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## **De Plana Musica and Introductio Musice: A Critical Edition and Translation, With Commentary, of Two Treatises Attributed to Johannes De Garlanda.**

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*DE PLANA MUSICA AND INTRODUCTIO MUSICE:*  
A CRITICAL EDITION AND TRANSLATION, WITH COMMENTARY, OF  
TWO TREATISES ATTRIBUTED TO  
JOHANNES DE GARLANDIA

VOLUME I

A Dissertation

Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
in partial fulfillment of the  
requirements for the degree of  
Doctor of Philosophy

in

The School of Music

by  
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December 1996



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**For Michael and Nancy Gwee**

## PREFACE

Johannes de Garlandia (fl. ca. 1250, Paris) was the author of *De mensurabili musica* (ca. 1260), the earliest of the five main treatises on thirteenth-century polyphony. This treatise, in its introductory remarks, refers to a prior treatise on plainchant by the same author, and circumstantial evidence indicates that this plainchant treatise is *De plana musica*, a work transmitted in three sources, one of which also transmits *De mensurabili musica*. Like *De mensurabili musica*, the plainchant treatise *De plana musica* is a significant document in medieval music theory: it is one of the first treatises to mention B flat in the grave register and ee in the superacute; it may in fact transmit the earliest chromatic division of the monochord; it is also probably the first to describe the thirteen intervals within the octave in a systematic way.

Johannes de Garlandia has also been credited (probably incorrectly) with another plainchant treatise, *Introductio musice*. This substantial work discusses what it considers fundamental knowledge for a beginning musician, including the thirteen intervals within the octave. The attribution of *Introductio musice* to Johannes de Garlandia, its relationship with *De plana musica*, and, indeed, the very identity of Johannes de Garlandia, are issues that have long fascinated scholars.

In this dissertation I examine these issues in detail, and present the first critical edition and translation, with commentary, of *De plana musica* and *Introductio musice*. Based on a careful study of their contents and sources, I propose that the text of *Introductio musice* is considerably shorter than that presented in Coussemaker's edition (CS, 1:157–75); in addition, I propose that only four of the nine texts scholars have called "sources" of *Introductio musice* can actually be considered versions of the treatise. Of the other five, one is really an abridgement, and the remaining four are more correctly described as peripheral treatises that share material with *Introductio musice*; to these I add a fifth peripheral text.

I wish to thank Professor Jan Herlinger for his most inspiring guidance during this project and throughout the other stages of my work at Louisiana State University. I am also deeply indebted to Professor Robert Edgeworth for his invaluable and insightful advice. Professors Wallace McKenzie, Matthew Brown, Jennifer Brown, and Michael Book have taken unusual pains in serving on my dissertation committee; Professors Stephen Schierling, Kenneth Kitchell, Cornelia Yarbrough, and David Smyth, too, have been most generous with their time; to them all I convey my heartfelt appreciation.

I am grateful to my colleagues, Ms. Linda Cummins and Ms. Nancy Washer, for providing much needed humor and moral support.

I would also like to thank Mr. Neil McQuaig for being there when I needed him and for making his home a welcome refuge.

To my wife Frances I express my gratitude for her constant love and devotion. In ways both big and small, she made it all a little more meaningful, and a little more bearable.

My parents, Michael and Nancy Gwee, were with me from the very beginning. I thank them both most warmly and dedicate this dissertation to them.

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## ABSTRACT

Johannes de Garlandia (fl. 1250, Paris), author of the seminal *De mensurabili musica*, has been linked to two plainchant treatises, *De plana musica* and *Introductio musice*. This dissertation presents the first critical edition and translation, with commentary, of these two treatises. It includes an introduction, Latin texts of the two treatises with English translations in parallel columns, critical apparatus, commentary, and appendices.

*De plana musica* is transmitted in three sources, *Introductio musice* in four. The text of *Introductio musice* established here is shorter than that printed by Coussemaker (CS, 1:157–75), who included in the final portion of his text several independent short treatises. Also considered here as separate treatises are five other texts, hitherto described as sources for *Introductio musice*; one of these is an abridgement of *Introductio musice*, and the other four are peripheral treatises that share material with it. To the latter group is introduced one more treatise, Florence, Conventi Soppressi 388, fols. 56r–60v, described and presented here for the first time. All these texts are included in appendices; another appendix provides a critical edition of the *Ars contrapunctus secundum Philippum de vitriaco*, a treatise that parallels portions of *Introductio musice*. Paleographical evidence is used to date and determine the provenance of the pertinent manuscripts, one of which, Rio de Janeiro, Cofre 50.18, is described in detail here for the first time.

The dissertation also addresses issues of authorship and dating of *De plana musica* and *Introductio musice*, their content, and their relationship with each other and with other medieval treatises. It concludes that although *De plana musica* may well have been written by the author of *De mensurabili musica*, the same author could not have written *Introductio musice*.

## PART ONE

### INTRODUCTION

This dissertation examines two plainchant treatises that have been attributed to the thirteenth-century music theorist, Johannes de Garlandia: *De plana musica* and *Introductio musice*.<sup>1</sup> It presents for the first time critical editions of the two treatises, and discusses their significance, their links with Johannes de Garlandia, and their interrelation.

*De plana musica* is one of the earliest treatises to describe systematically thirteen intervals within the octave, and one of the earliest to describe a chromatic division of the monochord. The dissertation shows that *De plana musica* is also one of the first treatises to mention B flat in the grave register and ee in the superacute. It demonstrates that the text of *Introductio musice* presented by Coussemaker (CS, 1:157–75) on the basis of one manuscript—Saint Dié 42—includes about twice as much material as it should; the latter half of Coussemaker’s text actually consists of four independent treatises, two of them fragments. The dissertation also argues that only four of the nine texts hitherto described as “sources” for *Introductio musice* are really versions of the treatise; of the other five, one is an abridgement of the treatise and the remaining four are peripheral texts that share material with it.

Who wrote the two treatises? *De plana musica* is transmitted anonymously in all three of its sources; three of the four sources of *Introductio musice* cite as its author (or authority—not quite the same thing) Johannes de Garlandia, an important figure in medieval music theory for his seminal treatise in the theory of thirteenth-century polyphony, *De mensurabili musica*. This treatise, in its opening statement, alludes to a prior plainchant treatise by the same author, and circumstantial evidence indicates that this plainchant

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<sup>1</sup>“Plainchant” is here taken in the broad sense (normal during the Middle Ages) comprising not only chant per se, but the fundamentals of music as well, thus encompassing a wide range of topics, excluding only mensuration.

treatise is *De plana musica*. Small wonder, then, that the possible links between *De plana musica* and *Introductio musice* and Johannes de Garlandia have long fascinated scholars.

This dissertation takes the view that the circumstantial evidence linking *De plana musica* with Johannes de Garlandia is compelling, but that the evidence linking *Introductio musice* with this theorist is tenuous at best; equally tenuous is the claim made by several scholars that *Introductio musice* is derived from *De plana musica*. Based on an examination of the style and content of these two treatises, the dissertation rejects this claim.

Subsequent sections of part one of this dissertation discuss these issues in detail. The rest of this section categorizes the sources for the two treatises, discusses earlier editorial work, and introduces the theorist Johannes de Garlandia.

\* \* \*

*De plana musica* appears in three versions:<sup>2</sup>

- P Paris, Bibliothèque Nationale, Fonds latin 18514, fols. 85r–94r (France, late 13th to mid 14th century)
- V Vatican City, Biblioteca Apostolica Vaticana, Vaticano latino 5325, fols. 1r–11v (France, mid 14th century)
- Vb Vatican City, Biblioteca Apostolica Vaticana, Barberiniano latino 307, fols. 17r–19r (Italy, 14th to early 15th century).

*Introductio musice* appears in four versions:

- B Barcelona, Biblioteca Central, 883, fols. 71v–78r (Italy [?], 14th century)<sup>3</sup>
- W Washington, Library of Congress, Music Division, ML 171.J 6, fols. 56r–67v (Venice and Piacenza, 1465 and 1477)

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<sup>2</sup>The manuscripts were first described as sources for *De plana musica* by Rudolf A. Rasch, *Johannes de Garlandia en de ontwikkeling van de voor-Franconische notatie*, Musicological Studies No. 20 (Brooklyn: Institute of Mediaeval Music, 1969), pp. 43–49, and Erich Reimer, ed., *Johannes de Garlandia: De mensurabili musica: Kritische Edition mit Kommentar und Interpretation der Notationslehre*, 2 vols., Beihefte zum Archiv für Musikwissenschaft, vols. 10–11 (Wiesbaden: Steiner, 1972), vol. 1, pp. 5–8. They are here listed in probable chronological order. These new datings are based on paleographic considerations: see the individual manuscript descriptions for these and for alternative datings by other writers.

<sup>3</sup>Gallo, “Tra Giovanni di Garlandia e Filippo da Vitry,” p. 17, erroneously gives fol. 71r as the beginning of the treatise.

- D* Saint-Dié, Bibliothèque Municipale, 42, fols. 68r–76v (Belgium [?] or Italy [?], mid or late 15th century)
- R* Rio de Janeiro, Biblioteca Nacional, Cofre 50.18, fols. 610r–613v (Pavia and Rome, 1488, 1489, or 1490).

In addition, five treatises share material with *Introductio musice*; these are transmitted in four manuscripts:

- S*<sub>1</sub> Seville, Biblioteca Capitular y Colombina, 5 2 25, fols. 50r–53r (Italy, late 14th century): *Introducendis in arte musice*
- S*<sub>2</sub> Seville, Biblioteca Capitular y Colombina, 5 2 25, fols. 117v–119v (Italy, late 14th century): *Ad evidenciam tam mensuralis quam immensurabilis musice*
- L* Lucca, Biblioteca Governativa, 359, fols. 106r–110v (Italy, probably between 1425 and 1477): *Ars musice plane optima et perfecta*
- F* Florence, Biblioteca Medicea-Laurenziana, Conventi Soppressi 388, fols. 56r–60v (Italy, late 15th century): *Quod musica est veraciter canendi ad omnem perfectum cantum via*
- Pe* Perugia, Biblioteca Comunale Augusta, 1013, fols. 47r–68v (Venice, 1509): *Quaestiones et solutiones*.

Finally, the following manuscript contains an abridgement of *Introductio musice*:

- Vc* Vatican City, Biblioteca Apostolica Vaticana, Capponiani 206, fols. 39v–40v (Italy [?], mid to late 15th century [16th century?]): *Introducciones in arte musica [sic] plane*.

Scholars have hitherto referred to nine of these texts (excepting that transmitted in *F*, reported for the first time in this study) simply as “versions” or “sources” of *Introductio*

*musice*.<sup>4</sup> But as will become clear, only *B*, *W*, *D*, and *R* can correctly be called “versions” of the treatise.<sup>5</sup>

Neither *De plana musica* nor *Introductio musice* has been critically edited before, though in 1956 Gilbert Reaney presented the version of *De plana musica* in *Vb* as part of the *Ars nova* attributed to Philippe de Vitry.<sup>6</sup> In 1964 Reaney, in collaboration with André Gilles and Jean Maillard, reprinted this edition, together with editions of what they regarded as other versions of the *Ars nova*.<sup>7</sup> In this reprint the editors acknowledged that the first thirteen chapters (comprising the *Vb* version of *De plana musica*) “do not belong to the *Ars nova* tradition,” but chose to retain them for unspecified “practical reasons” and “partly because they are not unconnected with the history of the *Ars nova*.”<sup>8</sup> They did not refer to these chapters as a version of *De plana musica* or attribute them to Johannes de

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<sup>4</sup>The texts were identified as such by Coussemaker (*D*), Pietzsch (*B* and *S*<sub>1</sub>), Reese (*W*), Waite (*Vc*), Stevenson (*R*), and Gallo (*Pe*, *L* and *S*<sub>2</sub>) (Edmond de Coussemaker, ed., *Scriptorum de Musica Medii Aevi Nova Series a Gerbertina Altera*, 4 vols. [Paris: Durand et Pedone-Lauriel, 1864–76; reprint, Hildesheim: Olms, 1963; cited hereafter as CS], vol. 1, p. ix; Gerhard Pietzsch, *Die Klassifikation der Musik von Boetius bis Ugolino von Orvieto*, Studien zur Geschichte der Musiktheorie im Mittelalter [Halle: Niemeyer, 1929], p. 29; Gustave Reese, *Music in the Middle Ages* [New York: Norton, 1940], p. 287, n. 42; William G. Waite, “Two Musical Poems of the Middle Ages,” in *Musik und Geschichte: Leo Schrade zum sechzigsten Geburtstag* [Cologne: Volk, 1963], p. 19; Robert Stevenson, “A Neglected *Johannes de Garlandia* Manuscript (1486) in South America,” *Notes* 24 [1967–68]:11; Gallo, “Tra Giovanni di Garlandia e Filippo da Vitry: Note sulla tradizione di alcuni testi teorici,” *Musica Disciplina* 23 [1969]:15–18).

<sup>5</sup>In this dissertation the term “source” will be used only in a general sense to refer to the entire corpus of versions, peripheral treatises, and abridgement of *Introductio musice*.

<sup>6</sup>Gilbert Reaney, “The ‘*Ars nova*’ of Philippe de Vitry,” *Musica Disciplina* 10 (1956):13–31.

<sup>7</sup>Gilbert Reaney, André Gilles, and Jean Maillard, eds., *Philippi de Vitriaco Ars nova*, Corpus Scriptorum de Musica, no. 8 (N.p.: American Institute of Musicology, 1964). The various versions appeared previously in *Musica Disciplina* 10 (1956):5–53 (including an edition of the *Vb* version); 12 (1958):59–66; and 14 (1960):29–31. In addition the editors included a French translation of *Vb* (previously in *Musica Disciplina* 11 [1957]:12–30) and an edition of CS 3’s Anonymous 3.

<sup>8</sup>They explained the connection as follows: These chapters appear in *P*, which originated in the Collège de Navarre in Paris (for further information on the provenance of this manuscript see manuscript descriptions below). This college was “given the stamp of authority” by Philippe de Vitry, whom the editors believe may possibly have taught at the college. Reaney, Gilles, and Maillard, eds., *Ars nova*, p. 3.

Garlandia.<sup>9</sup> The *Vb* version of *De plana musica* is, however, the shortest of the three extant versions.<sup>10</sup> Christian Meyer has transcribed part of the version found in *P* (chapters 9–10 of the present edition).<sup>11</sup> The only edition of *Introductio musice* available at present is Coussemaker's transcription from the single manuscript *D* (CS 1, pp. 157–75). This transcription contains significant errors in both the text and musical examples: Coussemaker silently made several emendations, a number of which were unnecessary; he also transcribed some of the musical examples incorrectly, introducing errors where none existed in his source. Most significantly, Coussemaker's edition includes in *Introductio musice* what now appear to be separate treatises on *falsa musica*, rests, and modal theory (see pp. 33–34). The texts of these treatises, as they appear in the various manuscripts that transmit them, are included in Appendix B of this dissertation.

The version of *De plana musica* found in *Vb* is the only one to have been translated (as a part of the *Ars nova* in Reaney's edition).<sup>12</sup> *Introductio musice* has never been translated.<sup>13</sup>

The Johannes de Garlandia to whom the two treatises are attributed is the thirteenth-century Parisian theorist who wrote *De mensurabili musica*. This seminal work is

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<sup>9</sup>See pp. 6–8 for the work of Rudolf Rasch and Erich Reimer in establishing *De plana musica* as a separate treatise.

<sup>10</sup>It lacks not only an entire section concerning ratios, but a major part of the discussion of the thirteen intervals as well. Reaney, Gilles, and Maillard (*ibid.*, p. 4) as well as Sarah Fuller ("A Phantom Treatise of the Fourteenth Century? The *Ars nova*," *The Journal of Musicology* 4 [1985]:25) also point out that the text of *Ars nova* following *De plana musica* in this manuscript (fols. 19r–20v) is incomplete. For a summary of this article, see Fuller, "Did Philippe de Vitry Write a Treatise *Ars nova*?" in *L'enseignement de la musique au Moyen-Âge et à la Renaissance: Colloque organisé par la Fondation Royaumont, Rencontres de Royaumont* (Royaumont: Editions Royaumont, [1987]), pp. 29–30.

<sup>11</sup>"Le *De synemmenis* et sa tradition: Contribution à l'étude des mesures du monocorde vers la fin du xiii<sup>e</sup> siècle," *Revue de musicologie* 76/1 (1990):92–94.

<sup>12</sup>Leon Plantinga, "Philippe de Vitry's *Ars Nova*: A Translation," *Journal of Music Theory* 2 (1961):204–23. Plantinga based his translation primarily on the text from *Vb* and included the *De plana musica* portion from this manuscript.

<sup>13</sup>Except for Waite's and Pesce's translations of small portions from Coussemaker's edition: William G. Waite, *The Rhythm of Twelfth-Century Polyphony: Its Theory and Practice*, Yale Studies in the History of Music (New Haven: Yale University Press, 1954), p. 109; Dolores Pesce, *The Affinities and Medieval Transposition*, Music Scholarship and Performance (Bloomington: Indiana University Press, 1987), p. 52.

the earliest of the five main treatises on thirteenth-century rhythmic notation,<sup>14</sup> and the one treatise that can be securely attributed to him. Erich Reimer has edited *De mensurabili musica* from three versions:<sup>15</sup>

V, fols. 12v–30v

Bruges, Stadsbibliotheek, 528, fols. 54v–59v (13th to 14th century)

Paris, Bibliothèque Nationale, Lat. 16663, fols. 66v–76v (between 1272 and 1304).

The third of these sources, Paris, Lat. 16663, contains for the most part (fols. 1r–94r) a large compilation by Jerome of Moravia called *Tractatus de musica* (Treatises on Music). This compilation includes a version of *De mensurabili musica*, which Jerome attributes to Johannes de Garlandia.<sup>16</sup>

#### AUTHORSHIP AND DATING OF *DE PLANA MUSICA* AND *INTRODUCTIO MUSICE*

##### *De plana musica*

Though attribution of *De plana musica* to Johannes de Garlandia is based on circumstantial evidence, the evidence is strong. Introductory remarks in all three manuscript versions of Johannes de Garlandia's *De mensurabili musica* refer to a treatise on plainchant:

Bruges, Stadsbibliotheek, 528, fol. 54v:

Dicto de musica immensurabili nunc tractandum est de ipsa mensurabili que organum nuncupatur. Habito *de ipsa plana musica* que immensurabilis dicitur, nunc est presens intentio de ipsa mensurabili que organum quantum ad nos appellatur. . . .

Unmeasured music having been spoken of, now measured music, which is called organum, needs to be dealt with. *Plana musica* (which is called unmeasured) having

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<sup>14</sup>The other four works are the treatises of Lambertus, the Anonymous of St. Emmeram, Franco of Cologne, and Anonymous 4 (so called because this author was the fourth anonymous writer whose treatise was edited by Coussemaker in CS, 1:327–65).

<sup>15</sup>Reimer, ed., *De mensurabili musica*, vol. 1, pp. 18–26.

<sup>16</sup>Fol. 66v, Incipit: "Sed quoniam defectuosa est ideo posicionem que Iohannis de garlandia est subvectimus. Habito inquit Iohannes [But because we have not done so, we now convey the position (treatise?) of Johannes de Garlandia on this matter. Johannes says, "Having . . ." ] . . ." Fol. 76v, Explicit: ". . . Hec posicio Iohannis dicti de garlandia de musica mensurabili [This is the position (treatise?) on measurable music held by Johannes, called "De Garlandia" (Translations of these and subsequent quotations in Latin are mine unless otherwise indicated)]." The other two versions of the treatise are anonymous. Coussemaker, in CS, 1:97–117, edited Jerome of Moravia's version as *De musica mensurabili positio*.

been treated, it is presently my intention to deal with measured music, which is called among us organum. . . .

Paris, Bibliothèque Nationale, fonds latin 16663, fol. 66v:

Sed quoniam defectuosa est ideo posicionem que Iohannis de garlandia est subvectimus. Habito inquit Iohannes *de cognitione plane musice* et omnium specierum soni dicendum est de longitudine et brevitate eorundem, que apud nos modus soni appellatur. . . .

But because we have not done so, we now convey the position of Johannes de Garlandia on this matter. Johannes says, "Having treated of the cognition of *plana musica* and of all its species of sound, we must now speak of the longness and shortness of the same, which among us is called the mode of sound." . . .

V, fol. 12v:

Habito *de ipsa plana musica* que immensurabilis dicitur, nunc est presens intentio de ipsa mensurabili que organum quantum ad nos appellatur. . . .

*Plana musica* (which is called unmeasured) having been treated, it is presently my intention to deal with measured music, which is called among us organum. . . .

Based on the participial forms *dicto* ("spoken of") and *habito* ("treated") in these passages, we can conclude that they refer to a discussion of plainchant that preceded the discussion of measured music we know as *De mensurabili musica*.<sup>17</sup>

In two of the above manuscripts, Bruges and V, these passages are in fact each preceded by a plainchant treatise. The plainchant treatise in Bruges (fols. 51v–54r followed by marginalia on fols. 51v–53r) appears to be derived substantially from Boethius's *De institutione musica* and Guido of Arezzo's *Micrologus*; the plainchant treatise in V (fols. 1r–11v) is an anonymous text containing a considerable amount of independent material. If Johannes de Garlandia in *De mensurabili musica* was actually referring to a single plainchant

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<sup>17</sup>Later in *De mensurabili musica*, the opening sentences of chapters 11 and 12 use *habito* and *dicto* respectively to refer to the subject matter of the previous chapter: "Sequitur de discantu. *Habito* superius de modo, . . . modo habendum est de discantu [The discussion on discant follows. Having treated above on mode, . . . now discant has to be treated]." "*Dicto* de discantu dicendum est de copula [Having spoken on discant, now copula has to be discussed], . . ." (Reimer, ed., *De mensurabili musica*, vol. 1, pp. 74, 88).



treatise that he had written, it is much more likely that it was the treatise from *V* than from Bruges.<sup>18</sup>

Rudolf Rasch, and afterwards Erich Reimer, showed the concordance of the text in *V*, fols. 1r–11v, with the texts, both also anonymous, in *P*, fols. 85r–94r, and *Vb*, fols. 17r–19r.<sup>19</sup> Rasch gave this plainchant treatise the title *De plana musica*, and both writers argued strongly that *De plana musica* is indeed the complementary work referred to in *De mensurabili musica*.<sup>20</sup> Besides the joint transmission of *De plana musica* with *De mensurabili musica* in *V*, Rasch based his identification and attribution of *De plana musica* on textual correspondences between the chapter on intervals in the version of *De plana musica* transmitted in *V* and all versions of *De mensurabili musica*.<sup>21</sup> Reimer claimed that further

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<sup>18</sup>As Jan Herlinger has pointed out, pairings of non-mensural and mensural treatises, or the division of a single treatise into two complementary parts dealing respectively with plainchant and mensuration were not uncommon during the late thirteenth and early fourteenth centuries. Hence the occurrence of such a pairing among the works of Johannes de Garlandia would not be unusual and would represent an early example of this tradition. Gallo, “Tra Giovanni de Garlandia e Filippo da Vitry,” pp. 14–15, however, believes that the opening statement referred to the treatise in the Bruges manuscript derived from Boethius and Guido. For further discussion see text below.

<sup>19</sup>Rasch, *Iohannes de Garlandia*, pp. 43–49; Reimer, ed., *De mensurabili musica*, vol. 1, pp. 5–8.

<sup>20</sup>Rasch, *Iohannes de Garlandia*, p. 43, gave the incipit of *De mensurabili musica* as “Habito de plana musica” and presumably named this treatise accordingly (this treatise would fit the one Coussemaker, in *Scriptores*, vol. 1, p. ix, referred to as “Tractatus quidam de cantu plano [A certain treatise on plain song]”). As given above, none of the incipits of the three versions of *De mensurabili musica* correspond exactly to the wording as given by Rasch. I have, nevertheless, adopted the name Rasch gave this treatise.

<sup>21</sup>Rasch, *Iohannes de Garlandia*, p. 46. Cf. *V*, fols. 5v, 9v: “Sequitur de consonanciis in eodem tempore uel in diuersis temporibus . . . Est etiam sciendum quod omnes consonantie possunt adiungi dyapason ut si diceretur et diceret semitonium cum dyapason, tonus cum dyapason et cetera, ut cum accurit ad bis dyatessaron similiter de bisdyapason sicut et de duplici et sic omnes consonantias in infinite possunt ascendere [Now there follows a discussion of consonances occurring at the same time or at different times . . . It must be known that all consonances can be joined to the diapason, so that they are called semitone plus diapason, whole tone plus diapason, etc., and just as there is the twice-diatessaron, similarly there is the twice-diapason, or doubled-diapason, and thus all consonances can ascend infinitely]. . . .”

Reimer, ed., *De mensurabili musica*, vol. 1, pp. 67, 72: “Sequitur de consonantiis in eodem tempore. Consonantiarum quaedam dicuntur concordantiae, quaedam discordantiae. . . . Iste species dissonantiae sunt septem, . . . et possunt sumi usque in infinitum sicut et concordantiae, scilicet semitonium cum diapason, tonus cum diapason, tritonus cum diapason etc., usque ad bis diapason et ulterius quantum placuerit [Now there follows a discussion of consonances occurring at the same time. Among the consonances, some of them are called

evidence can be found in citations by other theorists linking Johannes de Garlandia with concepts that can be found in *De plana musica*. The theorists are Jerome of Moravia (see parallel readings to *De plana musica* 1.2), Johannes de Grocheio (see *De plana musica* 2.5), Frater Guido (in the unedited treatise *Tractatus de tonis a fratre guidone monacho monasterii sancti dionysii in francia compilatus*; see *De plana musica* 2.11), and Rogerius Caperonii (in the unedited treatise *Comentum super cantum*, Catania, Biblioteche Riunite Civica e A. Ursino Recupero, D 39, fol. 126v).<sup>22</sup>

If *De plana musica* was indeed the plainchant treatise referred to in *De mensurabili musica*, a dating of the former can be made on the basis of the dating of the latter. Jeremy Yudkin has dated *De mensurabili musica* ca. 1260.<sup>23</sup> The wording with which *De mensurabili musica* refers to *De plana musica*, corroborated by the latter's physical location in relation to the former in *V*, suggests that *De plana musica* was written not long before *De mensurabili* concordant, others discordant. . . . There are seven dissonant species, . . . and they can be placed all the way to infinity, just as can the concordances, to wit, the semitone plus diapason, whole tone plus diapason, tritone plus diapason, etc., all the way to the twice-diapason, and further as one wishes]."

<sup>22</sup>An excerpt from the last-named reads: "Et ego Rogerius caperonij anglicus In opere presenti iuxta meum posse sensum et literaturam ipsius Guidonis supra dicti nec non magistri mei Reverendi Johannis de garlandia prosequi temptabo [I, Roger Caperon the Englishman, shall try, in the present work, to be able, by my understanding and by my writing, to imitate that of the abovementioned Guido, as well as that of my master the Reverend Johannes de Garlandia]." James Haar, "Roger Caperon and Ramos de Pareia," *Acta Musicologica* (1969):31, did not know of any treatise of Johannes de Garlandia to which this statement could have been referring. Reimer, *De mensurabili musica*, vol. 1, p. 10, however, claimed that Rogerius's treatise corresponds in construction and subject matter to *De plana musica*. On the contrary, it would appear that the treatise more closely resembles *Introductio musice* in these respects.

The association of *De plana musica* with *De mensurabili musica* is marked by the complementary treatment of the subject of the thirteen intervals in the two treatises (cf. *De plana musica*, chapter 16 and *De mensurabili musica*, chapter 9 [Reimer, ed., *De mensurabili musica*, vol. 1, pp. 67–72]). *De mensurabili musica* is also the only one of the five Notre Dame mensural treatises that appears incomplete in its discussion of intervals. In addition, *De mensurabili musica* discusses ratios in the chapter following to show the relation between an interval's ratio and its degree of consonance or dissonance. This discussion presupposes a prior knowledge of number theory, one which is thoroughly explained in *De plana musica*.

<sup>23</sup>Jeremy Yudkin, ed., *De musica mensurata: The Anonymous of St. Emmeram, Complete Critical Edition* (Bloomington & Indianapolis: Indiana University Press, 1990), p. 33, n. 64. He based this on the dating of the treatise by the Anonymous of St. Emmeram, which he argued to be 1279, and which in turn determines the dating of Lambertus's treatise, which he believes to be ca. 1260–79.

*musica*. Thus, if Yudkin's date is correct, *De plana musica* can be dated not long prior to ca. 1260.

### *Introductio musice*

The authorship and dating of *Introductio musice* involve different issues. The author's name "Johannes de Garlandia" (or orthographic variants) appears in only three of the four manuscript versions:

W, fol. 56r:

*Ex tractatu* Magistri Iohannis de Galadia de musica plana; fol. 70r: Explicit ars cantus plani Magistri Iohannis de Galadia.

Here ends the art of plainsong of Magister Johannes de Galadia.

R, fol. 610r:

In nomine domini incipit introductio musice plane et etiam mensuralis *secundum* magistrum Iohannem de Galandia musice sapientissimorum.

In the name of the Lord here begins the introduction to plainsong and also to mensural music according to Magister Johannes de Galandia, one of the wisest in music]; fol. 617r: Explicit musica plana magistri Iohannis de Galandia [Here ends *Musica Plana* of magister Johannes de Galandia.<sup>24</sup>

D, fol. 68r:

Incipit introductio musice plane et eciam musice mensurabilis *secundum* magistrum Iohannem de Galandia musyce sapientissimum.

Here begins the introduction to plainsong and to measured music according to Magister Johannes de Garlandia, the wisest in music. (This source contains no explicit)

Earlier scholars like Coussemaker, Fétis, Riemann, together with more recent ones like Waite, Stevenson, and Pesce<sup>25</sup> accepted the attributions in these sources at face value (see below). But the expressions *ex tractatu* and *secundum* more likely indicate an attribution of the work to Johannes de Garlandia *causa auctoritatis*, or else a reference to the teachings of

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<sup>24</sup>See p. 35 regarding the validity of the above two explicits with respect to the treatise *Introductio musice*.

<sup>25</sup>Pesce, *Affinities*, pp. 52, 81. For references to the other abovementioned scholars see text below.

Johannes de Garlandia. If the latter case, those teachings might have been transmitted orally through lectures or as a written treatise.<sup>26</sup>

The dating of the earliest manuscript source, *B* (14th century—see the manuscript descriptions below), establishes a *terminus ante quem*. No further external evidence is available for dating *Introductio musice* more precisely.

#### SCHOLARSHIP ON JOHANNES DE GARLANDIA AND HIS WORKS

The uncertainties surrounding the provenance and authorship of the two treatises discussed above parallel the uncertainties surrounding Johannes de Garlandia himself and the general body of works that have been associated with his name. Paucity of data on the theorist and anomalies in the transmission of these works have led to unfounded speculations by scholars from Gerbert and Coussemaker to the present, in particular Coussemaker's "two-Garlandia" hypothesis. Despite important discoveries, not all the issues have been satisfactorily resolved. The following is a synopsis of this scholarship that began with Gerbert and Coussemaker; it is presented chronologically in order clearly to delineate the unfolding of hypotheses and controversies. The main issues are the identity of Johannes de Garlandia and the attributions of various works to him, particularly with regard to the "two-Garlandia" hypothesis.

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In 1784 Martin Gerbert attributed certain fragments on organ pipes and bells to a Canon Gerlandus who had worked in Besançon during the twelfth century.<sup>27</sup> It was this Canon Gerlandus whom Coussemaker, in his *Histoire de l'harmonie au moyen age* (1852) identified as the author of Jerome of Moravia's redaction of *De mensurabili musica*.

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<sup>26</sup>For discussions on attributions *causa auctoritatis* and references to teachings and ideas of an authority see A. J. Minnis, *Medieval Theory of Authorship: Scholastic literary attitudes in the later Middle Ages*, 2nd edition (Philadelphia: University of Pennsylvania Press, 1988), esp. Introduction, chs. 1–2; Gilbert Reaney, "The Question of Authorship in the Medieval Treatises on Music," *Musica Disciplina* 18 (1964):7–17.

<sup>27</sup>Martin Gerbert, ed., *Scriptores Ecclesiastici de Musica Sacra Potissimum*, 3 vols. (St. Blaise, 1784; reprint, Hildesheim: Olms, 1963; cited hereafter as GS), vol. 2, pp. 277–78.

Coussemaker also specifically stated that this author was not the English poet and grammarian John of Garland known to have lived during the thirteenth century. Although John of Garland wrote a great number of works, Coussemaker could find none of these that dealt with music.<sup>28</sup>

When he published his edition of Jerome's redaction (as *De musica mensurabili positio* [CS, 1:97–117]) in 1864, however, Coussemaker questioned his own earlier identification of the author of *De musica mensurabili positio*, now identifying Johannes de Garlandia as a certain teacher of grammar and rhetoric in the university community of Paris who took his surname from the *clos de Garlande*, where he taught grammar and logic. This teacher of grammar and rhetoric was apparently John of Garland, whom Coussemaker had

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<sup>28</sup>*Histoire de l'harmonie au moyen age* (Paris, 1852; reprint, Hildesheim: Olms, 1966), pp. 47–48.

I shall refer to this English poet and grammarian as John of Garland, to distinguish him from Johannes de Garlandia the music theorist. John of Garland wrote at least eleven literary works, eight grammatical and rhetorical works, six lexica, and numerous other works of varying authenticity. His works were almost exclusively pedagogical in nature and written in a florid style. There are indications that he was particularly keen on the teaching of Latin and versification, and that his teaching emphasized an accurate historical view with concern for dates and facts.

From his writings we learn that he was born in England around 1195, and was probably still living in 1272. As a student he was influenced by an "Oxford School" of masters who stressed the natural sciences and languages; the most prominent masters of this school were Robert Grosseteste and Roger Bacon. He probably left England in 1217 to begin teaching at the University of Paris. John preferred to live in France rather than in England, although he always spoke well of both countries.

When a riot suspended lectures at the university in 1229, and when at the same time opportune political circumstances provided for the creation of a new university at Toulouse, John left for the latter to teach grammar. But ideological differences between him and the authorities forced him to leave Toulouse after three years. After tribulations at sea John finally returned to Paris around 1232, at which time the University of Paris reopened.

In his *Ars lectoria ecclesie* (*Accentarium*) John tells us that some of his works were published in 1234 and that he was publicly recognized in Paris. In his *Morale scolarium* (1241) he relates that he visited England; he probably made this trip after his return to Paris in 1232.

For further details of his life and works see Louis John Paetow, ed., *Morale Scolarium of John of Garland (Johannes de Garlandia), A Professor in the Universities of Paris and Toulouse in the Thirteenth Century*, *Memoirs of the University of California*, vol. 4, no. 2, *History*, vol. 1, no. 2 (Berkeley, California: University of California Press, 1927), pp. 71–145.

earlier dismissed as the possible author.<sup>29</sup> He also mentioned the opinion of Anselm Schubiger, a Swiss music scholar, composer, and librarian at Einsiedeln, that a certain treatise on counterpoint in the manuscript Einsiedeln, Stiftsbibliothek, 689, *Optima introductio in contrapunctum pro rudibus*, could be attributed to a Johannes de Garlandia, “physician, as well as poet and grammarian.”<sup>30</sup>

Coussemaker then listed six works or groups of works he believed could be attributed to Johannes de Garlandia:

1. *De musica mensurabili positio* (Paris, Bibliothèque Nationale, fonds latin 16663, fols. 66v–76v),
2. “the same treatise with varied readings from the Vatican codex” (V fols. 12v–19v)<sup>31</sup>
3. *Introductio musice plane et etiam mensurabilis* (D, fols. 68r–83r)<sup>32</sup>
4. *Optima introductio in contrapunctum pro rudibus* (Einsiedeln, Stiftsbibliothek, 689, fols. 45rv)<sup>33</sup>

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<sup>29</sup>CS, 1:viii–x.

The *clos de Garlande* was an enclosure comprising as its principal streets the rue Saint-Jacques, the rue du Fouarre, and the rue de Garlande (a name later corrupted to Galande or Gallande). It was the site of some of the oldest schools of the University of Paris and was named in honor of the twelfth-century archdeacon Etienne de Garlande, protector of the university during its early years. (Information taken from Peter Lefferts, ed., *Robertus de Handlo: Regule and Johannes Hanboys: Summa*, Greek and Latin Music Theory [Lincoln and London: University of Nebraska Press, 1991], p. 25, n. 71, and Paetow, ed., *Morale Sclarium*, pp. 87–88)

Coussemaker derived his reference to the teacher of grammar and logic from Victor Le Clerc, “Jean de Garlande, poète et grammarien (Addition au tome VIII, p. 83–98),” *Histoire littéraire de la France*, 21 (1847):369–72. It was Le Clerc (ibid., p. 372) who suggested, correctly, that John of Garland derived his surname in this way: in *Exempla honestae vitae* (II: 94–97, 196–99), one of his books on grammar and rhetoric, John of Garland himself tells us that he took his surname from the *clos de Garlande*. Although it is plausible that the theorist Johannes de Garlandia took his surname in the same way, there is no evidence for this.

