# *Organum and Persona:*
# *The Philosophical Significance of Early Polyphony*

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The flowering of polyphony in Western European music has long seemed singular and remarkable. Until well into the twentieth century, polyphony was considered unique in world music, especially by comparison with ancient Greek and Roman practice, which had long been considered purely monophonic.[1] Western music historians seemed unaware of anything in other musical repertoires comparable to complex, many-voiced compositions such as medieval motets. The growth of ethnomusicology as a sophisticated, wide-ranging investigation of musical anthropology has provided much more information that has greatly complicated the picture. Though ethnomusicologists now regard polyphony not as exceptional but almost ubiquitous in world musical practice, the Western emphasis on polyphony remains noteworthy for its insistence on particular kinds of independence yet coordination between voices. Given the intense theoretic, philosophical, and theological milieux that surrounded medieval music, it seems natural to ask: what is the significance of the turn of Western music towards polyphony since the ninth century? What theological or philosophical considerations bore on its status compared to monophony? Responding to these questions will involve consideration of the nature of the mind, whether human, angelic, or divine.

These begin with the nature of our own minds. Can we really understand many things at once? In our ordinary experience, we seem to attend to one thing at a time, for even a person who is "multitasking" usually does not work on all those tasks at once but turns from one to another as needed, in effect "time-sharing." To say that "something else was on my mind" implies that I was not really paying attention to the matter at hand. Then too, when surrounded by several nearby conversations, equally loud (say at a restaurant), I cannot understand them all but may try to switch my attention from one to another, though with difficulty because their very multiplicity distracts. Aristotle had taught that the human cannot *think* many things at once, for "it is possible to know many things but not to be thinking of them" (*Topics* II.10 114b34). Here Aristotle distinguishes *potential* subjects of thought, which may be multiple, from the one thing we are *actually* thinking right now.

If indeed we cannot understand multiple spoken conversations, how can we make sense of musical polyphony? This *paradox of polyphony* (as we shall refer to it) poses sharp difficulties for the intelligibility of polyphony, much less its aesthetic appeal, for it seems to contravene Aristotle's general assertion about the unified quality of each act of human thought. Is each of our minds one or many? If each mind is

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This lecture was given on Friday, October 30, 2009 at St. John's College in Santa Fe, NM and is dedicated to Philip LeCuyer, remembering thirty years as colleagues and friends, especially the conversations in which he first directed me to this topic and illuminated its relation to concept of personhood in the writings of Thomas Aquinas.

essentially *one*, how can we reconcile this with the manifold differentiation and multiplicity of the world? If each mind is not a single thing but a collection of many sub-minds (as Freud and Proust suggest), how then is it that we seem to understand or grasp anything as *one*? How could we even form the concept of unity?

If, as ethnomusicologists argue, polyphony is a universal tendency, then we should not be surprised that the chant tradition was also subject to this tendency. Consider, for instance, this description of informal music-making in the British isles by Gerald de Barri (Giraldus Cambriensis, 1198), a Welsh churchman and historian:

> When they made music together, they sing their tunes not in unison, as is done elsewhere, but in part with many simultaneous modes and phrases. Therefore, in a group of singers (which one very often meets with in Wales) you will hear as many melodies as there are people, and a distinct variety of parts; yet, they all accord in one consonant and properly constituted composition. In the northern districts of Britain, beyond the Humber and round about York, the inhabitants use a similar kind of singing in harmony, but in only two different parts, one singing quietly in a low register, and the other soothing and charming the ear above. This specialty of the race is no product of trained musicians, but was acquired through long-standing popular practices.[2]

Such practices were probably long-standing, along with their "rapid and lively" playing of musical instruments he also notes. One might imagine that monastic novices might have been familiar with such part-singing in their villages, which choirmasters might have tried to discourage so that they could conform to the prescribed practice of singing in disciplined unison with the other choir monks, again assuming monophony as the prevalent canonical practice. Yet the temptation to try a bit of polyphony might have remained, or perhaps was an alternative tradition that had never really died, even in ecclesiastical practice, but was even more likely to surface in secular or popular singing, given the general tendencies toward heterophony that ethnomusicologists have noted.

Thus, early polyphonic church music might have reflected a new synthesis with secular music, of which we know very little because it was scarcely recorded. So the question we are facing is not so much "why polyphony?" if indeed that was such a natural development. Instead, we are trying to understand how and why polyphonic music would be not merely tolerated as a regrettable backwash of popular practice but was taken up with interest by certain elements of the learned clergy, even enshrined as important adjuncts to the high solemnity of great feasts.

Ecclesiastical polyphony no less than chant should first of all be considered in its liturgical context. From later descriptions, down to the present day, in the Roman Catholic liturgy polyphony is considered to add "solemnity," which has the specific meaning in this context not merely of pomp or seriousness, but an elevation of protocol appropriate to certain important ecclesiastical occasions. Liturgical solemnity specifically calls for several independent personages (such as the celebrant, deacon, sub-deacon) to take different parts in the service, not to speak of the choir that would sing responses in an ordinary high mass. From early Christian times, the choir itself was often divided into two sub-choirs that would alternate, answering back and forth across

the church, thus providing another possible invitation to multiplicity of vocal parts. Thus, ecclesiastical solemnity has a kind of incipient or potential polyphony in its multiple clerical voices, which might have encouraged the use of polyphonic music for such services. Early liturgical dramas also emerged from the many voices of the solemn services for the highest feasts, such as the recitations of the Passion narrative by several voices. For instance, the dramatic dialogue *Quem quaeritis?* between the disciples seeking the body of Christ and the angel guarding his tomb began as part of the services for Holy Week, a natural development given the drama of this encounter as described in the Gospels read during the services. But any further assessment of the felt implications of polyphony needs comparison with the ancient practices from which it emerged.

## Polyphony in Ancient Musical Practice

Though the nineteenth-century insistence on the uniqueness of Western polyphony was overstated, ancient musical practice (as presently understood) does seem to have been largely monophonic. The presently extant works of Greek musical theory concentrated on a single melodic voice; those available in the Middle Ages were even more monophonically oriented. If the Greeks did add accompaniments, they scarcely commented on them anywhere, in comparison with their voluminous discussions of the modes. Yet Plato's Athenian Stranger does say in the *Laws* (812d) that the lyre "must produce notes that are identical in pitch to the words being sung," implying that singers would accompany themselves by playing on the lyre, if only to give themselves their starting pitch and support their melodic line. In fact, such practices of accompaniment (now commonly called heterophony) have been observed in Ethiopian singing to the lyre, as well as in many other traditions involving the performing needs of a singer-composer, including Homeric bards who sang to the lyre-like phorminx.[3]

Though aware of this, the Athenian Stranger nevertheless argues that "the lyre should not be used to play an elaborate independent melody [*heterophonia*]: that is, its strings must produce no notes except those of the composer of the melody being played; small intervals should not be combined with large, nor quick tempo with slow, nor low notes with high. Similarly, the rhythms of the music of the lyre must not be tricked out with all sorts of frills and adornments. All this sort of thing must be kept from students who are going to acquire a working knowledge of music in three years, without wasting time. Such conflict and confusion makes learning difficult..." This critique implies that such things did indeed happen frequently enough to annoy Plato's Stranger, though he does not disclaim what he considers the proper or seemly use of the lyre accompanying the voice. Viewed in the larger context of the musical discussions in Plato's *Laws*, such elaborate and increasingly polyphonic developments seem to have been part of newer musical currents that disturbed his conservative sense of received musical practice. For Plato, such new developments had a political import because he judged they would lead to an increasingly individualistic, fragmented polity. The Stranger regrets the divergence between accompaniment and song, whose "conflict and

confusion" distract learners. Virtuoso performers would be tempted to show off their skills through *heterophonia*, a word Plato seems to have used to denote departures from strict unison music, as compared to its modern usage to refer to the simultaneous use of different forms of the same melody in different voices, as when an accompaniment adds extra tones or ornaments to the singer's melody. Singing together, as one, may be one of the deepest ways political order is consummated; certainly Plato himself brings his ideal city into life through singing and dancing. From Plato's point of view, the ideal city would be nurtured by all its citizens singing a melody in unison, perhaps underlined by instruments that do not seek to rival that song by counterposing a distinct, contradictory voice. Conversely, *heterophonia* might instill or encourage divisions within the soul of each person as well as in the commonwealth as a whole.

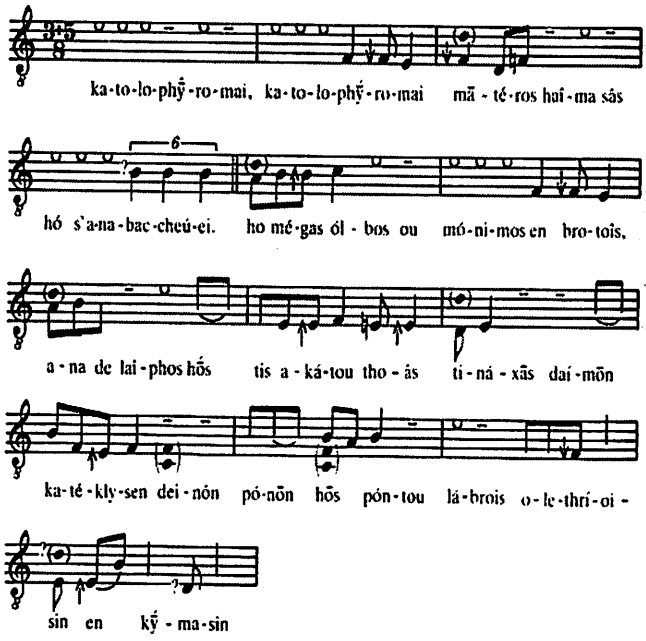
The evidence of ethnomusicology suggests that it is difficult to decide what is truly natural and what represents socially ordained behavior. It may be as "unnatural" -- or as "natural" -- to make a group of singers achieve a completely unified unison as it is to make them sing divergent melodic lines. Achieving either extreme requires discipline and practice. The consummate rendition of Gregorian chant with seamless ensemble and unanimity requires expert coordination from a chorus master of great skill, subtlety, and taste, along with active collaboration from the choristers. The difficulties of polyphony are more evident; a group of people who could sing passably in unison might well struggle to sing separate, independent parts. The training of truly independent voices requires each one to maintain its own line while maintaining its coordination with the other voices.

