Netherlandish composer has suffered more from misinterpretation in the histories of music than Johannes Ockeghem. It cannot be denied that the composition of a canon for thirty-six voices played a considerable part in blackening his name. Fétis\(^1\) resolutely refused to believe that Ockeghem ever composed such a canon, notwithstanding his familiarity with Guillaume Crétin’s\(^2\) testimony and Glareanus’ reference.\(^3\) He was convinced that the work was mythical.

Ambros,\(^4\) who did not know the canon either, found it impossible to disbelieve the literary evidence, particularly since he discovered new testimony in Ornitoparchus’ treatise of 1517.\(^5\) He surmised that


2. Er. Thoinan, *Déploration de Guillaume Cretin sur le trépas de Jean Okeghem ...* (Paris, 1864), p. 29:
   C’est luy qui bien sceut choisir et attaindre
   Tous les secretz de la subtilité
   Du nouveau chant par sa subtilité,
   Sans ung seul poinct de ses reigles enfraindre
   Trente-six voix noter, escripre, et paindre
   En ung motet . . . .

3. Henricus Glareanus, *Dodekachordon* (Basel, 1547), p. 454: “Quippe quem constat triginta sex vocibus garratum quemdam instituisse.” But Glareanus adds that he never saw the work—“Eum nos non vidimus”.


no more than six or nine voices were notated with a six- or fourfold canon emerging from each part; he referred to Josquin’s Psalm Qui habitat in adjutorio, written in the form of a canon for twenty-four voices developed from four notated parts, as an analogous example. However, he found the loss of “Ockeghem’s monster motet” hardly regrettable, since “under the mountainous burden of such an obbligo the hand of the master must have been paralyzed.”

Ambros’ designation of the canon, which he admittedly did not know, as a “monster motet” has colored the appreciation of Ockeghem’s canon to this day.

Since Riemann’s transcription (based on Eitner’s identification of the canon of literary fame with the anonymous “Deo gratia[s]” in Petrejus’ third volume of psalms dated 1542), it has been known that at no time are more than eighteen voices singing in the thirty-six-part motet. This moved Alfred Orel to say that the “apparent monster,” under closer examination, takes on a simpler shape.

But the technical aspect has continued to dominate the evaluation of the work. Johannes Wolf, probably skeptical of Eitner’s identification, wrote: “A marvel of technique must have been his 36-part motet...” Charles van den Borren, one of the few authors who subjected the work to a painstaking analysis, found it a “purely scholastic exercise.” Otto Ursprung spoke of Ockeghem’s motet and similar works as “monstrous canons,” and he added that such com-

7. Robert Eitner, Bibliographie der Musik-Sammelwerke (Berlin, 1877), p. 311. It might be added that Petrejus’ publication of 1542 begins with the twenty-four-part canon of Josquin, referred to above, and concludes with the anonymous thirty-six-part canon “Deo gratia[s].” For the rest, the edition contains mostly compositions for four and five voices. Riemann contended that the placement of the two canons, Josquin’s at the beginning and the anonymous (= Ockeghem’s) canon at the end, implied a value judgment and an adverse criticism of Ockeghem’s work. Laurence K. J. Feininger, Die Frühgeschichte des Kanons (Emsdetten, 1937), p. 46, points out that the position of the “Deo gratia[s],” which concludes the three-volume series of psalms, is to be interpreted simply as an analogy to the conclusion of the Divine Service. For reasons to be developed later, we believe that Eitner’s identification is correct. It should be added that the canon was printed a second time, without indication of the author, again in Nuremberg, in the Cantiones triginta selectissimae, edited by Clemens Stephani of Buchau, published by Ulricus Neuber in 1568.
10. Études sur le quinzième siècle musical (Antwerp, 1941), p. 222.
positions were destined not for the church but for "chamber music of a general, spiritual nature." Joseph Schmidt-Görg’s relegate the composition to the realm of "kanonische Spitzfindigkeiten."

Why Ockeghem, who ordinarily limited himself to compositions for three, four, and five voices, should have aspired to write a canon for thirty-six voices is a question. If he was, as is generally assumed, motivated by technical considerations, why should he not have tried his hand at other canons for eight, twelve, or sixteen parts? Why do we have only this one multivoice canon, and what is the reason for the unprecedented number of parts in a musical tradition that cultivates three- to five-part writing?

It is the burden of the present argument that technique was the least of Ockeghem’s concerns in composing this canon—that the canon was merely the instrument needed to carry out an idea. The idea that prompted Ockeghem to such an extraordinary enterprise had been for many centuries an integral part of the Christian mystical vision; it went back in part to the Neoplatonic, in part to the Jewish prophetic tradition, notably to Isaiah and Ezekiel, and was nourished by various ancient mythologies as well. It was the concept of the heavenly music of the angels sung in praise of God.

Ockeghem’s motet, the number of its parts, the canonic construction, and its whole technique can be explained in terms of the angelic music it was designed to echo.

The central work on the celestial hierarchy is the treatise of that name written by the mysterious Dionysius Areopagita about A.D. 500. It was destined to become the most influential and popular book on angels during the Middle Ages. According to Dionysius

13. The most recent and most thorough treatment of the subject is in Reinhold Hammerstein’s Die Musik der Engel (Bern and Munich, 1962). I should also like to refer to the article by Charles de Tolnay, "The Music of the Universe: Notes on a Painting by Bicci di Lorenzo," Journal, Walters Art Gallery, VI (1943), 83–104. This excellent study was unknown to Hammerstein.
Areopagita, whose ideas were taken up by St. Gregory and the later scholastics, there were three hierarchies of angels, each ordered in three choirs: Seraphim, Cherubim, Thrones; Dominations, Virtues, Powers; Principalities, Archangels, Angels.

The mystical writers of the Middle Ages developed certain ideas on the angelic chant in praise of God. Contrary to Hammerstein's belief, their ideas of angelic hymns, and of liturgical music as an echo of the heavenly music, go back to Dionysius Areopagita, who in his description of the highest hierarchy of angels says: "Therefore the Sacred Scriptures offer to the earthborn hymns that reveal the eminence of these sublime lights to us in sacred form. Indeed, some of these spirits, to use human metaphors, cry out with a voice like roaring waters: 'Blessed be the glory of the Lord in this place'; others call to each other that famous and venerable chant: 'Holy, Holy, Holy, Lord of hosts, the earth is full of thy glory.' These magnificent hymns of the angelic spirits we have already explained to the best of our ability in the treatise on divine chants."