<sup>30</sup>CS, 1:ix, n. 2.

<sup>31</sup>Coussemaker edited only a part of this treatise, which actually spans fols. 12v–30v of this manuscript. Nos. 1 and 2 of Coussemaker’s list, together with another reading from Bruges, Stadsbibliotheek, 528, folios 54v–59v, have been edited by Erich Reimer (1972) as *De mensurabili musica*.

<sup>32</sup>As discussed elsewhere (pp. 5, 33–34, 85–86), only the text in fols. 68r–76v appears to belong to *Introductio musice*.

<sup>33</sup>Coussemaker, CS, 1:ix, also mentioned Pisa, Biblioteca Universitaria, 606, (pp. 51–50) as a source. His edition of this treatise is based, however, only on the Einsiedeln manuscript.

5. "a certain treatise on plainchant that Johannes de Garlandia himself, in the incipit to *De musica mensurabili positio* (and also in the second treatise in this list, as he indicates on p. ix, n. 5) clearly states he has written,"<sup>34</sup>
6. "some excerpts from a work that Robertus de Handlo and Johannes Hanboys ascribe to Johannes de Garlandia."

In his first volume Coussemaker edited five of these works: *De musica mensurabili positio* (pp. 97–117), the second treatise on his list which he called *Johannis de garlandia De musica mensurabili* (only partially, pp. 175–82), "*Introductio musice et etiam mensurabilis*" (pp. 157–75), and the treatises of Handlo (pp. 383–403, based on London, British Library, Cotton Tiberius B.IX) and Hanboys (pp. 403–448, based on the only extant source, London, British Library, Additional 8866).

Coussemaker observed that the doctrines in the Pisa and Einsiedeln codices, and the excerpts in Handlo and Hanboys, differed widely from those transmitted by Jerome of Moravia and in the Vatican manuscript, and in a way that seemed to reflect about a century's development. He concluded that there must have been two writers with the name Johannes de Garlandia. If so, the treatises written "before the end of the twelfth century" (presumably nos. 1 and 2, but he might also have been referring to nos. 3 and 5) "appear to be" attributed to Johannes de Garlandia, teacher in a Parisian school, those written "at the end of the thirteenth century" (presumably nos. 4 and 6) to "some other" Johannes de Garlandia.<sup>35</sup>

In his introduction to *Optima introductio de contrapuncto*, which he published in 1869 (CS, 3:vii–viii), Coussemaker referred to his two-Garlandia theory that he had posited in his first volume. Here he stated he had shown that the treatise excerpted from Jerome of

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<sup>34</sup>In his introductory comments to *Introductio musice*, CS, 1:xiii–xiv, Coussemaker expressed his certainty that Johannes de Garlandia had written a work on plainchant on the basis of the opening statements of treatises nos. 1 and 2. He declared, however, that while it was possible *Introductio musice* was that work, he dared not assert this ("quamvis hoc sit probabile, asserere non audemus").

<sup>35</sup>Cf. Oswald Koller, "Garlandia, Joannes de," *Biographisch-Bibliographisches Quellen-Lexikon*, ed. Robert Eitner, 10 vols. (Leipzig: Breitkopf & Härtel, 1900–1904), vol. 4, pp. 157–58.

Moravia's work and that which Handlo and Hanboys transmitted could not have been written by the same person. In this introduction he gave biographical information on the *prior Johannes de Garlandia* that now clearly identifies him with John of Garland, the poet and grammarian. His source here for the biography of John of Garland was A. E. Gatiennard, "Jean de Garlande, docteur-régent de grammaire à l'université de Toulouse de 1229 à 1232," *Revue de Toulouse* (1866).<sup>36</sup> He attributed the *Optima introductio de contrapuncto*, which he dated to the fourteenth century, to the *alter Johannes de Garlandia*, describing him also as a teacher in a Parisian school.

By giving biographical information on the supposed author of *De musica mensurabili positio* (the treatise from Jerome's work) Coussemaker was apparently revising the late eleventh century dating he had given this work (and, by implication, the second work in his list above) in his first volume, for now he was saying that this *prior Johannes de Garlandia* was born in England around 1190 and came to Paris around 1210.<sup>37</sup> His dating of the *Optima introductio* here is also a revision of his earlier dating (this has proved a source of confusion for Paetow: see p. 17, n. 46). In the third volume Coussemaker also published *Ars nova Philippi de vitriaco* (based on Padre Martini's copy of *Vb*) and *Philippi de vitriaco Ars contrapuncti* (based on four manuscripts: *Vv*, *E*, *F*, and Padre Martini's copy of *F*, now Bologna, Civico Museo Bibliografico Musicale, B 1).<sup>38</sup>

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<sup>36</sup>The details on the "*prior Johannes de Garlandia*" concord more or less with the biography of John of Garland as outlined by Paetow (see p. 12, n. 28). In his first volume Coussemaker's identification of Johannes de Garlandia with the poet and grammarian is inferable but less clear.

<sup>37</sup>Cf. the dates of these events given on p. 12, n. 38, based on Paetow's study.

<sup>38</sup>See Appendix D for a critical edition of *Ars contrapunctus secundum Philippum de vitriaco* based on the following four sources:

<i>Va</i>	Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 5321, ff. 23r–25v (Italy, late 14th to early 15th century)
<i>E</i>	Einsiedeln, Benediktinerkloster 689, ff. 46r–50r (Italy, early 15th century)
<i>Vv</i>	Rome, Biblioteca Vallicelliana, B 83, ff. 1r–8v (Italy, mid 15th century)
<i>Fl</i>	Florence, Biblioteca Medicea-Laurenziana, Plut. 29.48, ff. 86r–88v (late 15th century).



A few years later, François-Joseph Fétis, in his *Biographie universelle des musiciens et bibliographie générale de la musique* (1874), discussed the identification of Johannes de Garlandia with Jarlandus Chrysopolitanus (Jarland of Besançon), and concluded that there was no evidence to support this.<sup>39</sup> Fétis, however, erroneously identified Jarlandus with the Canon Gerlandus whom Gerbert had published and to whom Coussemaker initially attributed *De musica mensurabili positio*.<sup>40</sup>

Fétis also discussed Jerome's redaction of Johannes' treatise, emphasizing that Jerome was a compiler and not a copyist. Fétis declared that this treatise, together with "an anonymous manuscript of the work of Garlande at the Vatican library" (i.e., V) and "a fifteenth century manuscript" at the public library of Saint-Dié (i.e., D) "will produce undoubtedly a good text."<sup>41</sup>

Coussemaker's conjectures have remained influential up to the present, in some manifestation or other. Subsequent modifications and discoveries are all based upon the framework of these conjectures. In 1898 Hugo Riemann proposed a modification to Coussemaker's two-Parisian Garlandia theory. In *Geschichte der Musiktheorie im IX.-XIX. Jahrhundert* he suggested that the second of Coussemaker's Parisian authors was not only the authority cited by Handlo and the author of *Optima introductio de contrapuncto*, but the author of *Introductio musice* as well.<sup>42</sup>

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<sup>39</sup>*Biographie universelle des musiciens et bibliographie générale de la musique*, 2nd ed., 8 vols., 2 supplements (Paris: Firmin-Didot, 1874), vol. 3, p. 409a, s.v. "Jean de Garlande." Jarlandus was a teacher and canon who lived in the first half of the twelfth century.

<sup>40</sup>*Ibid.*, p. 410. Paetow, ed., *Morale Sclarium*, p. 143, n. 18, pointed out that Jarlandus was often confused with Canon Gerlandus, "and thus with John of Garland" (see also Le Clerc, "Jean de Garlande," p. 372). The similarity in their names and their coincidental residence in Besançon may have been contributing factors.

<sup>41</sup>*Biographie universelle*, vol. 3, p. 410a. Coussemaker, *L'Art harmonique aux xii<sup>e</sup> et xiii<sup>e</sup> siècles* (Paris: Durand and Didron, 1865), pp. 162–63, criticized Fétis's reasoning that Jerome's inclusion of Johannes's treatise was as the work of a compiler, maintaining that this version was complete.

<sup>42</sup>*Geschichte der Musiktheorie im IX.-XIX. Jahrhundert* (Leipzig: Hesse, 1898; 2nd ed., Berlin: Hesse, 1920; 2nd ed. rep. Hildesheim: Olms, 1961), pp. 241, 515 (note). He referred to Coussemaker's "alter Garlandia" (p. 348) also as the "zweiter" (pp. 238, 515 [note]).

Riemann arrived at this conclusion by showing what he believed to be the textual relationship between *Introductio musice*, *Optima introductio de contrapuncto*, and *Ars contrapunctus secundum Philippum de vitriaco*; this latter treatise consists of three sections dealing with intervals, *falsa musica*, and counterpoint respectively. Riemann based his argument upon the premise that the third, final, section of this treatise derived from *Optima introductio de contrapuncto*.<sup>43</sup> Subsequently he showed that the first two sections dealing with intervals and *falsa musica* of *Ars contrapunctus secundum Philippum de vitriaco* derived from *Introductio musice*.<sup>44</sup> He concluded, not entirely logically, that *Introductio musice* was also written by the "second Garlandia," since *Ars contrapunctus secundum Philippum de vitriaco* derived from "both" *Introductiones* of Johannes de Garlandia.<sup>45</sup>

When Louis John Paetow published *The Morale Sclarium of John of Garland* (1927) he investigated and clarified to some extent the life and works of the poet and grammarian John of Garland: the poet and grammarian was himself the subject of several misidentifications and misattributions. Paetow considered it possible that John of Garland was identical with the Johannes de Garlandia cited in *Ars contrapunctus secundum Philippum de vitriaco* (CS 3, p. 23) but called for more research before any firm attributions could be reached.<sup>46</sup>

and "jüngerer Garlandia" (p. 241). Page numbers in this note refer to those in Riemann's original 1898 edition.

<sup>43</sup>Ibid., p. 248. This premise appears to be incorrect: as shown subsequently by Klaus-Jürgen Sachs (see below), *Optima introductio* postdates *Ars contrapunctus*.

<sup>44</sup>I shall be arguing that the section on *falsa musica*, hitherto believed to be part of *Introductio musice*, does not really belong to this treatise.

<sup>45</sup>Riemann, *Geschichte*, pp. 248, 535 [note]. Riemann's argument for the authorship of *Introductio musice* by the second Garlandia has to be pieced together from various statements he made throughout his book. At another place (p. 279, note) he referred to the treatise as follows: "*Introductio secundum Johannes de Garlacdia [sic] [II?]*."

<sup>46</sup>Paetow, ed., *Morale sclarium*, pp. 142–3. Paetow named *De musica mensurabili positio*, *Introductio musice*, *Optima introductio*, and "*Tractatus de cantu plano*" as the works on music that had been attributed to John of Garland "in various bibliographies." He stated inaccurately, however, that Coussemaker published these four works (Coussemaker postulated its existence, but did not know of a source for the *Tractatus de cantu plano*), and that Coussemaker had concluded that "there were two writers on music in the twelfth and thirteenth centuries, and one in the fourteenth, all named John of Garland" (Coussemaker's silent emendation of his datings in CS 3 was apparently the cause of this confusion). On p.

The first scholar to challenge Coussemaker's theory of the two Parisian theorists was Manfred Bukofzer. In *Geschichte des englischen Diskants und des Fauxbourdons nach den theoretischen Quellen* (1936), p. 111, and "Discantus," MGG vol. 3, col. 572, he pointed out that the source Coussemaker used for his edition of *Optima introductio de contrapuncto*, Einsiedeln 689, in fact transmitted the treatise anonymously.<sup>47</sup> He also showed that *Optima introductio de contrapuncto* had to date from the fifteenth century. Thus the "legend of the younger Garlandia" was without any basis.<sup>48</sup>

Gustave Reese, in *Music in the Middle Ages* (1940), p. 287 and n. 42, accepted Coussemaker's identification of Johannes de Garlandia with the poet and grammarian John of Garland, but questioned whether the Pisa counterpoint treatise was the same work as *Optima*

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143, n. 18, Paetow claimed incorrectly that Fétis, *Biographie universelle*, p. 408, identified the "twelfth [sic] century writer on music" with Jarland of Besançon. On the contrary, as I pointed out above (p. 16), Fétis stated that the evidence did not support this.

Pietzsch, *Klassifikation der Musik*, the scholar who made known the B and S<sub>1</sub> sources for *Introductio musice*, appears convinced that the author of *Introductio musice* was Johannes de Garlandia, who was the same person as John of Garland (p. 78). He, however, mystifyingly described this Johannes de Garlandia as "d. J. [= der Jüngerer?]", "born around 1180, died 1252" (p. 29).

<sup>47</sup>*Geschichte des englischen Diskants und des Fauxbourdons nach den theoretischen Quellen: Mit zahlreichen Notenbeispielen*, Sammlung musikwissenschaftlicher Abhandlungen, vol. 21 (Strassburg: Heitz, 1936), p. 111; "Discantus," in *Die Musik in Geschichte und Gegenwart*, ed. Friedrich Blume, 17 vols. (Cassel and Basle: Bärenreiter, 1949-68), col. 572.

It was Schubiger, upon whom Coussemaker relied for information on the contents of the Einsiedeln manuscript and for the transcription of the counterpoint treatise *Optima introductio de contrapunctu* from this manuscript (CS, 3:viii, xiii-xiv), who had attributed the treatise to Johannes de Garlandia. Reimer, ed., *De mensurabili musica*, vol. 1, p. 11, n. 77, suggested that the similarity between the incipits of *Optima introductio de contrapuncto*, Einsiedeln, and the counterpoint treatise transmitted in Pisa might have led to Schubiger's mistaken notion that these were two different versions of the same treatise. This and La Fage's attribution of the Pisa treatise to Johannes de Garlandia (*Essais de diphthéographie musicale* [Paris, 1864, reprint, Amsterdam: Knuf, 1964], p. 388) led Schubiger to conclude that Johannes de Garlandia wrote *Optima introductio de contrapuncto* and Coussemaker subsequently to "refine" this attribution to the "alter Garlandia." (CS, 1:ix, n. 1)

<sup>48</sup>Bukofzer, "Discantus," col. 572. Thrasybulos Georgiades, *Englische Diskanttraktate aus der ersten Hälfte des 15. Jahrhunderts: Untersuchungen zur Entwicklung der Mehrstimmigkeit im Mittelalter*, Schriftenreihe des Musikwissenschaftlichen Seminars der Universität München, vol. 3, ed. Rudolf von Ficker (Munich: Musikwissenschaftliches Seminar der Universität München, 1937), p. 60, dated *Optima introductio de contrapuncto* as "not before the mid 14th century."

*introductio de contrapuncto*, thus casting doubt on Coussemaker's attribution.<sup>49</sup> He also cited Bukofzer's point about the *Optima introductio de contrapuncto* being anonymously transmitted, but rejected Bukofzer's dating, claiming the treatise had been written in the fourteenth century. Significantly, Reese raised the possibility that the attributions in the Pisa counterpoint treatise and the Hanboys treatise were made "for the sake of *auctoritas*." If this were not so, Reese reasoned, then "there really was a younger Garlandia; but he is certainly a shadowy creature."

William Waite, in *The Rhythm of Twelfth-Century Polyphony: Its Theory and Practice* (1954), however, held to what he believed to be Coussemaker's attribution of *Introductio musice* to the earlier Johannes de Garlandia. He referred to "Garlandia's treatise," citing the contents of *Introductio musice*, which he described as "written in the middle of the century at a time when the author could look back upon the fully developed potentialities of Parisian organum."<sup>50</sup>

In his article "Johannes de Garlandia, Poet and Musician" (1960), Waite lent further support to Coussemaker's notion that Johannes de Garlandia the thirteenth-century Parisian music theorist and John of Garland the poet and grammarian were one and the same person. Waite credited this person for *De musica mensurabili positio*, *Johannis de garlandia de musica mensurabili*, and *Introductio musice* (i.e., the first three treatises in Coussemaker's list given in his introduction to *De musica mensurabili positio*).<sup>51</sup>

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<sup>49</sup>It is not the same work: see pp. 20–21 on the work of Klaus-Jürgen Sachs.

<sup>50</sup>*Rhythm of Twelfth-Century Polyphony*, p. 109. It becomes apparent that Waite, in referring to "Garlandia's treatise," was referring not only to *Introductio musice*, as it appears in Coussemaker's edition, but in conjunction with Johannes de Garlandia's mensural treatise that Coussemaker edited as *Johannis de Garlandia De musica mensurabili*, which appears just after his edition of *Introductio musice* (CS 1, pp. 175–182). E.g., further on p. 109 Waite referred to a "later definition" of measured music that Johannes de Garlandia made, quoting the opening statement of *De musica mensurabili*; he then proceeded for the rest of the chapter to discuss the content of the latter treatise without indicating that it was a separate treatise.

<sup>51</sup>"Johannes de Garlandia: Poet and Musician," *Speculum* 35 (1960):180–81, 183.

Armand Machabey, "Jean de Garlande, Compositeur," *La Revue Musicale* 221 (1953):20–22, also identified Johannes de Garlandia with John of Garland, and wrote of him as a composer, citing a monophonic song to Mary, *Aula vernat virginalis*, found in a version of

Gilbert Reaney, in "The Question of Authorship in the Medieval Treatises on Music," *Musica Disciplina* 18 (1964):11–12, questioned the identity of the music theorist with the poet and grammarian posited by Coussemaker and now championed by Waite. He also argued that if a "younger Garlandia" did exist, "he must have lived around 1300," but preferred to consider "apocryphal" the appearance of the name of Johannes de Garlandia in "the more recent treatises" (perhaps referring to *Introductio musice* and *Optima introductio de contrapuncto*). Like Reese, Reaney suggested the citing of authority as the cause of these appearances, expressed in his article as "the weight of authority born[e] by great names in the Middle Ages."<sup>52</sup>

Robert Stevenson, "Neglected Manuscript" (1967), brought to attention the Rio de Janeiro manuscript as "the one complete version" for *Introductio musice*.<sup>53</sup> Stevenson enthusiastically cited Waite (in his article "Poet and Musician") for rescuing "the identity of the Garlandia who wrote the treatises in Coussemaker, I, from any further doubt." He also erroneously credited Waite for Bukofzer's observation that the Einsiedeln source for *Optima*

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John of Garland's *Commentarius*.

Heinrich Hüschen, "Johannes de Garlandia," *Die Musik in Geschichte und Gegenwart*, ed. Friedrich Blume, 14 vols. (Kassel and Basle: Bärenreiter, 1949–1968), vol. 7, col. 93, gave outdated information: Hüschen accepted Riemann's attributions to the "younger Garlandia," not only of *Introductio musice*, but also of *Optima introductio de contrapuncto*, despite Bukofzer. He inaccurately implied that *Optima introductio de contrapuncto* was the same work as the Pisa counterpoint treatise, despite Reese. Moreover Hüschen appeared unaware of new sources for *Introductio musice* recently found by Pietzsch and Reese: in his outline of the works of Johannes de Garlandia (col. 93), he systematically gave both editions and manuscript sources for each of the works, but failed to mention any other source besides *D* for *Introductio musice*.

The entry under "Garlandia," in *Riemann Musik-Lexikon*, 12th ed., ed. Wilibald Gurlitt and Hans Heinrich Eggebrecht, 3 vols. (Mainz: Schott, 1959–1967), vol. 1, p. 586, is somewhat idiosyncratic. It described only a single theorist by this name and believed him to be identical with John of Garland; it attributed to this theorist *De musica mensurabili positio*, an *Ars cantus plani*, which it called the *W* source of *Introductio musice*, *Introductio musice* itself, as transmitted in "three further sources" (presumably *B*, *D*, and *S*<sub>1</sub>), and the *Dictionarius*, which is actually one of the authentic wordbooks of John of Garland.

<sup>52</sup>In 1957 Reaney published the version in *Vb* as part of the *Ars nova* attributed to Philippe de Vitry. See above, p. 4, for further details of this and other related editions.

<sup>53</sup>This manuscript is the only one of the extant sources to transmit chapter 6, but I shall argue (pp. 33–36) that the text after chapter 7 does not belong to *Introductio musice*.

*introductio de contrapuncto* was anonymous. Stevenson, like Waite, believed that the “elder Garlandia” was the author of *Introductio musice*.<sup>54</sup>

Rasch’s book *Iohannes de Garlandia en de ontwikkeling van de voor-Franconische notatie* (1969) was the first study to examine in detail the by then controversial problem of Johannes de Garlandia and his works. One of Rasch’s most important contributions was the identification of *De plana musica*. He also showed convincingly that Coussemaker’s and Waite’s identification of Johannes de Garlandia with the poet and grammarian John of Garland was untenable on the basis of a comparison of the music theorist’s and poet’s respective knowledge of music, writing styles, and revolutionary or reactionary attitudes.<sup>55</sup>

On the problem of the wide range of doctrine in works bearing the name of Johannes de Garlandia, Rasch concluded that there must have been two music theorists by the name of Johannes de Garlandia: the first, living around the middle of the thirteenth century in Paris, wrote *De mensurabili musica* and *De plana musica*; the second, living during the fourteenth century (ca. 1320) in England, whom Handlo and Hanboys cited in their treatises.<sup>56</sup> As for the other treatises associated with Johannes de Garlandia, Rasch decided that *De musica mensurabili positio* was a late thirteenth-century adaptation of *De mensurabili musica* (the second treatise on Coussemaker’s list), while *Introductio musice* and *Optima introductio de contrapuncto* are of “debatable authenticity.”<sup>57</sup> Rasch’s research on *Introductio musice* was

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<sup>54</sup>“Neglected Manuscript,” pp. 13–15.

<sup>55</sup>Rasch, *Iohannes de Garlandia*, pp. 88–134.

<sup>56</sup>*Ibid.*, p. 56.

The difference between Rasch’s two-Garlandia theory and Coussemaker’s is that Rasch’s second Garlandia was English, Coussemaker’s French; Rasch’s second Garlandia was the theorist cited by Handlo and Hanboys only, Coussemaker’s second Garlandia was by implication the theorist quoted by Handlo and Hanboys, and the theorist specifically credited for *Optima introductio de contrapuncto*.

Lefferts, ed., *Handlo*, pp. 24–25 and n. 70, wrote that Coussemaker’s “Garlandia the Younger,” the French (Parisian) master, “has effectively been shown to be a ghost” but cited Fuller, “Phantom Treatise,” p. 46, as one modern scholar who still believed that there might have been such a person.

<sup>57</sup>Rasch assumed that the third section (on counterpoint) of *Ars contrapunctus secundum Philippum de vitriaco* derived from *Optima introductio de contrapuncto* (see especially *Iohannes de Garlandia*, p. 82, Table III). But cf. Bukofzer, “Discantus,” col. 572

unfortunately incomplete, for he did not know of the Rio de Janeiro manuscript while he was writing his book, although he did acknowledge its importance in a late-breaking report which he incorporated in his book.

Gallo, in "Tra Giovanni di Garlandia e Filippo da Vitry" *Musica Disciplina* 23 (1969):15–18, identified two more sources for *Introductio musice* (*S*<sub>2</sub> and *L*), bringing the putative number of identified manuscript sources to nine. He wrote that the manuscripts ranged from the end of the fourteenth to the beginning of the sixteenth century and were "all of Italian origin or of close proximity."<sup>58</sup> One implication of the dating and Italianate provenance of these manuscripts is that they raise doubts about the authorship of this treatise by the thirteenth century Parisian Johannes de Garlandia.

Interestingly, Gallo believed that the opening statement in *De mensurabili musica* referred not to the plainchant treatise transmitted in *V* (one of the three versions of *De plana musica*), but to a treatise in Bruges, Stadsbibliotheek, 528 that derives from Boethius and Guido. To Gallo the Boethius portion on speculative music, the Guido portion on plainchant, and *De mensurabili musica* found in this manuscript constituted a "scholastic manual" of an *Ars musica*.<sup>59</sup>

Reimer's edition of *De mensurabili musica* incorporated the version in the Paris manuscript that Coussemaker had edited as *De musica mensurabili positio*, the Vatican 5325 version that Coussemaker only partially edited as *Johannis de garlandia De musica mensurabili* (CS 1, pp. 175–182), and a new source known only since 1961 thanks to Joseph Smits van Waesberghe: Bruges, Stadsbibliotheek, 528, folios 54v–59v. In his introductory chapter Reimer gave a detailed account of research concerning not only the treatise he was editing but also on other issues concerning Johannes de Garlandia and the treatises associated with him.

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(discussed above) and Reimer, ed., *De mensurabili musica*, vol. 1, pp. 10–12 (discussed below).

<sup>58</sup>Gallo, "Tra Giovanni di Garlandia e Filippo da Vitry," p. 16.

<sup>59</sup>*Ibid.*, pp. 14–15. Gallo made no references to Rasch's study. He referred to *De plana musica* not under that title but as "a miscellany of music theory," and did not link it to Johannes de Garlandia.

He gave further grounds for considering *De plana musica* as Coussemaker's "certain treatise on plainchant" by citing several passages from other theorists that linked Johannes de Garlandia to the contents of *De plana musica*. Like Rasch, Reimer disagreed with the identification of Johannes de Garlandia with the poet and grammarian. He contested Waite's thesis in "Johannes de Garlandia, Poet and Musician" by refuting three specific arguments raised by the latter: that Johannes de Garlandia was English, that he introduced into music theory a term derived from poetic and grammatic theory, and that John of Garland was familiar with contemporary musical practices.<sup>60</sup>

Regarding the two-Garlandia theory, Reimer's arguments steered a slightly different course from Rasch's in that they spoke against the necessity of any second Garlandia, French or English. Reimer declared that "in agreement with" Reese and Reaney, he believed that the citations of Johannes de Garlandia in Handlo's treatise (and therefore in Hanboy's text derived from Handlo) were made solely for the sake of *auctoritas*, to lend an air of distinction on the then modern teaching on notation.<sup>61</sup>

On the authorship of *Optima introductio de contrapuncto*, Reimer cited the work of Sachs (see next paragraph) who had shown that the *Optima introductio de contrapuncto* derived from the Pisa counterpoint treatise that was in turn a truncated version of *Ars contrapunctus secundum Philippum de vitriaco*; this latter treatise, as Riemann had shown,

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<sup>60</sup>Reimer, ed., *De mensurabili musica*, vol. 1, pp. 12–17.

<sup>61</sup>Reimer, ed., *De mensurabili musica*, vol. 1, p. 12. Neither Reese nor Reaney gave the citing of authority as the only possibility, although both leaned strongly in this direction (see text above). Reimer, vol. 1, p. 17, n. 111, argued against Rasch's attribution of the Hanlo citations to an English Johannes de Garlandia living around 1320 (see above, p. 21) by pointing out that Rasch had overlooked the fact that Jerome of Moravia had referred to Johannes de Garlandia as "Gallicus." Reimer had earlier (vol. 1, pp. 13–14) used this fact to help disprove Waite's identification of Johannes de Garlandia with John of Garland. His argument against Rasch's attribution of the Hanlo citations appears, however, misdirected. Jerome of Moravia in his reference was attributing a text that both Rasch (*Johannes de Garlandia*, p. 49) and Reimer (vol. 1, pp. 4–5) showed to be a passage from *De plana musica*. Both Rasch and Reimer, of course, have argued strongly that the author of *De plana musica* was Johannes de Garlandia, the same author of *De mensurabili musica*. But no scholar beginning with Coussemaker, and certainly not Rasch, has ever argued that this Johannes de Garlandia could be identified with the authority cited by Handlo.



shares material with *Introductio musice*. The earlier work of Bukofzer, Reese, Reaney, and Rasch had shown that it was unnecessary to claim the authorship of *Optima introductio de contrapuncto* by another Johannes de Garlandia. But Reimer went further. Having earlier described *Introductio musice* as a “revised version” of *De plana musica*,<sup>62</sup> he now extended the chain of derivation of *Optima introductio de contrapuncto* all the way back to *De plana musica*. I shall argue below (pp. 40–44) that *Introductio musice* can hardly be called a “revised version” of *De plana musica*. My conclusion, which disagrees with Reimer’s description of the relationship of these two treatises, does not of course invalidate Reimer’s argument against Coussemaker’s two-Garlandia theory.

In 1974 Klaus-Jürgen Sachs published *Der Contrapunctus im 14. und 15. Jahrhundert: Untersuchungen zum Terminus, zur Lehre und zu den Quellen*, which was based on his dissertation *Der Contrapunctus im 14. und 15. Jahrhundert: Untersuchungen zum Terminus, zur Systematik und zu den Quellen* (1967, Freiburg). In this work Sachs presented an edition of the counterpoint treatise transmitted in Pisa, Biblioteca Universitaria, 606, pp. 51–50, as *Volentibus introduci*, Pisa version. He also clarified the chronology of the counterpoint treatises, giving it as follows: 1) *Ars contrapunctus secundum Philippum de vitriaco*, 2) “*Volentibus introduci*, Pisa version,” and 3) *Optima introductio de contrapuncto*.

Peter Lefferts in his edition of the Handlo and Hanboys treatises (1991) entertained the possibility that a John of Garland active around 1300–1320 was “Handlo’s man.” He argued that “the name Garland or de Garlande is a perfectly good English surname.”<sup>63</sup> Thus Lefferts’s “Handlo’s man” would be the same theorist posited by Rasch as living during the fourteenth century in England.

In summary, the early identification of Johannes de Garlandia with Canon Gerlandus by Coussemaker was soon abandoned by him in favor of a more controversial identification

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<sup>62</sup>Reimer, ed., *De mensurabili musica*, vol. 1, p. 8. See also p. 40 of this dissertation.

<sup>63</sup>Lefferts, ed., *Handlo*, p. 25.

with John of Garland. Coussemaker also proposed a two-Garlandia theory to explain the diversity of the works that he thought were genuinely attributed to Johannes de Garlandia. Riemann made one modification concerning *Introductio musice* in attributing it to the “younger Garlandia” instead of to the “earlier Garlandia.” Bukofzer and Reese were among the first to question certain aspects of Coussemaker’s inferences, in particular the dating of *Optima introductio de contrapuncto*. Reese was also one of the first scholars to apply the concept of *auctoritas* to the attributions of the Pisa counterpoint treatise and the Hanboys citation. Despite these advances, certain other scholars, notably Waite and Stevenson, held to Coussemaker’s identification and attribution of *Introductio musice*. A significant development began with Rasch, who not only disproved Coussemaker’s identification of Johannes de Garlandia with John of Garland, but also announced three sources for the hitherto unknown plainchant treatise that Johannes de Garlandia had said he had written, and which Rasch named *De plana musica*. Rasch modified Coussemaker’s two-Garlandia theory by proposing a second, English instead of French, Johannes de Garlandia as the authority cited by Handlo. Reimer argued similarly against the identification with John of Garland and for the existence of *De plana musica*, but agreed with Reese and Reaney that the attribution in the Handlo treatise was made *causa auctoritatis*. Citing Sachs, Reimer clarified the chronology of *Ars contrapunctus secundum Philippum de vitriaco*, the Pisa version of this treatise, and *Optima introductio de contrapuncto*. These three works, as well as *Introductio musice*, are now thought to be attributed to Johannes de Garlandia *causa auctoritatis*.

Johannes de Garlandia thus was a thirteenth-century Parisian theorist whose authorship of the influential *De mensurabili musica* is secure. He also quite possibly wrote the work now referred to as *De plana musica*. On the basis of current scholarship, all other attributions to him either seem apocryphal or refer to another person with the same name.

## CONTENTS OF *DE PLANA MUSICA* AND *INTRODUCTIO MUSICE*

Together *De plana musica* and *Introductio musice* cover a wide range of topics in plainchant theory: basic definitions, categorizations, ratios, intervals, monochord divisions, the gamut, notation, hexachords, and mutation. This section gives an outline of their respective contents; it also presents an argument for the separation of a considerable amount of text, long considered part of *Introductio musice* (presented in CS, 1:166–75), as adjunct treatises. The contents of these adjunct treatises will then be briefly described.

### *De plana musica*

*De plana musica* begins with a definition and categorization of *scientia* (1.2). It defines *scientia* as a “cognition of a subject just as it is” and after a series of categorizations derives the subject of music as a final subcategory: *Scientia* is categorized into theoretical (or speculative) and practical (or operative); the theoretical category is subcategorized into the theological, the natural, and the doctrinal; the doctrinal category is in turn categorized as being spoken of commonly and in a proper sense; that category which is spoken of in a proper sense concerns quantity, which is twofold: continuous and discrete; discrete quantity concerns numbers, either absolute or relative; finally, relative number is the province of music, which deals with numbers related to sounds (1.3–9).

In the second chapter *De plana musica* additionally defines music as concerning the multitude and manner of sounds, as well as the true knowledge of singing (2.3–4). There are three types of music: *mundana*, which concerns the harmony of the positions of the “planetary spheres”; *humana*, which concerns the harmony of the elements of a composite being (the composition of incorporeal reason with the physical body); and *instrumentalis*, which concerns musical instruments (2.5–8). *De plana musica* intends to deal with the *instrumentalis* type and to describe only the monochord, a one-stringed instrument on which all the harmonies in use are found (2.10–11).

The third chapter is brief: it merely defines *concordantia* as a mixture of sounds falling pleasantly on the ears, and *dissonantia* as a harsh percussion of sounds (3.2–3).

In chapter 4 the three genera of melodies are described: diatonic, that which proceeds by the sequence whole tone, whole tone, semitone; chromatic, that which proceeds by semitone, semitone, and three semitones; enharmonic, that which proceeds by diesis, diesis, and a ditone (4.3–5). The diatonic genus is called common, the chromatic soft, and the enharmonic hard (4.6). *De plana musica* intends to deal only with the diatonic genus, but to understand its ratios a knowledge of numbers is necessary (4.8–9).

Chapter 5 provides this necessary knowledge. Number is a set of unities (5.2). It is either even or odd, absolute or relative, equal or unequal (5.2). There are five classes of unequal numbers, and these are represented by the multiplex (5.6), superparticular (5.11), superpartient (5.16), multiplex superparticular (5.21), and multiplex superpartient (5.30) classes of ratios.

These ratios provide the numerical basis for the following discussion of intervals. Chapter 6 limits itself to a discussion of the instrumental genre of music, as announced in 2.10, and of the diatonic genus of music, as announced in 4.8. In the diatonic genus there are thirteen species (of intervals within the octave), ranging from the minor semitone to the octave; they are enumerated in 6.7. These thirteen species are then each described in terms of the abovementioned ratios (6.8–20).

The next two chapters (7, 8) deal with various manipulations involving ratios. Chapter 7 shows a procedure whereby a ratio of two equal terms produces the duplex multiple, and then the duplex multiple the triplex multiple. Chapter 8 shows how the other classes of inequality can be derived from a prior class: the superparticular from the multiple, the superpartient from the superparticular, the multiplex superparticular from the superparticular, and the multiplex superpartient from the superpartient. It presents two more

procedures: producing a second ratio similar to a first (8.8) and augmenting the terms of an existing ratio while maintaining the same ratio (8.13).

Having related intervals to ratios (6.8–20), *De plana musica* now relates intervals to string lengths in the following two chapters (9, 10) centering round monochord divisions. It begins by stating that shortening a string raises its pitch (9.3). After digressions to a description of the grave, acute, and superacute registers (9.5) and to the compositions of the diapason, diatessaron, and ditone (major third) (9.6), it returns to the topic of the chapter to show the derivation of the notes of the diatonic genus in the gamut up to dd, “and further if possible” (9.9). This derivation is effected by interval measurements: the monochord division based on this derivation follows (9.13–23), but it does not specifically state the top limit of the notes derived. A second monochord division does specifically derive the top note, which is ee (9.24).

In chapter 10 *synemmenon* is defined as a sharpening or flattening of a pitch and four such *synemmena* in the diatonic genus are named: protosynemmenon, deutrisynemmenon, tresynemmenon, tetrasynemmenon (10.4). “There are many more,” and these are derived in a chromatic division of the monochord (10.5), which produces F#, C#, G#, and Eb. The four previously named *synemmena* are then described (10.14), with the statement that all *synemmena* are associated with the major semitone (10.18). The chapter closes with another reference to the grave, acute, and superacute registers (10.19): here their tonal properties are described.