Compared to these extremes, the middle ground of mild heterophony may be more comfortable and more widespread. Among many peoples, singers do not use exact unison but join the ensemble more freely, not diverging exactly from the other voices but perhaps starting a bit late or varying the melodic line a little as they join in. Besides the common use of such informal heterophony, Georgian folk music (for instance) has a well-developed tradition of more elaborate heterophony. Then too, African music often includes complex polyrhythms, each line of which is played by percussion instruments, far more intricate than common European folk practice. Such examples, among many others, have left little ground supporting older views of "primitive" versus "high" art, or of simple presumptions about "natural" musical style.

In the case of ancient Greek musical practice, our knowledge has grown in the past century, thanks to recently discovered manuscripts. The surviving ancient musical texts use a special code of alphabet-like symbols written above the sung syllables, lacking all the customary visual clues of "rising" or "falling" melodic line that singers can use to grasp the "shape" of the melodic line intuitively, as in the Guidonian staff notation.[4] The ancient alphabetic-symbolic notation called for a highly trained "reader" to decode it, perhaps conforming to a very different sense that musical literacy ought to be reserved to the few so as to guard the guild secrets of the bards. Very few such readers (if any) could have sight-read an unknown melody, as Guido boasted his boys could do. The ancient system of notation was well suited to monophony because each syllable of text is naturally matched with a single sequence of melodic symbols written

above it. Any other simultaneous pitch would require yet another horizontal register beside the two already present. That no other extra registers have been found both confirms the basic monophony and also reinforces the insight that ancient music was deeply dependent on its verbal text because the alphabetic musical notation acts as a kind of meta-text written above the text whose melody it notates, as if indicating the close union of both within a single *melos*. Even apart from this melodic meta-notation, Greek syllables have built-in rhythms, inherently short and long in quantity, as well as intrinsic pitch-accents (against which the musical line may well have played). Thus, the Greek language itself is a kind of monophony, so musically rich that the overlay of additional melodies might well have felt excessive or at least would detract from the melodic qualities of the single line of text/music.

Thus, scholars were surprised to find in the Euripides *Orestes* fragment (for instance) certain notation-symbols without any text syllable underneath; the consensus seems to be that these represent notes of the accompaniment, perhaps giving cues for the aulos players who were known to have accompanied such tragic choruses. In the modern transcription (figure 1), these pitches have been enclosed in parentheses, often sounding the note D that is the final of the fragment.




[Figure 1: Euripides, *Orestes*, lines 388-344, indicating words whose musical setting was lost on the papyrus by indicating their syllabic length (whether short ˘ or long –). The symbols ↑ and ↓ respectively denote pitches raised or lowered by one quarter-tone (diesis). Notes in parentheses were assigned to an aulos accompaniment, according to the opinion of modern scholars. Text: [Chorus of women of Argos] "I grieve, I grieve -- your mother's blood that drives you wild. Great prosperity among mortals is not lasting: upsetting it like the sail of a swift sloop some higher power swamps it in the rough doom-waves of fearful toils, as of the sea."]

Current scholarship interprets these extra notes as drone pitches, sustained by the instruments against the moving choral line. The shrill, nasal sound of the aulos would have prolonged this D in a way that would have sounded quite different than had it been plucked on a lyre as a drone note to accompany a Homeric bard. Nor does this secondary pitch remain fixed; for several measures, the drone changes to two pitches, F and C, as the melody itself shifts, indicating a certain dynamic function for the changing drone-notes, which here act to underline a melodic shift (emphasizing the notes Bb and

F) as the text describes the way divine power can swamp the ship symbolizing human pride "in the rough doom-waves of fearful toils."

All this might have been acceptable to Plato's Stranger, for in every visible respect these additional notes (whether sustained as drones or not) seem to act to frame the main musical line and its text, which remains the predominant musical determinant throughout. Perhaps the treatises considered such drones and auxiliary notes to be so universally known and accepted that they were not worth much commentary because they were not substantively independent of the melody. At one point in his *Manual of Harmonics*, the Greek theorist Nichomachus (writing in the first century A.D.) explicitly refers to striking "two strings simultaneously," though most of his other references seem to concern successive, rather than simultaneous, sounds.[5] Indeed, the auxiliary notes in the *Orestes* chorus really do not form a melodic voice of their own, but remains entirely accompanimental, providing backdrop for the vocal line. Though the Stranger's critique points to the existence of more daring *heterophonia* than the few surviving manuscripts evidence, his description does not go further than indicating increasingly ornate instrumental accompaniment to a vocal line.

## The Harmony of the Spheres

As the deepest archetype of music, though, Plato probably had in mind the "music of the spheres," for he held that both the soul and the cosmos were *made out of music* (*Timaeus* 35b-37a). In both cases, that primal music seems to have been monophonic, despite some puzzles. For instance, the *Republic* ends with an mythic description of looking down on heaven and earth, viewing the cosmic spindle of Necessity and *hearing* its circular whorls, each associated with a planet: "And up above on each of the rims of the circles stood a Siren, who accompanied its revolution, uttering a single sound, one single note. And the concord of the eight notes produced a single harmony [*harmonia*]" (617b). Yet the word *harmonia* (literally a joint, as between ship's planks, or a framework, agreement) seems to have meant a single melodic line, as opposed to our "harmony" with its predominant sense of blending different notes into a simultaneous chord. Still, it is hard to imagine those eight Sirens, each singing a single note, without thinking of their simultaneous sound as a chord, rather than as a melody composed of those notes. Nor do such Roman accounts as Macrobius's commentary on Cicero's *Dream of Scipio* alter this sense that the music of the spheres was a pure melody.

The earliest text that considers the celestial music to be a "harmony" in our sense comes in a later Roman work, Martianus Capella's *The Marriage of Philology and Mercury* (written sometime between 410-439 A.D.), an important source transmitting ancient ideas about the liberal arts to the Middle Ages. Seeking Apollo's advice, Mercury finds him in mysterious cave, calling up visions of the physical world, both past and present, including a musical grove: there,

> a tuneful melody caused by the whispering winds in the trees rustled with a certain musical vibration. The topmost layers of the tall trees, correspondingly stretched tight, reverberated a high sound, but whatever was close and near to

> the ground resounded a deep, heavy note through the down-turning branches. The middle portions of the trees, coming in contact with each other, sang together in the accompaniments [*succentibus*] of the octave [2:1], the fifth [3:2], the fourth [4:3], and even the whole tone [9:8], without any discontinuities, as long as the semitones were included. In this way, the grove sounded the full harmony and song of the gods in melodic concordance. When the Cyllenian [Mercury] explained this, Virtue became aware that even in the heavens the spheres produce harmony according to the same ratios or combine with other voices in accompaniment [*succentibus*]; so it is not strange that the grove of Apollo should be so full of harmony, when the same god, in the sun, modulates the spheres of the heavens also.[6]

Thus, we learn that some spheres *accompany* others in the celestial "harmony," implying simultaneous sound as confirmed by the striking image of the grove of trees reverberating that heavenly music at once in low, middle, and high registers.

Later, Martianus makes even clearer his awareness of polyphony in his description of the feast at which Harmony appears as the last of the prospective brides for Mercury. "Immediately a sweet new sound burst forth, like the strains of auloi, and echoing melodies, surpassing the delight of all sounds, filled the ears of the enchanted gods. For the sound was not a simple one, monotonously produced from one instrument, but a blending of all instrumental sounds creating a full symphony of delectable music" [905]. Martianus emphasizes the newness of this kind of simultaneous music-making, whose novelty and extravagance fits it for a divine feast. When Harmony herself appears, she carries a circular shield "with many inner circles... The encompassing circles of this shield were attuned to each other, and from the circular chords there poured forth a concord of all the modes... All other music - which, by contrast with its sweetness, seemed dissonant - now became silent. Then Jupiter and the other heavenly beings, recognizing the grandeur of the more exalted melodies, which were pouring forth in honor of a certain secret fire and inextinguishable flame, reverenced the profound ancestral song, and one by one arose in homage to extramundane intelligence" [909-910], Thus, the gods bear witness to Martianus's Neoplatonic convictions, for they honor the primal Mind that is higher than they and that here is revealed to be fundamentally polyphonic. Harmony goes on to speak at length of how "the Monad and first hypostasis of intellectual life" [922] ordered her to be the governess of souls emanating from that primal source, though her lengthy description of Pythagorean mathematics does not cast any more light on the question of polyphony versus monophony. Her mention of hypostasis will resonate strongly with our subsequent considerations

## The Christian Significance of Simultaneous Intervals

A common Neoplatonic heritage may help explain the coincidence that, at nearly the same time as Martianus or perhaps a few years earlier, musical simultaneity emerged at

the center of a seminal Christian text. St. Augustine's discussion of the nature of the divine incarnation in *On the Trinity* (written in the first decades after 400 A.D.) draws upon his own extensive musical and rhetorical education as a brilliant young pagan in Carthage. About ten years earlier, prior to his conversion, he had written a short treatise *On Music*, which concentrated on poetic rhythm and prosody, rather than melody, but testifies to the depth of Augustine's musical studies and interests. He calls on these concepts at the crux of his discussion of how the divine Word could become flesh.

Augustine uses the accord between "single" and "double" in the 1:2 ratio of the octave to describe "how the single [*simplum*] of our Lord Jesus Christ matches our double [*congruit duplo nostro*], and in some fashion enters into a harmony of salvation with it."[7] Though Augustine was steeped in Neoplatonic ideas of the One and of the Dyad, yet there is no precedent in those Neoplatonic writings for Augustine's daring synthesis in his extended metaphor of the octave, which incarnates ideal concepts in audible sounds comparable to the way Christ was the Word made flesh nor did Plotinus's treatment of the One emanating the Two did not make mention of the ratio between them.[8] In this context, Augustine's rhetorical struggle to find the right word mirrors and intensifies the felt effect of his sonic imagery, leading to the climactic point at which he adapts a new term to match his sense:

> This match - or agreement or concord or consonance or whatever the right word is for the proportion of one to two - is of enormous importance in every construction or interlock [*coaptione*] - that is the word I want - of creation. What I mean by this interlock, it has just occurred to me, is what the Greeks call *harmonia*. This is not the place to show the far-reaching importance of the consonant proportion of the single to the double. It is found extensively in us, and is so naturally ingrained in us (and who by, if not by him who created us?), that even the unskilled feel it whether singing themselves or listening to others. It is what makes concord [*consonantia*] between high-pitched and deep voices, and if anyone strays discordantly away from it, it is not our knowledge, which many lack, but our very sense of hearing that is painfully offended. To explain it would require a long lecture; but anyone who knows how can demonstrate it to our ears with a monochord.