To the characteristics of angelic chant as developed throughout the Middle Ages belong the following: The angels sing

1) as with one voice ("una voce"),
2) unceasingly ("sine fine"),
3) in alternating choirs ("alter ad alterum"),
4) beating their wings with a tone as of roaring waters,
5) always in praise of God, on texts of psalms, Alleluia, Sanctus, Gloria, or Benedictus.

At least the third, fourth, and fifth characteristics of angelic chant are rooted in Dionysius' description. The stipulation "una voce" by no means excludes harmonic or polyphonic song. Hildegard of Bingen (c. 1150) describes angelic music in terms suggesting

16. R. Hammerstein, Die Musik, gives an excellent account of angelic singing and the evolution of this concept in the Middle Ages. However, it is not correct that "Bei Pseudodionysius ist allerdings nicht ausdrücklich vom Gesang der Engel die Rede. Immerhin weist das Wort Xopos, bzw. chorus auf diesen Zusammenhang" (p. 26).
17. See Dionysiaca, II, 863–65. See also Roques et al., La Hiérarchie Céleste, p. 118, where the treatise on divine chants is referred to as "fictitious or lost" (n. 5). A reason why this work should be presumed fictitious is not given.
19. Eric Peterson, The Angels and the Liturgy, trans. R. Walls (New York, 1964; 1st ed., Das Buch von den Engeln, 1935), p. 28, takes the "una voce" literally. Basing his opinion on theological authority alone, the author also argues that "the worship which is offered to God in heaven makes use of no mechanical instrument but only the voice of angels" (ibid.). Accounts of mystical visions, literary testimony, and the
unity in harmony. She likens it to "the voice of a great multitude" which "unites harmonically in praise of the celestial inhabitants. For such harmony celebrates the glory and honor of the heavenly citizens in unity of mind and heart" ("ut vox multitudinis in laudibus de supernis gradibus in harmonia symphonizat, quia symphonia in unanimitate et in concordia gloriam et honorem coelestium civium ruminat").

To the same period belongs the famous vision of Tundalus. He reports that the music of the nine angelic choirs consists of "voces diverse consonantes." Somewhat later, Caesarius of Heisterbach (1177-1240) describes the heavenly music as sung by "voces multae et diversae," and its harmony as "concors illa diversitas."

If Ockeghem wished to create a sounding likeness of the unity of angelic harmony he could not have chosen a better means than canon, which mirrors unity and produces harmony. If he desired to imitate the chain of acclamations from one to the other ("alter ad alterum"), he could hardly have selected a more appropriate technique than the nine-part canon in which the voices enter one after another a bar apart, in ever swelling chorus. If he intended to emulate the alternating choirs, he could not have done better than to let each new nine-part canon come in at the end of a preceding nine-part canon. If he hoped to echo the tremendous sound of roaring waters, he had to go completely beyond the three- or four- or five-part harmony of his time. Thus he used eighteen real voices in the fifteenth century, an utterly unprecedented event in the history of concerted music. If Ockeghem meant to depict the nine angelic choirs, the number of thirty-six participating voices suggested itself quite logically; if he aspired to reproduce the aspect of never-ending praise, what better way than to compose a canon that could be easily and endlessly repeated? Since the ternary meter of each bar was divided into two units of tonic and one of dominant, the music could go on and on. If the lilting meter and the graceful rhythm suggested dance, this

innumerable paintings of angelic concerts showing the whole instrumentarium of the Middle Ages—some of which contain identifiable references to polyphonic music—roundly contradict this view.

20. Hammerstein, p. 56. The accumulation of terms such as "harmonia," "symphonia," "concordia," and "symphonizare," makes it extremely unlikely that Hildegard thought of song in unison.

21. Ibid., p. 66.

22. Ibid., pp. 85-86.
too fitted the medieval vision, according to which dance and procession accompanied the chanting of the angels. 23 Finally, the chief characteristic of angelic chant is its purpose of praising God. The “Deo gratia[s]” of the Petrejus text fulfills this condition.

If every single aspect of Ockeghem’s motet can be shown to flow forth from its iconographic intent, the traditional interpretation of the canon as a mammoth exercise in counterpoint must be abandoned. Even as the painters of the age never ceased to be fascinated by the topic of angelic music—a topic endlessly discussed by theologians, treated by mystics, and embellished by poets—so the greatest musician of his time, Johannes Ockeghem, rose to the challenge of depicting the nine angelic choirs in audible tones.

But if this new interpretation is accepted, the question arises whether Ockeghem’s contemporaries could have remained unaware of his intention. Since the theory of the time deals exclusively with the practical aspects of composition, not with questions of meaning, we must rely on implicit rather than explicit testimony.

Dragan Plamenac, in a justly famous essay, 24 has assembled contemporary literary evidence on Ockeghem’s canon. In particular he published a French poem written by Nicolle Le Vestu for a poetic contest at Rouen in 1523 in celebration of the Immaculate Conception. For such contests the competitors were given an “argument” in verse, on which they were to elaborate in a “chant royal.” Le Vestu’s poem, preceded by the “argument” of an unknown author, whom Plamenac hypothetically (and very persuasively) identifies with Guillaume Crétiln, deals with the “motet exquis, chef d’oeuvre de nature,” as the steadily recurring refrain line calls it—that is, with the thirty-six-voice canon by “Okghem.” 25 Although the poem had been published before, Plamenac is the first historian of music to discover this highly interesting document.