The next five chapters (11–15) describe the fundamentals of notation based on the gamut. Chapter 11 presents seven letter names of notes, six solmization syllables, and the three hexachords on G, C, and F. It defines the gamut (“Gamma”) as “nothing other than the combination of letters [*signa*] of the monochord with the syllables” (11.5).

Chapter 12 outlines the four principal aspects of the gamut: letters and syllables, proprieties, lines and spaces, and mutation. The first of these having already been

explained, the remaining aspects are described in the following chapters (13–15). Propriety is defined as a differentiation (*differentia*) involving three species: square b, round b, and natural (13.4–5). Hence the rule that every ut beginning on G takes the square b propriety, every ut beginning on C the natural, and every ut beginning on F the round, or soft b (13.9). Lines and spaces are related to the numerical properties of evenness and oddness (14.5). Mutation is defined as the displacement (*dimissio*) of one syllable by another (15.3). For a mutation to occur there must be at least two syllables in a note, and since Gamma ut, A re, B mi, and ee la each have only a single syllable, no mutation is possible on these notes. There is also no mutation on b fa–mi because there the two syllables are not placed with one single letter. A two-syllable note can have two mutations (15.10), a three-syllable note can have six mutations. Finally the rule: every mutation that ends on ut, re, or mi is said to be made in ascent, and every mutation that ends on fa, sol, or la is said to be made in descent (15.14).

The final chapter (16) describes each of the thirteen intervals first outlined in chapter 6. It defines each of the intervals in terms of whole tones and semitones contained therein; then it names various combinations of letters, as well as the solmization syllables, both within a single hexachord and between adjacent hexachords, that correspond to the interval. Finally it explains the derivation of the name of the interval.

#### *Introductio musice*


*Introductio musice* begins by listing the various terms and topics it has set out to describe: the term *introductio* itself, in how many ways it is categorized (not described subsequently), music, the art of music (described subsequently as *ars scientie*), *cantus*, in how many ways music is categorized, the “subject” and “predicate” of music, letters, syllables, proprieties, and mutations.

The definition of *introductio* sets the tone of this treatise: *introductio* is “a concise commentary that is necessary for the understanding of an entire art. Or, to put it another way: an introduction is a brief and clear description of a subject.”

The definition of music relates it to singing and number (1.12, 14). Also the legendary association of music with *moys* and *ycos* is invoked here (1.13). Music is categorized into *musica plana*, that which was first brought about by the Blessed Gregory and improved upon by Guido, all for the purpose of honoring God; *mensuralis*, that which is effected proportionally according to correct measure; and *instrumentalis*, that which is created by instruments such as are mentioned in Psalm 150 (1.15–19).

After similar short definitions of *ars*, *cantus*, and *subiectum* and *predicatum*, a more elaborate treatment follows for the other terms and topics listed previously. Chapter 2 describes letters and syllables. Just as there are seven days in the week, so there are seven (different) letters in music. These letters are categorized as *graves*, *acutes*, and *superacutes*, whose tonal properties are then described (2.3).

In this chapter the human voice is considered in some detail: it is said to be of the chest, throat, or head (2.7), and these categories are related to the grave, acute, and superacute letters introduced above. *Vox* is given a physical definition as air set in motion (2.13) and is said to derive its name from the term meaning “to call,” for we call out by making sounds that are distinguishable in pitch. The parts that make the human vocal instrument are then named.

Following the description of the human voice the topic of the letters is resumed and now aptly related to the term “key” (*clavis*): for just as by means of keys we enter a house, so by means of keys (as synonymous with the letters that designate musical notes) we enter into a proper understanding of the whole tones and semitones (2.20). The syllables make their appearance when the letters are linked to them, thus: Gamma ut, A re, B mi, C fa ut, D sol re, etc., in the context of the grave, acute, and superacute registers of the gamut. Although it is not explicitly stated, it becomes apparent that the term *vox*, previously defined in physical terms as air set in motion (2.13), is now understood to mean “solmization syllable”: in 2.22 the first syllable in b fa  mi is referred to as *vox*. Concepts involving this composite note follow

naturally. The number of keys or letters in the gamut totals 22, while the number of syllables totals 42.

These concepts involving letters and syllables and round and square b having been explained, an exposition of the proprieties (or hexachords) can now occupy the next chapter (3). There are three proprieties named square b, natural, and soft b. *Introductio musice* explains that the term *proprietas* is named for its property of properly (*proprie*) leading us into the knowledge of singing correctly, of showing us how to make whole tones and semitones correctly. The natural propriety begins on C, the square b propriety begins on G, and the soft b on F (3.4), as given in an oft quoted verse (3.9). The individual notes (for the purposes of illustration, from Gamma ut to D sol re only), represented by a combination of letters and syllables (called a *deductio* in this treatise, see 4.12), are now given their place on the staff, together with the appropriate proprieties in which they are sung (3.11). *Introductio musice* emphasizes the primacy of the syllable *ut* within the system of the proprieties (3.23).

Chapter 4 names as the principal clefs (*signa*) grave F and acute c and gives the ranges with which each of these clefs are used. It is necessary to use a third clef, acute g, when sometimes in motets, measured song, or instrumental music ascent is made for which the four lines of the stave in plainsong, or seven in measured song, prove inadequate. *Introductio musice* reminds us of the placement of the various notes on the lines and spaces of the stave (4.9). In this chapter the term *deductio* is defined as an “aggregate expression” (4.13).

The chapter on mutations (5) begins with a distinction between ascending and descending mutations (5.2), reinforced by another oft quoted verse (5.4). Then it defines mutation as the “displacement (*dimissio*) of one syllable by another governed by the same letter, pitch (*vox*: see note to *Introductio musice* 5.6), and sound” (5.6), cautioning us to use mutation only when necessary. For a mutation to be possible there must be no more and no less



than two syllables,<sup>64</sup> hence on Gamma ut, A re, B mi, and ee la there are no mutations. But there are either one, two, or three mutations on the notes from C fa ut to dd la sol, excepting b fa ˆ mi in the acute and superacute registers. The mutation possibilities on most of these notes are individually described (5.13), and that on b fa ˆ mi excluded: the letters b and ˆ do not represent the same pitch, even though two different syllables are involved.

The final two chapters of *Introductio musice* deal with intervals. In chapter 6 it is acknowledged that there are in fact thirteen intervals, although four are composite intervals built from the other nine. Rather inconsistently with this opening statement *Introductio musice* proceeds to name nine intervals, omitting the unison, tritone, semitone plus diapente, and whole tone plus diapente. These four omitted intervals are, as the text appears to suggest, the composite intervals (of these, however, only the last two are actually composite).

Chapter 7 is devoted to the systematic description of each of the thirteen intervals. A knowledge of these intervals is fundamental for the understanding of all song, measured and unmeasured. After making a brief reference to number theory (7.3) the necessity for knowledge of intervals for the successful application of song is again stressed.

In this chapter four composite intervals are named: whole tone plus diapente, ditone plus diapente, semiditone plus diapente, and diapason (7.9). These four composite intervals differ from the four implied in chapter 6.

In the individual descriptions of the intervals (7.12), each of them is defined in terms of number of syllables and number of whole tones and semitones contained therein. The derivation of the name of the interval is explained. Following this the various combinations of letters that produce the interval are named, and similarly solmization syllables. In

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<sup>64</sup>This is not entirely correct: there must be *at least* two syllables, cf. *De plana musica* 15.4; see also note to *Introductio musice* 5.10.

addition to these thirteen intervals, the whole tone plus diapason, semitone plus diapason, semiditone plus diapason, and ditone plus diapason are mentioned and illustrated (7.56).

Separate treatises included in Coussemaker's edition of *Introductio musice*

I propose that only the seven chapters just described constitute the entire treatise *Introductio musice*. These seven chapters occupy pp. 157–66 of Coussemaker's edition of the treatise. As will be argued below, the remaining text in Coussemaker's edition, on pp. 167–75, belongs not to *Introductio musice* but comprises separate treatises, the texts of which are presented in Appendix B.<sup>65</sup> The seven chapters of *Introductio musice* cover everything that was proposed at the beginning of the treatise. In Coussemaker's one source, *D*, and also in *B*, *W*, and *R*, chapter 7, which systematically describes the thirteen intervals within the octave, chapter 7 ends with the words: *Expliciunt omnes species necessarie cantus et utiles omnibus musicis introducendis*. These words, then, indicate that it is a conclusion, not only of this chapter, but of an entire treatise that was called an "introduction to music."

The text in Coussemaker's edition immediately following chapter 7 is the opening portion of a discussion of *falsa musica*: *De falsa musica*. Its opening words suggest a treatise separate from *Introductio musice*: *Nunc videndum est de falsa musica*. The text is truncated in Coussemaker's edition owing to a lacuna in his source, appears complete only in *W*, but in no other source.<sup>66</sup>

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<sup>65</sup>This remaining text, as well as further material transmitted in only one source (see below), encompasses what I shall show to be six separate treatises (*De falsa musica*; *Sed quoniam cantor diu sine intermissione continuare non potest*; *De litteris finalibus*; *Nota quod primus tonus finitur in D gravi*; *Nota generalem regulam quare inventum fuit b molle*; *Item notandum quod quatuor littere sunt regulares*). These treatises will be designated "A" through "F," respectively; thus, passages in *De falsa musica* are referred to as A.1, A.2, etc.; passages in *Sed quoniam cantor diu sine intermissione continuare non potest* are referred to as B.1, B.2, etc.

<sup>66</sup>*L*, does, however, transmit a treatise that shares material with the treatise on *falsa musica*. It is interesting to note that *Ars contrapunctus secundum Philippum de Vitriaco* (Appendix D) begins its prologue, which parallels chapter 7, with the words *Incipit introductio contrapunctus*; following this it presents text on *falsa musica*, which parallels the above treatise dealing with *falsa musica*, as part of a *tractatus secundus*.

Next in Coussemaker's edition is the ending portion of a discussion on rests: *Sed quoniam cantor diu sine intermissione continuare non potest*. The text is fragmented in Coussemaker's edition owing to the above-mentioned lacuna, but appears complete in *W* and *R*, yet once again in no other source. Although it ostensibly concerns plainchant (*de pausa cantus plani seu ecclesiastici*), the terms around which the discussion revolves, *cum littera* and *sine littera*, recall the theory of Notre Dame polyphony.

Following these discussions of *falsa musica* and rests is what appears to be a treatise on modal theory: *De litteris finalibus*. Besides *D*, this text is transmitted only in *R* and *W* (partially in the latter as will be explained below). Coussemaker's text incorporates a curious interpolation after C.27 that relates to B.3–4, which was missing in its proper place owing to the lacuna. This interpolation contains a short discussion on the perfection of the long: clearly not a plainchant topic. It does not appear in any of the other sources within a corresponding position in the text under discussion.<sup>67</sup> The treatise on modal theory is not entirely coherent in other respects. Sentences C.25–27 do not logically follow from the previous ones: they presuppose a prior discussion of *cantus regulares* and *irregulares*, which is lacking in the sources; similarly, sentences C.28–33 presuppose an earlier mention of the range of the first mode, which is also lacking.

The final portion of Coussemaker's edition is another treatise on modal theory: *Nota quod primus tonus finitur in D gravi*. Besides *D*, the only other manuscript that transmits this treatise is *R*. In any case it is clearly derived from *Dialogus* (once attributed to Odo of Cluny: GS, 1:259–63).

The scribes who copied these treatises seem to have been confused about just where *Introductio musice* ought to end, to judge from their haphazard use of explicits. Coussemaker's source (Saint-Dié 42) contains only one explicit: the sentence at the end of chapter 7, which as

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<sup>67</sup>It does appear, however in a later portion of *R*, on fol. 619v, as a separate note (see manuscript descriptions).

we have seen is also provided in *B*, *W*, and *R*. Of the other sources, *B*, *W*, and *R* (and only these) provide additional explicits, but most prove to be misleading rather than useful. *B*'s text is idiosyncratic in that it transmits chapters 5 and 7 before chapters 1–4. Although these three blocks of text (chapters 5, 7, and 1–4) are set off clearly by incipits and explicits, their unique ordering casts doubt on the validity of this source in determining the content of *Introductio musice*. *W*'s explicit following C.27 (*Explicit ars cantus plani magistri Johannis de galadia . . .*) already renders uncertain whether any further text in other sources is part of the same treatise.

The text in *R* contains no less than four explicits: the first at the end of chapter 7, in common with *D*, *W*, and *B*; the second ("Explicit") at the end of the modal treatise *Nota quod primus tonus finitur in D gravi*; the third ("Amen") at the end of the next treatise, one on the use of soft *b*, *Nota generalem regulam quare inventum fuit b molle*; and the fourth ("Explicit musica plana magistri Johannis de galandia") after yet another treatise on modal theory, *Item notandum quod quatuor littere sunt regulares*. In light of the above, *R*'s second and third explicits probably refer only to the end of their respective treatises, not to the end of *Introductio musice*. The fourth explicit, although bearing the name of Johannes de Garlandia, may simply be a mistaken attribution to the single treatise it concludes.

Of the above two treatises appearing uniquely in *R*, the treatise *Nota generalem regulam quare inventum fuit b molle* is repetitious (E.1–7, E.19–22, E.32–33), suggesting a conflation of various sources. It also includes two scholastic arguments (E.15, E.23), a feature that appears nowhere else in the texts under consideration.<sup>68</sup>

*R*'s final treatise on modes resumes a discussion that was interrupted by the discussion on the use of soft *b*. The ranges of the authentic and plagal modes have been discussed in the

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<sup>68</sup>Interestingly, a portion of this treatise appears in *W* immediately after the explicit to its version of the treatise on modes (fols. 70rv; see also fols. 94rv). In addition a verse appended to *W*'s portion of the treatise on soft *b* is also found in the final treatise on modes transmitted solely in *R* (F.24). This verse, as well as the others found in this final treatise are certainly not unique here: they are all frequently cited in many other works.

first of the three above-mentioned treatises on modal theory (C.8–19, D.67–69): these already do not agree entirely regarding the range of the plagal. A discussion on the ranges of the modes (F.20–23) does not agree with either of the earlier descriptions. In addition, a section on the grave, acute, and superacute registers (F.33) appears to be extraneous; in any case, this topic has already been thoroughly covered in chapter 2 of *Introductio musice*.

Even within this final treatise itself there are discrepancies. The prose discussion of ranges mentioned above (F.20–23) and the two verses dealing with range (F.24 and F.36) all do not completely agree.<sup>69</sup> At F.2 four co-finals are named,<sup>70</sup> and at F.39 a verse is quoted that seems to reinforce the four co-finals concept. But this verse has also been quoted in other treatises in a version that enumerates only three co-finals. One cannot help but suspect that the verse in F.39 was, like the numerous other verses in this treatise, simply thrown in by a scribe for good measure: most of them are not integrated with any well-ordered discussion. This is in contrast to the other verses quoted in *Introductio musice* (cf. 2.17, 3.9, 5.4).

Summaries of a) separate treatises incorporated into *Introductio musice* in Coussemaker's edition; b) treatises transmitted uniquely in *R*

#### A. *De falsa musica*

This treatise defines *falsa musica* as occurring “when we make a semitone from a whole tone and the converse” (A.3). By implication *falsa musica* can occur for every note on the gamut, for “every whole tone is divisible into two semitones” (A.4). *Falsa musica* is indicated by the signs for square and round b, for “wherever we find square  $\text{b}$  we call that syllable mi; wherever we find round b we call that syllable fa” (A.7). *Falsa musica* is necessary because of the discord of the tritone. By means of *falsa musica* we convert a tritone into either a diatessaron or a diapente (A.10).

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<sup>69</sup>In total we have five mutually inconsistent references to general ranges of the authentic and plagal modes among the three treatises on modal theory (C.14 and C.18, D.67–69, F.20–23, F.24, and F.36).

<sup>70</sup>Theorists are by no means unanimous in having four co-finals: some deny the seventh and eighth modes a co-final.

B. *Sed quoniam cantor diu sine intermissione continuare non potest*

This treatise on rests considers where to insert rests in a song, which is either *cum littera* or *sine littera*. If a song proceeds in neumes (i.e., neumes not broken by syllable or word divisions) rests should be made according to the demands of the human voice, but they cannot be placed between syllables of a word. If a song proceeds syllabically then it should be notated according to the syllables of the text.

C. *De litteris finalibus*

This first of three treatises on modal theory described here discusses in general terms the finals, the concept of authentic and plagal, and mixed modes; the second discusses the individual modes and shows how the authentic and plagal forms are distinguished; the third is a potpourri of verses illustrating the practical application of the theory explained in the first two.

In modal theory, the finals are those letters "upon which all regular song is assigned to end" (C.2). These letters are D, E, F, and G and have been established by the "moderns" among the grave register, and not the acute, for good reasons (C.5). There are eight modes, four authentic and four plagal (C.8): the authentics are the odd-numbered modes, and the plagal the even-numbered. The authentics are derived from the ancients, by virtue of their greater dignity and power. In fact the first of the authentics, by virtue of its authority, rules over all the notes of the gamut (C.13 and C.28–29). The other authentics have a smaller range of a diapason above the final normally and up to a semiditone plus diapason by licence. The lowly, less dignified plagals ascend above the final by only a semiditone plus diapente regularly and up to a diapason by licence, but what they lack in ascent they make up in descent, for they can descend from the final a diatessaron regularly and a diapente by licence. The four finals belong to the eight modes in the following manner: D to the first and second modes, E the third and fourth, F the fifth and sixth, and G the seventh and eighth (C.20). Songs are judged to be authentic or plagal according to which their greater part is in

agreement; but if a song takes on the range of both the authentic and plagal then, and only then, can it be called “mixed” (C.25). Finally the use of soft b in each of the modes is considered (C.30).

D. *Nota quod primus tonus finitur in D gravi*

This second treatise on modal theory describes each of the modes: their ranges are explained by means of their extreme notes as well as by *formule* (set of notes belonging to the mode), and their permissible beginning notes (*principia*) are prescribed. One can distinguish between the authentic and plagal modes of a pair by considering range, *principia*, and what we would term “tessitura.”

Summary of treatises transmitted uniquely in R

E. *Nota generalem regulam quare inventum fuit b molle*

This treatise that in R comes between the second and third treatises on modal theory explains why soft b was invented and gives three reasons: *causa tritoni*, *causa essentie*, and *causa necessitatis* (E.3). *Causa tritoni* governs the cases when the tritone interval F– $\sharp$  is encountered; *causa essentie* involves the fifth and sixth modes, which always take soft b; *causa necessitatis* describes the use of the soft hexachord in mutation when the intervals from grave F to acute c or acute d are scaled. In the next portion of the chapter the two forms of *natura* are described: one *conclusiva* and the other *exclusiva* (E.11). The discussion on the invention of soft b is then resumed (E.19, 32): soft b was invented after the invention of art and after square b to mollify the dissonance of the tritone. In addition two scholastic discussions concerning the use and definition of soft b illustrate the concepts presented.

F. *Item notandum quod quatuor littere sunt regulares*

This final treatise on modal theory begins by recounting the four finals, but here calling them “regular” and adding what it calls “irregular” finals: a, b, c, and d acute (F.1). We are reminded that the authentics are the odd-numbered modes while the plagals are the even-numbered modes (F.17). The authentics can ascend an eighth above their finals

regularly, and a ninth by licence, and descend only one pitch below, with the exception of the fifth mode which can descend a whole tone plus semitone; the plagals can ascend above their finals up to a fifth or sixth, and descend a third, fourth, and fifth (cf. the ranges given in the first treatise on modal theory). A verse on range follows (F.24) that does not agree entirely in details (authentics ascend an octave and descend one note from the final, plagals ascend and descend a fifth).

The rest of this treatise consists primarily of various verses covering aspects of the practical application of modes. Two verses giving the relationship of the finals to the reciting tone (F.25–26) are followed by a discussion of the role of the Greeks who created the protus, deuterus, tritus, and tetrardus nomenclature (F.27). This is broken off by two verses giving the intonations and mediants of the psalm tones (F.31–32). After a short reminder of what the notes of the grave, acute, and superacute are, the chapter closes with six more verses: “there are eight modes” (F.35); ranges of the modes (yet another variant: authentics ascend a ninth and descend one note from the final, plagals ascend a sixth and descend a fourth: F.36); relationship of the finals to the reciting tone (F.37, cf. F.25–26); finals of the modes (F.38); finals and co-finals of the modes (F.40); intervals and square and round b (F.41).

#### RELATIONSHIP BETWEEN *DE PLANA MUSICA* AND *INTRODUCTIO MUSICE*

The subject matter of both *De plana musica* and *Introductio musice* and their manner of presentation indicate that these two treatises were intended to be teaching texts. Perhaps these two works as they have survived are copies of what were originally student notes, as suggested by the terse treatment of the many topics covered, many of which are outlined in no more than a few sentences, occasional digressions (e.g., *De plana musica* 9.5; *Introductio musice* 4.12), repeated topics and statements (e.g., *De plana musica* 9.5 and 9.19), and use of



synonymous terms within individual statements to drive home a point (e.g., *Introductio musice* 7.31).<sup>71</sup>

Reimer called *Introductio musice* (by which he meant the text as presented by Coussemaker) a “revised version [überarbeitete Fassung]” of *De plana musica*; Rebecca Baltzer likewise described *Introductio musice* as “a later compendium based upon” *De plana musica*.<sup>72</sup> Both scholars seem to have been persuaded by the superficial similarity of topics in both treatises, and the reference to Johannes de Garlandia in three sources for *Introductio musice*. To determine the validity of their views I shall now compare the topics in both treatises, beginning with those common to both works.

Both treatises categorize *musica* into three parts, but they do so differently: *De plana musica* divides it into *mundana*, *humana*, and *instrumentalis* (*De plana musica* 2.5); *Introductio musice* divides it into *plana*, *mensuralis*, and *instrumentalis* (*Introductio musice* 1.15). Both treatises consider the grave, acute, and superacute registers, but the texts are all clearly different from each other (*De plana musica* 9.5, 10.19; *Introductio musice* 2.3). Both treatises explain the rudimentary topic of letter names and syllables but they use different terms for “letter” (*De plana musica* 11.2: *signum*; *Introductio musice* 2.27: *clavis*);<sup>73</sup> in addition *Introductio musice* uses the common analogy of the seven days in the week to illustrate the seven letters; *De plana musica* does not. Both treatises discuss proprieties (*De plana musica* 13; *Introductio musice* 3) but define their terms differently. *Introductio musice* lists a number of notes of the gamut, describing in formulaic manner their letters, syllables,

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<sup>71</sup>For a discussion of “master’s” and “student’s notes” see Anthony Kenny and Jan Pinborg, “Medieval Philosophical Literature,” in *The Cambridge History of Later Medieval Philosophy: From the Rediscovery of Aristotle to the Disintegration of Scholasticism, 1100–1600*, ed. Norman Kretzmann, Anthony Kenny, and Jan Pinborg (Cambridge: Cambridge University Press, 1982, reprint 1984), pp. 35–37, 74.

<sup>72</sup>Reimer, ed., *De mensurabili musica*, vol. 1, p. 8; Baltzer, “Johannes de Garlandia,” *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie, 20 vols. (London: Macmillan, 1980), vol. 9, p. 662.

<sup>73</sup>It is true, however, that both works refer to “syllable” as *vox*: *De plana musica* 11.3, *Introductio musice* 2.22.

and proprieties; *De plana musica* does not. Both treatises define mutations using the term *dimissio* (*De plana musica* 15.3; *Introductio musice* 5.6);<sup>74</sup> but the characteristic *Introductio musice* condition that specifies *sub eodem signo, eadem voce et eodem sono* (with the same sign, syllable, and sound) is different from that in *De plana musica* which specifies only *sub eodem signo et sub eodem sono* (as with the discussions on proprieties *Introductio musice* goes into formulaic detail for almost every possible mutation within the gamut; *De plana musica* does not).

Both treatises, as we have just seen, treat a number of standard plainchant topics, but they do so in manifestly different ways. The topic of the thirteen intervals was comparatively new, even innovative, as far as *De plana musica* was concerned: their descriptions in both treatises are no more similar than those found in other treatises. The main difference is that in *De plana musica* (6.8) they are first presented in terms of ratios, a subject that appears prominently in this treatise, but is nowhere discussed in *Introductio musice*, save for the brief references to number theory (1.14, 7.3–4). In their descriptions of the individual intervals (*De plana musica* chapter 16; *Introductio musice* chapter 7) although they both cover definitions, derivations, letter names, and syllables, the texts are different.<sup>75</sup>

Perhaps only in their definitions of *musica* can some degree of textual parallel be established: both treatises define music in terms of singing, and both treatises relate music to number (*De plana musica* 2.2, 2.4; *Introductio musice* 1.12, 1.14). But such definitions occur so frequently in medieval theory that no especial significance ought to be attached to their coincidence here.

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<sup>74</sup> Some *Introductio musice* sources give *divisio*, however: see the critical apparatus referring to *Introductio musice* 5.6.

<sup>75</sup>It is, however, interesting to note that both treatises give the unorthodox definition of the diapason as made up of five whole tones and two semitones *that make up one whole tone* (*De plana musica* 16.53; *Introductio* 7.49). This is especially surprising coming from the rigorous *De plana musica*, for one might have expected here a mathematical proof that the two minor semitones which the diapason comprises do not add up to one whole tone. Boethius has emphasized this fact, and it had become a standard *tropos* in medieval music theory.

Turning to the topics that are not shared by the treatises, we find many more of these than those topics common to both. The following topics are found only in *De plana musica* and not in *Introductio musice: scientia* (chapter 3), concords and discords (chapter 4), the three genera of melodies (chapter 5), the five classes of ratios (chapter 7), deriving inequality from equality (chapter 8), other computations on ratios (chapter 9), monochord divisions (chapter 10), and the synemmena and the chromatic monochord division (chapter 12). The following topics are found only in *Introductio musice* and not in *De plana musica*: definitions of the terms *introductio*, *ars*, *cantus*, the subject and predicate of music (chapter 1), *vox humana* (2.7–16), the gamut (2.18–31), clefs (4).<sup>76</sup>

Reimer has suggested that an earlier version of *De plana musica* contained a discussion of modes. In support of this idea he cited Jerome of Moravia: “Tropus autem secundum Johannem de garlandia est regula que de omni cantu in fine dijudicat [Trope according to Johannes de Garlandia is the rule that determines all song at its end].”<sup>77</sup> Presumably this statement pertains to *De plana musica*, since Jerome’s other statements that quote Johannes de Garlandia point either to this treatise or to *De mensurabili musica*, which, as we have seen, is closely associated with *De plana musica*.<sup>78</sup> Given the speculative

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<sup>76</sup>Vb, one of the *De plana musica* manuscripts, contains a section on *falsa musica*, but its definition and other explanations differ from those in the adjunct treatise *De falsa musica*. Vb’s section of *falsa musica* is more closely associated with Lambertus and CS 1 Anon. 2.

In *De falsa musica* we have also seen that there is made the innovative statement that *every* whole tone is divisible into two semitones (A.4). Subsequently, Rasch, *Johannes de Garlandia*, pp. 48–50, has claimed a connection between this statement and chapter 10 (that on synemmena and a chromatic division of the monochord) of *De plana musica*. There appears, however, to be little basis for this, and Rasch himself did not elaborate on his claim. At any rate, this statement can be found only in two sources (D and W); furthermore, chapter 10 of *De plana musica* appears only in P.

<sup>77</sup>Reimer, ed., *De mensurabili musica*, vol. 1, p. 9 and n. 64.

<sup>78</sup>Rasch, on the other hand, considered this as referring not to a now-missing section in *De plana musica*, but to what in this dissertation constitutes the text of *De litteris finalibus* (see C.2). Reimer (*De mensurabili musica*, vol. 1, pp. 9–10) cited two more passages, both from Frater Guido (*Tractatus de tonis a fratre guidone monacho monasterii sancti dionysii in francia compilatus* [London, British Museum, Harl. 281, fols. 58v–96v]), that refer to teachings on modes by Johannes de Garlandia:

Non enim video quod neuma quinti toni prout apud nos et multos alios et quasi omnes consuevit cantari sine falsa musica possit convenienter notari, unde et sic ipsum infra

emphasis in a large portion of *De plana musica*, however, it is conceivable that it never did contain a section on modes: if so, Jerome's citation of Johannes de Garlandia in this instance could have been made *causa auctoritatis*.

There is thus not any basis to call *Introductio musice* a "revised version" of or "a later compendium based upon" *De plana musica*, in the sense that *De musica mensurabili positio* clearly draws upon *De mensurabili musica* and *Optima introductio in contrapunctum pro*

notatum repperies suo loco, sicque ipsum a magistro Johanne de garlandia in libro quem fecit de tonis notatum inveni [I do not see how the neume of the fifth mode, as it customarily sung by us and by many others, can be conveniently notated without *falsa musica*, as we find notated below, and in the book on modes of Johannes de Garlandia]. (*Tractatus de tonis*, fols. 61v–62r)

Quandoque etiam licet raro aliqui finiuntur in d acuta id est in d lasolre sicut patet in Responsorio illo de sancta agnete secundum aliquos libros. Omnipotens adorande. et tunc d acuta ad d gravem reducitur. Immo etiam secundum magistrum Johannem de garlandia reliqua signa gamatis ad sibi similia reducuntur [Sometimes, although rarely, some songs are ended on d acute, that is on d la sol re, as is shown in that Response on Saint Agnes, according to some sources, *Omnipotens adorande*, and then from d acute it descends to D grave. Indeed, according to magister Johannes de Garlandia, the other notes of the gamut descend to their equivalences].

Nec mireris si modo dictum sit istud ultimum venite esse quarti toni cum supra dictum sit istud idem esse primi toni, secundum enim magistrum Johannem de garlandia qui fuit magne reputationis musicus non est inconueniens idem venite esse diversorum tonorum diversis respectibus [Do not wonder if now it is said that this last *Venite* is of the fourth mode when above it was said to be of the first. According to magister Johannes de Garlandia, who was a musician of great reputation, it is not wrong that the same *Venite* can be of different modes in different respects] . . .

Et sic numerum invitorum iuxta numerum septem dierum qui sunt in ebdomada statuerunt. Quicquid tamen sit de hoc potest dici secundum magistrum Johannem predictum qui allegat usum parisiensis ecclesie et magistrum Petrum de cruce qui fuit optimus cantor et ambianensis ecclesie consuetudinem specialiter observavit aliqua invitoria sunt istius toni saltem duo. Unum videlicet de quo ponit exemplum ille magister Petrus qui apud nos non est in usu nec eius venite. Sed videnter esse de usu ambianensis ecclesie sumpta, scilicet preoccupemus. Aliud vero de quo ponit exemplum prefatus magister Iohannes de garlandia, videlicet istud quod sequitur [Thus, the number of the invitatories corresponded to the number of the seven days that are in the week. Whatever, however, that can be said about this, according to the above magister Johannes, who promoted the custom of the Parisian church, and according to magister Petrus de Cruce, who was an excellent singer and who specially observed the custom of the church of Amiens, some invitatories are at least of these two modes. Magister Petrus gives an example, *Venite*, that is not in common use among us nor of <the Parisian church?>, but apparently is in use in the church of Amiens. The other example is given by magister Johannes de Garlandia, which follows below]. (*Tractatus de tonis*, fols. 95rv)

This latter passage also furnishes precious biographical information that the Johannes de Garlandia who taught about modes and invitatories was a musician of great reputation and promoted the custom of the Parisian church.

*rudibus* clearly draws upon *Ars contrapunctus secundum Philippum de Vitriaco*. *De plana musica* and *Introductio musice* lack the sort of close textual relationship those two pairs of treatises have. The topics common to both *De plana musica* and *Introductio musice* are widely discussed in numerous other works. The topics not in common, on the other hand, clearly point to the differences in approach of the two works: while they may both have been teaching texts, *De plana musica* is very much a speculative treatise, *Introductio musice* a practical primer.<sup>79</sup>

The examination and comparison of contents of the two treatises also bears upon the issue of their authorship by Johannes de Garlandia, the thirteenth-century Parisian music theorist and teacher. While the authorship of *De plana musica* by Johannes de Garlandia has some external evidence to support it (see pp. 6–10 above), that for *Introductio musice* has little or no evidence, either external or internal, aside from the explicit, which uses the ambiguous term *secundus*. *Introductio musice* may have originated as notes from, or for, a lecture by Johannes de Garlandia; or its incipit and explicit may have cited Johannes de Garlandia *causa auctoritatis*. On the other hand, it may have been only the section on thirteen intervals that was meant to be discussed in connection with the teachings of Johannes de Garlandia; or that the Johannes de Garlandia referred to in *Introductio musice* was not the same Johannes de Garlandia of *De plana musica*; or that, given that only three sources bear this name, this was a case of misattribution and that no Johannes de Garlandia ever had anything to do with this treatise. Any of these is possible.

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<sup>79</sup>*De plana musica* retains much of the speculative theories of Martianus Capella and Boethius, while *Introductio musice* focuses on more practical issues. For discussions on music texts used in schools and universities during the middle ages, see Max Haas, "Studien zur mittelalterlichen Musiklehre I: Eine Übersicht über die Musiklehre im Kontext der Philosophie des 13. und frühen 14. Jahrhunderts," *Forum Musicologicum* III (1982):323–456, and Michel Huglo, "The Study of Ancient Sources of Music Theory in the Medieval Universities," in *Music Theory and Its Sources: Antiquity and the Middle Ages*, ed. André Barbera (Notre Dame, Indiana: University of Notre Dame Press, 1990), pp. 150–72.

## RELATIONSHIP OF *DE PLANA MUSICA* AND *INTRODUCTIO MUSICE* WITH OTHER THEORISTS AND TREATISES

Because of the eminence of Johannes de Garlandia and because of the nature of the topics discussed in *De plana musica* and *Introductio musice*, a wide variety of cross-references with other theorists and treatises can be drawn or inferred. The following outline divides into four parts: specific citations by *De plana musica* and *Introductio musice* of previous authors; unspecified but clear borrowings by the two works from previous authors or treatises; citations of the name Johannes de Garlandia; possible borrowings from *De plana musica* and *Introductio musice* by later authors or treatises.

### Specific citations by *De plana musica* and *Introductio musice* of previous authors

The incipit of the Paris version of *De plana musica* acknowledges the work of Boethius. Specific citations are also made in 2.9, 4.7, 5.5, and 7.10: these for the most part accord with Boethius's text in Friedlein's edition of it (for more details on these and other sections mentioned here see the notes to these respective sections). *Introductio musice* cites Boethius in 7.15 and 7.22. In contrast to the citations in *De plana musica*, these passages do not quote Boethius literally; neither can they be linked to any specific passage in Boethius, although they do parallel the topics he discussed. Both treatises also cite Guido (*De plana musica*: 9.13, 9.23; *Introductio musice*: 1.12, 1.16, 5.5, 7.5, 7.7, 7.14). The citations in *De plana musica* concern similar but not identical monochord divisions (see next paragraph, also note to 9.13). Again, none of the citations in *Introductio musice* can be linked specifically to the earlier writer, with the exception of that in 7.7. The others are little more than an appeal to authority.

### Unspecified but clear borrowings by *De plana musica* and *Introductio musice* from previous authors or treatises

*De plana musica* borrows without acknowledgement several other sections from Boethius: 1.7, 2.5, 3.2, 4.6–7, chapter 5, 6.8, 8.2–7. Chapters 1 and 2 of *De plana musica* reflect the writings of Cassiodorus. The monochord division in 9.13–23 cites Guido (see paragraph

above) but actually derives the notes in the same order as does *Dialogus*, albeit by means of different ratios.<sup>80</sup>

Besides the above borrowings by both treatises from musical authorities, mention must also be made of the use in both treatises<sup>81</sup> of terms and concepts from the various fields of philosophy and logic. The majority of these terms and concepts are found to be associated particularly with Aristotle, whose influence on music theorists, especially during the thirteenth century, was enduring.<sup>82</sup>

Citations of the name Johannes de Garlandia by later authors or treatises

The following authors cite the name or authority of Johannes de Garlandia in passages that can be shown to have parallels in either *De plana musica* or *Introductio musice*

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<sup>80</sup>Incidentally, the derivation of *Nota quod primus tonus finitur in D gravi* (transmitted by R and D) from *Dialogus de musica* 11–18 (GS, 1:259–63) is very clear.

<sup>81</sup>As well as in the adjunct treatises, instances of which are also noted in the following note.