This fascinating passage describes high- and low-pitched voices (such as boys and men) singing in octaves. Though the singers may not be educated and do not know the learned mathematics Augustine refers to, they feel acutely and immediately whether their interval is exactly in tune. Indeed, such practices of singing at the octave are almost inevitable (and often happen unintentionally) when mixed groups sing together whose vocal ranges are sufficiently diverse.

Augustine may also have been acquainted with the ancient stringed instrument called "magadis," which was strung so that the same tune could be played in two octaves simultaneously. Using the name of this instrument as a term for octave singing ("magadizing"), students of Aristotle included in their collection of *Problems* (long, though incorrectly, ascribed to their teacher himself) the question "Why do people sing only the concord of the octave? For they magadize in this concord, but no other."[9] The

students' speculations go on to explore the special character of the octave as it would be experienced when sung simultaneously: "Is it because it alone is constituted out of corresponding notes, and in corresponding notes, whichever of them one sings, the effect is the same? For the one of them contains in some way the sounds of both, so that when one of them is sung in this concord the concord is sung, and when people sing both, or when one is sung and the other played on the aulos, it is as if they both sing one note. Hence that note along is sung, since things in correspondence have the sound of a single note." Thus Aristotle's students wondered at the peculiar resonance of a simultaneously sounded octave, in which two sounds somehow merge into one, whether instruments and voices combine or voices alone. They resolved the problem of two sounds becoming one by arguing that "one of them contains in some way the sounds of both."

By taking this insight much further, Augustine turns what had been a purely musical practice into something of great theological significance. His use of the image of octave singing makes clear that Christ, as the One, "matches our double" *simultaneously,* for if not, his divine nature would never finally blend with ours and we could never "participate in the Word, that is, in that *life which is the light of men.*" Thus, Augustine uses our natural reaction to the octave to show that we have an innate awareness that is not externally learned; his daring comparison of the octave with the "interlock" (*coaptione*) between soul and Christ expresses the divine origin of both, for how else could such perfection be found in our flawed human understanding? He takes the *simultaneous* octave to symbolize Christian incarnation and human redemption. Compared to his Neoplatonic masters, Augustine is far more interested in the physicality of sound precisely because he understands it as the perfect image of the union of human and divine natures essential to Christian teaching. At the same time, he retains touch with the Neoplatonic argument that "all that is eternal is a simultaneous whole." Augustine uses this significant simultaneity as the crux of his musical metaphor, in which the human soul tastes eternity in simultaneous sonorities, reverberating the eternal Word.[10]

## Person, Substance, and Hypostasis

Augustine here is addressing what was arguably the most difficult and controversial theological question of his time, the relation between the divine and human natures in the person of the Christ. By the First Council of Nicea (325), the essential outlines of the doctrine of the Trinity had been agreed by the Eastern and Western Churches, though Augustine himself was involved in further controversies about the procession of the Holy Spirit that to this day remain points of disagreement between those two churches (though those disagreements only really emerged later and still share the fundamental premises of the Trinity as such). Yet as difficult as the concept of the Trinity was, the problem of the two natures was even more vexed; during Augustine's lifetime and into the centuries beyond it, the Arian contention that Christ was a created, though divine, being, divided the Christian world far more directly than other Trinitarian issues. As

we will see, powerful ecclesiastical and political figures took up the Arian cause, including barbarian warlords and even ruling emperors.

The passage in Augustine we have just been considering uses the musical analogy of the octave to instantiate his contention that Christ had both divine and human natures. In this context, Augustine carried his argument further by using the term "person," which had first been introduced by Tertullian as a way of emphasizing the differences between Father, Son, and Holy Spirit, lest they seem merely different aspects of a single entity, rather than three distinct beings.

Here, we need to recover the original Greek terms that were at stake in these Latin controversies. These arguments rely on the distinction between "being" (*ousia*, in Greek, rendered into Latin as *essentia* but sometimes as *substantia*) and "substance" (*hypostasis*, which Latin rendered as *substantia*). Partly because of these overlapping and confusing Latin renderings, we need to go back to the Greek to discern what otherwise may be obscured or even falsified by our common words. The Greek noun *ousia*, derived from the verb "to be" (*einai*), has the general sense of "being-ness." Originally it meant "that which is one's own, one's substance, property," as in the English phrase "a man of substance," someone who has substantial assets, in the first instance land, which is the "reality" implicit in the term "real estate." From this, *ousia* came also to denote stable being, immutable reality, hence essence and substance as an abstract term, which the Romans rendered as *essentia*. On the other hand, *hypostasis* means literally "standing under, supporting" (*hypo-stasis*), as "hypothesis" means "that which is put under," (*hypo-thesis*) in the way a premise "underlies" an argument. Tellingly, we have taken "hypothesis" into our language, but not "hypostasis," for which we follow the Latin translation of this as "substance," literally "standing-under" (*sub-stantia*). In Greek, *hypostasis* denotes the foundation of a temple (for instance), the courage or steadfastness of soldiers, a promise or resolution, hence substance or reality in the sense of the full expression of something (such as the soldiers' resoluteness, manifest in their courage). But where *ousia* might denote real estate, *hypostasis* in the plural (*hypostaseis*) could designate the title deeds or documents that record and express ownership. Figuratively, *ousia* is the land itself, while *hypostasis* denotes the foundation or groundwork of the temple standing on that land.

When Augustine was trying to explain "three what?" are in the Trinity, he noted that the Greeks

> make a distinction that is rather obscure to me between *ousia* and *hypostasis*, so that most of our people who treat of these matters in Greek are accustomed to say *mia ousia, treis hypostaseis*, which in English is literally one being, three substances. But because we have grown accustomed in our usage to meaning the same thing by "being" as "substance," we do not dare say one being, three substances. Rather, one being or substance, three persons is what many Latin authors, whose authority carries weight, have said when treating of these matters, being able to find no more suitable way of expressing in words what they understood without words.[11]

Thus, Augustine adopts the term "person" rather than "hypostasis" out of convenience and to conform to the usage of other Latin authors, but he does not really make a sharp distinction between them and thinks that the Greeks, "if they like, could also say three persons, *tria prosopa*, just as they say three substances, *treis hypostaseis*. But they prefer this latter expression, because I imagine it fits the usage of their language better."[12] Augustine is aware that "scripture calls these three neither one person nor three persons - we read of *the person of the Lord*, but not of the Lord called person -- we are allowed to talk about three persons and the needs of discussion and argument require; not because scripture says it, but because it does not gainsay it. Whereas if we were to say three Gods scripture would gainsay us, saying *Hear, O Israel, the Lord your God is one God.*"[13] In his view, we choose the word "person" not so much because it is the only possible term but as a concession to the inadequacy of human words in response to "the sheer necessity of saying something, when the fullest possible argument was called for against the traps or the errors of the heretics." Augustine's famous *Confessions* are notably personal, in the modern sense of the word, vivid and emotionally fraught, including many aspects of his inner and outer lives that he considers shameful but essential parts of his spiritual journey. In so doing, Augustine discloses a new depth of interiority that have more to do with the radically self-reflexive notion of "self" than with the less reflexive "soul" known to ancient philosophy.[14] Yet, though Augustine was arguably the first thinker in the West to emphasize and analyze the concept of person, he still seems not to put the greatest possible weight on the term itself.[15]

## Persona and Personhood

In order to weigh the full nature and consequences of the concept of personhood, which we tend to take for granted, we need to consider its origins and history. In Latin, *persona* named the mask worn by an actor in tragic drama, the visible facade through which their voice sounded (*per-sonare*). From this, it came to have a legal connotation of someone who could appear in the "theater" of the law courts, address the court, give evidence, take oaths. In Roman times, personhood was a high and exclusive distinction, reserved in each family only to the *paterfamilias*, not to his wife, sons, daughters, or slaves unless he conferred it on them in a special ceremony conducted before an appropriate tribunal. There, the *paterfamilias* could give them personhood through the process of manumission, literally "releasing by hand." Because so many Roman citizens did not speak Latin, this ceremony sometimes took the form of a wordless charade: the *paterfamilias* would face the court, his son (or whoever was receiving manumission) facing him, hence with his back to the court. The father would then strike his son a ceremonial slap in the face that would then turn him around to face the court, after which the son would then be a person in his own right, able to address the court. Nor was personhood reserved to individual human beings; Roman law began the concept of corporation, an "artificial person" that was also able to appear in court and was immortal (unlike "natural persons").[16]

As suggestive as these Roman ceremonies and symbols are, the concept of person has still deeper roots that go beyond masks, facades, legal surrogates. The Latin word *persona* ultimately goes back to the Greek *prosōpon*, literally "that which is before/across from the eyes (*pros-opsis*)," first of all meaning the face or countenance. Greek literature set the precedent for a larger, more subtle understanding of what *prosōpon* meant. Homer already uses this word in a plural form (*prosōpa*) even when referring to a single person, implicitly indicating that even a single solitary "face" is implicitly regarded by another face, part of a larger world of faces. The word also means "one's look, countenance," which also implies some onlooker, someone "before one's eyes." *Prosōpon* also came to mean "character" in the sense of a dramatic part and hence also was used for the masks in the theater that expressed the character of each personage in the drama. But here too the concept of "character" should be taken in the larger sense of how each character is embedded in the whole drama, not standing purely by him- or herself, apart from the other characters.

Thus, the Greek concept of person rested on an implicit *communion of persons*, in which personhood is here understood as essentially a *relation* between persons, as opposed to some quality each person could be said to have independent of the others.[17] As touchstone of personhood, rather than external formalities of masks or legal charades, we should think of intimate conversation, *face to face*, as we still call encounters *person to person*. Such language already is important in the Hebrew Scriptures, in which Moses speaks to God "face to face, as a man talks with his friend." Hence the concept of person became an important point of reference as Christians struggled to express their novel concept of the Godhead without either connoting polytheism or conflating the distinct relations within the Trinity. But the even more difficult challenge was to reconcile the different natures of Christ within one person.