23. Ibid., pp. 47–49.
25. The first lines of the “chant royal” present the composer as “Okhem, tres-docte en art mathematique,/Aritmetique, aussy geometrie,/Astrologie, et mesnement musique.” It does not seem necessary to identify Le Vestu’s Okhem with the scholastic philosopher William of Occam, as was done in the first publication of the poem in Abbé A. Tougard’s work, Les trois siecles palinodiques (Rouen–Paris, 1898), II, 285. The branches of knowledge attributed to the composer are after all none other than the traditional subdivisions of the quadrivium of which music was a part—arithmetic, geometry, astronomy, and music—and which are correctly summarized as
From the vantage point of our interpretation it is easy to find elements in the "chant royal" that may lead us to believe that its author was indeed well acquainted with the intended meaning of the musical work. In the second verse, Le Vestu writes as follows:

Cestuy Okghem, usant moult de praticque
Et theorique en toute symphonie,
Si bien garny a cest oeuvre autenticque
De chant mistique et parfaicte armonie.\textsuperscript{26}

The angels are believed to have "knowledge of supernatural mysteries";\textsuperscript{27} their song, imbued with the fervor of the divine arcana, is the "chant mistique."\textsuperscript{28}

This meaning comes out more clearly in the last verse:

Se ung tel motet je attribue et applicque
A ton pudicque et saint Concept, Marie,
Ne soys marrye en tant que chant celicque
Ny angelicque au tien ne s'apparie.

(If such a motet I attribute and apply to thy holy immaculate conception, Mary, do not be sorrowful, for no heavenly or angelic chant matches thine.)

What Le Vestu is saying here implies his clear knowledge that the "motet exquis" was originally intended to present the heavenly concert of the angels. However, following the time-honored tradition of parody and contrafactum, he "applies and attributes" it to the Immaculate Conception of the Virgin. Such a reinterpretation was the more natural because Mary's Assumption and Coronation, in the

\textsuperscript{26} Plamenac, "Autour d'Ockeghem," p. 38.

\textsuperscript{27} "[T]he angels' knowledge of God's revelation in creation and Redemption... is what gives their Sanctus cry its Eucharistic significance" (see Peterson, Angels and Liturgy, p. 5; also p. 54, n. 12).

\textsuperscript{28} Speaking of the angels' ceaseless praise of God, Peterson (p. 20) says: "The song of praise." And again later (p. 41): "[T]he Sanctus cry of the angels is represented in the liturgies as mystical praise—\textit{theologia}. During their singing it is as 'crying and saying' is not supposed to be a natural 'crying and saying,' but a \textit{mystical} though the angels are beside themselves." This is why St. Gregory the Great, in describing the "mystical" life of the angels, speaks of their "being drunk with the sacred wine of wisdom" (ibid., p. 69, n. 1).
traditional iconography, are represented as occurring in the presence of singing and playing angels.\textsuperscript{29}

Among the various sources containing Le Vestu’s poem is the manuscript franç. 1537 of the Bibliothèque Nationale, written in 1523, which accompanies the poem with a miniature showing Ockeghem and his chapel singers. Published for the first time in Plamenac’s article (and since then republished in innumerable histories of music), it shows Ockeghem’s musicians singing a “Gloria in excelsis” from a choirbook mounted on a large lectern.\textsuperscript{30}

The lectern is surmounted by two figures of the angel announcing the blessed tidings to Mary. Even though this would suggest the feast of the Annunciation, the “Gloria” may still refer to the angelic concert, the original theme of Ockeghem’s canon. The singing angels’ praise of God is considered part of a heavenly liturgy, of which the earthly liturgy is but an echo.\textsuperscript{31} There is community between angelic and human worship. The biblical testimony to, and origin of, the angelic chant is the “Gloria in excelsis” of the angels on Christmas night (St. Luke 2:14), whose hymns of praise are heard by the shepherds.\textsuperscript{32}

Is it mere coincidence that Ockeghem and his singers are presented as intoning the “Gloria in excelsis” in the miniature accompanying the poem in celebration of the master’s “motet exquis”? Is it likewise coincidence that the number of singers, including Ockeghem himself—who was famous for his beautiful voice, and who is presented in the miniature as singing with his musicians—comes to nine? Or might the illuminator, working in close collaboration with the poet, have wished to emphasize with the number nine both


\textsuperscript{30} For a beautiful reproduction in color see Plamenac’s recent article on Ockeghem in Die Musik in Geschichte und Gegenwart, IX (1961), Plate 117. Curiously enough, no one, in discussing this group portrait, has ever clearly identified the composer. I confess that only the clarity of the colored reproduction in \textit{MGG} and, in particular, the stunning red of his choirgown, contrasting vividly with the dark hues of the other singers’ gowns, made it clear to me that the man standing to the right of the lectern was Ockeghem. It is also clear that the right hand of the composer resting on the lectern is used to tap the beat. Standing taller than his singers, Ockeghem offers a striking picture of handsome strength, bearing out contemporaneous descriptions (see Edward E. Lowinsky, \textit{The Medici Codex of 1518}, Monuments of Renaissance Music, III–V [Chicago, 1968], III, 67).

\textsuperscript{31} See Peterson, Angels and Liturgy, pp. 11–13, 30.

\textsuperscript{32} Hammerstein, Die Musik, p. 30.
the intimate relation between the chanting of the nine angelic choirs and the chanting of nine human singers and the enormous distance between them?33

There is a possible hint at angelic music even in the reference by Glareanus, who was not acquainted with the work but obviously did know of its fame. The word he uses in describing it is "garritus," which denotes not only the chatter of human beings but also the warbling of birds.34 Now it is important to remember that Glareanus considered music his avocation, that his chief profession was that of a humanist, and that he prided himself on his mastery of Greek. In the Greek tradition the ecstatic language of the seer is at times compared with the twittering of the swallow.35 It is possible, therefore, that Glareanus thought of the ecstatic praise of the angels in the sight of the Ineffable when he referred to Ockeghem's canon as "garritus."

The concept of angelic music was familiar to the musicians of the Middle Ages, not only from the Scriptures, the liturgy, the Church Fathers, the mystics, and the poets and painters, but also from the theorists of music. Aurelianus Reomensis, in his *Musica disciplina* of the ninth century, refers to the Apocalypse and its description of heavenly music ("habentes citharas Dei"); he regards the liturgical office as an imitation of the angels' singing ("quando in hoc angelorum choros imitatur"36) and he believes that the antiphonal character of liturgical singing is an attempt to imitate the singing of the Seraphim in alternating choirs.37

The thirteenth-century theorist Elias Salomon, in his *Proemium*
scientiae artis musicae, held that “music was created together with the angels. For it is proper to them to praise God; and this was, before the advent of our Lord, sung by prophets and other saints: *Praise Him all His angels. Praise Him with the sound of the tuba*, etc. And all song and the fine art of singing was hallowed at the Nativity of our Saviour as is written: Today Christ was born; today our Saviour appeared; today angels sing on earth, and archangels jubilate; today all exult singing: Glory to God on high, alleluia.”