<sup>82</sup>Cf. the use of *scientia* (*De plana musica* 1.2), *subiectum*, *predicatum* (*De plana musica* 2.2; *Introductio musice* 1.6, 1.23–24), *modus* (*De plana musica* 2.3; *Introductio musice* 1.5, 1.24, 6.3, 7.18; *Sed quoniam cantor diu sine intermissione continuare non potest* B.5), *genus* (*De plana musica* 4.2, 5.6, 6.7, 9.9, 10.4; *Item notandum quod quatuor littere sunt regulares* F.41), *species* (*De plana musica* 6.1, 6.7, 10.4, 13.5, 16.1; *Introductio musice* 1.7, 6.20, 7.2), *differentia* (*De plana musica* 9.10, 10.14, 13.4–5; *Introductio musice* 2.7; *Nota quod primus tonus finitur in D gravi* D.13, 27), *signum* (*De plana musica* 11.2, 14.4; *Introductio musice* 2.22, 4.2, 4.14; *De falsa musica* A.6), *proprietas* (*De plana musica* 13.4; *Introductio musice* 1.8, 3.2), *causa* (*De plana musica* 15.16; *Introductio musice* 3.26; *Nota generalem regulam quare inventum fuit b molle* E.3), *equipollentia* and related concepts (*De plana musica* 16.53; *Introductio musice* 2.24, 4.7–8, 7.42, 7.49), *supponere* (*De plana musica* 16.72), *dignitas* (*Introductio musice* 3.26; *De litteris finalibus* C.12), *auctoritas* (*De litteris finalibus* C.13, C.17, C.29), *gravitudo* (*Introductio musice* 2.3); see also the following three instances of scholastic argument that take the form of the *quaestio* (*De plana musica* 16.14; *Nota generalem regulam quare inventum fuit b molle* E.15, E.23). There is one reference to a philosopher in *Introductio musice* (3.26): that philosopher, unnamed in the text, is in all probability Aristotle. For the influence of Aristotle on thirteenth-century music theorists, see Jeremy Yudkin, "The Influence of Aristotle on French University Music Texts," in *Music Theory and Its Sources: Antiquity and the Middle Ages*, ed. André Barbera (Notre Dame, Indiana: University of Notre Dame Press, 1990), pp. 178–89; for lists of works by, or attributed to, Aristotle and their Latin translators, see Bernard G. Dod, "Aristoteles latinus," in *The Cambridge History of Later Medieval Philosophy: From the Rediscovery of Aristotle to the Disintegration of Scholasticism 1100–1600*, ed. Norman Kretzmann, Anthony Kenny, Jan Pinborg (Cambridge: Cambridge University Press, 1984), pp. 74–79. For a glossary of most of these terms in Latin, see Richard McKeon, ed., *Selections from Medieval Philosophers, Volume II: Roger Bacon, Saint Bonaventura, Saint Thomas Aquinas, Matthew of Aquasparta, John Duns Scotus, William of Ockham* (New York, Charles Scribner's Sons, 1930), pp. 422–506.

(for the locations of the related passages in the later works, see the notes to the respective passages): Jerome of Moravia (*De plana musica*: 1.2–9 and 2.2–3), Johannes de Grocheio (*De plana musica*: 2.5, 6.7, 16.16; *Introductio musice*: 2.17), “Frater Guido” (*De plana musica* 2.11), and *Ars contrapunctus secundum Philippum de Vitry* (*De plana musica*: chapter 16; *Introductio musice*: chapter 7).<sup>83</sup>

Possible borrowings from *De plana musica* and *Introductio musice* by later authors or treatises

The final category is by far the largest and most varied in the degree of certainty with which one can claim a borrowing has been made. The clearest parallels are perhaps those found between Lambertus (CS, 1:254–56) and chapters 12–15 of *De plana musica* (proprieties, even and odd properties, mutations). *De plana musica* 16.4 (definition of the unison) is also related to Lambertus.<sup>84</sup> If *De plana musica* is indeed by Johannes de Garlandia, it is reasonable to assume that it antedates Lambertus. No assumptions can be made in this respect for *Introductio musice*, given its uncertain authorship. Other prominent “borrowings” or parallels are those by Jerome of Moravia (*De plana musica*: 6.8, 10.2), Anon. 4 (*De plana musica*: 6.7), and *Quatuor principalia* (*De plana musica*: 2.2–3, chapters 12–25 [see especially the definition of *mutatio* in 15.3 and also 15.5–9]; *Introductio musice*: possibly 5.6), and Rossetti *Libellus* (*Introductio* 5, 7).<sup>85</sup>

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<sup>83</sup>The Pisa version of this treatise (edited in Klaus-Jürgen Sachs, *Der Contrapunctus im. 14. und 15. Jahrhundert: Untersuchungen zum Terminus, zur Lehre und zu den Quellen*, Beihefte zum Archiv für Musikwissenschaft, vol. 13 [Wiesbaden: Steiner, 1974], pp. 170–73) also cites the authority of Johannes de Garlandia for its entire contents. This version, however, contains only the portion dealing with counterpoint, derived entirely from *Ars contrapunctus secundum Philippum de Vitry*.

<sup>84</sup>The treatise *De falsa musica* is also related to Lambertus, and also with CS 1 Anon. 2: see Rasch, *Johannes de Garlandia*, p. 45.

<sup>85</sup>In addition, there exists a music treatise in Hebrew by Juda ben Isaac, which Joseph Smits van Waesberghe, “The Treatise on Music Translated into Hebrew by Juda ben Isaac,” in *Yuval: Studies of the Jewish Music Research Centre*, vol. II, ed. Amnon Shiloah (Jerusalem: Magnes Press, The Hebrew University, 1971), p. 134, claims “can be directly associated with” *Introductio musice*. For an edition with French translation and commentary of this treatise, see Israël Adler, “Le traité anonyme du manuscrit hébreu 1037 de la Bibliothèque Nationale de Paris,” in *Yuval: Studies of the Jewish Music Research Centre*, vol. I, ed. Israël Adler (Jerusalem: Magnes Press, The Hebrew University, 1968), pp. 1–47. This treatise is transmitted in a single manuscript: Paris, Bibliothèque nationale, Hébr. 1037, fols. 22v–27v.



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Both *De plana musica* and *Introductio musice* present a number of innovative concepts and statements. Foremost among these is the concept of the thirteen interval species within the octave.

The description of the thirteen intervals covers all the possible diatonic intervals within the octave (unison, semitone, whole tone, minor third, major third, perfect fourth, tritone, perfect fifth, minor sixth, major sixth, minor seventh, major seventh, and octave). Theorists and treatises before Johannes de Garlandia listed various smaller sets of intervals within the octave. Hucbald (ca. 893) described nine intervals: semitone, whole tone, minor third, major third, perfect fourth, perfect fifth, tritone, minor sixth, and major sixth. *Dialogus* (ca. 1000), Guido (ca. 1030), and Roffredi (writing between ca. 1170 and 1194) described six intervals: semitone, whole tone, minor third, major third, perfect fourth, and perfect fifth; both Guido and the author of *Dialogus* declared that “other intervals are nowhere found in music.”<sup>86</sup> Some theorists and treatises did not consider the unison to be an interval (e.g., Hucbald, *Dialogus*, Guido, Berno of Reichenau [d. 1048], Roffredi); some excluded the tritone (e.g., *Dialogus*, Wilhelm of Hirsau [ca. 1069]; Aribo [ca. 1070]; Theoger of Metz [ca. 1050–1120]; John [ca. 1100]; Roffredi; *Summa musice* [ca. 1200]), and some Smits van Waesberghe, pp. 143, 145, dated the treatise as from the fourteenth century, and hypothesized that it was translated in Southern France from Latin and German sources. Basing his arguments partly on the premises that Johannes de Garlandia was the author of *Introductio musice*, and that Johannes de Garlandia was identical with John of Garland, Smits van Waesberghe concluded that the Latin source, possibly a treatise written in Paris or Toulouse (two places in which John of Garland was known to have worked), was the same treatise from which *Introductio musice* was supposedly adapted. In view of the tenuous nature of the two premises, as discussed above (pp. 10–11, 21), Smits van Waesberghe’s conclusions regarding the details of the common ancestry of Juda ben Isaac’s treatise and *Introductio musice*, cannot be fully upheld. Furthermore, while the parallels between the two treatises are substantial, they do differ in a number of important details: the terms discussed in the introductory chapters in the respective treatises are not the same; Juda’s treatise gives only superacute dd as the highest note, whereas *Introductio musice* gives superacute ee; in the chapter on intervals, Juda’s treatise states explicitly that there are [only] seven interval species with which one composes all chant, whereas *Introductio musice* discusses thirteen species.

<sup>86</sup>Guido (*Epistola* [GS, 2:47]): Non aliter, quam his sex modis, voces iunctae concordant vel moventur.

excluded the octave (e.g., Hucbald, *Dialogus*, Guido, Berno of Reichenau, Aribio, John). Wilhelm of Hirsau (ca. 1069) seems to be the only theorist prior to *De plana musica* who included the minor seventh; all omitted the major seventh from their list of intervals.<sup>87</sup> Besides Johannes de Garlandia himself (in *De mensurabili musica*) I have not been able to find any medieval theorist who can be dated with any measure of certainty before Lambertus or even Jerome of Moravia to describe all thirteen intervals within the octave.<sup>88</sup> It is a strong possibility, then, that in *De plana musica* we find for the first time in the history of music theory a systematic treatment of all thirteen intervals within the octave.

Later treatises, when discussing intervals, almost invariably describe thirteen within the octave.<sup>89</sup> Notable among these is *Ars contrapunctus secundum Philippum de Vitry*, which cites as authorities for the thirteen intervals Boethius, Guido, and Johannes de Garlandia, calling the last the “most expert and most acclaimed.”<sup>90</sup> Johannes de Grocheio (fl. 1300) also links Johannes de Garlandia with the thirteen intervals, although he disagrees with Johannes’s numbering. Many other authors even up to the time of Bonaventura da Brescia (*Breviloquium musicale* [1497]) and Biagio Rossetti (*Libellus de rudimentis musices* [1529]) discuss these intervals in the manner first seen in *De plana musica*. The adoption by later theorists of the thirteen intervals stems logically from the practical situation, for both melodic and harmonic major and minor sevenths had become part of the musical vocabulary during the time of Johannes de Garlandia (i.e., that of the “Notre Dame” repertory).

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<sup>87</sup>Based on an electronic search of *Thesaurus Musicarum Latinarum*, an evolving electronic database of medieval and Renaissance Latin music theory.

<sup>88</sup>The La Fage Anonymous (*Tractatus de musica* [Adrien De La Fage, *Essais de diphthérogaphie musicale* (Paris, 1864; reprint, Amsterdam: Knuf, 1964), p. 362]) was the only theorist I found from the *Thesaurus Musicarum Latinarum* who possibly predates Garlandia (12th century). His treatise does not go beyond stating that there are thirteen intervals, naming only the unison, semitone, “etc.”

<sup>89</sup>The *Berkeley Manuscript* (1375) 1.9 [*The Berkeley Manuscript: University of California Music Library, MS. 744* (olim *Phillipps 4450*), ed. Oliver B. Ellsworth, *Greek and Latin Music Theory* (Lincoln and London: University of Nebraska Press, 1984), p. 98] described fourteen, differentiating between the tritone and the diminished fifth.

<sup>90</sup>1.2 (Appendix D).

Along with the developments in polyphony came the formulations of the earliest conventions of *falsa musica*—that is, concerning notes outside the gamut, or *musica vera* system. Medieval theorists represented musical sounds and intervals of *musica vera* by measurements on the monochord, which was used both as a teaching aid and as a measuring device. It was therefore logical for them also to represent *falsa musica*, or chromatic notes, on the monochord.<sup>91</sup>

In the Paris version of *De plana musica* we find a description of one such chromatic division of the monochord (10.5–13). Rasch has claimed that this is the first-ever chromatic division of the monochord. It certainly predates Hugo von Reutlingen's chromatic division (1332), which Cecil Adkins in his dissertation calls the first chromatic division.<sup>92</sup> Another treatise that predates Hugo von Reutlingen and that vies strongly with *De plana musica* to be the first to discuss chromatic tuning on the monochord is *Sequitur de synemenis*.<sup>93</sup> This short essay appears as an adjunct to Anonymous 4's treatise in all three of the latter's surviving sources. Since Fritz Reckow has dated the earliest source for Anonymous 4 (London, British Museum, Royal 12C. VI., fols. 59r–80v) as ca. 1275, *Sequitur de synemenis* could have been written no later than ca. 1275.<sup>94</sup>

In the chapter of *De plana musica* describing the chromatic division of the monochord the terms *prothosynemmenon*, *deutrisynemmenon*, *tresynemmenon*, and *tetrasynemmenon* are defined as names for certain chromatically inflected notes (10.4). The only other instances of

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<sup>91</sup>For the extent to which "ancient" and "modern" theorists applied chromatic notes see Karol Berger, *Musica Ficta: Theories of Accidental Inflections in Vocal Polyphony from Marchetto da Padova to Gioseffo Zarlino* (Cambridge: Cambridge University Press, 1987), pp. 30–34.

<sup>92</sup>Adkins, "The Theory and Practice of the Monochord" (Ph.D. dissertation, State University of Iowa, 1963), p. 170; diagram of Hugo's division on p. 174.

<sup>93</sup>For a modern edition, see Jan Herlinger, ed., *Prosdocimo de' Beldomandi Brevis summula proportionum quantum ad musicam pertinet and Parvus tractatulus de modo monacordum dividendi*, Greek and Latin Music Theory (Lincoln and London: University of Nebraska Press, 1987), pp. 123–35.

<sup>94</sup>Reckow, ed., *Der Musiktraktat des Anonymus 4*, 2 vols., Beihefte zum Archiv für Musikwissenschaft, vols. 4–5 (Wiesbaden: Steiner, 1967), vol. 1, p. 17.

a similar use of these terms are found in *Sequitur de synemenis* and Jerome of Moravia's treatise. But of these three works, only *De plana musica* names the notes to which these terms correspond (10.14–17).

In the second monochord division given in *De plana musica* (9.24–32), the note superacute ee is derived (9.30: *ultimum .eo.*). This is possibly the earliest mention of this note in the gamut: earlier descriptions of the gamut have given the top note as no higher than superacute dd. Other early mentions of this note occur in Lambertus (*Tractatus de musica*; CS, 1:257)<sup>95</sup> and Jerome of Moravia (*Tractatus de musica* 11, 12<sup>96</sup>). In addition to these *Introductio musice* also includes superacute ee as a note in the gamut (2.27: the 22 *claves* in the gamut by implication must include superacute ee for the count to be correct; after 2.29, diagram of the hand).

Despite the appearance of the chromatic division, only in the *Vb* version of *De plana musica* is the kindred topic *falsa musica* discussed. The adjunct treatise, *De falsa musica*, deserves brief consideration here if only because Rasch, like other scholars, considered it part of *Introductio musice*.<sup>97</sup> The definition of *falsa musica* given in this treatise (A.3: *Falsa musica est quando de tono facimus semitonium e econverso* [*Falsa musica* occurs when we make a semitone from a whole tone and the converse]) is almost an exact parallel to that given in Lambertus (CS, 1:258: *Per falsam musicam fieri appellamus, quando facimus de semitonio tonum, vel e converso* [When we make a whole tone from a semitone, or the converse, we say this is done by means of *falsa musica*]). Lambertus's definition can, with some degree of certainty, be called one of the earliest.

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<sup>95</sup>This belies Oliver Ellsworth's claim that the note ee la did not appear in music theory until the time of Jerome of Moravia (*The Berkeley Manuscript: University of California Music Library, MS. 744 [olim Phillipps 4450]*, Greek and Latin Music Theory [Lincoln and London: University of Nebraska Press, 1984], p. 33, note 1).

<sup>96</sup>Simon M. Cserba, ed., *Hieronymus de Moravia O. P. Tractatus de musica* (Regensburg: Verlag Friedrich Pustet, 1935), pp. 48, 55.

<sup>97</sup>Rasch, *Iohannes de Garlandia*, p. 61.

More remarkably, this definition precedes the statement that every whole tone is divisible into two semitones (A.4: *Omnis tonus est divisibilis in duo semitonia*). Boethius, *De institutione musica* 3.6<sup>98</sup> showed arithmetically that the whole tone comprises two minor semitones and a comma; Lambertus (CS, 1:257) defined the whole tone as containing two unequal semitones. The treatise *De falsa musica* states that the division of a whole tone into two semitones can occur on *every* such interval in the gamut, hence implying that *falsa musica* can be applied to every *musica vera* note, a statement that reflects what Karol Berger variously described as “the expanding limits” and “the potentially unlimited universe” of *musica ficta*.<sup>99</sup>

In the assessment of the historical significance of these concepts it is reasonable to assume that *De plana musica* antedates Johannes de Garlandia’s *De mensurabili musica*, since *De plana musica* is presumably the treatise referred to in the opening statement of *De mensurabili musica*. Regarding *Introductio musice*, it can only be estimated that at the latest this treatise was completed before the copying of Barcelona 883 (some time during the fourteenth century), the earliest of the manuscripts bearing its text.

Rasch has estimated that *Introductio musice* was written between 1250 and 1300. His suggestion of the possibility of a more precise dating of between 1280 and 1300 is, unfortunately, not well-founded. Citing a passage that occurs only in D<sup>100</sup> Rasch suggested

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<sup>98</sup>Gottfried Friedlein, ed., *Anicii Manlii Torquati Severini Boetii: De Institutione Arithmetica Libri Duo, De Institutione Musica Libri Quinque. Accedit Geometria quae Fertur Boetii* (Leipzig: Teubner, 1867), p. 277.

<sup>99</sup>Berger, *Musica Ficta*, pp. 29, 42.

<sup>100</sup>Fol 78r. It is part of a larger passage appearing between C.27 and C.28 of the adjunct treatise *De litteris finalibus*. This larger passage parallels B.3–4 from the treatise *Sed quoniam cantor diu sine intermissione continuare non potest*, which in D appears only fragmentarily, followed by the text in question:

Tunc debent fieri omnes quadre et habere unum tractum descendentem a dextris, sicut patet: Domine Deus noster [[qua]] in superius in exemplis. Et iste tales note in mensurabili cantu dicuntur longe. Longe quedam sunt perfecte [et quedam imperfecte inserted from marg.] imperfecta efficitur perfecta quatuor modis: primo, quando simul inveniuntur plures longe [tunc inserted from marg.] dicuntur esse perfecte; secundo, quando due breves inter duas longas inveniuntur; tercio, quando quidam parvulus punctus ponitur, qui dicitur divisio modi; quarto, quando pausa longa trium temporum

that if this passage was authentic the treatise could not have been written before Franco of Cologne (dated by Yudkin as ca. 1280). But since this passage dealing with mensuration appears out of place in a plainchant treatise it is probably not authentic and (as I have argued) ought not to be placed in the main text. But even if it were, or even if the scribe<sup>101</sup> had inadvertently inserted this passage from a text foreign to, but contemporaneous with, *Introductio musice*, the reasons Rasch gave for it not antedating Franco are not valid. Rasch argued that the terms *longe perfecte* and *longe imperfecte* and theories of imperfection of the long which this passage discusses could not have appeared before Franco's *Ars cantus mensurabilis*.<sup>102</sup> These terms can, in fact, already be found in the treatises of the Anonymous of St. Emmeram (1279) and Lambertus, who, according to Yudkin, might have written as early as 1260. In both these treatises the terms are used in discussions similar in nature to that of the mensuration passage found only in D, namely, the imperfection of the long.<sup>103</sup>

post longam invenitur, tunc illa longa precedens dicitur esse perfecta. Et sicut quatuor modis efficitur longa perfecta trium temporum, ut hic [Thus we ought to make all of them square and having a stem descending from the right side, as shown in *Domine Deus noster*, above among the examples. In measured music such notes are called longs. Certain longs are perfect and certain imperfect. An imperfect long is made perfect in four ways: first, when several longs are found together then they are called perfect; second, when two breves are found between two longs; third, when a certain very small dot is placed, which is called *divisio modi*; fourth, when a long rest of three *tempora* is found after a long, then that long preceding it is said to be perfect. Thus a perfect long of three *tempora* is made in four ways, as here].

<sup>101</sup>As discussed in the manuscript descriptions he was Jordanus de Blanckenborch, also the principal scribe of D. He was apparently a musician if not a Latinist and probably understood well the subject of his text.

<sup>102</sup>Rasch, *Johannes de Garlandia*, p. 69; Reimer, ed., *De mensurabili musica*, vol. 1, p. 9, used this same argument to show the "inauthenticity [*Nichtauthentizität*]" of the attribution of *Introductio musice* to Johannes de Garlandia. He also pointed out that the teaching of the numerical basis for the intervals, which was "still important [*noch wichtige*]" for Johannes de Garlandia, is missing in *Introductio musice*. It is present in both *De plana musica* and *De mensurabili musica*.

<sup>103</sup>Cf. Anonymous of St. Emmeram: "... quidam [referring particularly to Lambertus] in suis artibus maiorem longam perfectam solummodo vocaverunt, ... Minorem autem longam imperfectam dicere praesumpserunt, eo quod non nisi duo tempora contineat, quamvis affinitatem in forma et proprietate habeat cum maiori longa [some people in their treatises have called only the larger long perfect. ... They have presumed to say, however, that the smaller long is imperfect, because it only contains two units of time, although it has an affinity in form and propriety with the larger long (translation Yudkin)]. ... " (*De musica mensurata*, ed. Yudkin, pp. 102, 104–5) and Lambertus: "... prima super omnes fons est et origo ipsius scientie atque finis, que perfecta longa merito vocatur; ... Ante vero longam, tria

Having introduced the terms *longe perfecte* and *longe imperfecte*, the passage outlines four cases in which a perfect long can occur; the third of these is “quando quidam parvulus punctus ponitur, qui dicitur divisio modi [when a certain very small dot is placed, which is called *divisio modi*].” Rasch has equated this *punctus* with the *punctus divisionis* of the generation after Franco (presumably referring to Petrus de Cruce’s use of the *punctus divisionis*).<sup>104</sup> All the same, it is not at all clear that this equation is justified: the term *divisio modi* is used in this passage to show how a long can remain perfect, just as it is used by the Anonymous of St. Emmeram (who, however, states that *divisio modi* is graphically effected by a *tractulus obliquus* rather than a *punctus*);<sup>105</sup> Rasch’s post-Franconian *punctus divisionis* was first used by Petrus de Cruce to mark off groups of semibreves. Thus, the appearance of terms that gained wide currency with the innovative theories of Franco and Petrus de Cruce need not force a post-1280 dating of the treatise, even if this passage did belong to this treatise.<sup>106</sup>

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tempora longa fatetur. Si brevis addatur, duo tempora longa meretur [the first of these values is the source and origin as well as the end of knowledge itself, which is called by virtue of its state the perfect long; . . . Before another long it is divisible into three *tempora*. If a breve is added the long is worth two *tempora* (translation mine)]. . . .” (*Tractatus de musica*, CS, 1:269–70)

<sup>104</sup>Robertus de Handlo (*Regule*): “Securius tamen et verius in motetis et in aliis cantibus ubi semibreves sunt, addatur punctus inter duas et duas, vel inter tres et tres, vel inter duas et tres, vel inter tres et duas, ut ponit Petrus de Cruce [It is, nevertheless, safer and more suitable in motets and in other songs where there are semibreves for a punctus to be added between two and two or between three and three or between two and three or between three and two, as Petrus de Cruce employs it].” Johannes Hanboys (*Summa*): “Securius tamen et verius additur punctus inter duas et duas, vel inter tres et tres, vel inter duas et tres, [vel inter tres et duas,] ut ponit Petrus de Cruce [It is, nevertheless, safer and more suitable for a punctus to be added between two and two or between three and three or between two and three or between three and two, as Petrus de Cruce employs it (both the above translations are by Lefferts)].” (Lefferts, ed., *Handlo*, pp. 100–103, 258–59).

<sup>105</sup>Yudkin, ed., *De musica mensurata*, p. 254.

<sup>106</sup>Both this consideration of the “Franconian terms” and Reimer’s second argument, that the *Introductio musice* lacks a discussion of the numerical basis of intervals (*De mensurabili musica*, p. 9), a topic that was important to Johannes de Garlandia, seem to me insufficient to justify Reimer’s pronouncement of the “Nichtauthentizität” of the *Introductio musice*. It should also be borne in mind that Yudkin’s dating of Franco’s treatise (c 1280) is by no means unanimously accepted: according to Andrew Hughes (“Franco of Cologne,” *New Grove Dictionary*, vol. 6, p. 795), the consensus of available evidence favors a date of “soon after 1250.”

The difficulty in dating *Introductio musice* more precisely lies in the fact that, in the absence of external evidence, its contents give little precise indication of when it could have been written. Many of the plainchant topics it discusses remained relatively stable for a long period of time and were often transmitted substantially unaltered from theorist to theorist or treatise to treatise. This is in sharp contrast to the rapid and well-defined changes that took place in mensural theory, especially during the Notre Dame period. It is tempting, but unsafe, to posit any “firsts” on behalf of *Introductio musice*.

Although it appears that *De plana musica* and *Introductio musice* were innovative in several respects, we should be wary of relying on innovation per se as a measure of a treatise’s importance. Medieval writers did not prize originality as we do today. The value of treatises like *De plana musica* and *Introductio musice* lies not so much in their originality or their uniqueness as in their witness to what theorists and other musicians and scholars regarded as significant and worthy of transmission.

The true significance of *De plana musica* and *Introductio musice* can best be appreciated by placing them in the context of other theorists and other treatises spanning roughly the millennium between the fifth and fifteenth centuries. A running commentary to the texts in this edition serves to locate them clearly in this tradition.



## · THE MANUSCRIPTS

The following section describing the manuscripts is subdivided into four parts: Sources of *De plana musica* (P, V, Vb); Sources of *Introductio musice* (i.e., sources of the four versions of *Introductio musice*: B, W, R, D); Sources of Treatises Related to *Introductio musice* (i.e., group of sources of treatises that share material with *Introductio musice* and the source of the abridgement of *Introductio musice*: S, L, Vc, Pe); Interrelationship of the Sources.<sup>107</sup>

### SOURCES OF *DE PLANA MUSICA*

P Paris, Bibliothèque Nationale, Fonds latin 18514  
Parchment; 94 folios; 225 x 148 mm  
France; late thirteenth to mid fourteenth century

According to a note on folio 94r written between the end of the fifteenth and the beginning of the sixteenth century,<sup>108</sup> this manuscript once belonged to the Collège de Navarre, a college of the University of Paris.<sup>109</sup> The text was written in a single hand, with

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<sup>107</sup>The descriptions of these manuscripts are based on microfilm copies. Thus they do not deal with the physical organization of gatherings, nor with the materials (paper or parchment) of which the manuscripts are made, nor with the specific colors of inks used, except insofar as reported by other scholars.

<sup>108</sup>Meyer, "*De synemmenis*," p. 85, n. 10. Later in his article (same page) Meyer attaches another dating of "fin du XVI<sup>e</sup> siècle" to this note. For a listing of this manuscript with others at Navarre see Henri Auguste Omont, *Catalogue général les manuscrits français: Ancien petit fonds français III, Nos. 25697–33264 du fonds français* (Paris: Leroux, 1897), pp. 410–11.

<sup>109</sup>Founded in 1304 by Jeanne de Navarre, French wife of Philippe IV (le Bel), and dedicated on 3 April 1315. Meyer, "*De synemmenis*," p. 85, n. 15, incorrectly reports that the college was founded in 1316; cf. Jean Launoy, *Regii Navarrae Gymnasii Parisiensis Historiae Pars Prima in Libros Tres Distributa*, vol. 1 of *Academia Parisiensis Illustrata, Quatuor Partibus Divisa* (Paris: n. p., 1682), pp. 7, 21, 39. Meyer, p. 85, also points out, this time justifiably, that the relatively late date of the note itself renders uncertain any proposition that the manuscript could have belonged to the Collège de Navarre as early as the fourteenth century: the oldest manuscript in the library of the college dates from the late seventeenth century (*Bibliothèques de manuscrits médiévaux en France: Relevé des inventaires du VIII<sup>e</sup> au XVIII<sup>e</sup> siècle*, ed. A. -M. Genevois, J. -F. Genest, and A. Chalandon [Paris: Centre National de la Recherche Scientifique, 1987], p. 165). For discussions on an alleged connection with this college of Philippe de Vitry, see André Gilles, "Contribution à un inventaire analytique des manuscrits intéressant l'ars nova de Philippe de Vitry" *Revue belge de musicologie* 10 [1956]:150–51, and Fuller, "Phantom Treatise," pp. 45–46. For further information on the Collège de Navarre, see Gilbert Ouy, "Le Collège de Navarre, berceau de l'humanisme français," in *Actes du 95<sup>e</sup> Congrès national des Sociétés Savantes (Reims, 1970), Section de philologie et d'histoire jusqu'à 1610, Tome 1: Enseignement et vie intellectuelle (IX<sup>e</sup>–XVI<sup>e</sup> Siècle)* (Paris: Bibliothèque nationale, 1975), pp. 275–99.

between 35 and 38 lines of text per page. Initials have been written in, although without elaborate illumination. Several lines representing staves remain unfilled.

The use of the abbreviations (') for *-r-* and *-er-* (e.g., fol. 86r: *ternarius*), and (✚) for *-est* and *-is* (fol. 86v/-13: *idest*; fol. 89r/13: *talīs* [also used as final *-m*: e.g., fol. 87r/5: *iam*])<sup>110</sup> suggest a French provenance, although certain Italian features are also present: the uncrossed tironian *et* sign (7), and the almost equal proportion of height and width of the letters. The use of the abbreviation (C) for *con-* is more characteristic of German scripts. Genuine juncture is not used although some letters do overlap (e.g., fol. 85r: *de*; fol. 86r: *videlicet, species*); this feature and the overall slight angularity of the script suggest a Gothic influence. The use of the straight *d* indicates that the script is post-Gothic, although the uncial *d* is also found (for the use of both forms in close succession, see fol. 85v/-13: *diesim et diesim*; fol. 89r/6: *additio*). The single-looped *a* and the occasional dropping of the *f* and the straight *s* below the bodies of letters show cursive traits, while the use of straight *r* after a round letter (e.g., fol. 85r: *discreta*) and the occasional opening of the lower loop of *g* (e.g., fol. 85v: *generis*) indicate a slight informality of the script. On paleographic evidence,<sup>111</sup> therefore, this treatise may have been copied between the late thirteenth and the middle fourteenth centuries.<sup>112</sup>

<sup>110</sup>The system of folio and line numbering used here is as follows: e.g., fol. 86v/-13 indicates fol. 86v, line 13 from the bottom; fol. 89r/13 indicates fol. 89r, line 13 from the top. Lines are counted from the bottom if the word in question occurs nearer the bottom of the folio.

<sup>111</sup>I am deeply indebted to Professor Stephen Schierling of the Department of Foreign Languages and Literatures, Louisiana State University, for his generous assistance in paleographic matters. I have also relied on the following texts: S. Harrison Thomson, *Latin Bookhands of the Later Middle Ages, 1100–1500* (Cambridge: University Press, 1969); B. L. Ullman, *Ancient Writing and its Influence* (Toronto: University of Toronto Press, 1980, repr., 1989); L. D. Reynolds and N. G. Wilson, *Scribes and Scholars: A Guide to the Transmission of Greek and Latin Literature*, 3rd ed. (Oxford: Clarendon, 1991; reprint, 1991). In addition, Jan Herlinger, "The Lucidarium of Marchetto of Padua: A Critical Edition, Translation, and Commentary" (Ph.D. dissertation, University of Chicago, 1978), and *Lucidarium* have been particularly helpful in the detail with which they deal with paleographic factors for the determination of provenance and the dating of music theory manuscripts.

<sup>112</sup>The following date the manuscript as thirteenth century: Louis Royer, "Catalogue des écrits des théoriciens de la musique conservés dans le fonds latin des manuscrits de la Bibliothèque Nationale," *L'année musicale* 3 (1913):240; Smits van Waesberghe, Peter

This manuscript contains two treatises:<sup>113</sup>

- 1r–85r Boethius, *De institutione musica* (not used in Friedlein's edition). Incipit: "Liber Musice Boetii—Musicam nobis naturaliter esse coniunctam. Omnium quidem perceptio sensus ita sponte ac naturaliter quibusdam viventibus adest ut sine hiis animal non possit intelligi . . ." In margin in another hand: "Navarre 95"; in margin in yet another hand slightly above previous: "Navarre 95." Explicit: "In non spissis uero ut in diatonicis generibus nusquam una. Longobardorum invidia non explicit musica."
- 85r–94r *De plana musica* (fols. 88r–89v transcribed in Meyer, "Le *De synemmenis*," pp. 92–94). Incipit: "Tractatus de musica collectus ex hiis que dicta sunt a Boetio supra atque declaratio musice practice." Explicit: "Et dicitur a semi quod est imperfectum et tonus quasi imperfectus tonus ut hic." Note: "Pro libraria Regalis collegij Campaniae alias Navarrae parisius fundatj."
- 94v 3 lines of indecipherable text in a different hand

Folios 85r–94r transmit a version of *De plana musica* that is used as copy text in this edition. The Boethius text in folios 1r–85r contains numerous marginal comments.<sup>114</sup> In addition drawings of mythical characters holding various musical instruments are found on folios 19v, 29v, 30r, 51v, and 81v.

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Fischer, and Christian Maas, eds., *The Theory of Music from the Carolingian Era up to 1400*, vol. 1: *Austria, Belgium, Switzerland, Denmark, France, Luxembourg, Netherlands*, Répertoire international des sources musicales, B III<sup>1</sup> (Munich-Duisburg: G. Henle, 1961; hereafter cited as "RISM 1"), pp. 124–25 (based on Royer); Reimer, ed., *De mensurabili musica*, p. 5, n. 40 (based on Gilles, "Contribution," and Smits van Waesberghe); Baltzer, "Johannes de Garlandia," p. 662 ("end of the 13th century"). The following date the manuscript as fourteenth century: Léopold Delisle, *Inventaire des manuscrits latins de Notre-Dame et d'autres fonds conservés à la Bibliothèque nationale sous les numéros 16719–18613* (Paris: Durand et Pedone-Lauriel, 1871), p. 100; reprinted as part of Léopold Victor Delisle, *Inventaire des manuscrits latins conservés à la Bibliothèque Nationale sous les numéros 8823–18613* (Hildesheim and New York: Olms, 1974); Calvin M. Bower, "Boethius *De institutione Musica*: A Handlist of Manuscripts," *Scriptorium* 42/2 (1988):236; Meyer, "De *synemmenis*," p. 85 (suggests the first third of the fourteenth century on paleographical grounds). Bower, "Handlist of Manuscripts," p. 236, suggests that the manuscript was copied in the southwest of France from a Norman exemplar.

<sup>113</sup> For other descriptions of the manuscript and its contents see Royer, "Catalogue," pp. 239–40; RISM 1, pp. 124–25; Rasch, *Johannes de Garlandia*, p. 46; Reimer, ed., *De mensurabili musica*, p. 5, n. 40; Meyer, "De *synemmenis*," pp. 85–86.

<sup>114</sup> Interlinear and marginal glosses of this nature originated during the Carolingian Renaissance and developed through the next four centuries (Michael Bernhard and Calvin M. Bower, eds., *Glossa maior in institutionem musicam Boethii*, vol. 1, Bayerische Akademie der Wissenschaften Veröffentlichungen der Musikhistorischen Kommission Band 9 [Munich: Bayerischen Akademie der Wissenschaften, 1993], p. xxxix). In this volume, Bernhard and Bower examine glosses from the abovementioned period (ninth to the twelfth centuries) only.

V Vatican City, Biblioteca Apostolica Vaticana, Vaticano latino 5325  
 Parchment; 30 folios; 137–139 x 91 mm  
 France; mid fourteenth century

The manuscript consists of four gatherings: i) four bifolios (fols. 1–7), one folio between folios 4 and 5 now missing; ii) four bifolios (fols. 8–16), folio 11 added; iii) three bifolios (fols. 17–22); iv) four bifolios (fols. 23–30). The missing folio in the first gathering results in the lacuna between the folios at present numbered 4 and 5. In the second gathering folio 11 must have been inserted no later than the copying of the first treatise (*De plana musica*) for the text is contiguous at this point).

The text was copied in a single hand with 26 lines per page. The use of the crossed tironian *et* sign (7) and of the abbreviations (9) for *con-*, the suprascript (9) for an internal *-os-* (e.g.: fol. 5r/-1: *posset* ; fol. 4v/-4, and 9r/3: *postea*), and (') for *-er-* point to a French provenance for this manuscript. Genuine juncture is not used and the use of looped *r* after non-rounded letters (e.g., fol. 1r: *superparticularis*, *binarius*), and the pointed uncial *d* reveal a Gothic influence, but the use of straight *s* in the final position (e.g., fol. 2v: *aliquis*, *tercias*) and the overall only moderate amount of abbreviation are humanistic characteristics. The Arabic numeral forms of 4 and 7 (𐌹 and 𐌺, e.g., fol. 1v: margin; fol. 2v: text) point to either the thirteenth or fourteenth century.<sup>115</sup>

The manuscript contains two treatises (*De plana musica* and *De mensurabili musica*) separated by a page of musical examples:<sup>116</sup>

1r–11v      *De plana musica*. Incipit: "[Assit principio sancta maria meo *sup. lin.*] Musica est veraciter canendi scientia et facilis ad canendi perfectionem via, . . ."