## Boethius and the Concept of Personhood

Compared to Augustine, his younger contemporary Boethius defined personhood more closely in his theological writings. Boethius also wrote the *Fundamentals of Music*, the most important text transmitting ancient musical theory for the next thousand years. Boethius considered himself a translator, rather than an innovator; writing after the fall of Rome at the hands of barbarian invaders and himself the chief minister to the Ostrogothic king Theodoric, he felt the need to record Greek philosophy in the Latin language, as if he sensed that it would soon be lost. He himself only was able to complete a small part of his plan.

His dilemma comes forward in his *Consolation of Philosophy*, which he wrote in prison, awaiting execution on trumped-up charges brought by his suspicious king. This brief book became one of the most popular books throughout the Middle Ages and Renaissance, translated successively by the Anglo-Saxon King Alfred, Geoffrey Chaucer, and Queen Elizabeth I. In fact, Boethius was trying to mediate between Theodoric, an Arian, and the orthodox emperor, seeking a compromise solution to the controversy about the two natures of Christ. Theodoric took this as evidence that

Boethius was conspiring against him with the emperor. Facing imminent death, Boethius sought consolation and reassurance from Philosophy in person, a grave, tall woman who rebukes his tears. Her stern response brings to mind his life's project, to translate Aristotle, Plato, and other ancients into contemporary Latin. By comparison with Augustine's *Confessions*, the way Boethius depicts himself in his *Consolation of Philosophy* is less inward and self-reflexive but nevertheless gives a notably personal shape to his dialogue. Though he takes Plato's dialogues as his model, he uses his own dilemma as the central occasion of the dialogue with Philosophy; his personal agony takes the work beyond conventionalized allegory to something with the kind of existential force that must have touched medieval readers, as it still continues to do. Even Boethius's notable avoidance of Christian theology in this work seems to speak to his personal relation with Philosophy herself, apart from the theological issues that engaged him elsewhere; his own loyalties included both the pagan philosophic tradition and the new faith.

Though he attributes his inspiration to Augustine's *On the Trinity,* in his dialogue *On Person and the Two Natures Against Eutyches and Nestorius,* Boethius specifically grapples with the problem of the dual nature of Christ as man and God, for which he provides a definition of person as "the individual substance of a rational nature." Even as he follows and respects Augustine, Boethius's definition stresses both individuality and rationality because a stone, a tree, or a horse cannot be a person, "but we say there is a person of a man, of God, of an angel."[18] Using this criterion, Boethius then rejects the Nestorian heresy that the two natures in Christ imply that He is two persons. In that case, Boethius objects, there would be no union between those two persons, human and divine, only a mere juxtaposition, hence "Christ is, according to Nestorius, in no respect one, and therefore He is absolutely nothing." We can only conceive that Christ saved the human race, Boethius insists, if he united human and divine natures in his one person. On the other hand, that single personhood of the Redeemer does not imply that he has, as Eutyches had argued, only one single nature that utterly absorbed human into divine nature. For Boethius, personhood is precisely the way in which the multiplicity of natures (human and divine) can still subsist in the oneness of the person of the Christ, a oneness Boethius considered a precondition for human salvation. Where Augustine reserves the term "person" for the exalted individuals in the Trinity, Boethius also used it for angels and human beings, thus extending the concept of personhood widely. He also emphasizes that *personare* comes from *sonus,* sound "and for this reason, that the hollow mask necessarily produces a larger sound" so that, by those amplifying masks, we can recognize each personage in a tragedy. Thus, Boethius explicitly directs us to *sound,* to voice, as essential to personhood. This connection will remain important as we apply these concepts to polyphony.

## Organum and its Ninth-Century Philosophical Context

Four centuries pass before the ideas we have been discussing come to light again; only in the ninth century did Boethius and Martianus Capella became available again in

manuscript, along with the earliest written examples of polyphony in *Musica enchiriadis* and *Scholica enchiriadis*. These texts described "organum" built on a plainchant voice (called the "tenor" or "vox principalis"), practices probably already well established before these treatises were written. Because the earliest surviving written evidence of the chant is roughly contemporary with these treatises, we cannot assume that monophony simply preceded polyphony; more likely, both traditions coexisted, though ecclesiastical practice gave a special place to the monophonic chant.[19] Then too, these anonymous treatises seem to have been written somewhere to the north of the Carolingian realm, perhaps bringing contemporary practices to more remote regions, rather than themselves making any claim to innovation.

These and other early collections of organum seem to follow an intelligible pattern of gradually growing independence of voices, beginning with the monophonic chant and adding parallel organal voices to form what the *Enchiriadis* treatises call "symphonies" (fig. 2), each of which is "a sweet combination of different pitches joined to one another."[20]

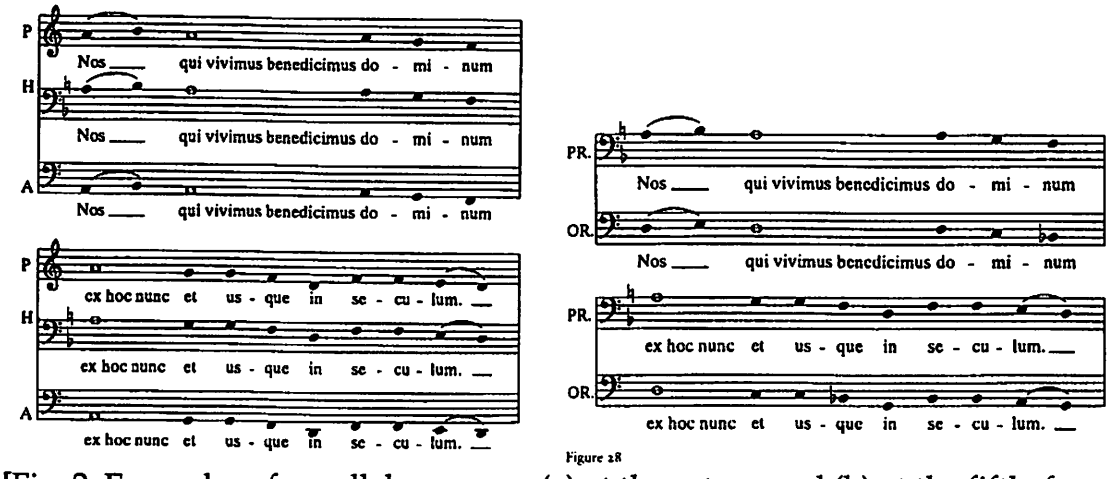
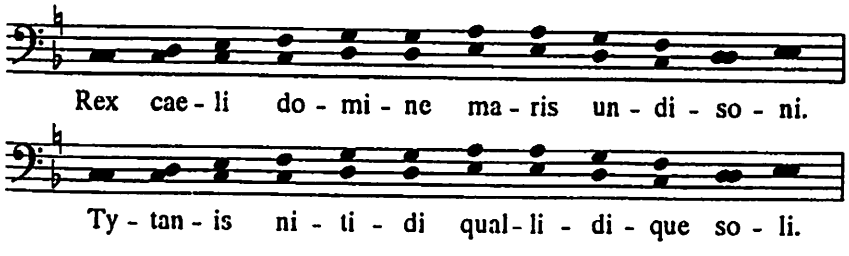



Figure 2.8

[Fig. 2: Examples of parallel organum (a) at the octave and (b) at the fifth, from the *Scolica enchiriadis* (ca. 850 A.D.). Text: We who live bless the Lord, both now and to the ages.]

Other examples involve freer motion of the organal voice against a "drone," in which the organal voice will sometimes converge on that same final pitch (*occursus*), a natural way of accommodating the separate voices to their mutual conclusion (fig. 3).



[Fig. 3: Example of obliquely moving organum from *Musica enchiriadis*, in which each line move towards a unison close (*occursus*) on the final note, E.]

As they stand, the *Enchiriadis* texts came near the beginning of an extraordinary flowering of polyphonic music that involved the most innovative intellectual centers of Europe. How did the partisans of polyphony conceive what they were promoting in terms of their intellectual priorities? How did they understand polyphony in relation to the great monophonic tradition of chant? If indeed polyphony opened a new intellectual as well as musical door, to what exactly did they think it led? How did they conceive it to be related to the sources and traditions they knew?

Another contemporary author, Remigius of Auxerre (d. 908), directly connects these developments with the text of Martianus, commenting on his description of the mysterious grove we considered earlier: "*Concentus* is the uniting of tones that are alike. *Succentus* occurs when different tones sound together, as, for example, in organum."[21] Remigius specifically understands what was heard in Apollo's grove - and hence in the music of the spheres resounding there - to be essentially the same as the contemporary organum he knew.

The most likely source about commonalities between polyphony and theology may be Boethius himself, the main authority cited by the *Enchiriadis* treatises, which call him *doctor magnificus*.[22] Where Boethius used the term *symphonia* to mean "consonance," the *Enchiriadis* treatises use this term to refer to "a sweet combination of different pitches joined to one another," specifically when sounded simultaneously in organum. Though most of Boethius can be read as referring only to a single melodic line whose notes are sounded successively, not simultaneously, the *Enchiriadis* treatise quotes his discussion of two strings plucked at once, which he in turn drew from Nicomachus: when tuned an octave apart, two strings "combine and are united together in sound so that one pitch [*vox*], as if produced from one string and not mixed from two, strike the hearing."[23]

"Thus says Boethius," the treatise notes, invoking his authority on a matter it considers especially important and difficult, noting that "why some tones agree with each other in a sweet commingling, whereas others disagree unpleasantly, being unwilling to blend with each other, has a rather profound and divine explanation, and in some respects is among the most hidden things of nature."[24] Here, the agreement or disagreement of specifically *simultaneous* tones has a special importance for the *Enchiriadis* author, which he connects with larger issues: "This principle, whose operations in this realm the Lord also permits us to penetrate, is treated in the writings of the ancients. In these is asserted, with most convincing arguments, that the same guiding principle that controls the concord of pitches regulates the natures of mortals. Through these numerical relationships, by which unlike sounds concord with each other, the eternal harmony of life and of the conflicting elements of the whole world is united as one with material things."