Salomon also pointed to the role of the angels at the Assumption of Mary. He believed that the plainchant was regulated by the angels, the holy prophets, and St. Gregory.

The fourteenth-century theorist Marchetto da Padova, in the peroration of his *Pomerium*, addressed the singers as follows: “I beseech all singers: sing to our Lord, sing, for He is the King of all the earth, sing wisely! The celebrated herald of Christ, David, prophet excelling among prophets, commanded conformity between the Church Triumphant, which sings praises and hymns to our Lord assiduously through the triple hierarchy of the angels, and of the Church Militant, which sings this praise seven times daily....”

The same author, in his *Lucidarum* (Tract I, Ch. 2), said: “*[T]he* greatness of music captures all that lives, and all that does not live: *it* praise is sung without end in the harmonious chant of angels, archangels, and all saints singing before God, Holy, holy, holy.”

Machaut (c. 1300–1377), a poet as well as a composer, in a poem dedicated to Music, wrote in this same tradition:


J'ai oy dire que li angles
Li saint, les saintes, les archanges
De vois delié, saine et clere
Loent en chantant Dieu le Père
Pour ce qu'en gloire les a mis
Com justes et perfais amis:
Et pour ce aussi que de sa grace
Le voient adès face à face;
Or ne peulent li saint chanter
Qu'il n'ait musique en leur chanter:
Donc est musique en Paradies...⁴¹

Georgius Anselmus of Parma, in his treatise *De musica* dated as of 1434, wrote of the “nine orders of celestial spirits.”⁴² His account is distinguished from others by his comparison of the angelic choirs with the Sirens’ song in the mystical account of the heavens given by Plato in the Republic, X, 617b. Anselmus’ reference is to this passage: “And the spindle turned on the knees of Necessity, and up above on each of the rims of the circles a Siren stood, borne around in its revolution and uttering one sound, one note, and from all the eight there was the concord of a single harmony.”⁴³ “Our theologians, however,” continued Anselmus, “more appropriately call these spirits angels, and divide them into nine orders, giving each order its own name.” Anselmus then proceeded to a precise description of the nine orders (attaching each order to one of the nine spheres of medieval astronomy⁴⁴) and of the celestial harmony they produce. Anselmus’ ideas were given wider circulation by Franchino Gaffurio in his *Theorica musicae* of 1480, in which Anselmus is quoted almost literally.⁴⁵

⁴⁴. For a typical description of the nine spheres, consisting of the seven planets, the eighth sphere of the fixed stars, and the ninth sphere of the *primum mobile* on which the twelve signs of the zodiac are fixed, see Lynn Thorndike’s account of the universe as seen by the fourteenth-century Geoffrey of Meaux (*A History of Magic and Experimental Science* [New York, 1934], III, 292).
The fifteenth-century composer-theorist Adam von Fulda invoked, in his treatise of 1490, the vision of "Cherubim and Seraphim proclaiming with untiring voice Holy, Holy, Holy" (from the Te Deum).46

This tradition continues in the sixteenth century, when Zarlino wrote, also in a chapter on the praise of music: "Our theology, placing the angelic spirits in Heaven, divides them into nine choirs and three hierarchies, as Dionysius Areopagita says. They are constantly in the presence of the Divine Majesty, and they never cease singing Holy, Holy, Holy, Lord God of hosts, as is written in Isaiah."47

To prove the thesis that Ockeghem intended to create a musical likeness of the angelic concert in praise of God, we have presented evidence of various kinds: inner evidence resting on the nature of the composition, on its unprecedented character (which demands explanation), and on a structure explicable in its every facet as a precise analogy to the traditional ideas of angelic music; literary evidence produced one generation later, in which the canon is referred to as a "chant mystique," that is by a term that could have been used only in reference to the "musica coelestis"; and the circumstantial evidence (which could easily be doubled and tripled) that the musical literature of the Middle Ages abounds in references to the music of the angels.

All of this evidence seems seriously compromised by the evidence in the first print of the canon in Petrejus' psalm collection of 1542. Here the composition carries the heading "Novem sunt musae." The print of 1568 by Ulricus Neuber varies this inscription slightly to "Musis ter trinis. . . ." The two sources transmitting the canon seem to attribute it to the nine Muses instead of to the nine angelic choirs.

How serious a challenge is this evidence to the interpretation developed thus far? We can in fact dispose of the argument by means of the following observations:


47. "[L]a Theologia nostra ponendo nel cielo gli spiriti angelici, divide quelli in nuove Chori & tre Hierarchie, come scrive Dionisio Areopagita. Queste sono di continuo presenti al conspetto della Divina maestà, & non cessano di cantare Santo, Santo, Santo, Signore Iddio de gli esserciti, come è scritto in Esaia" (Le Istitutioni harmoniche [Venice, 1558], pp. 5–6).
1) The Muses are Greek deities. Traditionally, they are known as individual goddesses protecting the various arts and branches of scholarship. If Ockeghem had had the nine Muses in mind, nine voices would have sufficed, there being no choirs of Muses.

2) In that event, the use of canon would also have been inappropriate, inasmuch as each Muse standing for her own individual art should have been represented by her own melodic line.

3) A composition by Ockeghem in honor of the Muses would constitute a unique phenomenon in the composer’s oeuvre. There are no manifestations in his work of any interest in humanism or of sympathy with the humanistic movement. Ockeghem, among the outstanding composers of the fifteenth century, was perhaps the most uncompromising representative of the belief that music’s dignity lay in its service to divine worship.

How then is the inscription of the two Nuremberg prints to be explained? For one thing, it is not necessarily to be read as a title to the composition; it may be regarded as a humanistically inspired direction for the solution of the canon. In the time-honored manner of canon writing, the inscription “Nine are the Muses” would then simply indicate a nine-part canon. Ockeghem would not himself have used such a motto. If anything, he would have said “Nine are the angelic choirs.”