<sup>115</sup>Enrico Bannister, *Monumenti vaticani di paleografia musicale latina*, Codices e Vaticanis selecti, vol. 12 (Leipzig: Otto Harrassowitz, 1913), pp. 196, 199, dated this manuscript as thirteenth century; Baltzer, "Johannes de Garlandia," p. 662, late-thirteenth century; Reimer, ed., *De mensurabili musica*, p. 18, and Meyer, "De synemmenis," p. 86, give "first half" and "early" fourteenth century respectively. Reimer, p. 18, is not entirely certain of the French origin of this manuscript.

<sup>116</sup>For a detailed description of the manuscript and its contents see Reimer, ed., *De mensurabili musica*, vol. 1, pp. 18–19; for other references see Bannister, *Monumenti vaticani*, vol. 12, pp. 196, 199 (does not discuss fol. 12r); RISM 2, pp. 100–101; Meyer, "De synemmenis," p. 86 (fols. 1r–11v only).

Explicit: "... Ascendere dyapason descendere ditonum cum dyapente et cetera et similiter descendere."

- 12r Musical examples for mutations (see Appendix E; cf. *B* fols. 68v–69r)
- 12v–30v Johannes de Garlandia, *De mensurabili musica* (CS, 1:175–82 [folios 12v–19v only]; Reimer, ed., *De mensurabili musica*, vol. 1, pp. 35–86 [*V* transmits chapters 1–11 of the treatise as edited by Reimer]). Incipit: "Habito de ipsa plana musica, que immensurabilis dicitur, nunc est presens intentio de ipsa mensurabili, ..." Explicit: "... Quintus primi et primus secundi. Honorare deum debemus in omni tempore nostro sine initio sive sine termino, benedicamus domino."

Fols. 1r–11v of this manuscript transmit the following portions of *De plana musica*: chapters 2 (partially), 5, 6, 7, 8 (partially), 9 (partially, owing to a lacuna from 9.13–13.10), 13 (13.11–12 only), 15, and 16. After chapter 16, fols. 10r–11v contain a unique formulaic passage giving permutations of the various intervals from the semitone to the octave.

On fol. 12r there are musical examples apparently designed to accompany an explanation of mutations. In all three sources of *De plana musica* the chapter on mutation is without musical examples. But there is a treatise on mutations in *B*, fols. 68r, that parallels this chapter (Appendix C). The text in *B* is followed by musical examples, fols. 68v–69r, that correspond in general to those found in *V*, fol. 12r (the correspondence commences with the second stave of examples in *B* and the beginning of *V*). The only other main difference is that the examples in *B* contain solmization syllables while those in *V* do not.

The examples in *B* seem to be complete, as they begin with the mutation on *C* fa ut, the first possible mutation on the gamut, and end with *dd* la sol, the last possible mutation. Since the examples in *V* parallel those in *B* from the latter's second stave, it is reasonable to suppose that we are now missing perhaps an extra stave at the beginning of the examples in *V*. If so, the missing portion must have been on a single folio that follows fol. 11, which was itself inserted before or during the copying of the manuscript at that point (see p. 59 above).

The possibility of a lost bifolio before the present fol. 12 is ruled out by the fact that the text between the present fols. 13 and 14 is contiguous.<sup>117</sup>

*Vb* Vatican City, Biblioteca Apostolica Vaticana, Barberiniano latino 307  
Parchment; 33 folios; 270 x 208 mm<sup>118</sup>  
Italy; 14th to early 15th century

The 33 folios of the manuscript are numbered 1–16, 25–40, and 62 in the top center of the recto sides. Reaney gave evidence that Gerbert was responsible for the removal of the original folios 17–24.<sup>119</sup> These folios now form folios 51–58 of codex 29.4<sup>0.3</sup> of the Library of the Abbey of Saint Paul (Austria).<sup>120</sup> A later foliation written on the top right of the recto sides of *Vb* substitutes 17–33 for the earlier 25–40, 62.<sup>121</sup> The present description uses the later foliation.

At least three and possibly as many as six scribes worked on the manuscript (in addition to the compiler of the list of contents on the flyleaf): scribe A copied folios one to

<sup>117</sup>See text in Reimer, ed., *De mensurabili musica*, p. 40. For the foliation of the second gathering, to which these folios belong, see p. 59 above.

<sup>118</sup>On the dimensions of the manuscript, Meyer, Frederick Hammond, and Fischer give "c.270 x c.308 mm," "205 x 270 mm." and "c. 270 x c. 208 mm" respectively (Meyer, "Le *De synemmenis*," p. 86; Hammond, ed., *Iohannis Vetuli de Anagnia Liber de musica*, Corpus Scriptorum de Musica, no. 27 (N. p.: American Institute of Musicology, 1977), p. 10; RISM 2, p. 102): I have chosen what I consider to be the most likely possibility, as I have not been able to examine the manuscript personally.

<sup>119</sup>Reaney, "Question of Authorship," p. 16.

<sup>120</sup>RISM 2, p. 102, gives "39.4<sup>0.3</sup>": probably a misprint, for on p. 103 it gives "29.4<sup>0</sup>," in agreement with Reaney, "Question of Authorship," p. 16. According to Oswald Koller, "Aus dem Archive des Benedictinerstiftes St. Paul in Lavanthal in Kärnten," *Monatshefte für Musikgeschichte* 22 (1890):39–41 (cited by Hammond, ed., *Iohannes vetulus*, p. 11, n. 4) the transplanted folios contain the treatises *Regulae de mensurabili musica* by Imbertus de Francia (extracted from *Musica practica* of Johannes de Muris), an anonymous *Rota compositionis monochordi*, a polyphonic composition (?) (reproduced in GS 3, frontispiece), *Explicatio tabulae monochordi* by Nicolaus de Lugduno (see GS 3, Praefatio), first chapter of *Proportio est quedam habitudo* (GS III:78), and *Questiones* by Johannes de Muris (GS, 3:301–308).

<sup>121</sup>RISM 2, p. 102, describes this manuscript as having "31 + II folios," the II folios presumably being the last two, which RISM 2 does not describe or list. Hammond, *Iohannes vetulus*, p. 10, on the other hand, considers the first 33 folios integral to the manuscript, and concludes that the manuscript originally contained 62 folios, adding that "the original fol. 41–61 are lost." Given the evidence of the older pagination, this may well be possible, but it may also be possible that the manuscript contained more than 62 folios or indeed less, for we cannot be absolutely certain that the last folio originally belonged to this manuscript.

part of 29va (just before the treatise on organ tuning: “qui est inter g et a”). The hand that copied the following treatise on organ playing on folios 29vb–30ra is very similar to scribe A’s, although minor differences are discernible. Owing to its similarity, however, it will be described as belonging to “scribe AA.”<sup>122</sup>

Scribe B copied from the rest of folio 30ra up to 30vb (up to “in la dicitur la viiia fa via mi va ut iiiiia.”). Scribe C copied folios 31ra to part of 31va (through “Terra spera celestis.”). As in the case of scribes A and AA, the hand that copied the final treatise on folio 31va–b is very similar to scribe B’s. Minor differences are also discernible in this case between the scripts of scribe B and this scribe, who will be referred to here as “scribe BB.”<sup>123</sup> On the last folio yet another scribe, D (or perhaps scribe A or AA), wrote the words of a diagram (see description below).

An incipit on folio 30ra gives the date 13th July, 1431; another incipit on folio 31va gives 31st (*ultimo*) March, 1432 (for the text see content description below).<sup>124</sup> The text copied by scribe A is arranged in two columns usually of 43 lines.

The Italian provenance of scribe A’s script is suggested by the following features: the uncrossed tironian *et* sign, the use of the abbreviation (¶) for *qui-* and *-qui-* (e.g., fol. 17ra: *quicquid, sexquialterum*), the use of the suprascript (¨) for *-re-* and *-er-*, the roundness of loops of *b*, *p*, and *q*, and the relatively equal height and width of the letters.

The script of scribe A (and also that of scribe AA) would seem to belong more to the fourteenth century than to the fifteenth: both the letters *d* and *g* are Gothic, the script has the appearance of lateral compression, juncture is used (e.g., fol. 17rb: *de*), and the Arabic

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<sup>122</sup>Its main difference with scribe A’s is that it is larger; in addition, several letters are written slightly differently, e. g., the tironian *et* signs, *e*’s, and lower- and upper-case *g*’s.

<sup>123</sup>Scribe B employs juncture for *de*, BB does not appear to do so; both shade their *s*’s differently, and their *g*’s are noticeably different.

<sup>124</sup>The first incipit describes the rules of counterpoint as “laid out” (*ordinate*) by Theodonus de Capua; the second incipit implies that the text in question was “copied” (*scriptam*) by Theodonus de Capua. The appearance of this name in these two incipits suggests the possibility that scribes B and BB were one and the same.

numeral forms for 4 and 7 are (℥) and (↖) respectively (although scribe B also uses the same form for 4 [e.g., fol. 30rb/4; there are no instances of the numeral 7 in scribe B's text]). The script of scribe C shows humanistic characteristics: it is more spacious laterally than that of scribe A and suggests a later period, similar to that indicated by scribes B and BB (1431–32).<sup>125</sup>

The present contents of the manuscript follow (using the later foliation):<sup>126</sup>

- |               |   |
|---------------|---|
| flyleaf verso | Partial list of authors of treatises in the manuscript, in a modern hand: "In Hoc Volumine continentur Tractatus diversi de Musica quorum auctores sunt infrascripti, videlicet Joannes Verulus [sic] de Anania, Imbertus de Francia, Ioannes de muris, Philippus de Vetri, Isidorus Hispalensis, Theodoricus de Campo."  |
| 1–16v         | Johannes Vetulus de Anagnia, <i>De musica</i> (CS, 3:129–77; Hammond, ed., <i>Johannes vetulus</i> ). At the top in a later hand: "Magistri iohannes de Anagnia." Incipit: "Cum igitur de arte musice tractare debeamus primo videndum est quid sit musica . . ." Explicit: "Et quod minima mutet figuram non requiritur nisi quando prolatio minor miscitur [cum sup. lin.] maiore aut minima prolatio cum minore. Finito libro sit laus gloria Christo. Dexteram scriptoris salvet eam deus cuncti [...] horis Amen. Explicit liber de musica magistri Iohannis veruli [sic] de anagnia." |
| 17r–19r       | <i>De plana musica</i> (Reaney, Gilles, and Maillard, eds., <i>Ars nova</i> , pp. 13–23). Incipit: "Musice tria sunt genera Mundanum humanum et instrumentale[[m]] . . ." Explicit: " . . . sed hoc non est falsum ergo."   |
| 19r–20v       | Version of <i>Ars nova</i> attributed to Philippe de Vitry (Reaney, Gilles, and Maillard, eds., <i>Ars nova</i> , pp. 23–31). Incipit: "Sex minime possunt poni pro tempore imperfecto . . ." Explicit: "Et est notandum quod maius tempus imperfectum se habet sicut maius tempus perfectum. Explicit ars nova magistri philippi de vetri. deo gratias. amen amen amen."   |

<sup>125</sup>Bannister, *Monumenti vaticani*, pp. 197–99, nos. 1012, 1003, 1008, 989, 1009, 1010, dates the text of folios 1r–27ra as of the 14th century, that of 27rb–29ra as of the 15th century, and erroneously reports the date given on folio 30ra as "1631"; Hammond, ed., *Johannes vetulus*, p. 10, and Reaney, Gilles, and Maillard, eds., *Ars nova*, p. 10, date the manuscript ca. 1400–1432.

<sup>126</sup>For descriptions and complete, or almost complete, listings of the contents see also Bannister, *Monumenti vaticani*, pp. 197–99 [omitting fols. 29ra–rb, 29rb–va, 33]; Raffaella Casimiri, "Teodono de Caprio non Teodorico de Campo, Teorico musicale italiano del sec. XV, Un suo trattato inedito," *Note d'archivio per la storia musicale* 19 (1942):38–42 [omitting fol. 33]; RISM 2, pp. 102–4 [omitting fol. 33]; Reaney, Gilles, and Maillard, eds., *Ars nova*, pp. 10–11; Hammond, ed., *Johannes Vetulus*, pp. 10–13. For partial listings see Ulrich Michels, *Johannis de Muris Notitia artis musicae et Compendium musicae practicae*, *Petrus de Sancto Dionysio Tractatus de musica*, *Corpus Scriptorum de Musica*, no. 17 (N. p.: American Institute of Musicology, 1972), p. 123; Sachs, *Contrapunctus*, pp. 200–1; Meyer, "De synemmenis," p. 86.



- 21r–27ra      Treatise on mensuration (CS, 3:177–93; Cecily Sweeney, ed., *Anonymous: De musica mensurabili*, Corpus Scriptorum de Musica, no. 13 [N. p.: American Institute of Musicology, 1971]). At the top in a later hand “Alius Auctor ex multis auctoribus.” Incipit: “Omnis ars sive doctrina honorabiliorem habet rationem . . .” Explicit: “. . . Tamen per simplicem minimam omnes divisiones reducuntur ad perfectionem, quelibet in numero suo, salvo semper dicto meliori.”
- 27ra            Note on how music is named from moys. Incipit: “Quomodo musica derivatur a moys quod est aqua. Moys grece latina dicitur aqua . . .” Explicit: “. . . musat qui verberat idem.”<sup>127</sup> Below in a later hand: “Sine nomine auctoris ab omnibus ars sed accepit ab alijs.”
- 27rb–29ra      Isidore of Seville, *Etymologiarum sive originum libri xx* (GS, 1:20–24; Wallace M. Lindsay, ed., *Isidori Hispalensis Episcopi Etymologiarum sive originum libri XX*, 2 vols. [Oxford: Clarendon, 1911]). At the top in a later hand: “Isidori Hispalensis.” Incipit: “Incipit capitulum de musica .1. Musica est peritia modulationis sono cantuque consistens . . .” Explicit: “. . . ut sine ipsius scilicet vocis perfeccione etiam metra consistunt in arsi et thesi idest elevatione et positione.”
- 29ra–29rb      Treatise on modes (cf. Lawrence Gushee, ed., *Aureliani Reomensis Musica disciplina*, Corpus Scriptorum de Musica, no. 21 [N. p.: American Institute of Musicology, 1975], pp. 75 ff). Incipit: “De octo tonis. Gregorius presul meritis et nomine dignus unde genus duxit summum conscendit honorem renovavit monumenta patrum. Tunc composuit hunc librum seu libellum musice artis scole cantorum et anni circulum autenti [sic] proti antiphona in lege Responsorium Da michi . . .” Fol. 29rb: “. . . Plagi autem ex coniunctione dicuntur omnes quatuor quod nomen significare dicitur latus vel pars sive interiores eorumque licet quasi quoddam latus vel quedam partes eorum ab eis ex tono non recedunt et inferiores quod sonus eorum pressior que superior deprehendit. De autentico protho. Autentus protus habet plures varietates denique introitum varietatesque in semetipso continet tres que prima est hoc Gaudete in domino . . .” Explicit: “. . . nam amplius nec sursum nec infra nec puncta aut duo aut iii aut v faciunt neomam. Explicit tractatus de musica beati ysodori yspalensis episcopi.”
- 29rb–29va      Short description of the nine muses and the nine branches of knowledge. Incipit: “Ut superius dictum est per multos novem sunt muse et dicuntur secundum fabulas habitare in monte elycione . . .” Explicit: “. . . Nonum est quod eligis bene proferre hic est ordo sapientie. Nablum hebraice grece psalterium latine organum dicitur.”<sup>128</sup>
- 29vb–30ra      Treatise on organ tuning (Raffaele Casimiri, ed., “Un Tratatello per Organisti di Anonimo del Sec. XIV,” *Note d’Archivio per la Storia Musicale* 19

<sup>127</sup>The explicit is illegible on microfilm. RISM 2, p. 103, gives “musat qui verberat idem”; Reaney, Gilles, and Maillard, eds, *Ars nova*, p. 10, “qui verberat idem”; and Hammond, ed., *Iohannes vetulus*, p. 11, “qui verberat tamen.”

<sup>128</sup>This last sentence may have been part of the beginning of another treatise or note.

- [1942]:100–101). Incipit: “Ars et modus pulsandi organa secundum modum novissimum inventum per magistros musicos modernos:  
 c d e f g a b $\text{♭}$  c + d + e f + g + a b $\text{♭}$  c + d + e f + g + a b $\text{♭}$  c + d.  
 Nota quod omnes voces totius organi tam toni quam semitoni possunt esse fa et mi ubi sunt semitoni iusta tonum et non alibi. . . .” Explicit: “. . . Iste sunt bone seste C A D $\text{♭}$  C semito tonum [sic] qui est inter C et D F et D G E A semitonum qui est inter F et G $\text{♭}$  semitonum qui est inter G et A.”
- 30ra–30vb Theodonus de Caprio, *Regule contrapuncti* (Casimiri, ed., “Teodono de Caprio, pp. 94–98). Incipit: “Incipiunt Regule contrapuncti ordinate per venerabilem virum fratrem Theodonum de caprio de Civitate sancte Agathes priorem Capuanum ordinis Sacri monasterii montis virginis in anno dominj 1431 none Indictionis 13<sup>o</sup> mensis Julij. Set In primis ostendendum est que et quot sunt consonantie tam perfecte quam imperfecte secundum naturam hominis . . .” Explicit: “. . . Et quicquid superius dictum est de speciebus discantus intelligatur ipso modo per se et similiter post eas simplices consonantias componendo etc. Nota quod regula generalis est quando volumus canere per octavam semper de omne ut octava est fa, in re octava est sol, in mi octava e<s>t la, et sic de singulis. Item per duodecimam semper naturaliter in omne ut duodecima est sol in re duodecima est la et sic de singulis. In ut dicitur la x fa viiia re via ut va . . . in la dicitur la viiia fa via mij va ut iia.”
- 31ra–31rb Treatise on ratios and intervals.<sup>129</sup> Incipit: “Incipiunt Capitula de proporcionibus in primis videndum est de tono et quare dicitur tonus et in quo proporzione consistit et quare dicitur sesquioctava . . .” Explicit: “. . . Omnis ditonus in uno intervallo positus sive per arsim seu per thesim dialecticum genus est divisus vero in tono et tono rectoricum genus est.”
- 31rb Note on astronomy. “De astronomia. Sicut enim sunt septem voces in musica de quibus omnis cantus componitur ita eciam sunt in celo septem circuli celorum qui omnis dant dulcissimum cantum armonie ut auctores referunt sic itaque plena descriptio de omnibus circulis celorum cum musica artificiali hoc modo. Ysidorus.”
- 31rb–31va Note on the seven liberal arts. Incipit: “Septem enim sunt scientie septem planeta et septem circuli celorum. Septem enim liberales artes sunt in genio et studio philosophorum invente quarum prima musica est . . .” Explicit: “. . .

<sup>129</sup>Bannister, *Monumenti Vaticani*, p. 198, Reaney, Gilles, and Maillard, eds., *Ars nova*, p. 10, and Hammond, ed., *Iohannes vetulus*, p. 12, describe this treatise, plus the following two notes on astronomy (fol. 31rb) and the seven liberal arts (fols. 31rb–31va), as belonging to the *Regule contrapuncti* of Theodonus de Capua (fols. 30ra–30vb). Reaney, Gilles, and Maillard, and Hammond also wrongly cite Casimiri’s edition of Theodonus’ *Regule contrapuncti* as containing these extra sections. RISM 2, p. 104, describes these sections as separate from Theodonus’s treatise, but nevertheless considers them to be a single treatise which he calls *De proportionibus*; he also gives the following citation for this treatise: “Ed. Casimiri, l.c. [no page numbers given, but referring to Casimiri’s articles in *Note d’archivio per la Storia Musicale* 19 (1942)].” Casimiri, “Teodono de Caprio,” p. 40, describes the *Regule contrapuncti* as including these sections in question. But in his edition of the treatise (pp. 94–98), he goes no further than fol. 30vb.

Circuli celorum nomina hec sunt: Luna, Mercurius, venus, sol, Mars, Iovis, Saturnus. Terra spera celestis."

- 31va–31vb      Fragment from Johannes de Muris, *Libellus cantus mensurabilis* (CS, 3:46–47; for concordances of the *Libellus* see Michels, *Musiktraktate*, p. 27, n. 40, and Daniel Seth Katz, "The earliest sources for the 'Libellus cantus mensurabilis secundum Johannem de Muris'" [PhD dissertation, Duke University, 1989], pp. 1–4). Incipit: "Sancti spiritus assit nobis gratia. Incipit ars magistri Johannis de muris de francia scriptam [sic] per venerabilem virum et religiosum fratrem Theodonum de sancta Agatha priorem Capuanum ordinis sacri monasterij montis virginis sub anno dominij 1432 ultimo mensis marcij decime Indicionis. In primis videlicet. Musica est arcium domina continens omnium methedorum [sic] principia . . ." Explicit: "Perfecta sive maior prolatio est quando semibrevis valet tres minimas. Imperfecta sive mi [nor quando [semis *infra lin.*]]brevis valet duas minimas *in a later hand*]."
- 32rv              Blank
- 33r                *Rota paschalis et dominicalis*. Text: "Habito preterito pascate inde enumerare incipe versus partem sinistram et in sextadecima anno semper reperia pasca futurum cum dominicali lictera."
- 33v                Blank

Fols. 17r–19r of this manuscript transmit the following portions of *De plana musica*: chapters 6, 7, 8 (partially), 9 (partially, with just one monochord division, which is different from both of *P*'s, *V* transmitting no monochord division), 10.19–10.21, 11, 12, 13, 14, 15, and 16 (partially, but containing extra text on the unison, semitone, and falsa musica). The text of *De plana musica* ends without an explicit: the following portion of text is a version of *Ars nova* attributed to Philippe de Vitry.

#### SOURCES OF INTRODUCTIO MUSICE

*B*      Barcelona, Biblioteca Central, 883  
Parchment; 78 folios; 235 x 165 mm  
Italy; 14th century

The entire manuscript is the work of a single scribe. The Italian provenance of the manuscript is suggested by the uncrossed tironian *et* sign (7), the suprascript (™) for *-er-* (e.g., fol. 77r/3: *obtinere*), and the general appearance of the letters: roundness of the loops of *b*, *p*, and *q* and the relatively heights and widths of the letters. This script is similar in several respects with that of *Vb*, although it has clearly been copied in a more careful bookhand.

Nevertheless, several cursive and informal traits are apparent: the single-looped *a*, with the upright stroke not extending above the loop, the open lower loop of *g*, and the occasional use of straight *r* after round letters (e.g., fol. 72v/12: *fieri*). The frequent use of juncture (e.g., fol. 71v/12: *de*; fol. 72v/7: *patet*; fol. 72v/9: *mutat'oes*) points more to the fourteenth century than to the fifteenth; the sparse amount of abbreviation, characteristic of humanistic scripts, points to a later period rather than an earlier. Together, they suggest a late fourteenth or possibly early fifteenth century date.<sup>130</sup>

Most of the treatises and musical examples contained in this manuscript deal with plainchant; texts in folios 13v–15v, 20r–21r, 21r–22r, 23r–24r, 27v–28v, 30r–30v, and 64v–66r deal with discant and mensuration. There is also a Kyrie for three voices (fols. 22v–23r) and examples illustrating the art of motets (fols. 30rv).

Contents of the manuscript follow:<sup>131</sup>

- |        |   |
|--------|---|
| 1r–15v | Treatise on plainchant, discant, and organum (concordances: Parma, Biblioteca Palatina, parmense 1158, fols. 65r–73r; Venice, Biblioteca Nazionale di San Marco, latino VIII 85 [= 3579], fols. 24r–47v; Florence, Biblioteca Nazionale Centrale, II I 406 [= Magliabecchiana, XIX, 19], fols. 1r–5r; Pisa, Biblioteca Universitaria, 606, 2nd part, pp. 52–57. Editions: La Fage, <i>Essais</i> , pp. 355–63 [portions of Florence, II I 406 only]; Jacques Handschin, "Aus der alten Musiktheorie. II. Orgel und Organum," <i>Acta Musicologica</i> 14 [1942]:23–26 [discant and organum portions]; Albert Seay, "An Anonymous Treatise from St. Martial," <i>Annales musicologiques</i> 5 [1957]:13–42). Incipit: "<Q>uoniam de canendi scientia doctrinam sumus facturi omnes ad quorum manus iste libellus ad naturaliter per musicam canendum introductorius pervenerit obnixe precamur . . ." Fol. 13v: ". . . Quoniam igitur naturam tandem cantum faciendi deo auxiliante plene docuimus oportet ut ad doctrinam faciendo naturaliter componendam festinemus. De discantu simplici. Discantus cantui debet esse contrarius non quia cum cantu debeat personare sed in elevatione et dispositione . . ." Fol. |
|--------|---|

<sup>130</sup>F. Alberto Gallo, "Alcune fonti poco note di musica teorica e pratica," in *L'ars nova italiana del trecento 2: Convegni di studio 1961–1967* (Certaldo: Centro di Studi sull'Ars Nova Italiana del Trecento, 1968), p. 49, dates this manuscript as of the fourteenth century.

<sup>131</sup>For another description of the contents of the complete manuscript see Gallo, "Alcune fonti," pp. 49–53. For information on the treatise in fols. 1r–15v see Anglés, "Die mehrstimmige Musik in Spanien vor dem 15. Jahrhundert," in *Beethoven-Zentenarfeier: Internationaler Musikhistorischer Kongress, Wien 1927* (Vienna: Universal, 1927), p. 159; Anglés, *La música a Catalunya fins al segle XIII*, Biblioteca de Catalunya: Publicacions del Departament de Música 10 (Barcelona: Institut d'estudis catalans: Biblioteca de Catalunya, 1935), pp. 265–66.

- 14r: "... Quod in subdito monstrat exemplo [dGGafd, ddeacd, sint lumbi *in marg.*]. De dupplici discantu. <V>ides qua ratione discantus cantui appropinquet . . . Hactenus de natura discantus exemplis attestantibus quod diximus ut credo satis docuimus iam ad naturam componendam organum faciendi stilum et animum preparemus. De organo. <A>d organum itaque faciendum tria sunt necessaria ut sciatur, scilicet quomodo incipiatur, quo ordine progrediatur, qua ratione terminetur . . ." Explicit: "... Hactenus de cantu et discantu simul et organo faciendo satis ut credimus docuimus tandem ad diffinitionem tonorum vel modorum sub interrogatione discipuli et solutione magistri componendam veniamus."
- 15v–19r Treatise on modes in the form of a dialog between student and master. Incipit: "Brevis comprehensio tocus musice sub interrogatione et solutione magistri. Quid est tonus? Magister: regula naturam et formam cantuum determinans regularium . . ." Explicit: "... Discipulus: Quot differentias habet? Magister: Duas, unam servientem principiis cantuum, quarta afinali incipientium alteram ceteris ipsius omnibus deputatam. Amen. Libro finito refferamus gratia magistro."
- 19r List of Greek note names: "Γ. epogdeus a proslamba nos menos . . ." Explicit: "... a. mete yperboleon."
- 19r–20r Treatise on modes. Incipit: "<H>ic incipit rude documentum tonorum sed valde utile est hijs qui intelligunt. Octo sunt toni scilicet primus et cetera . . ." Explicit: "... Septimus in quinque finitur iure moderno. Sic tenet octavus inter tantum modo quinque."
- 20r–22r Notes on discant. Incipit: "<A>d habendum discantum artis musice. Primo videndum est quid sit discantus et unde dicatur. Discantus est aliquorum cantuum diversorum concordantia sive consonantia . . ." Fol. 20v: "... Dyapason est ultima speties et habet omnes alias sub se et dicitur a dya quod est de et pan quod est totum et son quod est sonus, quasi de toto sonans, id est de omnibus spetiebus sonans. <M>odo debetur scire quod ex istis tres decim spetiebus sunt septem que concordant et alie sex discordant . . ." Fol. 21r: "... Etiam omnis discantus debet incipi et finiri propter factas discordantias videlicet per unisonum per quintam per octavam aut per duodecimam secundum ascensus vel descensus plani cantus. <S>eptem sunt species discantus principales scilicet Unisonus, Dyapason, Dyapente, Dyatessaron, Ditonus, Semiditonus et Tonus cum dyapente . . ." Explicit: "... Cum cantus ascendat discantus debet descendere, cum descendit debet ascendere; nec debet ascendere discantus neque descendere cum cantu in imperfectis spetiebus discantus."
- 22v Diagram of the gamut. Text: "Subiectum musice sunt septem discrete voces . . . Ut re mi scandunt, descendunt fa quoque sol la."
- 22v–23r Kyrie for 3 voices (concordance: S, fol. 80r; transcribed in Jacques Handschin, *Review of Festschrift für Johannes Wolf zu seinem sechzigsten Geburtstag, Zeitschrift für Musikwissenschaft* 16 (1934):120, n. 2). Text: "Kyrie leyson. Nota has figuras . . ."

- 23r–24r Treatise on discant. Incipit: “Quicumque voluerit discantare primo debet scire quod sunt sex concordantie scilicet Tertia, Quinta, Sexta, Octava, Decima, Duodecima . . .” Explicit: “. . . Duodecima est ex una quinta perfecta et octava et predicta patent in hoc exemplo [*musical example*].”
- 24v–26r Treatise on plainchant in the form of twelve questions and answers. Incipit: “Inter diversas de musica questiones queritur cur Gama a G pocius habeat exordium quam ab A . . .” Explicit: “. . . Ad quod Respondeo quod secundum modos subiectos cantus est formandus et quod diversis materijs diversimodi soni concordantie seu dissonantie sunt appetende ut boetius predictique musici ac alij non pretereo nominati testantur et cetera.”
- 26r Short discussion of the effect of music on living things, enumeration of the planets and the muses. Incipit: “Notandum quod est omnis habitus anime gubernatur cantibus . . .” Explicit: “. . . Nona caliope id est captiva vox scilicet proferre.”
- 26r–27r Treatise on modes. Incipit: “Octo sunt toni quatuor [-26v-] pares et quatuor impares . . .” Explicit: “. . . Item omnes toni finem habentes in C sol fa ut sunt omnes sexti toni. Ista regula non falit et dicuntur toni irregulares.” Fol. 27r: table showing the beginnings, middles, and finals of modes; gamut showing the proprieties.
- 27v Diagram for the computation of intervals. Text: “Ista rota debet volui ponendo istud capud superius inferius versus litteram et ponendo unisonum ubi est dyapente . . .”
- 27v–28v Fragment on mensuration. Incipit: “[*Diagram of note values*: Longa, longa duplex et triplex, Brevis, Semibrevis, Minima] Longa duplex [*sic*] perfecta valet sex tempora ut hic [*example*] . . .” Explicit: “. . . Nota de pausis quot quot [*sic*] spatia continet linea tot tempora obmissa valet ut patet per exemplum, ut hic: [*example*]”
- 28v–29v Verses and musical examples on modes. Incipit: “Sequitur de tonis ac eorum principijs medijs et finibus tam per versus quam per figuram superius stantem ubi loquitur de principijs de medijs de fine et de plagalibus . . .” Explicit: [*musical examples*]. Text: “. . . Seculorum octavi. Neuma.”
- 30rv Musical examples demonstrating the art of motets. Text: “Hic est ars motetorum tam in notis simplicibus id est in notis per se stantibus quam in notis compositis id est in notis ligatis ut patet intelligentibus. Ibi sunt quedam exempla floretinarum [*sic*] tam de tempore perfecto.”
- 31r–31v Description of the thirteen intervals. Incipit: “Notandum est quod tresdecim speties sunt concordantiarum et discordantiarum scilicet unisonus, Semitonium, Tonus, Semiditonus, Ditonus, Dyatessaron, Tritonus, Dyapente, Semitonium cum dyapente, Tonus cum dyapente, Semiditonus cum dyapente, Dytonus cum dyapente et dyapason . . .” Explicit: “. . . Dyapason ex consonantia constans ex dyatessaron et dyapente continet enim sex tonos et fit ex octo vocibus de c ad c et de .a. usque ad .a., ut patet hic: [*musical example*]”

- 31v–47r      Treatise on modes. Incipit: “Modus est regula naturam et formam cantuum regularium demonstrans . . .” Explicit: “. . . [-35r-] Nota quod iste octo antiphone posite sunt hic secundum octo tonos quibus quidem tonus subiacent omnis cantus ecclesiastici regulares prima est de primo secunda de secundo et sic de alijs.” Fols. 35r–47r: musical examples.
- 47R–64v      Treatise on modes. Incipit: “Incipiunt toni sive modi. Unde sciendum est in principio quod greci qui dicuntur artis musice fuisse repertoires quatuor tonorum esse speties solummodo decreverunt ad instar quatuor temporum anni seu quatuor humorum naturalium ex quibus omnia nutriuntur . . .” Explicit: “. . . Sed dicendum est quod debent cum responsorijs iudicari resumptionibus aliorum responsiorum ut si ibi terminetur cantus ubi resumptio responsorij terminatur et unius cuiuslibet cantus si versus cum responsione responsorij similiter habetur frequenter in graduali quod responsum toni autentici et versus eius toni plagalis sed unius est cantus responsorij cum suo versu et alleluia cum suo versu. Explicit.”
- 64v–66r      Treatise on discant. Incipit: “Quicumque vult quintare breviter et secure quinta voce prehabita fatiente dyapente debet subtiliter de proprio cantu facere suum cantum ne per nimiam vocum distantiam alicubi sit deceptus provecti tantum suos punctos singulos in mente habent ac artificialiter et cognoscunt . . .” Explicit: “. . . Nota per Versus hic modus ac ordo numerus sic scemaque cordo. Nota manet certa discantus arte reperta [*musical example*].”
- 66r–70r      Description of the four principal parts of the gamut. Incipit: “Sciendum est quod quatuor sunt partes principales ipsius palme sive gamatis . . .” Fol. 68r: “. . . et notandum quod disiunctio vocat<ur> quando aliquis saltat altius quam la vel inferius quam ut sine recta mutatione. [*musical examples*]” Fol. 69r: “Voces ad concordandum diversimode nota hic superius secundum omnes variationes que fieri possunt inter ut et la ascendendo et descendendo sine disiunctione et sine mutatione [*musical examples*].” Fol. 70r: musical examples.
- 70v–71v      Short treatise on plainsong. Incipit: “<I>ncipit quedam cartula de cantu plano. Et dixit qui nescit palmam manum tendit ad musicam primo docendum est quod octo sunt littere graves, scilicet G, A, B et cetera . . .” Explicit: “. . . Incipiunt littere graves, acute et superacute regule notale claves, id est, F grave et e acutum proprietates scilicet b molle et ♮ quadratum et per istas dimittitur maius spatium et minus spatium et ascensus proprius totius palme, ut patet.”
- 71v–78r      *Introductio musice*. Incipit: “Sequitur de mutationibus de quibus dicendum est quod omnis mutatio . . .” Fol. 73r: “. . . de b quadro in b molle ut patet hic. Nunc de mutationibus vocum artis manus significare cantus sufficiat nobis [*musical example*]. Ad evidentiam totius musice tam mensurabilis quam immensurabilis vel etiam plane. Primo videndum est quot sunt eius speties . . .” Fol. 76r: “[*musical example*] Dictonus cum dyapason. Expliciunt omnes speties cantus necessarie et utiles omnibus illis musicam introducendis. Introducendis in artem musice primo videndum est quid sit introductio . . .” Explicit: “. . . omnia infrascripta superius apparent in exemplis precedentibus. Deo Gratias. Amen.”

78v Note in another hand: "... postea bene cantabis asicrite ... et est ... e movere [?]"