Thus, the *Enchiriadis* treatise connects the problem of concord and discord between simultaneous voices with "the natures of mortals," specifically with the way "the eternal harmony of life" is united with "material things." This indeed describes the

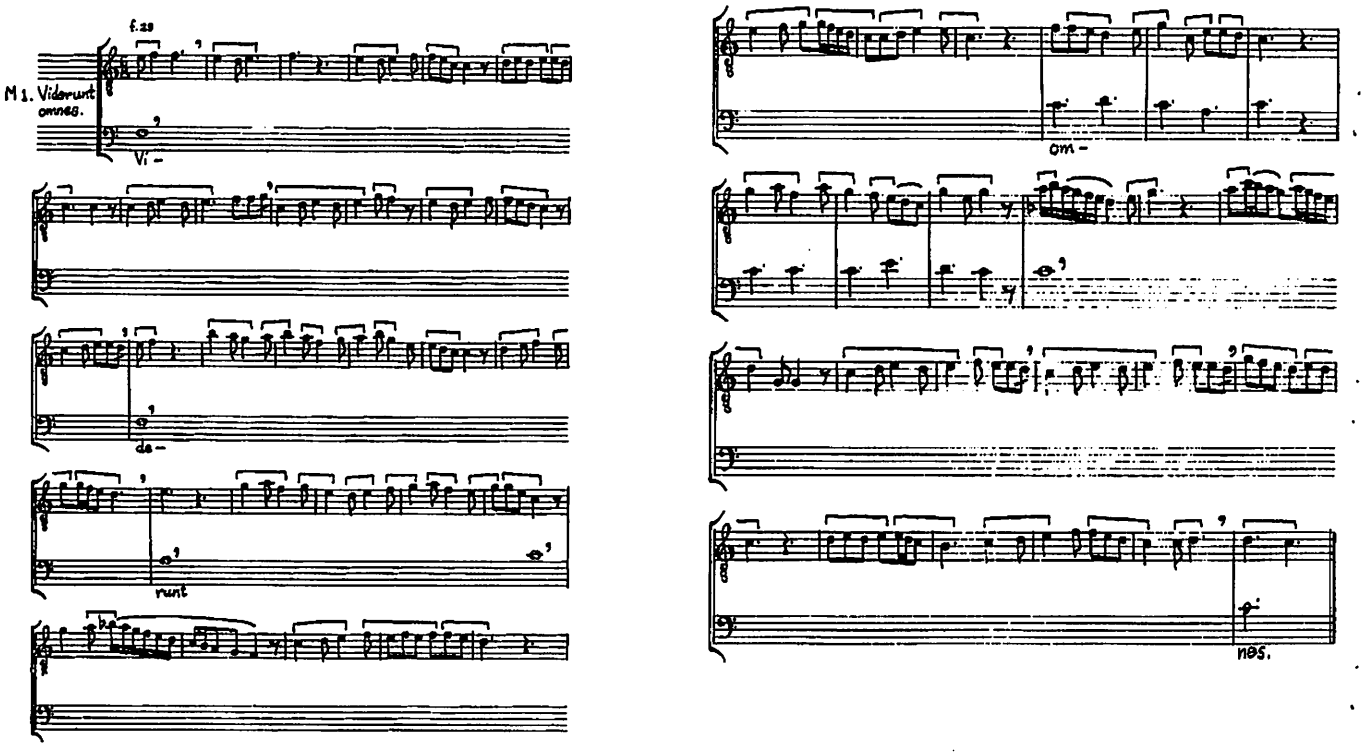
exact problem of the possible "concord" of divine and human nature in the person of the Christ; the author's reference to the Lord (the first and only such in this treatise, except for its concluding prayer) also signals that we are in fact dealing with a matter whose mysterious hiddenness specifically depends on matters that only the Lord can enable us to penetrate, hence also presumably implying also that they have to do with the Lord Himself. The author of the *Enchiriadis* treatises was probably also aware of the theological works of Boethius (whose manuscripts were extant even before those of his mathematical and musical writings) and hence his reference to the Lord and the problem of the dual nature may well also refer to Boethius's formulation and his teachings about personhood. If so, this gives contemporary evidence connecting the problem of musical polyphony with the "theological polyphony" inherent in the person of Christ, giving us some indication of how this early treatise on polyphony thought about its nature and implications in its larger theological and philosophic context. In this nexus of interconnected references and problems, Boethius was a central figure.

## Persona and Polyphony

Returning now to the *Enchiriadis* treatise in light of these distinctions, we can view a polyphonic composition as a kind of virtual person because it unites several separate "natures" (here, the distinct voices) into one persona, the unified individuality of the musical work itself. Because the theological concept of person seems to have explicitly informed the way the author of *Enchiriadis* spoke about polyphony, we may infer that he implicitly understood polyphony as analogous to the way in which we encounter *persons*, as opposed to the ways we encounter beings that are not persons. Augustine, following the usage of philosophers before him, spoke of human *souls*, rather than human persons; the distinction is subtle but telling precisely because the soul (*anima* or *psyche* in Greek) denotes some life-giving, animating principle within each animated being, whereas person is more deeply social, denoting a face surrounded by other faces, or (in the case of Christ) two distinct natures that are together unified into one person. That is, "person" seems to indicate the encounter as a unity with a certain kind of multiplicity. For Boethius, the encounter with Christ involves human and divine natures united within one person. For the *Enchiriadis* author, the encounter with polyphony "permits us to penetrate ... that the same guiding principle that controls the concord of pitches regulates the natures of mortals." In that way, polyphony becomes a privileged new way to apprehend the mysterious truths of theology not just as concepts but in the intimate experience of our own polyphonic persona.

These considerations illuminate also the further innovations associated with the School of Notre Dame. For instance, in Leonin's setting of the Gregorian Gradual for Christmas Day, *Viderunt omnes*, the chant is heard in long, unmeasured notes held in the lower of the two voices. Above the chant, the organal voice (called the "discant" by Anonymous IV) weaves a free course that touches on the chant pitch but also uses many other notes freely against it, some quite dissonant (such as the initial E). Compared to the restrained pitch range of the chant, the discant's range is huge (an

octave plus a fourth) and its fioriture demanding, requiring a virtuoso executant, not just one of the anonymous choir singers intoning the chant. Though this development was already underway in the increasingly elaborate free organum (such as that of St. Martial), Leonin's piece implies a whole new "political" reality of the soloist set against the chant (presumably intoned by a chorus), which cannot help but alter our perception of the chant as "holding" (as the word "tenor" literally indicates) the musical background against which the discant shines forth.




[Fig. 4: Leonin, *Viderunt omnes,* based on the Gradual for Christmas Day. Text: All [the ends of the earth] shall see [the salvation of our God: all the earth shall rejoice in God.]]

The sense of the chant syllable (much less the complete word) is lost behind in the play of the discant. The timeless quality of the chant is further heightened by this fading of linguistic coherence: a single word of text now occupies so long a time that the mind only dimly tracks it.

In Perotin's setting of this same Gradual, not only is the number of voices greater but the sheer extension of each syllable of the chant is also immensely dilated; we hear forty measures of "Vi-" before changing to "-de-." Though using the same rhythmic mode as Leonin, Perotin's three voices result in a qualitatively very different texture, so closely spaced and overlapping in range that one often cannot tell one of them from the other. The ear is dazzled, unsure of when the voices intertwine and cross, when they move apart. This confusion results partly from the greater multiplicity of voices: the ear attends differently to four voices than to two. Perotin seems to want a new texture of interwoven

voices, as compared with one or more *distinct* voices. Here texture enters music in a new way, denoting a complex effect emerging from the synthesis of a number of elements that together produce a net effect qualitatively different than their mere sum. Compared to the soaring individuality of Leonin's discant, Perotin's voices have a wholly other mode of being, independent yet indistinguishable in their intricate interconnection. Though their overall structural plans are similar, by radically extending the outer organum sections (over 100 measures compared to Leonin's 17), one no longer perceives Perotin's structure in anything like the same way. Perotin's organum goes on at such length that one really looses oneself in it, far more so than in Leonin's much more compact setting. The very excess of Perotin's proceeding suggests that he himself was not merely carried away by exuberance but more intended his hearers to be agape, perhaps as those might feel when first entering in a Gothic cathedral with much higher vaults and ceilings than they had ever before encountered. Such a person might well feel disoriented, overwhelmed, perhaps experience a kind of vertigo gazing into the heights. Leonin and Perotin reduced their texts almost to incomprehensibility, at least to a human mind that can only understand words pronounced near their normal speeds, not so radically slowed and prolonged.

Though we confront their works as written compositions, we should bear in mind the strong evidence that ecclesiastical polyphony was probably improvised according to careful formulae committed to memory, each prescribing possible counterpoints to a given intervallic motion in the underlying chant.[25] For example, careful examination of the account-books of the Cathedral of Notre Dame has indicated that its allotment of candles was not great enough to allow music to have been read in the dim light, only performed by heart. In that case, the written music may have been more a reminder or sample than a definitive, exclusive text. If so, those improvisers confronted even more directly the difficulties of generating (as well as apprehending) and coordinating many musical lines at once.

## Thomas's Polyphonic Mind

These arguments remind us of the relation between polyphony and the mind. In the slow unfolding of this subtle and complex issue, it will prove helpful to begin by looking back from the vantage point of the mature works of Thomas Aquinas, writing a century after Leonin wrote his *Magnus liber organi*. Born about the time that Perotin died (ca. 1220), Thomas himself was a product of the University of Paris, whose intellectual milieu literally and figuratively surrounded the School of Notre Dame and its cathedral. As the historian William of Armorica noted,

> in that time [1210] letters flourished at Paris. Never before in any time or in any part of the world, whether in Athens or in Egypt, had there been such a multitude of students. The reason for this must be sought not only in the admirable beauty of Paris, but also in the special privileges which King Philip and his father before him conferred upon the scholars. In that great city the study of the trivium and the quadrivium, of canon and civil law, as also of the science which empowers one to preserve the health of the body and cure its ills, were held in high esteem. But the crowd pressed with a special zeal about the chairs where Holy Scripture was taught, or where problems of theology were solved.[26]

That unprecedented body of students (who themselves constituted a city within the city of Paris, proudly defending their own privileges and power) may have affected the reception and understanding of the new polyphony in the Cathedral in ways that may be comparable to the theological debates Thomas encountered after he himself arrived in Paris in 1245 as a student.[27] We see something of the spirit and method of these debates in the "questions" Thomas used throughout his *Summa Theologiae*. Each question begins with a statement of the issue at hand (for example, "is God a person?"), to which Thomas first gives a series of objections, each in the voice of those who hold it, along with their reasoning, followed by what Thomas considers, "on the contrary," to be the decisive argument against the view held by these objections. Then Thomas responds "I answer that...," summarizing the theological crux in light of that decisive argument, followed by a reply to each objection.