Why did the Nuremberg editors choose the humanistic motto? One reason, I believe, lies in the Protestant faith of Nuremberg, to which this imperial town was officially converted in the year 1525. Although Luther believed firmly in the existence of angels, he rejected as sacrilegious the claims of Dionysius Areopagita to an intimate knowledge of the heavenly hierarchies: “In the Cherubim and Seraphim he [Luther] does not recognize angels at all.”

Georg Forster, the editor of Petrejus’ collection of psalm settings, was a Lutheran. A physician by profession, a musician by avocation, he was also a solid humanist who knew Latin and who had studied Greek with Melanchthon and Garbicius in Wittenberg. There, in 1540, he met Luther, who accepted him into his famous table sodality.

50. See MGG, IV (1955), cols. 568–74.
Georg Forster had been a choirboy in the court chapel of Heidelberg; he belonged to the circle of gifted young composers who had gathered around Lorenz Lemlin, the director of the court chapel: Caspar Othmayr, Jobst vom Brandt, and Stephan Zirler. Long after their years of common study, these men remained attached to each other. Clemens Stephani of Buchau, in the preface to his posthumous edition of Brandt's *Geistliche Psalmen* of 1573, speaks of common plans made by Forster, Othmayr, and Brandt. Clemens Stephani was the editor of the 1568 print which, as mentioned above, contains the second publication of Ockeghem's canon. There can be little doubt that in his canon inscription on the nine Muses, he followed the example of Georg Forster.

Among the Protestant editors of Catholic church music, no activity was more common than the adapting of old texts and ideas to the new faith. Thus it is understandable that all allusions to the "chant mystique" of the angels should disappear, that the nine angelic choirs should be replaced, inadequately to be sure, by the nine Muses—Nuremberg was a center of humanism—and perhaps even that the composer should not be mentioned, since Ockeghem's name stood squarely and unambiguously for France and Catholicism, the former being highly unpopular in contemporaneous Germany, the latter being bitterly combated by the adherents of the new faith.

However, at least two fifteenth-century theorists wrote of the nine Muses in connection with the nine angelic orders. It is observed by Georgius Anselmus Parmensis (and by Franchino Gaffurio, quoting him in his *Theorica musicae*), after having described the angelic order residing in the ninth sphere: "Therefore some poets posited the Muse Urania there, she who, of the nine Muses, whom they imagined to be the daughters of Jupiter and Memory, embraces and exceeds every sweetness of expression." To be sure, this is only a juxtaposition, but it is not impossible that, in the form of the well-known treatise of Gaffurio, it could account for the replacement of the nine angelic orders by the nine Muses in the Nuremberg prints.

While painters and poets competed with each other in representing angelic concerts, Ockeghem's attempt to do the same in sound

52. Ibid., p. 31.
remained rather isolated. Only when we come to the seventeenth century do we find, in a fresh resurgence of musical mysticism, another instance of a thirty-six-voice canon written in imitation of the angelic choirs. Preceding the title page of Athanasius Kircher's *Musurgia universalis*, published in Rome in 1650, we see a full-page woodcut that combines pagan and Christian symbols in praise of music (Plate I). Below, on the left side, Pythagoras points with a

54. Dr. Kathi Meyer-Baer has kindly drawn my attention to Robert Wylkynson's nine-part *Salve Regina* in the Eton Choirbook (see Frank Ll. Harrison's edition, *Musica Britannica*, X, 90–100). In the note pertaining to it (p. 147) Professor Harrison writes as follows: "In each of the initial letters in the first opening, which were pasted in place, is written the name of one of the nine choirs of angels, thus: Quadruplex, Seraphyn; Triplex, Cherubyn; Primus Contratenor, Dominaciones; Tenor, Potestates; Primus Bassus, Angeli; Medius, Troni; Secundus Contratenor, Principatus; Inferior Contratenor, Virtutes; Secundus Bassus, Archangeli. At bottom of right-hand page: 'Antiphona hec Cristi laudem sonat atque 'Mari/ Et decus angelicis concinit ordinibus. . . '"

Wylkynson's *Salve Regina*, and in particular its initials and the accompanying poem, demonstrate the vigor of the ancient tradition of the nine angelic choirs, a tradition which is unquestionably responsible for the choice of the unusual number of nine voices.

The same composer wrote a thirteen-part round (Eton Choirbook, *Musica Britannica*, XII, 135) on the text of the Apostles' Creed. Each of the articles of the Creed is assigned to one of the Apostles in accordance with a pseudo-Augustinian tradition (see Harrison's note on p. 171 of the volume cited). The work begins with the words "Jesus autem transiens" from the Antiphon to the Magnificat on the Third Sunday in Lent. Certainly, the thirteen voices are meant to represent Jesus and the twelve Apostles. The two works, probably written in the first decade of the 16th century, corroborate our interpretation of Ockeghem's thirty-six-voice canon directly as well as indirectly—indirectly because of the possible connection between theological numbers and the number of voices in a composition.

Attention should likewise be drawn to a painting by Marten de Vos that reached a wide public in the form of an engraving by Johann Sadeler, dated 1587 (the best reproduction is Illus. 3 in the catalogue *Die Singenden in der graphischen Kunst: Ausstellung anlässlich des XV. Deutschen Sängerbundfestes in Essen, 1962*). The engraving carries, the following caption at the top: *Triumphus chori angelici de pace hominibus per incarnationem verbi divini facta*.

In this representation two spheres are contrasted: the lower sphere shows the shepherds astonished, indeed terrified, as the heavens open and the angel announces Christ's birth; the higher sphere shows a choir of nine angels surrounded by crowds of little putti. Each of the nine angels holds a sheet of music in legible notation with the text "Gloria in excelsis Deo." Max Seiffert, in his article "Bildzeugnisse des 16. Jahrhunderts für die instrumentale Begleitung des Gesanges und den Ursprung des Musikkupferstiches," *Archiv für Musikwissenschaft*, I (1918), 49–67; 56, identified the composition on the engraving as Andreas Pevernage's nine-part "Gloria in excelsis." A third reproduction and additional information are found in J. A. Steffled, *Andries Pevernage* (Louvain, 1943), opp. p. 91 (description on p. 92).