Folios 71v–78r of this manuscript transmit portions of *Introductio musice* in the following order: chapters 5 (fols. 71v–73r), 7 (fols. 73r–76r), and 1–4 (fols. 76r–78r). A substantial part of the text in fols. 66r–70r parallels *De plana musica* 10.19–21 (the four principal parts of the gamut), and chapters 11, 13–15 (Appendix C). Moreover, musical examples on fols. 68v–69r, which belong to the final section on mutations in this text, correspond to the musical examples found in *V* fol. 12r (Appendix E).<sup>132</sup>

W Washington, Library of Congress, Music Division, ML 171.J 6  
Parchment and paper; IV + 10 + 187 + I folios; 208 x 150 mm  
Venice and Piacenza: 1465 and 1477

The manuscript consists of, in order, four front flyleaves (indicated in the present descriptions as [i] . . . [iv], ten folios paginated "a–k," 173 numbered folios, fourteen unnumbered blank folios, and one rear flyleaf. The manuscript is paper except for the first front and rear parchment flyleaves. The text is in single columns at 25 lines per page and it was almost entirely copied by Johannes Franciscus Preottonus of Pavia.<sup>133</sup>

Although a note by an early owner, Fassone Fassati, on [ii]v (see description below) indicates a date of "1489,"<sup>134</sup> the latest date given on the content-bearing folios is "9 October 1477" (folio cv), and on folios 47r, 70r, and 79r, the year "1465" is noted. The appearance on one of the folios a–k of a later date than those on the subsequent folios therefore suggests that folios a–k were a slightly later addition to the main part of the manuscript. The provenance of this manuscript is indicated by the respective place names given on various pages.<sup>135</sup>

<sup>132</sup>For the relation between these two sets of examples see pp. 60–61.

<sup>133</sup>His name appears on the third front flyleaf and on fols. ar, cv, 47r, 70r, 79r, 95v, 102r, 109r, 118v, and 155r.

<sup>134</sup>A later note by Fassone Fassati (folios 118v–119r) gives the following dates: "1493, 1505, 1506." The manuscript subsequently passed into the hands of one F. Passi, then to a private library of one of the Piedmontese nobility, before it was finally purchased in 1932 by the antiquarian Walter Toscanini for the Library of Congress.

<sup>135</sup>Places of copying and dates appearing in this manuscript are: 1465, Monastery of St. George, Venice (f. 47r); St. Syrus's Day (St. Syrus of Genoa, 29 June; or more likely St.



Contents of the manuscript follow:

- [i]rv      Note on the celestial spheres with diagram. Incipit: "Questo e el corso de li pianeti quanti anni e di stano in ciaschaduno segno e di. Et prima de saturno . . ." Explicit: ". . . Luna sempimo pianeta e sta soto tute le altre pianeta a presso ala terra el quale sta in ciaschaduno segno per doy di e mezo. E formisse el corso so in trenta di."

Syrus of Pavia, 9 December) 1465, Monastery of St. George, Venice (f. 70r); 1465, Monastery of St. George, Venice (f. 79r); 2 March (no year given), Monastery of St. Sixtus, Piacenza (f. 155r).

This manuscript has received considerable attention from scholars. For further information on the scribe and the manuscript see D. Paolo Guerrini, "Un codice piemontese di teorici musicali del Medioevo," *Rivista musicale italiana* 34 (1927):63–65, 72; U. S. Library of Congress, *Report of the Librarian of Congress for the Fiscal Year Ending June 30, 1933*, (Washington: Government Printing Office, 1933), pp. 93 ff; Knud Jeppesen, *Die mehrstimmige italienische Laude um 1500* (Leipzig: Breitkopf & Härtel; Copenhagen: Levin & Munksgaard, 1935), p. xxiv; Seymour de Ricci and W. J. Wilson, *Census of Medieval and Renaissance Manuscripts in the United States and Canada*, 3 vols. (New York: Wilson, 1935–40), vol. 1, p. 245; F. Alberto Gallo, "Cantus Planus Binatim, Polifonia primitiva in fonti tardive: Firenze, BN, II. XI. 18; Washington, LC, ML 171 J 6; Firenze, BN, Pal. 472," *Quadrivium* 7 (1966):85; Stevenson, "Neglected Manuscript," p. 10, n. 10; Giulio Cattin, "Polifonia quattrocentesca italiana nel codice Washington, Library of Congress ML 171 J 6," *Quadrivium* 9 (1968):87–88; von Fischer and Lütolf, *Handschriften*, vol. 2, p. 1173.

For descriptions of the contents of the entire manuscript see also Smits van Waesberghe, ed., *Guidonis Aretini Micrologus*, Corpus Scriptorum de Musica, no. 4 (n. p.: American Institute of Musicology, 1955), pp. 68–71; Gilbert Reaney, ed., *Johannes Hothby De arte contrapuncti*, Corpus Scriptorum de Musica, no. 26 (n. p.: American Institute of Musicology, 1977), pp. 17–21 (based on Smits van Waesberghe, ed., *Micrologus*); Herlinger, ed., *Lucidarium*, pp. 59–62; Schreier, ed., *Tractatus figurarum*, pp. 55–58. The following describe selected contents of the manuscript: Guerrini, "Codice piemontese," pp. 65–72; U. S. Library of Congress, *Report*, p. 94; Ricci and Wilson, *Census*, vol. 1, pp. 244 ff; Michels, *Musiktraktate*, p. 124; Michels, ed., *Johannes de Muris Notitia artis musicae et Compendium musicae practicae*, Petrus de Sancto Dionysio *Tractatus de musica*, Corpus Scriptorum de Musica, no. 17 (n. p.: American Institute of Musicology, 1972), pp. 35–6; von Fischer and Lütolf, *Handschriften*, vol. 2, pp. 1173–75 (index of the musical compositions); Sachs, *Contrapunctus*, pp. 205–6; Smits van Waesberghe, ed., *Guidonis "Prologus in antiphonarium," Divitiae Musicae Artis*, series A, book 3 (The Netherlands: Knuf, 1975), p. 51; Herlinger, *Lucidarium*, Vol. 1 (dissertation), pp. 117–19; Michel Huglo and Nancy C. Phillips, *The Theory of Music, Volume IV: Manuscripts from the Carolingian Era up to c. 1500 in Great Britain and in the United States of America: Descriptive Catalogue*, part II: United States of Amerika [sic] (Munich: Henle, 1992), pp. 190–96.

For descriptions of the musical compositions see Jeppesen, *Mehrstimmige italienische Laude*, pp. xxiv–xxv; Cattin, "Polifonia quattrocentesca," pp. 88–100; Gallo, "Cantus Planus Binatim," pp. 85 ff.

For facsimiles see Cattin, "Polifonia quattrocentesca," plates 1, 2, 3, 4, 5 (fols. 109v–110r, 110v–111r, 122v–123r, 125v–126r, 126v–127r respectively); F. Alberto Gallo and Giuseppe Vecchi, eds, *I più antichi monumenti sacri italiani*, Monumenta Lyrica Medii Aevi Italica, III: Mensurabilia, vol. 1 (Bologna: [Tamari], 1968), plates 149, 150, 151 (fols. 119v–120r, 120v–121r, 121v–122r respectively); Giuseppe Vecchi, "Primo annuncio del sistema proporzionale di Marchetto in un passo del Lucidarium," *Quadrivium* 9 (1968):85 ff (two diagrams from fols. 6v and 7v showing the division of a continuous quantity).

[ii]r	Diagram of the celestial spheres with note. Text: "Ipsa ego sum Johannis francisci [...] exscripta in usum qui propria exscripsit me quoque iure tenet."
[ii]v–[iii]r	Blank
[iii]v	Reference to Fassone Fassati, an early owner of the manuscript. "Liber mei Fassoni fassati ex conditionis cuniolij legum scholaris studentis in regia civitate papie anno dominj 1489 die."
ar–cv	Table showing the dates of Easter from 1400 through 1931 with note. Text: "Ista est quedam ratio Paschalis que incipit in milesimo quadrigentesimo et finit in milesimo nonagesimo trigesimo primo . . . Explicit Rubrica infrascripte tabule quam scripsit don iohannes franciscus pretonus de papia. deo gratias. Incipit tabula [table] Qui finise la suprascripta tavola a trovare la pascha, scripta per don iohanne francesco da pavia in 1477, nonas octobris."
cv–hr	Treatise on the <i>Littera dominicalis</i> . Incipit: "Si vis invenire litteram dominicalem debes notare hanc rotam presentem et debes scire quod in anno domini milesimoquadrigentesimo quadregesimo primo currit A quod est in principio rote . . ." Explicit: ". . . Et sic decetero annuati procedendo cognosces proculdubio que sit littera dominicalis, et quando bisextus occurrat usque in eternum et in seculum seculi. Explicit rubrica."
hv–kr	Table of contents. "In isto libelo continentur omnia infrascripta [opera <i>sup. lin.</i> ] per ordinem. Primo et principaliter Lucidarium Marcheti de Padua . . . septimo et ultimo opus Magistri Johannis de muris de Arte contrapuncti. Incipiunt capitula lucidarii Marcheti de padua. De inventione musicæ capitulum 1 in folio 1 . . ." Explicit: ". . . De principijs primi toni capitulum 6 in folio 35."
kv	Blank
1r–47r	Marchetto, <i>Lucidarium</i> (GS, 3:65–121; Herlinger, ed., <i>Lucidarium</i> , pp. 68–550). Incipit: "Incipit epistola Marcheti de Padua, Magnifico militi et potenti domino suo . . ." Explicit: ". . . Nam musicus cognoscit sentit discernit eligit ordinat et disponit omnia que ipsam tangunt scienciam et per cantorem iubet tanquam per suum nuntium praticari. Et hec de musica plana dicta ibi sufficiant. Explicit. Explicit lucidarium Marcheti de padua quod scripsit domnus Johannes franciscus de papia monachus Venerabilis cenobij sancti Georgij de Venetijs. 1465."
47v	Table of the gamut with Greek and Latin solmization syllables, and consonances. Incipit: "Hic continentur Manus greca, latina atque contrapuncti . . ." Explicit: ". . . Ad te nos de pro tri. vt re mi fa sol la."
47v–56r	Johannes de Muris, <i>Libellus cantus mensurabilis</i> (CS, 3:46–58). Incipit: "Ex tractatu Magistri Johannis de muris de pratica arte mensurabilis cantus. Quilibet in arte pratica mensurabilis cantus erudiri mediocriter affectans ea scribat diligenter que secuntur summarie compilata secundum Magistrum Johannem de muris. Quinque sunt partes prolationis, videlicet maxima ♩ ,

longa ♯, brevis ■, semibrevis ♦, et minima, ut hic: ♯... Fol. 51r: "... Sequitur de alteratione ..." Fol. 52r: "... Sequitur de puncto ..." Fol. 52v: "... Cum duplex sit tempus et prolatio ut superius dictum est videndum est per quem distinguuntur ..." Fol. 53r: "... Item sex sunt modi ..." Fol. 53v: "... De ligaturis ..." Fol. 54v: "... Sincopa est divisio cuiuscumque figure per partes separatas ..." Fol. 55r: "... Sequitur de paussa [sic] et eius valore ..." Fol. 55v: "... De diminutione motetorum ..." Fol. 56r: "... Quid sit color in musica ..." Explicit: "... Exempla patent in motetis. Et predicta quamvis rudia sufficiant in arte pratica mensurabilis cantus volentibus introduci. Gratias deo refferamus nostro. Explicit ars cantus mensurabilis secundum magistrum Johannem de muris, quam scripsit dominus Johannes franciscus pretonus papien<s>is monachus licet indigne venerabilis cenobij sancti georgij de venetijs prestante domino nostro yesu christo qui vivit et regnat in secula seculorum."

- 56r–67v *Introductio musice* (CS, 1:157–66). Incipit: "Ex tractatu magistri Johannis de galadia de musica plana. Pro introductione artis musice. Primo videndum est quid est introductio ceteris pretermisissis ..." Explicit: "Expliciunt omnes species necessarie cantus et vtiles omnibus musicis introducendis."
- 67v–68v Treatise on *falsa musica*, *De falsa musica* (CS, 1:166–67, as part of *Introductio musice*). Incipit: "Nunc videndum est de falsa musica que in instrumentis musicalibus multum est necessaria spetialiter in organis. ..." Explicit: "Similiter quando tritonus figuratur de quinque vocibus tunc oportet quod nos faciamus diapente et non econtrario et cetera [example: kirie leyson]."
- 68v–69r Treatise on rests, *Sed quoniam cantor diu sine intermissione continuare non potest* (CS, 1:167, as part of *Introductio musice*). Incipit: "Sed quoniam diu sine intermissione continuare non potest ymo aliquotiens inter duos cantus ipsum pausare cogat natura hominis debilis et infirma. ..." Explicit: "... Similiter in cantu ascensiuo ad vltimam descendentem solam superius remanentem debemus facere pausam per tonum uel per semitonium uel per semidictonum uel per dictonum sicut patet hic [example]."
- 69r–70r Treatise on modes, *De litteris finalibus* (CS, 1:167–70, as part of *Introductio musice*). Incipit: "Uisum est de pausationibus cantus plani nunc uidendum est de litteris finalibus in quibus omnis cantus regularis iubetur finiri. ..." Explicit: "... et si cantus medietatem utriusque incipiat, tunc proprie dicitur esse mixtus, et non aliter. Explicit ars cantus plani magistri Johannis de galadia, quam scripsit dominus Johannes franciscus de papia monachus monastiri sancti georgij de venecijs, 1465 die sancti Syri."
- 70rv Rules on the use of soft b and for the ranges of the authentic and plagal modes. Incipit: "Alique regule utiles in cantu firmo sive plano. Nota quod quando cantus ascendit ab F grave vel G grave vel A acuto usque ad B acutum et iterum descendit ad F grave semper debemus cantare per b molle, ut hic inferius patet ..." Explicit: "... Regula vel differentia inter plagales et autenticos per Versus. Tertius et primus hij quintus septimus octo vocibus ascendunt, solam

descendere potest. Sextus et octavus quartus pariterque secundus vocibus ascendunt quamvis [?]<sup>136</sup> totidemque subibunt. Explicit."

- 70v–74r *Tractatus figurarum* (CS, 3:118–24; Schreier, ed., *Tractatus Figurarum*). Incipit: "Incipit tractatus diversarum figurarum per quas diversimodi discantantur non sequendo ordinem tenoris id est alterius temporis secundum Egidium monachum. Prologus incipit. Quoniam ut deo placuit . . ." Fol. 73v: "... et si quatuor ascenderent usque ad octo et nunc sic deficerent. Sic itaque ad complementum huius operis consecutus sum. Ideo refero gratias deo. Amen. Superius dictum est de augmentatione atque diminutione figurarum. nunc dicendum est qualiter ipsas ordinabis ad discantandum diversimode super quatuor tempora . . ." Explicit: "Et primo de tempore perfecto maioris et ponuntur pro duobus temporibus novem semibreves vacue, ut hic de tempore perfecto maiori: [musical examples]"
- 74r–79r Egidius de Murino, *Tractatus cantus mensurabilis* (CS, 3:124–28). Incipit: "De modo componendi tenores motetorum capitulum quartum. Primo accipe tenorem alicuius antiphone vel Responsorij vel alterius cantus de antiphonario et debent verba concordare cum materia de qua vis facere motetum . . ." Explicit: "... [musical example] Neumarum signis erras qui plura refingis. Deo gratias. Amen. Explicit tractatus Magistri Egidij mensurabilis cantus, quem scripsit dominus Johannes franciscus de papia monachus monasterij sancti georgij maioris de Venetiis 1465."
- 79rv Final section of *Tractatus figurarum* (cf. fol. 74r), repeated. "Superius dictum est de augmentatione [sic] atque diminutione figurarum. Nunc dicendum est qualiter ipsas ordinabis ad discantandum diversimode super quatuor tempora . . . et primo de tempore perfecto maioris. Et ponuntur pro duobus [-79v-] temporibus novem semibreves vacue, ut hic infra patet [musical example, incomplete compared to that corresponding in fol. 74r]
- 80r Blank
- 80v Diagram of the hand. Text: "Hec est manus Boetij."
- 81r–94v John Hothby, *Tractatus de arte contrapuncti* (partially edited in Reaney, ed., *Hothby*, pp. 25–42; listed as "Dico che l contrapuncto" by Sachs, *Contrapunctus*, p. 210). Incipit: "Incipit primus tractatus de Arte contrapuncti secundum venerabilem priorem dominum Johannem de Anglia quem ipse direxit ad venerabilem monachum dominum Johannem franciscum de pretonibus de papia. Et ut melius [[in]] adiscatur atque intelligatur in lingua materna descripsit ac notavit ponendo tenorem in nigro colore et contratenorem in rubeo. Et primo de primo gradu. Dico chel contrapuncto richede avere quatro cose cioe voce consonantia grado e prolatione . . ." Fol. 92r: "... Si decima in duodecima [-92v-] ho de sexta in octava ho de terza in quinta et cetera."
- 92v–94v Treatise on counterpoint [interpolated] (listed as "Notandum est quod novem sunt consonantie," with reference to fols. 92v–94v of this manuscript, by Sachs,

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<sup>136</sup>Perhaps an error for *quintus*.

- Contrapunctus*, p. 215): "Notandum est quod novem sunt consonantie contrapuncti quarum quinque sunt perfecte et quatuor in<per>fecte . . ." Fol. 94r: "Nota quod quando cantus ascendit ad a acutum et inde ascendit ad b acutum et postea descendit ad F grave per b molle cantatur. . . ." Explicit: ". . . Non est minus dedecus nescire canere quam litteras ignorare. Explicit ars contrapuncti secundum dominum Johannem de Anglia priorem quam scripsit don Johann<e>s franciscus preottonus de papia monachus licet in digne venerabilis cenobij sancti Salvatis prestante domino nostro Iesu christo qui vivit et regnat per infinita secula seculorum Amen."
- 93v–94r Note on counterpoint with table of consonances. Incipit: "Idem. Qui de soto se principia uno breve compendio in L'arte del contrapuncto. Et prima gle pone la mano con le sue voce deinde le consonantie cum li soy exempli per ogni grado A La Mi Re Re fa la . . ." Explicit: ". . . Gama ut Re [12 *sup. lin.*] mi [13 *sup. lin.*] sol [15 *sup. lin.*]."
- 95rv Treatise on counterpoint (listed as "Notandum est quod novem sunt consonantiae," with reference to fols. 95rv of this manuscript, by Sachs, *Contrapunctus*, p. 215). Incipit: "Notandum est quod novem sunt consonantie contrapuncti quarum quinque sunt perfecte et quatuor imperfecte . . ." Explicit: ". . . Tamen [in *sup. lin.*] quantum possumus debemus servare hunc ordinem, scilicet post unam consonantiam perfectam debemus facere imperfectam. Explicit summula de arte contrapuncti quam scripsit don Johannes franciscus preottonus de papia ad laudem dei. Amen."
- 96r–98r Treatise on mensuration. Incipit: "Incipit brevis summula de arte mensurabilis cantus. Primo et ante omnia scire debes quod quinque sunt figure notularum in musicha. Prima vocatur Minima exemplum ut hic: ♪ . . ." Explicit: ". . . Iste notule sunt semiminime: ♪ ♪ ♪ ♪ . Pontus concordantie seu organi: ̄ ̄ . Explicit ars Musice sub brevi quam scripsit don iohannes franciscus preottonus de papia monachus licet in digne monasterij dominum Salvatoris scripsit ad laudem et gloriam omnipotentis dei qui vivit et reg<n>at per infinita secula seculorum. Amen."
- 98r Poem attributed to Guido on the hexachords and intervals between the adjacent syllables. Incipit: "Guido Monachus composuit. His sex formantur sex motus et variantur . . ." Explicit: ". . . G♭ quadrum significat C naturam F quoque b molle. Amen."
- 98v–100r Table of the four divisions of *prolatio* and *tempus*. Text: ". . . Hic superius sunt figure notularum ad cognoscendum prolationes in Musicha et valorem temporum per exempla et diffinitiones . . ."
- 100v Diagram of the hand with poem. Text: "Ad quodlibet intellige tonum ac semidiscute . . ."
- 101rv Treatise attributed to Guido on notes and intervals. Incipit: "Ratio Guidonis Monachi. Nota quod 22e littere sunt in Manu Guidonis et alij dicunt esse 20. Sed intentio istorum est talis quod isti non considerant loca ubi littere sunt posite . . ." Explicit: ". . . Nota quod in musica p[o *sup. lin.*]nitur dya pro de sed secundum rectum vocabulum gramaticalem ponitur dia. pro duo. Explicit."

- 101v–102r Verse on modes and their use in chant, and a reminder to observe the tempus when singing. “De formationibus tonorum. Primus tonus continet suam undecimam aliquando . . . De meditationibus tonorum . . . [-102r-] Ad cognoscendum naturam tonorum . . . De finibus seculorum . . . Ad cognoscendum versus seculorum . . . Nota bene. Vocem dum cantas per notas compellere noschas. Tempus etiam observes bene si canere voles. Explicit summula Manus guidonis monacha quam scripsit don Johannes franciscus preottunus papiensis ad laudem et gloriam omnipotentis dei et matris eius virginis Marie et omnium sanctorum et sanctarum dei. Deo gratias. Amen.”
- 102rv Verse on the ranges of the authentic and plagal modes. Incipit: “Versus. Inpares ut plurimum ascendere debent, Et pares nunquam sed semper infima petunt . . .” Explicit: “. . . Pares descendunt a fine suo per duas per tres per quatuor vel quinque notas.”
- 102v–109r Petrus de Sancto Dionysio, *Tractatus de musica* (Michels, ed., *Petrus de Sancto Dionysio Tractatus de musica*, pp. 147–66). Incipit: “Incipit tractatus fratris [petri sup. lin.] de sancto dionisio qui est in duas partes divisus in theoricham scilicet et praticam . . .” Explicit: “. . . Longa autem simplex valet tria tempora si est de modo perfecto, ut hic: ♪♪♫♫♫ Explicit ars cantus fratris petri de sancto dionisio quam scripsit don Johannes franciscus preottonus de papia.”
- 109v–110r Three-part composition. Text: “Ubi karitas et amor deus ibi est . . .”<sup>137</sup>
- 110v One part of a mensural setting. Text: “Jesu dulce o infinit amor . . .”<sup>138</sup>
- 111rv Blank
- 112rv Treatise on counterpoint, as the first part of *Ars contrapuncti secundum Johannem de muris. Quilibet affectans* (CS, 3:59–60; for concordances see Michels, *Musiktraktate*, p. 40, n. 82; listed as “Quilibet affectans,” with concordances, by Sachs, *Contrapunctus*, p. 217). Incipit: “Tractatus Johannis de Muris de Arte contrapuncty. Quilibet affectans scientiam contrapuncti diligenter scribat que secuntur per Johannem de Muris sumaria compilata. Primo sciendum enim est quod supra octavam non est species . . .” Explicit: “. . . Item est sciendum quod quando tenor ascendit cantus debet descendere et econverso. Et hoc ad presens de contrapuncto dicto sufficient.”
- 112v–114r Treatise on counterpoint, as a portion of the second part of *Ars contrapuncti secundum Johannem de muris. Cum notum sit* (CS, 3:60–62; listed as “Cum notum sit,” with concordances, by Sachs, *Contrapunctus*, p. 209). Incipit: “Cum notum sit omnibus cantoribus mensurabilem artem musice a plana originem sumere. Ideo de ipsa tanquam de fundamento est notandum . . .” Explicit: “. . . Sed ad hoc evitandum datur ultima perfecta ut apparet in exemplis omnibus.

<sup>137</sup>For a description of this composition, with concordances, see Cattin, “Polifonia quattrocentesca,” pp. 88–91.

<sup>138</sup>For a description of this composition, with concordances, see Cattin, “Polifonia quattrocentesca,” pp. 91–96.

Et hoc ut contrapunctum sufficiant. Et sic debet servari in omnibus motetis et alijs."

- 114r–117v      Treatise on counterpoint, as a continuation of the second part of *Ars contrapuncti secundum Johannem de muris. De diminutione contrapuncti* (CS, 3:62–68; listed as "De diminutione contrapuncti," with concordances, by Sachs, *Contrapunctus*, p. 209). Incipit: "Sequitur de eius Minutione in pluribus videlicet: Est sciendum quod contrapunctus aut fit in tempore perfecto Maiori aut in tempore perfecto Minori. Aut fit in tempore imperfecto maiori aut in tempore imperfecto Minori idcirco sit prima constructio . . ." Explicit: ". . . Sed si scire vis in quo tempore sit facta vide et quere diminutiones ipsius."
- 117v–118r      Treatise on counterpoint, as the third part of *Ars contrapuncti secundum Johannem de Muris. Sequitur de tertio mebro huius artis* (listed as "Nota quod unisonus de ut," with concordances, by Sachs, *Contrapunctus*, p. 214). Incipit: "Sequitur de tercio menbro huius Artis. Nota quod Unisonus de Ut est simile Ut, tertia est Mi, . . ." Explicit: ". . . Nota quod Unisonus de La est simile la, Tertia est fa vel ut, Quinta est La vel Mi, Sexta est la vel Re, Decima est fa, Duodecima est La."
- 118rv      Treatise on counterpoint (listed as "Species contrapuncti" by Sachs, *Contrapunctus*, p. 219). Incipit: "Videamus nunc species contrapuncti. Species contrapuncti sunt novem videlicet Unisonus, Tertia, Quinta, Sexta, Octava, Decima, Duodecima, Tridecima Et quintadecima . . ." Explicit: ". . . Harum vero predictarum novem specierum quinque sunt perfecte et quatuor imperfecte. Perfecte sunt Unisonus, Quinta, Octava, Duodecima Et quintadecima. Imperfecte sunt Tercia, Sexta, Decima Et tridecima. Explicit tractatus Magistri Johannis de Muris quem scripsit don iohannes franciscus preottonus de papia ad Laudem et gloriam Jesu christi dominj nostri et beatissime virginis matris Marie ac sanctissimorum confessorum pape Benedicti hironimi Syri atque Antonij. Deo gratias. Amen."
- 118v      Verse on ownership of this manuscript. "Sorte supernorum scriptor libri potiatur Morte infernorum raptor libri moriatur."
- 118v–119r      Incomplete note by Fassone Fassati: "Iste liber est mei fassoni fassati ex dominis cunioly patria montis feriat in alma ticinensi accademia iuribus insudantis sub annis domini 1493 . . . 1507 de mense februarij questorie dignitati ascitus in ea per transij usque ad"
- 119v–128r      Seven two-part settings. *Sanctus*; fol. 120v: *Agnus Dei*; fol. 121v: three settings of *Benedicamus domino*<sup>139</sup> fol. 122v: Motet: "Cum autem venissem ad locum ubi crucifigendus erat . . ."; fol. 126v: Response: "Sepulto domino signatum est monumentum volentes lapidem ad hostium monumenti . . ."<sup>140</sup>

<sup>139</sup>See Cattin, "Polifonia quattrocentesca," p. 96. The *Sanctus*, *Agnus Dei*, and *Benedicamus domino* settings are transcribed in Gallo, "Cantus Planus Binatim," pp. 84–86.

<sup>140</sup>For a description of "Cum autem venissem" and "Sepulto domino," with concordances, see Cattin, "Polifonia quattrocentesca," pp. 96–100.

- 128v–133r      Treatise in Italian on chancery script. Above text in another hand: “Qui comencia la materia de la littera matescha.” Incipit: “Qui se incomenza la raxone e le questione de La littera canzelarescha . . .” Explicit: “. . . Salvose non fosse menado a meza pena. Verbo che la fileta non porent andare in fin de quella asta”
- 133v–137v      Blank
- 138r–155r      Guido, *Micrologus* (GS, 2:2–24; Smits van Waesberghe, ed., *Micrologus*)  
Incipit: “Incipit Michrologus idest brevis sermo in Musica editus a domno Vuidone [*sic*] Musico. Gymnasio Musas placuit revocare solutas . . .” Explicit: “. . . Ipso doctore semper humanas tenebras illustrante cuius summa sapientia per cuncta [*viget sup. lin.*] in secula Amen. Explicit ars Musice guidonis quam scripsit don Johannes franciscus preotonus papiensis et monachus venerabilis cenobij sancti Sisti placentij secundo Martij.”
- 155v–157v      Guido, *Prologus in antiphonarium* (Smits van Waesberghe, ed., *Prologus in antiphonarium*). Incipit: “Incipit antiphonarium dicti domini guidonis. Temporibus nostris super omnes homines miseri sunt cantores . . .” Explicit: “. . . Et an vox sequens ad precedentem gravior vel acutior vel equisona sit facili colloquio in ipsa neumarum figura monstratur si ut debent ex industria componantur.”
- 157v–159r      Excerpts from Guido, *Epistola ad Michaellem* (GS, 2:44–46). Incipit: “Qui vero monocordum desiderat facere et qualitates et quantitates similitudines et disimilitudines sonorum tonorumve discernere paucissimas quas subiecimus regulas summopere studeat intelligere. <A>d inveniendum igitur ignotum cantum prima et vu[*sup. lin.*]garis regula est si habeas quaslibet neuma habuerit in monocordo sonaveris . . .” Explicit: “. . . ut eodem modo finis neume bene iungatur cum principia eius particule que ab eadem incipit voce in qua neuma finita est.”
- 159v              Blank
- 160r              Poem in Italian. Incipit: “Jhesus. Calmetta. <V>ergine dietro a la producta prole . . .” Explicit: “. . . cum suprema humilta suprema *fide*.”
- 160v–164v      Blank
- 165r–172r      First part of Guido, *Regule rhythmicæ* (GS, 2:25–33; Joseph Smits van Waesberghe, ed., with the assistance of Eduard Vetter, “*Regulae Rhythmicæ*,” *Divitiae Musicae Artis*, series A, book 4 [The Netherlands: Knuf, 1985]). Incipit: “Incipiunt rithimi don Vuidonis [*sic*] Musici de gretia [*sic!*] et primo de plana musica in Monochordo. Musicorum et cantorum magna est distantia. Isti dicunt, illi sciunt que componit musica . . .” Fol. 170v: “. . . quim [*sic*] sit idem semper melum in una et altera.” Interpolated treatise on modes. Incipit: “De tonis et quid sit diapason, diapente, diatessaron, et quid sit tonus. Omnes autenti quinto loco a se principia seu fines distinctionum mitunt . . .” Fol. 171v:<sup>141</sup> Explicit of interpolated treatise on modes: “. . .

<sup>141</sup>Schreur, ed., *Tractatus figurarum*, p. 58, mistakenly gives fol. 171r.



Mane non solum gravem acutamque disiungit sed etiam unam eandemque principio et fines distinctionum partium atque sillabarum." Continuation of *Regule rhythmicæ* (GS 2, p. 33): "Feci regulas apertas et antiphonarium Regulariter perfectum contuli cantoribus . . ." Explicit: ". . . Pium deum exorare nobis sit propitius Operis quoque scriptorem adiuuate precibus Pro Magistro exorate cuius adiutorio Auctor indiget et scriptor gloria sit domino. Amen."

172rv Epilogue (CS, 2:110–111). Incipit: "Ars humanas instruit loquelas en grammatica Vulgoque magna loquitur que manent doctis inscia . . ." Explicit: ". . . semit [id est semitonium *in marg.*] non resonant [*sic*] nec locum tenet ditonus Longe ab est semiditonus dum carent proportionibus."

173r Blank<sup>142</sup>

Folios 56r–70r of this manuscript transmit chapters 1, 2, 3, 4, 5, and 7 of *Introductio musice*; they also transmit the treatises *De falsa musica* and *Sed quoniam cantor diu sine intermissione continuare non potest*, and partially the modal treatise *De litteris finalibus* (Appendix B). There is an explicit (dated 1465) after this last treatise (C.27). The text following, however ("rules on the use of soft b," folios 70rv), and that in folios 94rv ("when to use soft b" and "the three causes for the invention of soft b" as part of the counterpoint treatise interpolated into Hothby's treatise fols. 92v–94v) correspond to parts of the treatise *Nota generalem regulam quare inventum fuit b molle* (see Appendix B, R, fols. 615v–616v).

D Saint-Dié, Bibliothèque Municipale, 42  
Paper; III + 132 + I folios; 226 x 170 mm (irregular)  
Belgium (?) or Italy (?); Mid or late 15th century<sup>143</sup>

<sup>142</sup>According to Huglo and Phillips, *Theory of Music*, Vol. IV, pp. 191, 196, there are blank folios 173–187, and on fol. 187v there are the words "A fare ormare quando no se po. . ."

<sup>143</sup>For descriptions of the manuscript and its contents see also Edmond de Coussemaker, *Notice sur un manuscrit musical de la bibliothèque de Saint-Dié* (Paris: Didron, 1859); Giuseppe Vecchi, "Su la composizione del *Pomerium* di Marchetto da Padova e la *Brevis compilatio*," *Quadrivium* 1 (1956):163–65; RISM 1, pp. 131–33; Michels, *Musiktraktate*, p. 123; Sachs, *Contrapunctus*, p. 202; Gilbert Reaney and André Gilles, eds., *Franconis de Colonia Ars cantus mensurabilis*, Corpus Scriptorum de Musica, no. 18 (N. p.: American Institute of Musicology, 1974), pp. 16–19; Herlinger, *Lucidarium*, Vol. 1 (dissertation), pp. 81–84; Gilbert Reaney, ed., *Anonymus De diversis maneriebus in musica mensurabili* (Ms. Saint-Dié, Bibl. Municipale 42), Corpus Scriptorum de Musica, no. 30 (N. p.: American Institute of Musicology, 1982), pp. 46–49; Herlinger, ed., *Lucidarium*, pp. 38–40. For facsimiles see Friedrich Gennrich, ed., *Magistri Franconis Ars cantus mensurabilis*, 2 vols, Musikwissenschaftliche Studien-Bibliothek, vols. 15, 16 (Darmstadt: n. p., 1957) (fols. 43v–53v: Franco, *Ars cantus mensurabilis*, entire); Reaney and Gilles, *Franconis de Colonia Ars cantus mensurabilis*, p. 85 (fol. 53r); Herlinger, *Lucidarium*, Vol. 1 (dissertation), p. 130

The manuscript is of paper except for the first front and rear flyleaves, which are of parchment. It is now missing several folios, which are represented by blank sheets that have been bound in a modern restoration between the following pairs of folios of the present enumeration: 60/61 (three blank sheets inserted), 66/67, 68/69, 122/123, and 129/130.<sup>144</sup>

Most of the codex was copied by a Brother Jordanus de Blanckenborch<sup>145</sup> whose script shows humanistic characteristics of the fifteenth century, as indicated by the wide spacing, absence of juncture, and the relatively small number of abbreviations. Extensive use of *y* (e.g., fol. 68rb/2: *Musyca*; fol. 68va/-11: *phylosophye*; 68vb/6: *alcoryem*) also suggests a fifteenth-century rather than a fourteenth-century date. In addition, several cursive traits are apparent: the single-looped *a*, with the upright stroke not extending above the loop (the formal *a* occasionally appears: fol. 68v/-4: *Alie*), final *s* (sometimes taking the bastarda form [S]), shading of ascenders and descenders. The lower loop of *g* is open and straight *r* appears after round letters (e.g., fol. 68rb/-18: *gloriossime* [sic]): these as well as the cursive features suggest a later-fifteenth-century date. Furthermore, white notation that begins to be used after folio 23v of this manuscript indicates the latter part of the fifteenth century.<sup>146</sup>

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(fol. 24r).

<sup>144</sup>Herlinger, ed., *Lucidarium*, p. 38, n. 35.

<sup>145</sup>Fols. 1r–53v, 68r–106v; his name appears on fols. 33v, 53v, and 106v. At least three other hands are distinguishable in the present manuscript: a hand very similar to that of Jordanus: fols. 54r–67r, 121r–132r; a Gothic cursive: fols. 107r–114v, 114v–116r [diagrams], 117r–120v, 132rv; a humanistic minuscule with cursive traits [e.g., single-looped *a*]: fols. 114v–116v.

<sup>146</sup>Heinrich Hüschen, "Marchettus von Padua," in *Die Musik in Geschichte und Gegenwart*, vol. 8, edited by Friedrich Blume, 17 volumes (Cassel and Basle: Bärenreiter, 1949–68), col. 1627; Reaney and Gilles, eds., *Franconis de Colonia Ars cantus mensurabilis*, p. 16; and Reaney, ed., *Anonymus De diversis maneriebus*, p. 46, also date this manuscript as from the fifteenth century; Sachs, *Contrapunctus*, p. 202, gives "14. und 15. Jh."; Herlinger, *Lucidarium*, Vol. 1 (dissertation), p. 81, and *Lucidarium*, p. 38, estimates "[m]iddle or late fifteenth century"; the following assign the manuscript to the fourteenth century: Cousse-maker, *Notice*, p. 5; Heinrich Bessler, "Franco von Köln," *MGG*, vol. 4, col. 694 (describing the manuscript as "verschollen"); Vecchi, "Composizione del *Pomerium*," pp. 154, 163; RISM 1, p. 131; Vecchi, "Anonimi Rubrice breves," *Quadrivium* 10 (1969):126; Michels, *Musiktraktate*, p. 123; and Reimer, ed., *De mensurabili musica*, vol. 1, p. 8.