Given their keen attention to these theological debates, Parisian students would likely have been struck by the question about polyphony. Indeed, the multiple conflicting "voices" in a scholastic "question" themselves form a kind of intellectual polyphony. The students' thinking would have been shaped largely by Boethius's *Fundamentals of Music*, which they all studied as part of the quadrivium. Thomas too would have known this text well, no less than Boethius's theological works such as *On the Trinity*, on which Thomas as a young man wrote the only commentary dating from his century.[28] Thomas also adopted as canonic Boethius's definition of the concept of person.

In his *Summa Theologiae*, Thomas cites the argument of Augustine that "this word person of itself expresses absolutely the divine essence, as this name God and this word Wise." [29] But Thomas also reviews the subsequent controversies whether "person" really signified an *essence* or a *relation*, to which he answers that "the name person signifies relation directly, and the essence indirectly." In this way, Thomas phrases the orthodox view by saying that the Trinity comprises three persons and one hypostasis (underlying substance, as discussed above), which formulates both the unity and trinity essential to the triune God. The personhood of the Son is his sonship, in relation to the Father, whose fatherhood only emerges in relation to his Son, continuing on through all the interrelations that are essential to the Trinity, where "relation" implies both the common ground of the two related persons and also their difference (between Father and Son, for instance). These relations were famously controversial; part of the schism between Eastern and Western churches concerned whether or not the Spirit could proceed from the Father *and* from the Son (the *filioque* of the Roman creed) or only from the Father (as the orthodox East insisted).

Thomas, with Aristotle, held that the human mind cannot think many things at once, for "it may happen that many things are known, but only one understood."[30] Thinking back to the example of listening to multiple conversations at once, Thomas might argue that they are so distinct that we cannot know them "through the one form of the whole," namely through "one species it [the mind] can understand at the same time; hence it is that God sees all things at the same time, because He sees all in one, that is, in His Essence. But whatever things the intellect understands under different species, it does not understand at the same time," for the same reason that "it is impossible for one and the same body at the same time to have different colors or different shapes," which in this example correspond to the "different species" that in general characterize the differentiating qualities through which we recognize different beings in the world.

In confronting the general paradox of polyphony, Thomas never refers directly to polyphony or music but is very much engaged with the closely related consideration of the differences between divine, angelic, and human minds. In assessing these distinctions of his, we should bear in mind that they do not necessarily require some doctrinal acceptance of revealed truth or religious dogma; in this phase of his work, Thomas is trying to reach the furthest implications that can be drawn by ordinary human reason, without the benefit of revelation, to establish the logical truths that ought to be accepted by any reasonable mind. In the process, it is important to establish the character and scope of such a mind, which may most readily be done by comparison with other kinds of mind that are more or less than human; whether they are actual or merely hypothetical possibilities goes beyond this discussion and requires addressing issues of experience and revelation. In his time as well as our own, the human mind persistently reaches out toward and beyond its own limitations (whatever they may be, whether a result of a presumed, given "nature" or as a product of social convention), towards what may be more than human.

Looking to the extreme side of such trans-human possibilities in one direction, a supreme and infinite Being would be the ultimate logical extrapolation. Yet even were such a Being to exist, the question would remain whether and how a purely finite human intellect could ever know such a transcendent Being. After all, such a Being could exist so far above human knowledge as to be utterly unknowable to humans and hence entirely disconnected from any human concern. So Thomas's questions about the nature and existence of divine and angelic beings concern their possible interaction with humans, not merely their existence in themselves, absolutely apart from human intelligence, hence his project require determining how far beyond itself human intelligence can reach.

The self-contradictory quality of trying to reach beyond oneself returns us to what we can know, by and in ourselves. Here Aristotle helps Thomas express how it is that we see, and hence know: "Two things are required both for sensible and intellectual vision -- namely, power of sight, and union of the thing seen with the sight. For vision is made actual only when the things seen is in a certain way in the seer.... Therefore in order to see God, there must be some likeness of God on the part of the seeing power whereby the intellect is made capable of seeing God."[31] We could only see -- or understand -- something beyond ourselves if there is something of that higher being in us; otherwise, it would remain utterly unfamiliar and incomprehensible to us. Our recurrent aspiration to see a higher power beyond ourselves is thus read as evidence that that higher power does exist and also that we share enough in common with it that we might aspire towards it, to come into contact with it or perhaps even to become more like it. Thomas argues that our aspiration to know a being higher than ourselves means that some human intellects will actually see the essence of God, not merely His bare possibility or a few of His attributes, because God, as supreme actuality, "is in Himself supremely knowable," in the sense that knowledge in general is the actualization of some potential for knowing, as Aristotle had argued.[32]

Thomas divides all created beings into those that are either purely corporeal (such as inanimate matter), those that are partly corporeal and partly spiritual (such as humans), and those that are purely spiritual, hence wholly incorporeal (such as those called "angels" in the Scriptures). As such, the angels form an interesting middle ground between purely finite, corporeal beings, such as ourselves, and a purely incorporeal, infinite God. Thomas

argues that, as entirely actualized spiritual beings, such angels would naturally know God "by His own likeness refulgent in the angel itself."[33] In his *Treatise on Angels*, Thomas goes on to explore many aspects of angelic knowledge and action. Angels would be far closer to the ultimate actualization of the supreme Being and hence would then know God through their own natural powers (as can humans also, through reason, Thomas argues, though less completely). Angels would accordingly know themselves perfectly, thus fulfilling the ancient injunction of the Delphic oracle: know thyself.[34]

Despite this, even angelic minds have their limitations, which Thomas does not merely claim to be coincidental but deduces as logically necessary, given their nature and essence. He argues that angels cannot know the future or the secret thoughts of men.[35] Angels cannot be in several places at once, nor can several angels be in the same place at the same time; they move through space sequentially with finite speed, not instantaneously.[36] These deductions all follow from angels sharing the fundamental aspects and limitations of all finite entities. On the other hand, Thomas argues that "an angel can understand many things at the same time." In this, the angels show their essential kinship with God, who "sees all things in one thing, which is Himself. Therefore God sees all things together, and not successively as we have held."[37] In contrast, "we understand [many things] simultaneously if we see them in some one thing; if, for instance, we understand the parts in the whole, or see different things in a mirror." Thomas takes up this image of a mirror as the crux of our reflections, both literal and figurative. "A mirror and what is in it are seen by means of one species," meaning a certain mode of likeness or of shared being, in this case the species of light common to luminous objects and to the seeing eye. "But all things are seen in God as in an intelligible mirror," bringing to mind the paradox of a supreme mirror, whose perfect reflectivity, even apart from all objects, seems virtually to shine in the darkness.

Thomas summarizes the argument we have just been considering by noting that God's own knowledge is not discursive, unlike our common modes of cognition, which proceed through separating and delineating the strands of succession and causality in ways necessary to human understanding. God, in contrast, sees all in Himself, and the angels, beholding Him directly, can also see many things as one, through Him.

Thereby we receive a resolution of our paradox of polyphony: only a completely unified mind can see many things as one, through itself, a superlative form of vision which then becomes a possibility for those who behold that mind. Here the *unity* of God as supreme Being is essential, rather than His infinity - or perhaps we here confront unity as an essential, surprising face of infinity. Our puzzlement may also reflect our unexamined modern presupposition that "one" is merely a number, the first in a series of integers: one, two, three, four,.... But in ancient mathematics, "one" is *not* included as a number, which begins with two, three,... The Greek word for "one," *monad,* comes from *monos*, alone, solitary, with the sense of preeminence: the One. In this exalted sense, oneness is a transcendent state, something superhuman and divine, not to be put on the same level with twoness or threeness or multiplicity in general. Thomas was well aware of the tradition of Neoplatonic philosophy and theology that reflected centrally on the supreme mystery of the One and how it could "overflow" into the Many. As did Augustine, Thomas relies on the Neoplatonic argument that "all that is eternal is a simultaneous whole," implying that understanding the eternal means grasping the *simultaneity* of all the diverse voices in the universe.[38]

Here, then, we may best situate the paradox of polyphony in its full philosophical and theological context. If indeed the mind of God is polyphonic, in the sense of uniting together many things as one, simultaneously, then those who practice polyphony are implicitly attempting to turn their minds towards that divine potentiality. But given what we have just heard from Aristotle and Thomas, this is not possible for human beings, as such - hence the paradox. In the context of the *Enchiriadis* treatises, its true resolution lies more in the context of the theological controversies about the nature of Christ, whose divine and human natures unite in the mystery of personhood. Thus, polyphony calls attention to the way personhood represents the exact point of connection between human and divine natures crucial for Christology.

By comparison with our earlier discussion of human and divine minds, Thomas implies that understanding such a god-man requires that we step beyond what is knowable to the unaided human reason, at least in certain respects. The mere possibility of such a being is important, quite apart from the question of whether it ever actually existed, which (Thomas judges) we could only know through revelation. With that hypothetical question in mind, then, we can ask: what would be required for some being to partake equally of divine and human natures, or is that logically self-contradictory to the point of impossibility, like a round square or an odd even number?