Finally, it should be mentioned that the Vienna choirbook MS. 11.778 and MS. Cappella Sistina 41 transmit the canon of the middle voices in the four-part Sanctus of Josquin's Mass *L'homme armé sexti toni* with the motto "Duo Seraphim clamabant alter ad alterum," after Isaiah 6:2–3 (see Helmuth Osthoff, *Josquin Desprez* [2 vols.; Tutzing, 1962–1965], I, 166).
wand to the cave where the mythical blacksmiths are at work, producing diverse intervals with their hammers of differing sizes and weights. His right arm rests on a rectangular block on which we see the harmony-producing numbers one to six—Zarlino’s famous *senario* containing the proportions of the consonances from the octave (1:2) to the minor third (5:6)—and three squares of differing dimensions, combined into an appealing geometric pattern. Proportion governs the world of sound as well as that of shape. At Pythagoras’ feet lie primitive ancient instruments. On the right, Music appears as a beautiful, richly adorned young woman—the Muses were invariably represented as women—holding a cornett in her hand, surrounded by the rich instrumentarium of the Baroque. Perched on her head is a nightingale, symbol of music in nature. The earthly group is designed to illustrate sketchily, in a bird’s-eye view, the progress of music from its mythical origins in the time of Pythagoras to what in 1650 was its present state, this being illustrated in the complexity and variety of the contemporary instruments.

Behind the figures of Pythagoras and Music there opens a view of a beach with the ocean framed by hills and distant mountains. Dancing on the beach are the diminutive figures of nine satyrs, and in the water are eight dancing sea-gods. Presumably, they all sing while they dance. From the most ancient times, in both Eastern and Western traditions, dancing and music have belonged together. Toward the right, a man leaning on a cane calls up to the mountain, “Pascite ut ante Boves.” A dotted line shows the angle of refraction at which the word “Boves” echoes back as “Oves” and comes down upon a shepherd walking with his sheep. This is evidently a little illustration of the working of acoustics, a subject in which Kircher was much interested. On the right, the winged horse rearing from

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55. The same figure of three squares appears in John Harington’s correspondence with Isaac Newton printed in Book X of John Hawkins’ *A General History of the Science and Practice of Music* of 1776 ([New York: Dover Publications, 1963], I, 410–11). Harington demonstrates the presence of all musical intervals from the minor second to the major seventh in this figure. Since the correspondence between Harington and Newton took place in the year 1693, whereas the same figure with the numbers 1, 2, 3, 4, 5, 6 appeared on the frontispiece of Kircher’s work of 1650, it is unlikely that Harington is indeed, as Hawkins believed, “the author of this discovery.”

55a. Aside from parts of the *Musurgia* dealing with acoustics, Kircher devoted a whole book to the subject—the *Phonurgia nova*, published in the year 1673.
the highest step of the staircase, as though ready to soar to the high cliff above, represents Pegasus, a companion of the Muses' and a symbol of immortality.

The lower sphere denotes the "musica instrumentalis." The globe floating in the center with the symbols of the zodiac, and the inscription from Job 38:37, "Quis concentum coeli dormire faciet? (Who shall still the harmony of the spheres?)," symbolizes "musica mundana," the music of the spheres. On the globe, Apollo, his streaming curls held together by a laurel wreath, is seated holding a kithara in his right hand and Panpipes in his left, representing string and wind instruments respectively.

Finally, crowning the music of the heavens and the mortals is the "musica coelestis" of the angels symbolized in the Canon Angelicus 36 Vocum in 9 Choros Distributus. The banderole with the canon and the inscription is held by two six-winged cherubim; a corona of angels surrounds the circle of the sun, with an inscribed triangle and three ears denoting the Trinity, and an eye symbolizing God.

Added to the inscription is the remark, "cuius resolutionem vide fol. 584" (Plate II). Here we find the name of the composer, the Roman master of canonic writing, Romano Micheli, and the resolution of the canon. Although nearly two hundred years had passed since the earlier thirty-six-voice canon was composed, that of Micheli is inferior in every respect to Ockeghem's. Since it is built on a triadic motif, contrapuntal problems are eliminated. It is easy to use the motif both recte and inverse, and to set nine choirs for four parts rather than four parts in nine-part canons. Nevertheless, Kircher invites the reader's admiration for the ingenuity with which the canon is set so as to avoid all obvious unisons—a result that Micheli achieves by clever use of pauses and of numerous octaves and double octaves. Unisons nevertheless occur throughout, although they are not allowed to begin at the same time.

Compared with the heavenly monotony of Romano Micheli's canon based on one single harmony, Ockeghem's canon seems rich indeed. It is hardly possible to exaggerate the immense difficulties

56. To do justice to the latter work we must take into account Laurence Feininger's critique of Riemann's transcription in Die Frühgeschichte des Kanons, pp. 45–48. Feininger has pointed out a series of errors in the original edition and in Riemann's transcription. Having studied the whole evolution of canonic writing, he has become convinced that Ockeghem is the author of the thirty-six-voice canon.
Artis Magnae Consoniæ, et Dissoniæ

Triginta sex vocibus, non enim videlicet Choris, decantandus.

Sanctus i, Sanctus ii, Sanctus iii, Sanctus iv, Sanctus v, Sanctus vi.

Vox per contrarios motus.

Sanctus, sanctus, sanctus, sanctus, sanctus, sanctus, sanctus, sanctus.

Sanctus i, sanctus ii, sanctus iii, sanctus iv, sanctus v, sanctus vi.

Vox per contrarios motus.

SANCTUS

Declaratis supraditibis Canonis:

Bassus incipit, ut iacet.

Tenor simul cum Basso, ad duodecimam canit, sed per contrarios motus.

Altus vero post unum tempus, ad diapason.

Canthus simul cum Alto ad decimam nonam, sed per illos contrarios motus.

Et sic primus Chorus constitutus est.

Secundi Chori partes quatuor, sedelicet Bassus, Tenor, Altus, Cantus, sedem modo canunt, quo superius, sed post duo tempora.