Jordanus's script shows a mix of Italian and French influences. Italian characteristics include the abbreviation (¶) for *-qui-* (e.g., fol. 68rb/11: *loquitur*; fol. 77rb/4: *quibus*), use of *y* in place of final *-i* (an example from the text on Marchetto's *Lucidarium* can be found on fol. 24b/-1: *speciey*), roundness of the loops of *b*, *p*, and *q*, and the relative equality of the height and width of letters. On the other hand the use of the angular looped *r* (e.g., fol. 68rb/11–12: *numero*), as well as the upright *r* with the finishing stroke seldom joining its trunk, and the crossed tironian *et* sign (7) (e.g., fol. 68rb/5), suggest a French provenance. On the basis of the appearance of French and the relative absence of German characteristics<sup>147</sup> Herlinger has suggested that "Blankenborch" is probably better identified with Blankenberghe, Belgium, than with Blankenburg am Harz, Germany.<sup>148</sup> The bulges on the initial letters *S* (fol. 74rb), *T* (fol. 75va), and *O* (fol. 82va), however, are possibly the result of German influence; the crossed tironian *et* sign (7) (e.g., fol. 68rb/5), although suggesting French provenance, does not rule out German origins. In addition, the unusual words found in several explicits, and elsewhere in this manuscript (explicit in folios 33v, 53v, 106v, and 128v [this last not in the hand of Jordanus]; and in folios 77v [within the first treatise on modes] and 83r [see description below]) hint at a German provenance.<sup>149</sup>

Contents of the manuscript follow (the front flyleaves were paginated "I–VI"):

I–II                Verses and responses written in a cursive hand.

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<sup>147</sup>E.g., use of the abbreviation [c] for *con-*, vertical final stroke of *h* descending below the baseline, use of [ſ] for final *-s*, and use of *w* for semi-consonantal *u*.

<sup>148</sup>Herlinger, *Lucidarium*, Vol. 1 (dissertation), p. 82, and *Lucidarium*, p. 38.

<sup>149</sup>Reaney and Gilles, eds., *Franconis de Colonia Ars cantus mensurabilis*, p. 21, call the manuscript "clearly an Italian source," and describe Jordanus as "a cleric from the Low Countries," identifying Blankenborch as the Belgian city. Cousse-maker, *Notice*, p. 5, on the other hand, identifies it as the German city ("[v]ille du duché de Brunswich"). Vecchi, "Composizione del *Pomerium*," p. 163, reports that the manuscript was "probably" copied in Germany by "a certain Brother Giordano di Blankenburg"; Rasch, *Iohannes de Garlandia*, p. 57, indicates that the manuscript was "probably" written in North Germany; Michels, *Musiktraktate*, p. 123, and Sachs, *Contrapunctus*, p. 202, likewise designate the manuscript as of German origin. Also, Reaney ed., *Compendium musicae mensurabilis artis antiquae* [Ms. Saint-Dié, Bibl. Municipale, 42], Corpus Scriptorum de Musica, no. 34 [n. p.: American Institute of Musicology, Hänsler, 1987], p. 25, points out that this manuscript "reveals a knowledge of Italian as well as French theory, and has links with German sources."

- III–IV Description and contents of manuscript in a modern hand (Coussemaker's?). Text: "Ce précieux Manuscrit contient [neuf *underlined*] traités différents, Sur le Plainchant et la Musique du Moyen age. 10 Lucidarium [Marcheti de Padova *underlined*] in arte musice. Ce traité est bien complet, il comprend 33 feuillets . . . [-IV-] Plusieurs de ces traités ont été publiés, en 1784, par Martin Gerbert, Prince-Abbé du Convent des Bénédictins de St. Blaise, dans la foret Noire. Voyez son livre intitulé... Scriptores ecclesiastici de musica Sacra potissimum et c. On dit la Compilation de Gerbert remplié de fau.. tres grossières, le Manuscrit de St. Dié pourrait ... servir a les corriger."
- V Prayers written in a cursive hand.
- VI In a modern, cursive hand: "Lucidarium Marcheti de Padua. Sanctae Musicae Planae tractatus." In another modern hand: "Ce petit trestie est a lesglise de saint Diey tesmoin."
- 1ra–33va Marchetto, *Lucidarium* (GS, 3:65–121; Herlinger, ed., *Lucidarium*). Incipit: "[Les 6 premières pages sont paginées en chiffres romains *above text in a modern hand*] <M>Agnifico militi et potenti domino suo domino Raynerio . . ." Explicit: ". . . Sic et musicus ad cantorem. Nam musicus cognoscit, sentit, discernit, eligit, ordinat et disponit omnia que ipsam tangunt scienciam et per cantorem iubet tanquam per suum nuntium praticari. Et hoc [*sic*] de musyca plana ibi dicta sufficiant. Deo gracias. Amen. Explicit lucidarium veenerabilis [*sic*] viri Magistri Marcheti de padua, in arte musyce plane. Incoatum cesene, completumque verone. In Godes namen amen. Frater Iordanus de blanckenborch et cetera."
- 33vb Blank
- 34ra–43rb Anonymous II, *Tractatus de discantu* (CS, 1:303–19; Albert Seay, ed., *Anonymous II: Tractatus de discantu*, Critical Texts with Translation, no. 1 [Colorado Springs: Colorado College Music Press, 1978]). Incipit: "<G>audent breuitate moderni. Quandocumque punctus quadratus vel nota quadrata tractum habens a perte [*sic*] dextra descendentem vel ascendentem lo[[ul]]nga dicitur, ut hic [*example*] . . ." Explicit: ". . . Incipiens autem in dyapason infra vel cum tenore ascende duas voces, ut hic: [*musical examples*] Et de discantu hic [*sic*] dicta sufficiant. Amen. amen."
- 43va–53vb Franco, *Ars cantus mensurabilis* (GS, 3:1–16; CS 1:117–36; Gilbert Reaney and André Gilles, eds., *Franconis de Colonia Ars cantus mensurabilis*, Corpus Scriptorum de Musica, no.18 [N. p.: American Institute of Musicology 1974]). Incipit: "<C>um de plana musyca quidam phylosophy sufficienter ordinaverunt ipsamque nobis tam theorice quam practice et efficaciter illucidaverit . . ." Explicit: ". . . Et de discantu et eius speciebus nec non de ipsius figuris, id est de figuris et de pauusacionibus [*sic*] et de ipso organo sufficiant ibi dicta. Explicit magna ars mensurabilis musyce Reverendi viri cuiusdam domini franconis Capellani domini pape nec non preceptoris domus Colonensium hospitalis sancti Johannis ierosolimitani. Amen. Jordanus de blankenborch katerina gyf mek moyt."

- 54ra–55vb *Compendium musicae mensurabilis artis antiquae*. (CS, 1:319–24, as the first part of Anonymous III, *De cantu mensurabili*; Heinz Ristory, ed., *Compendium musicae mensurabilis artis antiquae* [Ms. Saint-Dié, Bibl. Municipale, 42], Corpus Scriptorum de Musica, no. 34 [N. p.: American Institute of Musicology, Hänssler, 1987], pp. 27–36). Incipit: "<G>Audent brevitatem moderni. Quodcumque nota quadrata vel punctus quadratus invenitur quod idem est habens tractum a parte [sic] dextra descendente longa vocatur, ut hic patet [example] . . ." Explicit: [Music. Text: "Virginale decus et presidium. Amen."]
- 55vb–58vb Treatise on counterpoint (CS, 1:324–27 as the second part of Anonymous III, *De cantu mensurabili*). Incipit: "quicumque bene et secure discantare voluerit primo oportet scire quid sit quintum et quid duplum . . ." Explicit: ". . . Quinta regula descendencium. Si cantus descendat gradatim dytonum vel tritonum omnes descendentes debent esse in dyapente preter ultimam que debet esse in Dyapason, ut hic patet per exemplum [example]"
- 59ra–59va John, *Musica*, chapter 6 (Joseph Smits van Waesberghe, ed., *Johannis Affligemensis De musica cum tonario*, Corpus Scriptorum de Musica, no. 1 [N. p.: American Institute of Musicology, 1950], pp. 63 ff). Incipit: "<M>Ulte quidem ac diverse sunt monacordi dimensiones . . ." Explicit: ". . . Tercius in G quod est dyapason Eodem modo et reliquas invenire potes. Explicit divisio monacordy. Amen."
- 59vb Blank
- 60ra–65rb Incomplete version of Marchetto, *Brevis compilatio*, lacking the central portion (CS, 3:1–9; G. Vecchi, "Composizione del *Pomerium*," pp. 177–80, 188–205). Incipit: "Incipit brevis compilatio Magistri Marcheti musyci de padua in arte musice mensurate pro rudibus et modernis. [q in marg.]Uoniam omnis cantus mensuratus mensuratus dicitur eo quod tempore mensuratur . . ." Fol. 60vb: "Dicamus ergo sic: Nota brevis de se principaliter." Missing folio/s (3?: three blank sheets inserted here) between fols. 60 and 61. Fol. 61ra: "Et per hoc cognoscamus quando ad novenariam et quando ad duodenariam divisionem debeant pertinere . . ." Explicit: ". . . Quare autem sit istud de dictis longis, brevibus et semibrevibus in hoc opusculo rationem ponere non curamus quia ab omnibus cantoribus hoc universaliter observatur. In alio enim opere nostro musice mensurate rationem assignavimus predictorum."
- 65va–66vb Treatise on trecento mensuration, *Rubrice breves* (CS, 3:9–11 as part of *Magistri Marcheti de padua Brevis compilatio in arte musicae mensurate*; Giuseppe Vecchi, "Anonimi *Rubrice breves*," *Quadrivium* 10 [1969]:125–34). Incipit: "Tempus perfectum recte divisum in duodecim. [t in marg.]Empus perfectum recte est illud in quo ponuntur duodecim semibreves que vocantur minime . . ." Explicit: ". . . Et ille due postea dividuntur in sex que dicuntur minime, ut hic patet per exemplum: [example]"
- Missing folio/s between fols. 66 and 67.
- 67r Fragment on counterpoint (CS, 3:11–12 as the concluding part of *Magistri Marcheti de padua Brevis compilatio in arte musicae mensurate*; but

identified as a separate fragment on counterpoint (fragment *Sa*) by Sachs, *Contrapunctus*, p. 211). "quarta quod tenore ascendente contrapunctans vel discantans potest ascendere et econverso . . . Item sic dicas de decima et tertiadecima respectu superioris et inferioris. Et de regulis contrapuncti seu discantus dicta sufficis et cetera. Salve crux digna super omnia ligna benigna, Tu me consigna moriar, ne morte maligna. Amen."

- 67v Blank
- 68ra–76va *Introductio musice* (CS, 1:157–66). Incipit: "<I>ncipit introductio musice plane et eciam mensurabilis secundum magistrum Johannem de Galandia musyce sapientissimum. <i>Ntroducciones in arte musyce. Primo videndum est quod sit introductio ceteris pretermisiss . . ." Fol. 68vb: "... Si queratur qui sit vox et unde dicitur respondendum est sic vox est [[re]] aer remissus in ore verberatus rectus naturalibus instrumentis formatur et dicitur." [Missing folio(s)]. Fol. 69ra: "hic apparent exempla de omnibus uocibus tocius artis cantus per graues acutas et super acutas literas unde istis prelibatis uobis sufficiat quo ad presens. . . ." Explicit: "expliciunt omnes species necessarie cantus et [[ut]] utiles omnibus musicis introducen[[es]]dis."
- 76vab Fragment on *falsa musica*, *De falsa musica* (CS, 1:166–67, as part of *Introductio musice*). Incipit: "videndum est de falsa musyca que instrumentis musicalibus multum est necessaria specialiter in organis. . . . et per consequens signa semitonia designancia in omnibus tonis possunt amplicari [examples: Signum enim ut dicit sapiens signato cor hominis respondet Vbicumque inuenimus—quadrum dicimus istam uocem mi vbicumque igitur inuenimus]."
- 77rab Fragment on rests, *Sed quoniam cantor diu sine intermissione continuare non potest* (CS, 1:167, as part of *Introductio musice*). "secundum condiccionis uocis humane. Ideoque in cantu descensiuo ad ultimam descendentem debemus facere pausam sicut patet in kyrie leyson de sancta maria. . ." Explicit: ". . . Similiter in cantu ascensiuo ad ultimam descendentem solam superius remanentem debemus facere pausam per tonum uel semitonium semidictonus uel semidictonus ut hic patet [example: Kyrie leyson]."
- 77rb–79va Treatise on modes, *De litteris finalibus* (CS, 1:167–70, as part of *Introductio musice*), with interpolated note on four ways a long can be perfected. Incipit: "uIsum est igitur de pausacionibus cantus plani nunc videndum est de lictis finalibus in quibus omnis cantus regularis iubetur finiri . . ." Fol. 78ra: ". . . et si cantus medietatem utriusque accipiat tunc proprie dicitur esse mixtus et aliter non. Sequitur de figuris et ligaturis cantus plani Mnis cantus fit duobus modis aut cum littera. . . et sicut quatuor modis efficitur longa perfecta trium temporum ut hic. Icet dictum sit in precedentibus quod primus tonus potest ascendere usque ad f acutum et descendere tonum sub sua fine teneas tamen quod sui prioritatem et auctoritatem per totam manum potest ascendere et descendere sicut dominus et magister. . . ." Explicit: ". . . Quando ergo incipit in f coniuncta uel diuisa de propinquo uel remoto nisi unius ibi est b molle sine signo Similiter a superiori Cuius causa exempla ponantur ne ualeas ab errare et non solum unius toni set per ordinem singulorum [examples: Exempla primi toni qualiter b molle sine signo ueraciter cognoscitur . . . Octaua exempla toni per neumen inprobanda]."

- 79va–83rb Treatise on modes, *Nota quod primus tonus finitur in D gravi* (cf. *Dialogus*, GS, 1:259–63; CS, 1:170–75, as part of *Introductio musicae*). Incipit: “nOta quod primus tonus finitur in d [[...]] graui as[[de]]scendit usque ad d acutum et eciam ad E acutum et deponitur usque uero ad C graue. . . .” Explicit: “. . . Illud eciam nota quot octavus tonus b molle interdum recipit, sepius autem reiecit.”
- 83rb–106vb Tonary (CS, 2:117–49 as *Oddonis Abbatis Intonarium*). Incipit: “iNcipit intonatorium a domno Octone abbate diligenter examinatum et ordinatum a guidone sanctissimo monaco optimo musyco examinatum, probatum legitime, approbatum et autentica tam tam [sic] quam opus ad cantorum periciam necessarium ecclesie dei honorificum, deo gratificum cum in eo plurimum collaudetur. Ideo autem sic vocatur quia per ordinatam et fallibilem antphonarium [sic] in[[c]]cepzione et antiphone cuius sit toni statim cognoscitur . . .” Below text: “heuen [drawing of head and upper body of a king] (?) figure] stryt.” Explicit: “. . . Primus terminabit in b rotundum Secundus in f. Et de disposicionibus vocum hii duo modi regularum sufficiant[[s]] et cetera. dominus sit benedictus et pie mater eius. frater <J>ordanus de blankenborch. Amor wy grot ys dyn craft dem sy al so gut leyf we kennen uns wol g c.”
- 107ra–117r Johannes de Muris, *Musica speculativa*, Version B (GS, 3:256–83; Susan Fast, ed., *Johannis de Muris Musica <speculativa>* (Ottawa: The Institute of Mediaeval Music, 1994); for concordances see Michels, *Musiktraktate*, p. 18, n. 13). Incipit: “qUoniam musica est de sono relato ad sonos aut e contra necessarium est utrumque numerum si<mi>lliter [sic] et sonum considerare . . .” Explicit: “. . . Exempli causa describere tibi volo quarum figure sunt in hoc ordine consequentes: [diagram showing intervals between various notes] Explicit theorica musice secundum magistrum iohannem de muris.”
- 117v–118v Monochord division. Incipit: “Jesus. Divisio monocordi secundum boetium In tribus generibus divisi scilicet diatonico, cromatico et enarmonico . . .” Explicit: “. . . cum autem illam per medium secuierit minori [quidem sup. lin.] numero adiungi debere constat.”
- 119ra–120va Treatise on ratios (CS, 3:266 as part of *Christiani sadze de flandria Tractatus modi, temporis et prolationis*).<sup>150</sup> Incipit: “<P>Roportio est habitudo duorum terminorum ad invicem vel distantia duorum terminorum inter se . . .” Explicit: “. . . proportio subdupla tertia ad quatuor proportio sub sexquitercia et sic de singulis. Et hec de proportionibus dicta sufficiant studere volentibus. Explicit tractatus proportionum.”
- 120vb Blank
- 121r–122v Treatise on mensuration. Incipit: “[Diagram] Musica est triplex scilicet naturalis instrumentalis et moralis . . .” Explicit: “. . . Nomina vocum septime divisionis cum suis figuris Semibrevis ♢, sextilis ♦, bisextilis ♧, duodilis ♡. [figures of notes above their names]”

<sup>150</sup>Coussemaker, CS, 3:266, n. 1, pointed out the similarity of this treatise to a discussion of ratios edited in GS, 3:286.

Missing folio/s between fols. 122 and 123.

- 123ra–126v Fragment on mensuration (CS, 3:404–8 as part of *Anonymi VII De diversis manieribus in musica mensurabili*). “Ascendendo vel descendo [sic] ut hic supra [musical example] Sic formantur breves plicate, ut hic supra . . . [musical example] Quinque quatuor prime minores”

Missing folio/s between fols. 126 and 127.

- 127rv Fragment on mensuration (CS, 3:408 [excluding the section on pauses]). “tempora. Si due breves inter duas longas inveniuntur . . . [-127vb-] Item quando brevis naturalis duas semibreves et semibrevis naturalis tres minimas est tempus imperfectum minoris prolationis modi perfecti. Item de pausacionibus. Prima pausa naturalis tria tempora quando continet quatuor lineas cum tribus spatiis . . . Item pausa unius semibrevis continet partem unius spacij supra lineam a parte superiori. Pausa unius”
- 128rv Fragment on hexachord mutations. “in  $\text{C}$  quadrata est tonum et de B molla in C acuta est tonum . . . In desendendo [sic] vero duo videlicet de B molla in quadrata la sol, de quadrata in B molla sol re. Explicit expliciunt wnser maget is de kuntte bunt, et cetera.”
- 129rv Fragment of Johannes de Muris, *Libellus cantus mensurabilis* (CS, 3:46–48). “Incipit ars magistri ihohannis de muris musice mensurate et primo primum capitulum et tractatus primus. <Q>uilibet in arte pratica mensurabilis cantus eruditi mediocriter affectus ea scribat diligenter que secuntur sumarie compilata secundum magistri Ihohannem de muris. Quinque sunt partes prolationis videlicet maxima, longa, brevis, semibrevis et minima, ut hic . . . Secunda regula est quandocumque aliqua nota debet inperfici oportet quod eam in mediate sequitur nota maior vel minor in forma vel pausa maioris vel minoris forme, quia simile ante si”

Missing folio/s between fols. 129 and 130.

- 130r Fragment on trecento mensuration, *Fragmentum de mensuris* Gallo, ed., *Mensurabilis Musicae Tractatuli*, pp. 49–52). “naria perfecta, Senaria imperfecta, novenaria, Octonaria et duodenaria. Mensura quaternaria est quando quodlibet tempus valet vel dividitur in quatuor minimas vel in duas semibreves . . . Eciam si aliqua esset caudata a parte Inferiori, valet octo minimas.”
- 130rb–131ra Monochord division. Incipit: “Divisio monacordi, et cetera. Flat cordus, concavum quadrum ponatur, corda super illud fiat magadam in cauda seu dextra parte et distanciam . . .” Explicit: “. . . Quinta divisio incipe a semitonio quod est inter f et g dividendo cordas per quatuor partes equales usque ad magadam, et habebis in secundo puncto primi passi  $\text{C}$  inter a et c.”



- 131ra–131vb      Fragment on ratios. "Incipit ars proporcionum Secundum magistrum franconem. [V *in marg.*]Enerabiles [sic] domini mei<sup>151</sup> porporciones per dei graciā intendo declarare sub correctione dominorum meorum atque magistrorum ispanie regno consistencium . . . Item nota quod sexquialtera porporcio potest poni in utraque prolacione, scilicet in tempore perfecto ac imperfecto nisi in tempore perfecto maioris prolacionis. Quare quia Ipsa pro"
- 132rv              Prayers. Incipit: "Vox de celo ad antonium . . ." Explicit: ". . . littera gesta docet quid credat allegoria [hI *added from margin*]bralis quid agas quo tendis anagogia."
- Reaf flyleaf r    In a modern hand: "132 feuillets papier devant 6 pages marquées en chiffres romains."

Folios 68r–83r of this manuscript transmit the following portions of *Introductio musice*: chapters 1, 2 (partially, owing to a short lacuna between 2.15 and 2.29), 3, 4, 5, and 7; they also transmit the treatises *De falsa musica* and *Sed quoniam cantor diu sine intermissione continuare non potest* (both also partially, owing to another lacuna between A.8 and B.11), and the modal treatises, *De litteris finalibus* and *Nota quod primus tonus finitur in D gravi* (Appendix B). Folio 78r contains a paragraph discussing the perfection of the long, a topic pertaining to mensurable music; it occurs within the modal treatise *De litteris finalibus* (between C.27 and C.28).

R              Rio de Janeiro, Biblioteca Nacional, Cofre 50,18  
Parchment; 635 folios; 136 x 98 mm<sup>152</sup>  
Italy; 1488, 1489, or 1490<sup>153</sup>

<sup>151</sup>RISM 1, p. 133; Reaney and Gilles, eds., *Franconis de Colonia Ars cantus mensurabilis*, p. 18; and Reaney, ed., *De diversis maneriebus*, p. 49 incorrectly transcribe as "venerabilis dominici" what appears in the manuscript as "venerabiles domini mei."

<sup>152</sup>Material described as *papel apergaminado* ("parchment-like paper") by Francisco Curt Lange, "Estudios Brasileños (Mauricinas). I. Manuscritos en la Biblioteca Nacional," *Revista de estudios musicales* I/3 (April, 1950):105. Dimensions given in Frei Pedro Sinzig, "Um dos tesouros da Biblioteca Nacional," *Cultura Política: Revista mensal de estudos brasileiros* 4/36 (1944):238; Lange, "Estudios Brasileños," p. 105.

<sup>153</sup>For general information on this manuscript see Lange, "Estudios Brasileños," p. 105; Stevenson, "Neglected Manuscript," pp. 9–17. For information on its contents see Sinzig, "Um dos tesouros," pp. 238–42 (reprinted in *Música Sacra* 4 [November, 1944]:203–5); Lange, "Estudios Brasileños," p. 105; Sachs, *Contrapunctus*, p. 200. For a facsimile of folios 610r–617r see Rasch, *Iohannes de Garlandia*, on unnumbered pages, just after title pages and before acknowledgements and contents pages, which are also unnumbered; for other facsimiles see Sinzig, "Um dos tesouros," page facing p. 240 (fol. iiv); Lange, "Estudios Brasileños," pages facing p. 136 (fols. xxxv, 40v, 617v). For an explanation of the foliation see main text.

This manuscript found its way to the National Library of Brazil as part of a huge collection transferred primarily from Lisbon in 1814 by the Portuguese prince regent Dom João VI, who six years earlier had established his court in Rio de Janeiro.<sup>154</sup> It is now titled “*Missae et Officia Divina cum cantu gregoriano*” in the register of codices and manuscripts kept in the coffer of the Biblioteca Nacional Division of Manuscripts (“*Relação dos códices e manuscritos guardados no cofre*”).<sup>155</sup> It was rebound in 1905, having formerly borne the catalog number I-6-1-No. 3.<sup>156</sup>

The manuscript contains two overlapping foliations: the first numbers the first thirty-three folios only; the second begins as folio “1” the thirtieth folio coinciding with the beginning of the *Ordo missalis*, and proceeds, through some irregularities as described below, to the end of the manuscript. The first foliation was written on the top right corner of the recto sides in a recent hand, apparently in pencil, while the second foliation, in ink, in a more contemporaneous hand, was also written at the top but a little further toward the inside of

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<sup>154</sup>The manuscript was previously acquired as a result of Dom João’s efforts to collect musical compositions and writings, among other works of value, for his private library. Dom João also brought material from the library of the Colégio de Todos os Santos from the island of S. Miguel in the Azores, and miscellaneous collections. When João was compelled to return to Lisbon in 1821 he, by then King, took back with him a large part of this entire collection but nonetheless left behind more than a thousand manuscripts, of which the present manuscript was one (Stevenson, “Neglected Manuscript,” pp. 9–10).

<sup>155</sup>It was formerly known as “*Livro de Orações com Cantochão* [Book of Prayers with Plainchant], 1490,” a title written on the cover of the manuscript, and which Sinzig, “Um dos tesouros,” p. 239, felt did not accurately indicate the content of the manuscript. He suggested its title be changed to *Missae et Officia Divina totius anni cum Cantu Gregoriano ad usum Ordinis Fratrum Minorum*, both to reflect the content of the manuscript and to highlight its use by the Franciscan Order. Sinzig illustrates the connection of the Franciscan Order with several sequences copied in this manuscript. Lange, “Estudios Brasileños,” p. 105, designated it “*Missae et Officiae [sic] Divina totius anni cum cantum [sic] gregoriano ad usum Ordinaris Fratrum Minorum*” in compliance with Sinzig’s suggestion.

<sup>156</sup>Stevenson, Rasch, Gallo (“*Tra Giovanni di Garlandia e Filippo DaVitry*,” p. 16), and Sachs (*Contrapunctus*, p. 200) all refer to this manuscript as “Cofre 18.” I am informed by Mss. Eliane Perez and Anna Naldi of the Document Information Section of the Biblioteca Nacional [letters to the author, 18 Nov 1992, 8 July 1994, 6 April, 1995] that “Cofre 50, 18” is the present signature. The number “18” in the former signature referred to the manuscript’s ordinal position in the single coffer (“cofre”) then in the Biblioteca Nacional. The subsequent addition of a new coffer necessitated the differentiation of the two coffers, with the result that the coffer to which this manuscript belonged was given the arbitrary number “50.” I am indebted to Mss. Perez and Naldi for this information.

the folio. The second foliation will be adopted for descriptions of folios beginning at this point, while references to the first thirty folios will be denoted by Roman numerals.

The foliation of the manuscript is not entirely continuous. Without any apparent loss of textual continuity, however, folio 89 is followed abruptly by folio 100, 161 by 166,<sup>157</sup> and 209 by 211. In addition, folio 620 is now missing.<sup>158</sup> Taking into account the first thirty folios before the commencement of the second foliation, the fifteen non-existent folios, and the missing folio, the total number of folios contained in this manuscript presently is 635, and not 621, as a cursory reference to the final folio (fol. 621) might suggest.

At least three, and possibly as many as five, scribes copied the principal portions of the folios of the manuscript as it presently stands. Scribe A copied folios *ii*v–*xv*v and *xix*v–*xxx*v; scribe B copied folios *xv*v–*xix*r (“Te igitur dementissime pater . . .”); scribe C copied folios 1r–609v; scribe D copied folios 610r–619v (and at least part of a following folio or folios, now lost); and scribe E copied folios 621rv (and at least part of a preceding folio or folios, now lost).

From the similarity of their script, it is possible that two or three among scribes A, C, D, and E are the same person. Scribes A and E, however, were probably not the same person: in a note at the bottom of folio *xxx*v scribe A identifies himself as *Angelus* and writes that he is turning over the manuscript to Brother Johannes Orici, who belongs to the same order (“Ego frater Angelus de *clarvasio* . . . concedo tibi fratri Iohanni orici eiusdem ordinis hunc librum . . .”).<sup>159</sup> On folio 621v scribe E identifies himself as “Johannes orici de francia” (“*Ego frater*

<sup>157</sup>The subsequent folios 166–168 are blank. Fol. 161v contains the end of a portion of music (text: “. . . Lac profer et ubera nos a penis libera tremendi iudicij. Amen.”); fol. 169r begins a new section of text (“Incipit proprium sanctorum . . .”). It is possible, but unlikely, that some folios are now missing between fols. 161v and 166r.

<sup>158</sup>On fols. 590–597 numbering is present but very faint; no numbering can be seen on fols. 598–599. These ten folios are reckoned when the numbering resumes on fol. 600.

<sup>159</sup>While it is true that this note was written in an informal, cursive, style, it appears to be in the same hand as that of the text that precedes it, and this text was copied by scribe A. Lange, “Estudios Brasileños,” p. 105, reads the scribe’s name as Augustus.” The name *de clarvasio*, if it is transcribed correctly, may be referring to “Clairvaux,” (a Cistercian monastery in Burgundy).

Johannes orici de francia fateor me scripsisse et notasse hunc librum cantus . . ."). Thus scribes A (Angelus) and E (Johannes orici de francia) are two different persons. Furthermore, if Johannes Orici, to whom scribe A was referring, was identical to this "Johannes orici de francia," scribe A apparently turned over the manuscript to scribe E himself.

In his note scribe E also tells us that he copied (his portion of) the manuscript in Pavia and Rome during the fifth and sixth years of the reign of Pope Innocent VIII (" . . . Johannes orici de francia fateor me scripsisse . . . hunc librum cantus in papia et in roma . . . . . anno innocentii octavi quinto et sexto"). Since Innocent VIII was pope from 1484 to 1492, it follows that scribe E was referring to the year 1488, 1489, or 1490.<sup>160</sup>

Paleographic features of scribe D, who copied the theoretical portions that transmit *Introductio musice*, point to the fifteenth century. These include cursive traits and signs of informality: the single-looped *a*, with the upright stroke not extending above the loop, the complete absence of a lower loop in the letter *g*, the final *s* (S), the exclusive use of round *r* (2), shading and length of ascenders and descenders (e.g., fol. 611/-10: *supradictum*), dropping of straight *f* and *s* below the bodies of the other letters (e.g., fol. 611v/-8: *sol fa fa sol*). But beyond these indications it is not at all certain to what extent the dates given by scribe E apply to this and other portions of the manuscript.<sup>161</sup>

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<sup>160</sup>Stevenson, "Neglected Manuscript," p. 10, claims a date of 1486 for the writing of the manuscript, based on the above-mentioned passage. His transcription of this passage is, however, inaccurate, especially of the information concerning the date of copying: ". . . Johes orici de francia fateor me scripsisse et notasse huc librum . . . ano inocetii S. 4.<sup>o</sup> R. 6.<sup>o</sup>." At any rate, Stevenson does not explain how he derives the date "1486" from what he has transcribed. Sachs, *Contrapunctus*, p. 200, also gives the date "1486," presumably based on Stevenson's article (he cites only this article as his source in his description of the manuscript). Likewise, Reimer, ed., *De mensurabili musica*, p. 8, n. 56, gives the same date, basing it presumably also on Stevenson's article, which he cites later in his note. Also, as has been pointed out above, its former title was "Livro de Orações com Cantochão, 1490," which was written on the cover page. This date is more consistent with the information given in the closing words on folio 621v.

<sup>161</sup>Lange, "Estudios Brasileños," p. 105, appears to believe that "Augustus" (identified as "Angelus" in this dissertation) and the copyist of *Introductio musice* are the same person ("El mismo padre copió integramente el Tratado de Juan de Garlandia . . ."); Stevenson, "Neglected Manuscript," p. 10, that a single scribe was responsible for the entire manuscript ("But of wider geographic import is such an item as the manuscript on vellum now

Evidence presented by the foliation, scribal characteristics, and the notes of Angelus and Johannes Orici de Francia suggests that the present manuscript is a composite of four different manuscripts comprising the present folios i–xxx, 1–609, 610–619, and 621, respectively. The third and fourth of these contained one or more folios that are now lost. The two systems of foliation were applied after the four original manuscripts were put together.

The bulk of the manuscript (folios ii<sup>v</sup>–609<sup>v</sup>) contains principally music for the mass and office, as well as prayers and rubrics for the liturgy. They were copied primarily for the use of the Franciscan order. The final portion of the manuscript (fols. 610<sup>r</sup>–612<sup>v</sup>) contains various texts on plainchant, mensuration, and counterpoint.

The contents of the manuscript follow:

ir	Blank
iv	Table [?] with names of the twelve months of the year.
iir	Explanation in Italian (with table in Latin) on how to find the <i>lettera dominicale</i> . Text: “Se voi trovare la lettera dominicale et l’ano dello bisexto in questo circulo . . . [Circular chart. Text: “Lettera dominicale et annus bisextus . . .”] . . . [Table. Headings (in Latin): “Aureus numerus xvi, littera dominicale c, septuagesima Januarius, Cinis Februarius, Pasca Marcius, Ascensio Aprilis, Pentecoste Maius, Residuum Dominicarum . . .]”
ii <sup>v</sup> –609 <sup>v</sup>	Music, text, prayers, and rubrics for the Mass and Office. Incipit: “Incipit Officium Immaculate Virginis marie, Editum per dominum leonardum nogarolum prothonotarium apostolicum. In primis vesperis antiphona [Music. Text: “Sicut lilium inter spinas sic amica mea inter filias ade alleluya . . .”] <sup>162</sup>
	Fols. xi r–xii v: Calendar of ecclesiastical events.

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catalogued as ‘Cofre 18’. On the last page (folio 621<sup>v</sup>.) the copyist testifies to having done his transcription at Pavia and at Rome in 1486.”).

<sup>162</sup>According to Stevenson, “Neglected Manuscript,” pp. 11–12, the present manuscript provides the music for the printed text of an *Officium immaculate conceptionis virginis Marie editum per reuerendum patrem dominum Leonardum nogarolum*. According to the *Catalogue of Books Printed in the XVth Century Now in the British Museum*, part VII: Italy: Genoa–Unassigned Addenda (London: Quaritch and Oxford University Press, 1935), pp. lxxiv and 1080, this publication was signed by Giovanni Leonardo Longo on 9 May, 1478, probably at Torrelbelvicino, a village near Schio and about fifteen miles north-west of Vicenza.

Fol. ix v: "Incipit missa de immaculata conceptione virginis marie veraciter approbata a sixto quarto et Innocentio octavo [*Music.* Text: "Egredimini et videte filie syon reginam vestram . . ."] . . ."

Fol. xiii r: "In nativitate domini et per octavam prephacio [*Music.* Text: "Versus eterne deus Quia per incarnati verbi misterium nova mentis nostre oculis lux tue claritatis infulsit . . ."

Fol. xv v: "Te igitur clementissime pater per ihesum christum filium tuum dominum nostrum supplices rogamus ac petimus . . ."

Fol. xvii v: ". . . Est tibi deo patri [cross] omnipotenti in unitate spiritus [cross] sancti omnis honor et gloria [*Music.* Text: "Per omnia secula seculorum Amen. Oremus . . ."] . . ."

Fol. xix v: "Secuntur cantilene scilicet orationes tocius breviarum Reliqui quere in loco suo Dominica prima adventus capitulum Fratres Scientes quia hora est iam nos de somno surge . . ."

Fol. xxv v: "Incipit sanctuarium: In festo sancti saturnini oratio Deus qui nos beati saturnini martyris tui concedes natalicio perfrui . . ."

Fol. xxix v: "Incipit commune sanctorum. In natalicijs apostolorum capitulum Fratres Iam non estis hospites et advene sed estis cives sanctorum et domestici dei superedificati supra fundamentum apostolorum et prophetarum . . ."

Fol. xxx v: ". . . et dixit qui sedebat in throno, ecce nova facio omnia. Explicit [*Note in a cursive hand:* Ego frater Angelus de clarvasio [?] . . . . . venerabilis [?] concedo tibi fratri Iohanni orici eiusdem ordinis hunc librum propria manu scriptum]."

Fol. 1r: "In nomine individue trinitatis. Ac beate marie semper virginis. Ac beati patris nostri francisci. Incipit ordo missalis secundum consuetudinem romane curie. Dominica prima Adventus. Introitus [*Music.* Text: "Ad te levavi . . ."] . . ."

Fol. 65r: *Music.* Text: ". . . Mansit autem maria cum illa quasi mensibus tribus et reversa est in domum suam."

Fols. 65v–70v: blank.

Fol. 71r: "Sabbato sancto hora competentis cooperiuntur altaria . . ."

Fol. 128r: "Sequitur cantilena de cantanda in omnibus missis tocius anni Et primo Kyrieleyson sequencia cantantur a sabbato sancto usque ad octavam penthecostes exclusive . . ."

Fol. 142r: "Misse votive de beata virgine Et primo a prima dominica adventus usque ad nativitatem . . ."

Fol. 142v: "Officium pro defunctis Introitus [*Music*. Text: "Requiem eternam dona eis domine . . ."] . . ."

Fol. 145v: "Secuntur sequencie in principiis [*sic*] festibus tocius anni In nativitate domini [*Music*. Text: "Letabundus exultet fidelis chorus alleluya . . ."] . . ."