Thomas's answer relies on the language of personhood, which opens new possibilities of phrasing a complex combination of unity and multiplicity in ways that emphasize strong parallels between these theological problems and the novel paradoxes of polyphony. Granting that a purely "natural man" cannot grasp the many-in-one of the Trinity, Thomas relies on the concept of personhood to give an intelligible form to the mysterious sacred texts he is interpreting. He is working within a theological tradition that views human psychology in terms of a "trinity" of faculties in the soul, each of which are explicit images of the Trinity that made man. Augustine had described a number of such "trinities" in the human soul, such as memory, understanding, and will, or wisdom, understanding, and memory, or lover, beloved, and love.[39] Ultimately, Thomas considers that human beings have been given the capacity to contemplate the divine Trinity and its personhood because they themselves are persons, through the grace of God. Thus, the interplay of polyphonic voices may reflect the interplay of separate but deeply unified and correlated persons within the godhead as well as the parallel inner faculties by which humans might be attuned to them.

Indeed, the connection of humanity to this divine unity-in-multiplicity is the crux of the most radical and controversial Christian doctrine of the union of divine and human natures in Christ Himself. Having established that He is a person co-equal to the other persons in the Trinity, Thomas argues that "the union of the two natures [human and divine] in Christ is the greatest of all unions" and that union "took place in the Person of the Word, and not in the nature."[40] In this case, the personhood of Christ is precisely the way He could unify two seemingly antithetical natures, human and divine, mortal and immortal. According to this view, a newly extended concept of person is the essential precondition for the coherence and logical consistency of Christian doctrine.

Understanding and hearing polyphony also required the new capability to hear that such a sublime conception of personhood implied: the process of apprehending the mysterious truth of the union of the two natures in the person of Christ parallels hearing two different polyphonic voices *as one*, while still noticing their differences. Here we

return to our starting point, Aristotle's (and Thomas's) insistence that we can finally only know one thing at a time, which now is extended (but not violated) by this new kind of polyphonic apprehension, in which we grasp many things as one precisely through a kind of broadening or deepening of the human person that is intrinsic to the Christian message. For if, as Thomas seems to imply, Aristotle really described the full potentialities of human nature (at least in broad outline), both Christian revelation and polyphony require and demonstrate the ways in which rational humanity can expand or extend its capabilities through the actions of divine grace. In this reading, polyphony may then be a kind of experimental demonstration of the effect of Christian grace on human hearing, as Thomas's extension of Aristotle manifests the effect of that grace on ancient wisdom.

To be sure, we lack any direct testimony to these inferences from contemporary sources, which really do not address the question of how they understood polyphony or what sense they made of it, philosophically. Yet the parallels we have drawn are so strong and direct that it is hard to believe that they were not noticed at the time, even though we do not possess any direct evidence. The same crowds of excited students who pressed around the chairs of theology, hearing arguments about personhood and the union of the two natures or about the Trinity, probably also heard (or even sang) the new polyphony of the School of Notre Dame. The theme of *newness* is common and worth remarking: the works of Leonin and Perotin were obviously new, as Anonymous IV makes clear, as were the teachings of Thomas. And here we recall also that "newness" was not then a term of praise, as it generally is for us; Thomas himself came under investigation for heresy, which precisely seeks out dangerous and misleading novelties. His new use of the ancient philosophers, especially Aristotle, was highly controversial; Thomas used his immense rhetorical and logical skill to persuade his contemporaries to accept this new synthesis of faith and reason, for which his model was Boethius, who had brought knowledge of Aristotle to the Christian West.

Throughout this period, polyphony remained controversial. In 1159, John of Salisbury (a close associate of Thomas à Becket) argued that "music sullies the Divine Service" on account of the "effete emotings of their before-singing and their after-singing, their singing and their counter-singing, their in-between-singing and their ill-advised singing ... to such an extent are the highest notes mixed together with the low or lowest ones. Indeed, when such practices go too far, they can more easily occasion titillation between the legs than a sense of devotion in the brain."[41] In 1323, Pope John XXII's bull *Docta sanctorum* proscribed many forms of polyphonic music, quoting Boethius that "a person who is intrinsically sensuous will delight in hearing these indecent melodies and one who listens to them frequently will be weakened thereby and lose his virility of soul."[42] The pope referred to polyphony as a "common" state of things, which implies that objections must also have become common; he exempts "the occasional use of some consonances, which heighten the beauty of the melody," indicating ways in which polyphonic practice was by then deeply ingrained.

Though he did not write directly on music, some of Thomas's other writings give us insight into his views. We know that he composed the liturgical texts for the newly established feast of Corpus Christ, instituted in 1264 by Pope Urban IV, whose liturgy involved newly composed chants setting Thomas's texts, including the famous *Tantum ergo sacramentum*. One wonders how he would have regarded these musical settings, especially in relation to the mystical theology of the Eucharist to which Thomas seems to

have been deeply drawn. We have unambiguous evidence of his concern with sound in his Eucharistic poem *Adoro te*, which includes the revealing lines "Visus, tactus, gustus in te fallitur, / Sed auditu solo tuto creditur." As Gerard Manley Hopkins rendered it, "Seeing, touching, tasting are in thee deceived: / How says trusty hearing? that shall be believed." Just as Augustine was finally converted by a mysterious childlike voice that piped over and over again the sing-song words "Take it and read," Thomas here asserts the peculiar importance of hearing as a mode through which the divine may made known to the human soul. Accordingly, he implicitly places a high value on music, which may well have complemented in his mind the *heard* quality of the disputations and questions that formed the body of his theological works.

This emphasis on hearing also is manifest in the *spoken* quality of his work. After his youth, Thomas customarily dictated, rather than wrote, his works. His output was staggering, amounting (on careful calculation) to more than twelve printed pages a day of closely argued prose, on a pace maintained over many years. In order to do this, several independent accounts by his associates noted that he "dictated at the same time on diverse subjects to *three secretaries and sometimes four.*" Thus, Thomas's own mind seemed to have operated in a way that was distinctly polyphonic. One of his amanuenses even recorded that once "after dictating to him and to two other secretaries that he [Thomas] had, sitting to rest for a bit, he fell asleep and continued dictating even while sleeping."[43] Such stories of simultaneous dictation also were told of Caesar as evidence that his abilities exceeded the human norm. But where his prodigious feats merely indicated his superhuman talents, in Thomas's case, his ability to function polyphonically corresponds strikingly with the questions about human, angelic, and divine minds he had argued so closely, perhaps to several secretaries simultaneously. Thomas's multiple dictation indicates how far a human mind could go into the polyphonic realm of angelic mentality. Though his secretaries might have considered his feats to be miracles, Thomas himself would probably not have agreed, given his respect for what human reason and willpower could accomplish without presuming to draw on divine grace. Thomas also knew his limitations and evidently became so weary that he would fall asleep while trying to work, as you or I might. But, unlike us, he just kept on dictating. A monk whose cell was nearby "frequently heard him talking and disputing with himself when he remained alone and without anyone else in his cell." That singular mind, capable of dictating several complex texts at once, may have been shaped by those solitary, ceaseless disputations, as if those intricate arguments in which spoke aloud and heard himself as advocate, opponent, and judge were the crucible in which that polyphonic mind was formed.

## The Overflowing Source

Though his perspective on the general questions of mind and person is rich and suggestive, Thomas wrote centuries after polyphony had begun to flower; its sources should, therefore, be sought closer in time to its beginnings. On the basis of the texts we have assembled, those sources seem to be Neoplatonic, as evidenced especially by Martianus's specific examples. The fundamental importance of the overflowing of the One into the Many in Neoplatonic thought is deeply congruent with the historical unfolding of polyphony, the One of chant bifurcating into the two voices of early organum, at first strictly parallel and then more freely independent. After these early dyads, then three and

more voices emerged. Even apart from this close analogy between Neoplatonic ontology and music history, that ontology grounds the relation of the successive voices to the One in just the way that the One overflows into the Many in every facet of Becoming.

The question at issue here not only concerns the nature of the mind but the very heart of what it means to grasp anything as one. The Neoplatonic sources look back to the initial statement of the fundamental question in Plato's *Phaedo* 97a-b, where Socrates is recounting his early experiences with natural philosophy:

> I will not even allow myself to say that where one is added to one either the one to which it is added or the one that is added becomes two, or that the one added and the one to which it is added become two because of the addition of the one to the other. I wonder that, when each of them is separate from the other, each of them is one, nor are then then two, but that, when they come near to one another, this is the cause of their becoming two, the coming together and being placed closer to one another. Nor can I any longer be persuaded that when one thing is divided, this division is the cause of its becoming two, for just now the cause of becoming two was the opposite. At that time it was their coming close together and one was added to the other, but now it is because one is taken and separated from the other.

The primal arithmetic assertion that "one plus one is two" turns out to be a profound mystery; we seem only to parrot this statement (and so many other mathematical truths that follow upon it) without really understanding anything about what it really means or how the One could ever be said to "turn into" the Dyad, a paradox that verges on flat self-contradiction. Neither Socrates nor Plato seem to resolve this enigma, at once so simple and so deep, nor can the Neoplatonists, save perhaps through a kind of poetic evocation. When Plotinus (*Enneads* VI.6.1), addresses the origin of number, he falls back not so much on argument in any ordinary sense as a kind of inspired description:

> A thing, in fact, becomes a manifold when, unable to remain self-centered, it flows outward and by that dissipation takes extension: utterly losing unity it becomes a manifold since there is nothing to bind part to part; when, with all this outflowing, it becomes something definite, there is a magnitude.

The very concept of "outflowing" may stand for us as a kind of intuition that the One is not static or self-contained but seems to pour forth states of higher multiplicity that still bear the mark of the One insofar as we grasp their unity: the three upper voices of Perotin seem to be emanations of the chant voice below them, so that all four voices really are a mask of the One. But we remain at the very beginning of this deep and perennial question: how can we grasp anything as One? and how, then, can we grasp the Many as One, or One in Many?

Here we may outline two possible roads. The Roman manifestations of polyphony such as Martianus described may have hewed to the Neoplatonic ascent that begins with the Many but *leaves the Many behind* as it reaches past reason to grasp the One. Plotinus understands this as utterly transcending all multiplicity and returning to the One as "self-seeing": "In this seeing, we neither hold an object nor trace distinction; there is no two. The man is changed, no longer himself nor self-belonging; he is merged with the Supreme... There were not two; beholder was one with beheld; it was not a vision compassed but a

unity apprehended.... When the soul begins again to mount, it comes not to something alien but to its very self... the flight of the alone to the alone" (*Enneads* VI.9.10-11). The Christians, on the other hand, seem to understand that One still to maintain Trinity, even at the height of mystical vision, a One that is not our "very self" in its supreme aloneness but something Wholly Other Who ultimately meets us person to person, face to face. These questions of mystical theology are desperately difficult, for they defy reason and speech, according both to Christians or Neoplatonists. Perhaps only the felt experience and interrogation of the works of music themselves may help us. Is the experience of polyphony the evocation of emergence from and return to a monophonic Unity, or is the deepest ground of reality finally polyphonic?