Tertii Chori partes quattuor, sedelicet Bassus, Tenor, Altus, Cantus, sedem modo canunt, qui superius, sed post duo tempora.

Quarti Chori partes post 6 tempora.

Quinti Chori partes post 8 tempora.

Sexti Chori partes post 10 tempora.

Noni Chori partes post 16 tempora.

Vox per contrarios motus.

PLATE II. Athanasius Kircher, Musurgia universalis, Rome, 1650, p. 584.
involved in setting a four-fold canon for nine parts each; and this is the problem that Ockeghem set for himself. The four canon melodies are so conceived that each bar contains an alternation between tonic and dominant, the former having two beats, the latter one; accordingly, they must be so written that the tones on beats one and two are F, A, or C, and so that the tones on beat three are C, E, or G. Variation is achieved by passing notes, by syncopated dissonance, by the use of rests, and by rhythmic diversity. At the same time, the four melodies must be so planned as to produce a sound harmonic combination. If anything speaks for Ockeghem's authorship, it is the indisputable rhythmic genius with which the canon is executed (see Plates III and IV). The result of the metric and rhythmic diversity achieved by the subtle use of rests, of triplets, of syncopations, and of carefully gradated movements of differing speeds is a total rhythmic flow of infinite suppleness, of constant motion and unending variety.

We have anticipated the problem of authenticity. Bertha Wallner, in her study on Virdung,\textsuperscript{57} was the first scholar to question Eitner's identification of the "Deo gratia[s]" in Petrejus' psalm collection with the famous thirty-six-voice canon by Ockeghem. She had discovered a letter by Sebastian Virdung in which the composition was described as consisting of six six-part canons. Since the letter was dated 1504, not even a decade after Ockeghem's death, Wallner took Virdung's testimony seriously, as is even more understandable if we consider that Virdung was a versatile and competent musician, theorist, composer, and singer at the court chapel of Heidelberg. Bertha Wallner's doubts were shared by Dragan Plamenac\textsuperscript{58} (and others) for the same reason.

But Virdung's letter allows a different interpretation. It is true that he wrote: "[A] master of all composers, whose name was Johannes Ockeghem, and, as I believe, he was a provost at Thueren [Tours] where St. Martin is [located], or a bishop. He made a motet for six voices. Each voice is a canon for six parts, and together thirty-

\textsuperscript{58} See his aforementioned essay and his recent article in \textit{MGG}, IX (1961), cols. 1825–38; 1834.
six voices.” Virdung added a brief description of the Missa prolationum and mentioned the Missa cuiusvis toni—all works that were available at the Heidelberg court chapel. But now comes the crux of the matter: referring to the canon and the Missa prolationum, he said: “[T]hese two things we have here with us and also a Mass c[uius]vis toni, but [they are] altogether incorrectly written”—a remark that explains the purpose of the letter, in which Virdung asked Count Palatine Ludwig of Bavaria to furnish the court chapel of Heidelberg with correct copies of the three works. If Virdung succeeded in acquiring a correct copy of the canon, then it is very likely that Georg Forster, first publisher of the canon, obtained his copy of it at the Heidelberg court chapel, where he had been a choirboy.

Virdung’s description of Ockeghem’s canon as consisting of six times six voices, then, was based on nothing more than imagination or possibly hearsay—not, at any rate, on his knowledge of the work from a correct copy. Virdung may not have had more than two or three parts of the canon. Or he may even have had all four of them; but he had never worked them out, since a canon for four times nine voices was so unprecedented an enterprise that he persuaded himself that two parts must be missing. Indeed, nothing in the letter refers to an actual performance of the canon. This eliminates the only objection so far raised to the identification of the “Deo gratia[s]” with Ockeghem’s thirty-six-voice canon.

But there is more to be said for Ockeghem’s authorship; if Virdung’s description of the canon may be dismissed on his own testimony that he did not possess a correct copy, his ascription of the canon to Ockeghem constitutes the earliest contemporary testimony for that composer’s authorship of a work that amazed contemporaries and later generations alike. All these pieces of evidence speak of one canon for thirty-six voices, not of two canons; all of them ascribe that one canon to Ockeghem. Taking into account

60. “[D]ye zwey Ding haben wir / hye aussen bey vns vnd ein mess c(uius)vis toni, aber aller Ding vngerecht geschrieben…” (ibid., p. 98).
Nouem sunt Musæ.
Omnia cum tempore.

E o gratia.


XL.
Nouem sunt Musæ.
Omnia cum tempore.

E o gratia 2.
XL.

Nouem sunt Mufæ.

Omnia cum tempore.

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XL.

Nouem sunt Mufæ.

Omnia cum tempore.
the extraordinary character of the undertaking as well as the unanimity of literary and theoretical evidence, the assumption that two such works existed may safely be ruled out. It is intrinsically unlikely; it is also completely unsupported by any evidence whatever. Finally, the musical character of the work in no way goes counter to Ockeghem's style or technique. He was interested in canonic writing; he never shied away from technical difficulties. The melodic and, in particular, the rhythmic ingenuity of the composition, always considering the unheard-of difficulty of constructing a fourfold canon having nine parts in each canon, makes for its easy acceptance into the body of Ockeghem's authentic works.

Ockeghem has often been characterized as a mystic among composers, but on no evidence other than a subjective interpretation of certain stylistic features of his music. In understanding the celebrated canon as Ockeghem's answer to the age-old challenge of visionaries, poets, and painters to the musicians, as his conception of the ecstatic song of the angelic choirs surrounding the Divine Majesty of God, we have tangible testimony of his mystical outlook. Far from being moved by the ambition to do the technically well-nigh impossible, he is motivated by the *visio Dei*. Such an understanding calls for a transformation of the traditional image of the composer (and the traditional evaluation of the canon) from one representing a proud exhibitionism of technique to one expressing the heroic humility of an artist willing to undergo the most extreme difficulties in the service of an idea, in an attempt to create in sound the effect of a mystical vision.

If Ockeghem's canon for thirty-six voices was an answer to the challenge of painters, poets, and visionaries, Josquin's canon for twenty-four parts may well have been an answer to Ockeghem's unprecedented enterprise. It has been observed by Riemann and others following him that Josquin's canon exceeds Ockeghem's in technical difficulty, since even though he reduces the number of written parts, he does engage all twenty-four voices simultaneously in the unfolding of the canon.

Josquin constructs his work in four canons of six parts each. Did

62. Ockeghem's great contemporary, Nicholas of Cusa, philosopher and mystic, wrote a treatise *De visione Dei*. 
he, too, have a symbolic idea in mind? We cannot write another essay here. Suffice it to formulate the following suggestion:

Josquin may have chosen the number twenty-four to represent the twenty-four elders of the Book of Revelation. Adam of Fulda mentions, next to the angels, the twenty-four elders singing God’s praise as they fall on their faces before His throne. Zarlino follows in this tradition when, in Chapter Two of the first book of his *Istitutioni harmoniche*, on the praise of music, he testifies that not only the angels, but also “the twenty-four elders stand before the immaculate Lamb, and with the sound of citharas and with high voices sing a new song to God on high.” The early Christian philosopher and theologian Origen made a significant distinction

63. The twenty-four elders come from the apocalyptic vision of St. John. In Revelation 4:4 they are described as follows: “And round about the throne were four and twenty seats: and upon the seats I saw four and twenty elders sitting, clothed in white raiment: and they had on their heads crowns of gold. . . .” Revelation 5:8 adds to this description: “. . . and four and twenty elders fell down before the Lamb, having every one of them harps, and golden vials full of odors, which are the prayers of saints.”

“These elders constitute a puzzle, since their exact counterparts are not to be found in Jewish sources. It is possible that John obtained the suggestion for these elders, who sing God’s praises, from a verse in the little apocalypse in Isaiah, ‘For the Lord shall reign in Zion and in Jerusalem and shall be glorified before the elders’ (Isa. 24:23 LXX). It has also been proposed that they represent the twelve tribes (or patriarchs) combined with the twelve apostles, as in 21:12-14, where the names of the twelve tribes are inscribed on the twelve gates of the New Jerusalem with those of the twelve apostles on the twelve foundations.”—*The Interpreter’s Bible*, ed. George Arthur Buttrick et al. (12 vols.; New York, 1952-1957), XII, 402. Many other suggestions follow in that work. But the decisive aspect of the twenty-four elders as rendered in medieval church sculpture is that they are human figures wearing crowns, holding musical instruments and chalices in their hands (see, e.g., the representation of the twenty-four elders at the abbey church of Moissac; cf. Meyer Schapiro, “The Romanesque Sculpture of Moissac,” *Art Bulletin*, XIII [1931], 249-350, 464-531, esp. 464 ff.).

That the iconographic tradition of the twenty-four elders had a long life can be seen from the *Adoration of the Lamb* by Jodocus a Winge, likewise engraved by Johann Sadeler and dated as of 1588 (see Seiffert, p. 57 of article cited in note 54). In the lower part of the picture, crowds of people worship the Lamb; in the higher part, God is seated in the center surrounded by clouds of angels. But in a semicircle grouped around Him sit the twenty-four elders with crowns on their heads, each one playing a harp. The picture, on the open pages of four tall part-books, carries the four-part motet *Dignus es*, by Andreas Pevernage.

It might be added that Aurelianus Reomensis, in the description of heavenly music referred to above, probably had the twenty-four elders in mind when he characterized the “heavenly citizens” as holding harps in their hands.


65. “Stanno poi li ventiquattro vecchi inanzi all’Agnello immaculato, & con suono di Cetere & altissime voci cantano all’altissimo Iddio vn nuovo canto” (p. 6).
between the singing of angels and that of men when he wrote: “To man, the singing of psalms is appropriate: but the singing of hymns is for angels and those who lead a life like that of the angels.”

According to the Alexandrian theologians, “the psalm corresponds to the *active* life and the hymn by contrast to the contemplative life.” Josquin chooses a Psalm—No. 90 in the Catholic Bible, No. 91 in Protestant versions—for his canon: “Qui habitat in adiutorio Altissimi, in protectione Dei caeli commorabitur.” The psalmist sings of God and of the angels (verses 11–12), but, throughout, he deals with the relation between God and man, and with the angels as God-appointed guardians of man. Whereas the text can hardly be made to fit Ockeghem’s canon, which, in consequence, sounds more like a twittering (“garritus”) of birds, Josquin so sets the text that it can be comprehended; it is human speech.

It is thus that Josquin’s canon for twenty-four parts may perhaps be understood as an answer to Ockeghem’s canon for thirty-six voices. Ockeghem sings of the angelic praise of God, Josquin of the human soul in search of God and in need of the angels. Josquin’s canon is a symbol of Christian humanism; Ockeghem’s, of Christian mysticism.

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66. Quoted in Peterson, *Angels and Liturgy*, p. 27.
67. Ibid.
68. After completing this study I found the article by Walther Krüger, “Ein neun­chöriger Sanctus-Kanon,” *Musik und Kirche*, XXV (1955), 180–83, which deals with Romano Micheli’s canon on the illustrated title page of Athanasius Kircher’s *Musurgia universalis*. Although I fully agree with Krüger’s interpretation of the canon—an interpretation that is of course suggested by Kircher himself—I believe that he is mistaken in identifying the figure seated on the globe with St. Cecilia, and consequently the middle area with church music. Kithara, Panpipes, and laurel wreath are fitting attributes for Apollo (who, with his long hair, indeed resembles a woman), but they are quite unsuitable for St. Cecilia, who converted from paganism to Christianity and who cannot therefore be represented through Greek instruments. Krüger’s interpretation of the three sides of music on Kircher’s title page as secular, ecclesiastic, and heavenly should be replaced by instrumental (and therefore human), cosmic, and celestial music. Strangely enough, Krüger mentions Ockeghem’s canon without the slightest hint at the possibility of a symbolic interpretation. He writes (p. 182): “Im übrigen ist daran zu erinnern, dass ja auch schon die Niederländer derartige vielstimmige Kanons geschrieben haben, man denke etwa an Ockeghems 36stimmige Motette mit sechs notierten Stimmen für je sechsfachen Kanon oder an das anonyme 36stimmige Deo gratias mit Kanonvorschrift ‘Novem sunt musae!’” Obviously, the author still believes in the existence of two different canons for thirty-six voices.