[1] Georgiades, T. G. (1973). Greek music, verse, and dance. New York,, Da Capo Press., 23-38, argues that (according to his reading) the nature of Greek rhythms made polyphony "impossible," in the later Western sense.

[2] Weiss, P. and R. Taruskin (2008). Music in the Western World : a history in documents. Australia ; Belmont, CA, Thomson/Schirmer., 60-61.

[3]West, M. L. (1992). Ancient Greek music. Oxford, Clarendon Press., 205-207 at 207, discusses the surviving evidence of heterophony in Greek music, including its mentions in Aristoxenus's important treatise.

[4] For a general overview of this and other ancient musical notations, see Ibid., 254-276.

[5] Nicomachus and F. R. Levin (1994). The manual of harmonics of Nicomachus the Pythagorean. Grand Rapids, MI, USA, Phanes Press., 84; see also 173.

[6]Cited and translated in the excellent article by Sullivan, B. (1997). "The Polyphony of the Spheres." Viator **28**: 33-43., 36. See also Martianus, C., W. H. Stahl, et al. (1977). The marriage of Philology and Mercury. New York, Columbia University Press., 2:9-10, [11]-[12].

[7] Augustine, E. Hill, et al. (1990). The works of Saint Augustine : a translation for the 21st century. Brooklyn, N.Y., New City Press., 155-157, at 155 (4.4-5). For a general discussion of Augustine's work on music, see Schueller, H. M. (1988). The idea of music : an introduction to musical aesthetics in antiquity and the Middle Ages. Kalamazoo, MI, Medieval Institute Publications, Western Michigan University., 239-256.

[8] See Plotinus, *Enneads* V.4.

[9] Barker, A. (2004). Greek musical writings. Cambridge ; New York, Cambridge University Press., 194-195; for the attribution of these *Problems* to his school, see 190.

[10] Proclus, D. and E. R. Dodds (1963). The elements of theology = Stoichei*osis theologik*e. Oxford,, Clarendon Press., 51, proposition 52; Augustine refers to this seminal text on many occasions in his work on the Trinity.

[11] Augustine, E. Hill, et al. (1990). The works of Saint Augustine : a translation for the 21st century. Brooklyn, N.Y., New City Press., 196 (5.10).

[12] Ibid., 228 (7.11). Tertullian addresses the concept of person in *Against Praxeas* (written not earlier than 208 A.D.), Roberts, A., J. Donaldson, et al. (1885). The Ante-Nicene fathers. Translations of the writings of the fathers down to A.D. 325. Buffalo,, The Christian literature publishing company., 3:597-627, especially ch. 7 (601-602), and may have been the earliest Latin Christian author Augustine may have had in mind.

[13] Ibid., 226-227 (7.8); the scriptural citations are from 2 Cor. 2:10 and Deut. 6:4.
[14] For instance, Taylor, C. (1989). Sources of the self : the making of the modern identity. Cambridge, Mass., Harvard University Press., 131, argues that Augustine "introduced the inwardness of radical reflexivity and bequeathed it to the Western tradition of thought."
[15] Henry, P. (1960). Saint Augustine on personality, Macmillan. argues that "in the history of thought and civilization Saint Augustine appears to me to be the first thinker who brought into prominence and undertook an analysis of the philosophical and psychological concepts of person and personality" (1). While granting this, I would like also to bring forward the ways in which Augustine also expressed his hesitations about this concept, leaving room for the later additions of Boethius and Thomas, among others.
[16] For a general survey, see Borkowski, J. A. (1997). Textbook on Roman law. London, Blackstone Press., 84-87; see also Duff, P. W. (1971). Personality in Roman private law. New York,, A. M. Kelley. and Watson, A. (1967). The law of persons in the later Roman Republic. Oxford,, Clarendon P..
[17] Here I am indebted to the insights of Bruce Venable, "The Name and Nature of the Person," in (Stickney 1993), 260-274. See also Peacocke, A. R., G. Gillett, et al. (1987). Persons and personality : a contemporary inquiry. Oxford, UK ; New York, NY, USA, B. Blackwell..
[18] Boethius, H. F. Stewart, et al. (1936). The theological tractates. Cambridge, MA, Harvard University press., 83-85.
[19] Taruskin, R. (2005). The Oxford history of western music. Oxford ; New York, Oxford University Press.,1:147-148 argues this point cogently.
[20] Erickson, R. and C. V. Palisca (1995). Musica enchiriadis ; and, Scolica enchiriadis. New Haven, Yale University Press., 13, which contains a full translation and excellent commentary on these works. For Guido's somewhat different treatment of "diaphony" or organum, see Hucbald, Guido, et al. (1978). Hucbald, Guido, and John on music : three medieval treatises. New Haven, Yale University Press., 77-82. For the Syrian practice of organum, see Husmann, H. (1966). The Practice of Organum in the Liturgical Singing of the Syrian Chruches of the Near and Middle East. Aspects of Medieval and Renaissance Music: A Birthday Offering to Gustav Reese. J. LaRue. New York, W. W. Norton: 433-439..
[21] Discussed in (Sullivan 1997), 39.
[22] Because the ninth-century Irish theologian Johannes Scottus Eriugena used the phrase *organicum melos*, which the *Musica enchiriadis* treatise used in reference to polyphony, some musicologists (including Hugo Riemann) took this as indicating that Eriugena was referring to this treatise and to contemporary organum or alternatively that the treatise drew its Neoplatonic elements from Eriugena. Yet subsequent investigations showed that the phrase *organicum melos* could also refer to non-polyphonic practice (such as fixed mathematical ratios used to build instruments, *organa*). Also, the Neoplatonic references in the *Enchiriadis* treatises all could have been derived from writings of Boethius or Augustine, whom the treatises explicitly mention, as opposed to Eriugena, whom they never mention. Raymond Erickson and Claude V. Palisca, *Musica enchiriadis ; and, Scolica enchiriadis* (New Haven: Yale University Press, 1995), xliv-xlvi, and also Erickson, R., Ed. (1992). Eriugena, Boethius and the Neoplatonism of Musica and Scolica Enchiriadis. Stuyvesant, NY, Pendragon Press., which gives a detailed account of the controversy; some eminent musicologists, such as Michel Huglo, still remain persuaded of the Eriugena connection.

[23] Erickson, R. and C. V. Palisca (1995). Musica enchiriadis ; and, Scolica enchiriadis. New Haven, Yale University Press., 26, citing Boethius, C. M. Bower, et al. (1989). Fundamentals of music. New Haven, Yale University Press., 169 (5.9). Nicomachus and F. R. Levin (1994). The manual of harmonics of Nicomachus the Pythagorean. Grand Rapids, MI, USA, Phanes Press., 173, one of Boethius's most important Greek sources, also notes that "systems [i.e., combinations of two or more intervals] are consonant when the notes comprising them, though different in compass, are, when struck simultaneously or sounded in some way, intermingled with one another in such a manner that there is produced from them a single sound like one voice."

[24] Erickson, R. and C. V. Palisca (1995). Musica enchiriadis ; and, Scolica enchiriadis. New Haven, Yale University Press., 30.

[25] See Berger, A. M. B. (2005). Medieval music and the art of memory. Berkeley, University of California Press..

[26] Cited in Waite, W. G. and Léonin (1973). The rhythm of twelfth-century polyphony, its theory and practice. Westport, Conn.,, Greenwood Press., 1-2.

[27] Torrell, J.-P. and R. Royal (2005). Saint Thomas Aquinas. Volume 1, the person and his work. Washington, D.C., Catholic University of America Press. gives a particularly clear account of the career of Thomas in light of recent research; for his Parisian studies (1245-1248) under Albertus Magnus, see 18-35. Thomas served two periods as a master in Paris, from 1252-1259 (36-95) and then again from 1268-1272 (179-223).

[28] For Thomas's relation to Boethius, see ibid., 68, 226. Thomas's commentary on Boethius's *On the Trinity* is one of his earliest writings (ca. 1257-1259) and shows his close study of Boethius's theological work; see Thomas, Thomas, et al. (1946). The Trinity and The unicity of the intellect. St. Louis, Mo., London,, B. Herder book co.

[29] ST I, Q. 29, art. 4. Though he did not know Greek, Thomas considers the Greek word *prosōpon* important enough to quote verbatim, noting that it refers to masks that were "placed on the face and covered the features before the eyes." ST I, Q. 29, art. 3.

[30] Aristotle, *Topics* II.10 (114b34), which is cited by Thomas in ST I Q. 12, art. 10, obj. 1; Q. 58, art. 2, obj. 1, and Q. 85, art. 5, which gives his sustained discussion of "whether we can understand many things at the same time?"

[31] ST I Q. 12, art. 2.

[32] ST I Q. 12.

[33] ST I Q. 12., art. 4, repl. obj. 1.

[34] ST I, Q. 56, art. 3, 1.

[35] ST I Q. 57, art. 3, 4.

[36] ST I Q. 52, art. 1-3; Q. 53, art. 1-3.

[37] ST I Q. 14, art. 7.

[38] Proclus, D. and E. R. Dodds (1963). The elements of theology = Stoichei*osis theologik*e. Oxford,, Clarendon Press., 51.

[39] Augustine, E. Hill, et al. (1990). The works of Saint Augustine : a translation for the 21st century. Brooklyn, N.Y., New City Press., 403-404 (15.12).

[40] ST III, Q. 2, art. 9, 2.

[41] Weiss, P. and R. Taruskin (2008). Music in the Western World : a history in documents. Australia ; Belmont, CA, Thomson/Schirmer., 62.

[42] Ibid., 70-71 (excerpt).

[43] Torrell, J.-P. and R. Royal (2005). Saint Thomas Aquinas. Volume 1, the person and his work. Washington, D.C., Catholic University of America Press., 239-244, reviews all these stories, including the two cited here (241-242).