Fol. 161v: ". . . Mater cuius viscera penetraverunt vulnera patientis filij. Lac profer et ubera nos a penis libera tremendi iudicij. Amen."

Fols. 166r–168v: blank.

Fol. 169r: "Incipit proprium sanctorum In vigilia sancti andree Introitus [*Music*. Text: "Dominus secus mare galilee vidit duos fratres petrum et andream et vocavit eos venite post me faciam vos fieri piscatores hominum . . ."] . . ."

Fol. 189v: "In nomine domini Incipit commune sanctorum. In vigilia unius ap<ostoli> Introitus [*Music*> Text: "Ego autem sicut oliva fructificavi in domo domini . . ."] . . ."

Fols. 223r–224r: Musical examples of intervals, and species of the diatessaron on various notes of the gamut.

Fol. 224r: "Incipit officium immaculate conceptionis virginis marie. In primis vespers antiphona [*Music*. Text: "<S>icut lilium inter spinas sic amica mea inter filias ade alleluya . . ."] . . ."

Fol. 230r: "In nomine sanctissime trinitatis et Virginis marie, ac sanctissimi confraternitatis francisci. Incipit ordo Antiphonarii secundum morem romane curie Et primo In principio sabbato adventus domini ad vespas capitulum fratres Scientes hymnus Conditor Versus Rorate. Ad Magnificat Antiphona [*Music*. Text: "Ecce nomen domini venit . . ."] . . ."

Fol. 372r: "Dominica resurrectionis domini ad Matutinum. Invitatorium Surrexit hymni capitula Responsoria et Versiculi non dicuntur in aliqua hora per totam octavam [*Music*. Text: "Surrexit dominus Vere . . ."] . . ."

Fol. 401v: "Incipit Rub<rica> per . . . de communi dominicarum que veniunt inter penth<ecostes> et . . . In festo sanctissime trinitatis primis vespers antiphona [*Music*. Text: "Sedenti super solium congratulans trisagium [-fol. 402r-] seraphici clamoris cum patre laudat filium indifferens principium reciproci amoris predixit . . ."] . . ."

Fol. 414v: "Incipit officium transfiguracionis Jhesu Christi ad vespas antiphona . . . [*Music*> Text: "Cristus Ihesus splendor patris et figura substancie eius portans omnia verbo virtutis sue . . ."] . . ."

Fol. 419r: "In vigilia beati patris nostri francisci ad vespas antiphona [*Music*. Text: "Franciscus vir catholicus et totus apostolicus . . ."] . . ."

Fol. 449v: "Responsorium cum festo sancte cecilie . . ." [much lighter ink for the rest of the page]

Fol. 450r: "Dominica prima post penthecostes Invitatorium Adoremus dominum . . . In matutinis. Invitatorium: [*Music.* Text: "Adoremus dominum . . ."] . . ."

Fol. 488v: "Sequitur cantus omnium hymnorum tam de tempore quam de festo In adventu [*Music.* Text: "Conditor alme syderum . . ."] . . ."

Fol. 497r: "Secuntur suffragia quando inhumantur defunctorum corpora Responsorium [*Music.* Text: "Subvenite sancti dei occurrere angeli domini . . ."] . . ."

Fol. 498r: "Secuntur exequie defunctorum Et primo anima egressa a corpore dicitur Responsorium Subvenite ut supra deinde Kyrieley. . ."

Fol. 499r: "Incipit officium parvulorum Quando extrahitur puer de domo dicitur versus beati immaculatj et laudate pueri cum gloria patri cum puer est in ecclesia cantatur hoc antiphona cum psalmo [*Music.* Text: "Hic accipiet benedictionem a domino et misericordiam a deo . . ."] . . ."

Fol. 500r: "In nomine domini Incipit secunda pars anthiphonarii. Et primo In vigilia sancti andree ad vespervas antiphona . . . [*Music.* Text: "Unus ex duobus qui secuti sunt dominum erat andreas frater simonis petri alleluya . . ."] . . ."

Fol. 534v: "Incipit commune sanctorum a pasca usque ad pentecostes Invitatorium [*Music.* Text: "Exultent in domino sancti Alleluya. . ."] . . ."

Fol. 582v: "Incipit officium visitacionis virginis gloriose... positum ex precepto sexti pape quarti confirmatum et ab eodem bene correctum ad vespervas antiphona . . . [*Music.* Text: "Hodie . . . to repletur dominum quem Verbis laudare non potuit corporis obsequis reco[-fol. 583r-]gnovit beata helizabet . . ."] . . ."

Fol. 592r: "Aliud officium de stigmatibus. In primis vespervis antiphona. . . In festo sancti ludovici ordinis minorum ad vespervas [*Music.* Text: "Tecum fuit principium beate ludovice . . ."] . . ."

Fol. 600r: "Incipit commune sanctorum. In natalicijs apostolorum Ad vespervas antiphona . . . [*Music.* Text: "Tradent enim vos in consiliis et in sinagogis suis flagellabunt vos . . ."] . . ."

Fol. 608v: "Secuntur diversi toni tocus officij plurimum necessarij Ad matutinum. Ad completorium [*Music.* Text: "Domine labia mea aperies . . ."] . . . Explicit: "[*Music.*] . . . hic in bethama trans Iordanem Johannes baptizans Humiliate capita vestra deo Oremus flectamus genua levate."

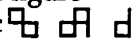








610r–613v


*Introductio musice* (CS, 1:157–66). Incipit: "In nomine domini. Incipit introductio musice plane et eciam mensuralis secundum magistrum Johannem de galandia musice sapientissimorum. Prologus. Introductiones in arte musice.



...” Explicit: “... Expliciunt omnes species necessarie cantus et utilis omnibus musicis introducendis.”

- 613v Treatise on rests, *Sed quoniam cantor diu sine intermissione continuare non potest* (CS, 1:167, as part of *Introductio musice*). Incipit: “Sed quoniam cantor diu sine intermissione continuare non potest ymmo aliquociens inter duos cantus ipsum pausare cogat natura hominis debilis et infirma. . . .” Explicit: “. . . Similiter in cantu ascensivo ad ultimam descendentem solam superius remanentem debemus facere pausam per tonum et semitonum ditonum uel semiditonum sicut hic patet [*example*: Kyrie leyson].”
- 613v–614v Treatise on modes, *De litteris finalibus* (CS, 1:167–70, as part of *Introductio musice*). Incipit: “Visum est igitur de pausationibus cantus plani. Nunc videndum est de litteris finalibus in quibus omnis cantus regularis iubetur finiri . . .” Explicit: “. . . Quando ergo incipit in f coniuncta uel diuisa de propinquo uel remoto vnus ibi est b mol sine signo. Similiter a superiori Cuius causa exempla ponantur ne valeas oberrare et non solum vnus toni sed per ordem [*sic*] singulorum [*examples*: Exempla primi toni qualiter b mollis sine signo veraciter cognoscitur . . . Exempla octauis toni].
- 614v–615v Treatise on modes, *Nota quod primus tonus finitur in D gravi* (cf. *Dialogus*, GS 1:259–63; CS, 1:170–75, as part of *Introductio musice*). Incipit: “Secundus tonus similiter finitur in d grave et ascendit usque ad b acutum et eciam a c deponitur vero usque ad gamaut. . . .” Explicit: “. . . illud eciam nota quod octavus tonus b mol interdum recipit sepius autem reicit Explicit.”
- 615v–616v Treatise on the use of soft b. Incipit: “Nota generalem regulam quare inuentum fuit b mol multum necessaria [*sic*] cantare volentibus Tres sunt littere conclusiue . . .” Explicit: “. . . Item inuentum fuit b mollis ut non possint dici tres toni in loco superius nominato ratione aliqua inuenta et illa de causa inuentum fuit b mol in prima materia siue secunda et tertia sicut supra largius est dissertum Amen.”
- 616v–617r Treatise on modes. Incipit: “Item notandum est quod quatuor littere sunt regulares ubi formantur seu sumuntur toni videlicet d e f g grave que sunt d solre e lami f faut g solreut. . . .” Explicit: “. . . De tono facto omnis coniuncta vocatur. Explicit musica plana magistri Io

617r–617v Treatise on mensuration. Incipit: “Incipit musica mensurabilis seu instrumentalis. Quinque sunt figure cantus figurati videlicet Maxima, longa, brevis, semibrevis et minima. Et notandum est quod iste quinque figure cognoscuntur multis modis. Et primo Maxima cognoscuntur ut hic  . . .” Explicit: “. . . Signum huius C valet modi imperfecti minoris prolationis est hic inferius signatum. Et notandum quod in omnibus tenetur numerus binarius. Exemplum Maxima  videlicet  Longa  videlicet  Brevis  videlicet  Semibrevis  videlicet  et cetera.”

617v–618r Treatise on mensuration. Incipit: “Secuntur alie optime regule pro biscantu nota. Quinque sunt figure cantus figurati videlicet Maxima, longa, brevis, semibrevis et minima. Et notandum est quod iste quinque figure cognoscuntur multis modis. Et primo maxima sic cognoscitur  . . .” Explicit: “. . .

Et habemus pausam maximam || ♯ pausam longam | ♯ pausam brevem | ♯  
 pausam semibreven | ♯ Et pausam minimam | ♯ [diagram of note shapes, rests,  
 and ligatures]"

Folios 610r–613v transmit the version of *Introductio musice* that is used as copy text in this edition. Folios 613v–617r transmit the adjunct treatises *Sed quoniam cantor diu sine intermissione continuare non potest*, *De litteris finalibus*, *Nota quod primus tonus finitur in D gravi*, *Nota generalem regulam quare inventum fuit b molle*, and *Item notandum quod quatuor littere sunt regulares* (Appendix B). Part of a note on figures and ligatures in folio 619v (Appendix C) parallels the passage concerning the perfection of the long found in *D*, fol. 78 (Appendix B). The parallel begins with the words “. . . tunc debent fieri omnes quadre . . .”<sup>164</sup>

#### SOURCES OF TREATISES RELATED TO *INTRODUCTIO MUSICE*

S Seville, Catedral Metropolitana, Biblioteca Capitular y Colombina, 5.2.25  
Parchment and paper; I + 138 folios; 220 x 150 mm  
Italy: late 14th century

This is a composite manuscript whose various parts were acquired by Ferdinand Columbus during the early years of the sixteenth century. These parts were bound together by the librarian Juan de Loaisa during the second half of the seventeenth century, in what he estimated to be their chronological order. A partial list of contents on folio [ii]r was probably also drawn up at this time.

The 138 folios are foliated 1–138 in a modern hand on the upper right corners. The front flyleaf ([i] in the present description: see below) and the first 15 folios are additionally foliated 1–16 in another modern hand on the upper middle of the recto sides. The present edition follows the former foliation.

According to Gallo, except for a treatise in Spanish within the fascicle holding folios 98–109,<sup>165</sup> the other parts of this composite manuscript were copied in Italy between the

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<sup>164</sup>Compare also the opening words of this note: “Omnis cantus fit duobus modis aut cum littera aut sine littera . . .” with the treatise on rests (9.4–5).

<sup>165</sup>Actually there are two short notes on consonances and on counterpoint respectively, fols. 107v–108r and 108rv, as described below, and listed as counterpoint writings in Sachs, *Contrapunctus*, p. 203.

middle of the fourteenth century and the early fifteenth century.<sup>166</sup> Herlinger has dated folios 1r–21v of this manuscript as late 14th century on the basis of paleographical indications.<sup>167</sup>

This manuscript transmits two treatises that share material with *Introductio musice*, each copied by a different scribe. Both scribes wrote an informal script with many cursive features. Both used the bastarda *s* and single-looped *a*'s, and both shaded their ascenders and descenders. The letters *f* and straight *s* frequently drop below the bodies of the other letters, and the lower loops of *g*'s are left open. In addition the scribe of *S*<sub>1</sub> (hereafter referred to as "scribe A") looped the *d*'s (the scribe of *S*<sub>2</sub> [hereafter referred to as "scribe B"] used the uncial *d*), and scribe B used the straight *r* after round letters (e.g., fol. 118r/12: *breviter*; fol. 118r/13: *formatus*). Both scripts show Italian characteristics: the abbreviation (¶) for *-qui-* (e.g., fol. 50r/2: *quid*; fol. 117v/11: *quia*; fol. 118v/10: *Sequitur*); the suprascript (¨) for *-er-* (e.g., fol. 50r/17: *genera*; fol. 117v/-15: *genera*); fine vertical lines decorating initials. Scribe A wrote letter names in a more formal script: on these occasions the *b* is round, and the *d* is uncial. Scribe B used *y* in place of final *-i* (e.g., fol. 117v/14: *modulandy*; fol. 117v/-1; *moderny*), as well as in mediant positions (e.g., fol. 117v/18: *prosaycus*; fol. 118v/10–11: *arsym et thesym*). On the other hand, both scribes used the forked *r* (⌘) and the hooked tironian *et* (ʒ), features commonly found in insular scripts.

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<sup>166</sup>A scribe by the name of Bernardus de Sancta Cruce identified himself on fol. 65r: his handwriting appears from fols. 63r–65v.

<sup>167</sup>Gallo, "Alcune fonti," p. 59; Herlinger, ed., *Lucidarium*, pp. 56–57. Datings by other writers are as follows: fourteenth–fifteenth centuries: Anglès, "Mehrstimmige Musik," pp. 159 ff; Handschin, review of *Festschrift*, p. 120; Michels, *Musiktraktate*, p. 123; Kurt von Fischer and Max Lütolf, *Handschriften mit mehrstimmiger Musik des 14., 15. und 16. Jahrhunderts*, 2 vols., Répertoire international des sources musicales, B IV<sup>3–4</sup> (Munich-Duisburg: G. Henle, 1972), vol. 1, p. 426; Sachs, *Contrapunctus*, p. 203; fifteenth century: Juan F. Riaño, *Critical and Bibliographical Notes on Early Spanish Music* (London: Quaritch, 1887; repr. New York: Da Capo Press, 1971), p. 67; Anglès, "Dos tractats medievals de música figurada," in *Musikwissenschaftliche Beiträge*, ed. Walter Lott, Helmuth Osthoff, and Werner Wolfheim (Berlin: M. Breslauer, 1929), p. 6 (treatises on fols. 63r–64v and 63r–66r).

Scribe B's script shows heavy shading of the ascender of the letter *f*, dropping below the line (e.g., 118v/-1: *fa ut*) and rare use of juncture (e.g., fol. 118r/-3: *de*; fol. 117v/18: *macron*) indicating a late fourteenth-century dating.

Scribe A probably also copied the text in folios 41r–49v, 56r–58v, 78r–85v, 87r–108v; scribe B probably also copied the text in folios 110r–117v, 124r–130r.

Contents of the manuscript follow:<sup>168</sup>

[ii]r	Table of contents.
1r–5r	Treatise on mensuration, <i>Guidonem fratris Ars musicae mensurate</i> (F. Alberto Gallo, ed., <i>Mensurabilis Musicae Tractatuli</i> , <i>Antiquae Musicae Italicae Scriptores</i> , vol. 1 [Bologna: (Calderini), 1966], pp. 17–39). Incipit: “Ars musicae mensurate secundum Guidonem. Ad habendam aliqualem noticiam figurarum simplicium et compositarum seu ligaturarum artis musicae . . .” Explicit: “Et secundum naturam [[dua]] unam de quatuor vel duas de octo continet ut hic: ♠♠♠♦♦♠♠♠♠♠♠ . . . a me indigno cantore extitit compilatum Deo reddatur laus et gloria per cuncta secula. Amen.” <sup>169</sup>
5r–20v	Marchetto, <i>Lucidarium</i> (GS, 3:65–121; Herlinger, ed., <i>Lucidarium</i> ). Incipit: “Incipit lucidarium Marchetti de padua in plana musica. Magnifico militi et potenti domino suo domino Raynerio domini Cacharie de urbe veteri . . .” Explicit: “. . . Nam Musicus cognoscit sentit discernit eligit ordinat et disponit omnia que ipsam tangunt scientiam et per cantorem tamquam per suum nuntium et preconem iubet praticari. Et hec de Musica plana sufficiant. Explicit lucidarium Marchetti de padua in arte plane Musicae ychoatum [sic] Cesene et perfectum Verone.”

<sup>168</sup>For a listing of its complete contents see also Gallo, “Alcune fonti,” pp. 59–73 (includes a detailed description of the manuscript); Philip Schreuer, ed., *Tractatus Figurarum: Treatise on Noteshapes*, Greek and Latin Music Theory (Lincoln and London: University of Nebraska Press, 1989), pp. 48–52, 59 (based on Gallo, yet less detailed and less accurate). For other references see Riaño, *Notes*, p. 27; Anglès, “Dos tractats medievals,” pp. 6–12; Handschin, review of *Festschrift*, p. 120; Anglès, “La música conservada en la Biblioteca Colombina y en la Catedral de Sevilla,” *Anuario musical* 2 (1947):8; Michels, *Musiktraktate*, p. 123; Sachs, *Contrapunctus*, p. 203; von Fischer and Lütolf, *Handschriften*, vol. 1, pp. 426–28 (index of the musical compositions); Herlinger, *Lucidarium*, Vol. 1 (dissertation), pp. 112–15; Herlinger, ed., *Lucidarium*, pp. 56–57. For facsimiles see Gallo, “Alcune fonti,” plates 1, 2, and 3 (fols. 22v, 49r, and 59r respectively); Gallo, *Mensurabilis Musicae Tractatuli*, plate 2 (fol. 94v); Herlinger, *Lucidarium*, Vol. 1 (dissertation), p. 133, plate 9 (fol. 5r).

<sup>169</sup>This last statement (“a me indigno . . . Amen.”) is illegible on microfilm and is here based on Gallo, ed., *Mensurabilis musicae tractatuli*, p. 39.

- 20v–21r Ending<sup>170</sup> of Frater Raymundus de silva, *Doctrina finalis*. “nuvarum pia convicitur [?] a quibusdam discenditur [?] per 18 anno usque ad sui consumacionem . . . usque ad conversionem totius orbis ad christum seminaliter ychoatam. Explicit doctrina finalis compilata per fratrem Raymundum de Silva probum filium sexti angelj ascendentis ab ortum supra in hoc signo [figure] ibi est principium.”
- 21v Fragment of a religious text. “hel’yas propheta . . . Tercius status incipit a B usque ad finem.”
- 22r Fragment of a religious text. “fratrem tuum omnes . . . cum esses parvulus”
- 22v Four staves of music.<sup>171</sup> Text: “la dura ... mi fa .urnar Parrcem fa... cosa . hennola da fine [?]”<sup>172</sup>
- 23r Text: “Liber cantus id est rationum”
- 23v Blank. Present folio shows a smudged imprint from a recto side, but not the present folio 24r.
- 24r–36v Treatise on plainchant. Incipit: “Tractatus de musica. Primo videamus quid sit musica et unde dicatur. diffinitio. Musica est motus vocum qui fit per arsim et per tesim, id est per elevationem et depositionem Vel ut quibusdam placet, Musica est motus rationabilium vocum et veraciter canendi viam . . .” Explicit: “. . . bisdyapason queris totam cordam divide in quatuor partes et ultimo puncto tercie partis id est [in g minuto underlined] stillum aplica. Explicit compendiolum sive excepta de musica optime per quendam dilligentissime [sic] compillata.”
- 36v–37v Treatise on singing organum. Incipit: “De modo organicandi. Omnis homo qui vult bene organicare oportet perfectissime consonancias musice animo atque auribus esse notas . . .” Explicit: “. . . vel unam et erit in dyapente vel inferius in dyapason et octavam ascendere.”
- 37v Note on the vocal and other organs for various bodily functions and emotions. Incipit: “De modis loquendi. Novem sunt instrumenta loquendi secundum philosophos scilicet Duo labia . . .” Explicit: “. . . Epate sive iecore amamus Extremum verum. Et hec dicta de istis sufficiant. DEO GRACIASS [sic]. Deo gratias.”
- 37v Fragment on ratios. “Omnis proportio vel est comuniter dicta vel proprie dicta . . . duple porporcionis sicut dyamater ad costam”

<sup>170</sup>The explicit of this fragment indicates that the location of its beginning is indicated by a certain figure, but this figure is not found elsewhere in the present manuscript.

<sup>171</sup>For three voices, according to Gallo, “Alcune fonti,” p. 66.

<sup>172</sup>Text: “La(?) dura (?) . . . mi fa turnar . . .” according to Kurt von Fischer and Max Lütolf, *Handschriften mit mehrstimmiger Musik des 14., 15. und 16. Jahrhunderts*, 2 vols., Répertoire international des sources musicales, B IV<sup>3</sup> (Munich-Duisburg: G. Henle, 1972), p. 426.

- 38r Verse for intonation formulas. "Aga utile fin de letania. [*in another hand*] Primus cum sexto fa sol la semper habeto. Tertius et octavus ut re fa atque secundus. La sol la quartus ut mi sol sit tibi quintus. Septimus fa mi fa sol sit omnes esse recordor."
- 38v Circular chart. Text: "De celo vita . . . De austio calor . . . De aquilone frigiditas . . . De terra mors . . ."
- 39rv Blank
- 40r Musical examples. Text: "Semitonium est imperfectum sonum duarum vocum proximo sibi iu<n>tarum ut ab a in g et cetera . . . dyapente in proportione emiolia id est sexquialtera." In another hand: "In isto libro sunt rationes tonorum secundum boetium." Further letters in two other hands.
- 40v Fragmentary biblical commentary. "Nunc autem sum. omnes gentes plaudite sicut dixi vobis . . . sicut et maximo consurrexisse. Sicut enim"
- 41r–48r Treatise on plainchant. Incipit: "Cum boecius rome degeret Pitagoras quoque in taranto viveret [?] . . ." Explicit: ". . . Sicut omnis indiccio in fine cognoscitur etiam sicut scriptum est omnis laus in fine canitur."
- 48v–49r [Landini:] *Fortuna ria aniore e crudel donna*, ballata for 4 voices (Concordances in Florence, Biblioteca Nazionale Centrale, Panciatichi 26, fol. 10r; Paris, Bibliothèque Nationale, fonds italien 568, fol. 86v; Florence, Biblioteca Medicea Laurenziana, palatino 87, fol. 147v; Pistoia, Archivio Capitolare, B 3 n. 5, fol. 1v. Editions: Leonard Ellinwood, *The Works of Francesco Landini* [Cambridge, Mass.: Mediaeval Academy, 1939; reprint, New York: Kraus, 1970], pp. 89–90; Leo Schrade, ed., *The Works of Francesco Landini*, Vol 4: *Polyphonic Music of the Fourteenth Century* [Monaco: L'oiseau-Lyre, 1958], p. 27).
- 49v Verse for intonation formulas. "Primus cum sexto fa sol la semper habetur. Tertius et octavus ut re fa atque secundus. La sol la quartus, ut mi sol sit tibi quintus. Septimus fa mi [fa *sup. lin.*] sol sic omnibus esse recordor."
- 50r–53r Treatise on plainchant that shares material with *Introductio musice* (CS, 1:157–66), *Introducendis in arte musice*. Incipit: "Introducendis in arte [[*muscis*]] musice [*sic*] primo videndum est quid sit introductio unde dicatur . . ." Explicit: ". . . gravibus acutis et superacutis litteris ut apparet hic."
- 53v–55v Blank
- 56r Notes on the proprieties and on how b molle is used. Incipit: "Nota quod tres sunt modj cantandj videlicet ♭ quadrum natura [[c]] et b molle . . ." Explicit: ". . . et dicc<i>tur conclusive littera quia concludunt cantus concluduntur in cantum quia quelibet littera habet in se conclusionem que faciunt de clunu cantus [diagram with text: "causa tritonj, causa necessitatis"]
- 56rv Note on intervals and modes. Incipit: "Nota quod septem sunt consonantie scilicet Tonus semitonus dictonus et semidictonus diethexeron diapente et

- diapaxon . . ." Explicit: ". . . Sed optavj tonj Incipit in c acuta sicut dicit supra x primus ad quintam."<sup>173</sup>
- 57rv Musical examples showing various intervals, with the interpolation of a tenor voice of a mensurable musical fragment, and concluding with a setting of Benedicamus domino. Text: "viii v . . . hic autem vult amare bonum hominum . . . [-57v-] Tenor de monaco so tucto ziusu . . . [-58r-] Benedicamus domino."
- 58v Note on counterpoint (listed as "Sciendum est quod novem," with one concordance [Venice, Biblioteca Nazionale di San Marco, lat. VIII. 85], by Sachs, *Contrapunctus*, p. 218). Incipit: "Sciendum est quod novem sunt species contrapuncti videlicet unus sonus et una vox Tercia et dyapente Sexta et dyapaxon Thesis et tarsis et secundum quosdam Terciadecima et Quintadecima Inveniuntur . . ." Explicit: ". . . Sciendum est quod si cantus noster ascendit nos debemus [[dc]] descendere et econverso si cantus noster descendit nos debemus ascendere."
- 58v Contratenor of a mensurable musical fragment, possibly related to the tenor fragment in fol. 57rv. Text: "Contratenor de monaco so tucto ziusu."
- 58v Invocations to Mary. Text: "Virgo mater ecclesie eterna . . . Adiuvente eodem filio tuo domino nostro qui cum patre et spiritu sancto vivit et regnat dominus in secula seculorum. Amen. Caro cara cruce san.
- 58v Short note on the unison. "Unisonus est species discernens divisionem aliarum specierum."
- 59r Ballata for two voices. *Chi temp a per amore*.
- 59v Textless musical fragment.<sup>174</sup>
- 60r–62v Treatise on motets (CS, 3:124–28). Incipit: "Incipit ars qualiter et quomodo debent fieri mottettj. In nomine domini amen. Mottetti debent fieri hoc modo. Primo accipe tenorem alicuius antiphone vel responsorij vel alterius cantus de antiphonario et debent verba concordare cum materia de qua vis facere mottectum . . ." Explicit: ". . . et quandoque de modo perfecto tunc debet semper poni punctus divisionis post tertia tempora et illa perfectio debet durare usque ad finem. Deo gratias. Amen."
- 63r–64v Treatise on mensuration (Anglès, "Dos tractats medievals," pp. 6–10<sup>175</sup>). Incipit: "Omni desideranti notitiam artis mensurabilis tam nove quam veteris obtinere certas regulas huic presentes sub brevi compendio proposse meo propono fideliter assignare Cuius antiquitatem per franconem notum omnibus tradidisse, Novitatemque per philippum in maiori parte subtiliter invenisse . . ." Explicit: ". . . sed hec est differentia quia que ponitur sub linea est

<sup>173</sup>Gallo, "Alcune fonti," and Schreuer, ed., *Tractatus figurarum*, do not describe this note on intervals and modes separately from the previous note on the properties.

<sup>174</sup>Described by Gallo, "Alcune fonti," p. 67, as "2 (?) voices in Italian notation."

<sup>175</sup>Cf. CS, 3:29–35; Gilbert Reaney, "A Postscript to Philippe de Vitry's *Ars nova*," *Musica Disciplina* 14 [1960]:30–31.



- semibrevis, que ponitur super lineam est minime. Ut hic apparet. <example of rests> Explicit deo gratias referamus. Amen."
- 65rv Nicolaus of Siena, Rules for discant (Anglès, "Dos tractats medievals," pp. 10–12). Incipit: "Iste sunt regule in discantu scripte et componite per fratrem Nicolaum de senis ordinis servorum Sancte Marie copiate per me fratrem Bernardum de sancta cruce de venecijs ordinis predicatorum in civitate Verone 142 de mense Januarij. Notandum primo quod quatuor sunt voces super tenorem consonantia facientes, scilicet, quinta, octava, duodecima et quintadecima . . ." Explicit: ". . . id est ita debent observari quando discantantur plures note pro nota sicut quando cantatur simplex nota pro nota sicut in exemplis supradictis et infranotatis patet. <musical examples>"<sup>176</sup>
- 66r Note on counterpoint (listed as "Ad brevem notitiam contrapuncti" by Sachs, *Contrapunctus*, p. 207). Incipit: "Ad brevem notitiam contrapuncti nota quod cantus quilibet vel est in ascensu vel est in descensu . . ." Explicit: ". . . Si ascendit quintam accipe quintam et descende unam et eris in octava cum tenorem."
- 66r Short note on composing *ballate*, *rondella*, and *virondella* (CS, 3:128, as part of *Tractatus cantus mensurabilis* by Aegidius de murino). Incipit: "Regula ad faciendum ballatam Rondellum et virondellum ut sequitur. In primis quomodo debet fieri ballata simplex . . ." Explicit: ". . . et quando finitur in la debet esse quinta et retro habet clausum. Deo gratias. Amen."
- 66v–68v Treatise on plainchant.<sup>177</sup> Incipit: "Incipit ars Magistri Marchectj de Padua super cantum planum. Sciendum est quod antiquitus solummodo fuerunt adinventi quatuor toni sive modj videlicet Protus, Deuterus, Tritus et Thetrardus . . ." Explicit: ". . . et hoc quo ad tonorum cognitionem. Predicta sunt Magistrj Marc<hect>j de Padua expertissimi doctoris Musice. Et secundum eum predicta compilavj."
- 68v Verse for modes in psalmization. "Primus ad tertiam, Secundum [*sic*] una desubtus, Tertius ad tertiam, Quartus ad quartam, Quintus in eodem loco dicendo ut mi sol, Sextus in eodem loco dicendo fa sol la, Septimus in eodem loco dicendo ut fa, Octavus in eodem loco dicendo ut re ut et cetera."
- 69rv Blank

<sup>176</sup>Bernardus apparently also copied the material on fos. 60r–64v and 66r–67v, since the handwriting is the same for these folios as for fol. 65rv.

<sup>177</sup>For details on this treatise see Jan Herlinger, "Marchetto's Influence: The Manuscript Evidence," in *Music Theory and Its Sources: Antiquity and the Middle Ages*, ed. André Barbera (Notre Dame, Indiana: University of Notre Dame Press, 1990), pp. 249–50. Concordances: Pavia, Biblioteca Universitaria, Aldini 361, fols. 25r–28v; Pavia, Biblioteca Universitaria, Aldini 450, fols. 7v–10r. Edition based on Pavia, Aldini 361 by Raffaello Monterosso, "Un compendio inedito del *Lucidarium* di Marchetto da Padova," *Studi medievali*, 3rd series, 7 (1966):914–31.

- 70r–76r *Libellus cantus mensurabilis secundum Johannem de Muris* (CS, 3:46–58)<sup>178</sup>.  
Incipit: “Ad sit principio virgo maria meo. Quilibet in arte pratica mensurabilis cantus erudiri mediocriter affectans ea scribat diligenter que secontur [sic] sumare [sic] completa secundum magistrum iohanne[[s]]m de muris. Quinque sunt partes prolacionis videlicet masima longa brevis [[et]] semibrevis et minima ut hic: [blank] . . .” Fol. 73v: “. . . Sequitur de ponto Capitulum secundum . . .” Fol. 75r: “. . . Sequitur de sincopa . . .” Fol. 75v: “. . . Sequitur de pausis [[capl]] capitulum quartum . . .” Fol. 76r: “. . . De diminutione mothetorum Capitulum quintum . . . De colore Capitulum sextum . . .” Explicit: “. . . et sic fiunt diversarum vocum que diversitas licet servetur in quam pluriesbus tenoribus mothetorum non servatur motetis. Exempla patet [sic] in motetis. Et predicta quamvis rudia sufficiant in arte pratica mensurabilis cantu volentibus introduci.”
- 76v–77v Excerpt from Marchetto, *Lucidarium* (Herlinger, ed., *Lucidarium* 4).<sup>179</sup>  
Incipit: “Sequitur de proposicionibus. <P>roposicio est quidam habitudo duorum terminorum adinvicem vel distancia duorum terminorum inter se . . .”  
Explicit: “. . . Sexta bis diapason in quadrupla. Ex hec de proporcionibus ad presens dicta [[ssufi]] sufficiant. Deo gracias. Amen.”
- 78r–79r Treatise on discant. Incipit: “<A>d habendum discantum artis musice. Primo videndum est quid sit discantus et unde dicatur. Discantus est aliquorum cantuum diversorum concordantia sive consonantia . . .” Fol. 78v: “. . . Dyapaxon est ultima species et habet omnes alias sub se et dicitur a dia quod est de et pan quod est totum et son quod est sonus quasi de toto sonans, id est de omnibus speciebus sonans. Modo debetur scire quod existis tresdecim speciebus sunt septem que concordant et alie sex discordant . . .” Explicit: “. . . Etiam omnis discantus debet incipi et finiri per perfectas concordantias videlicet per Unisonum, per quintam, per octavam aut per duodecimam secundum ascensum et descensum planj cantus.”
- 79r–80r Treatise on discant. Incipit: “Septem sunt species discantus principales scilicet unisonus, dyapason, dyapente, dyatessaron, dictonus, semidictonus et tonus cum dyapente ex hijs quedam sunt perfecte, quedam imperfecte . . .”  
Explicit: “. . . Cum cantus ascendit dyscantus debet descendere, cum [[cantus]] descendit debet descendere nec debet ascendere discantus neque descendere cum cantu in [[in]]perfectis speciebus discantus.”<sup>180</sup>
- 80r Kyrie for three voices (concordance, B, fol. 22v–23r; transcribed in Handschin, review of *Festschrift*, p. 120, n. 2). Text: “Kyrie leyson . . . Nota has

<sup>178</sup>For concordances of the *Libellus* see Michels, *Musiktraktate*, p. 27, n. 40 (lists only fols. 70r–76r for this manuscript, see descriptions below of fols. 86r–87r, 88rv, and 111r–14r), and Katz, “Earliest sources,” pp. 1–4 (like Michels, mentions only fols. 70r–76r of this manuscript).




<sup>179</sup>Herlinger, “Marchetto’s Influence,” p. 252 and n. 35.

<sup>180</sup>Gallo, “Alcune fonti,” p. 69, and Schreuer, ed., *Tractatus figurarum*, p. 50, give “in imperfectis speciebus discantus” for the explicit.

figuras.”<sup>181</sup>




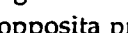
- 80r–81r Section on singing discant. Incipit: “Quicumque voluerit discantare primo debet scire quod [[sunt]] sex [sunt *sup. lin.*] concordantie scilicet Tertia, quinta, Sexta, Octava, decima, duodecima . . .” Explicit: “. . . et decima duodecima est ex una quinta perfecta et octava. et predicta patent in hoc exemplo. <musical examples>”
- 81v–82v Treatise on singing discant. Incipit: “<Q>uicumque vult cantare breviter et secure quinta voce prehabita faciente diapente debet subtiliter de proprio cantu facere suum cantum . . .” Explicit: “. . . Nota per versus hic modus ac ordo numerus sic scemaque ordo Nota manent certa discantus arte reperta. Deo gratias. Amen.”
- 83rv Blank
- 84r–85v Anonymous, *Tractatus figurarum* (CS, 3:118–24; Schreier, ed., *Tractatus Figurarum*). Incipit: “Incipit tractatus figurarum per quas diversimode discantatur per aliquos non sequentes modum tenoris sed alterius temporis. Quoniam sicut domino placuit scientiam musice in corde desiderantium [vel desiderantium *sup. lin.*] gratiose perlustravit . . .” Fol. 85v: “. . . et si quatuor ascenderet usque ad octo et numerus sic deficeret. Sic itaque ad complementum huius operis secutus sum. Ideo refero gratias Christo. Amen. <N>unc videndum est qualiter ipsas ordinabimus ad discantandum diversimode . . .” Explicit: “. . . in principio de tempore perfecto maiori ponuntur pro duobus temporibus novem semibreves vacue ut hic. [in a different hand: *trainer vel traineir*]. <examples>”
- 86r–87r Final part of *Libellus cantus mensurabilis secundum Johannem de Muris* (CS, 3:56–58). Incipit: “Sequitur de sincopa. Unde sincopa est [divisio *sup. lin.*] circum quaque figure per partes seperatas que numerando perfectiones ad invicem reducuntur . . .” Fol. 86v: “Sequitur de pausis . . . Sequitur de diminutione . . . Sequitur de coloribus . . .” Explicit: “. . . Et sic [figuri *sup. lin.*] diversarum vocum que diversitas licet servetur in quampluribus motettis non tamen servatur in ipsis motettis. Et predicta quamvis rudia sufficiant in arte pratica cantus mensuralis annellantibus Introduci.”
- 87r Fragment from *Tractatus figurarum* (CS, 3:118–19; Schreier, ed., *Tractatus Figurarum*). Incipit: “Incipit tractatus figurarum per quas diversimode discantatur non sequentes ordinem tenoris sed alterius temporis, ut hic patet. <Q>uoniam sicut domino placuit scientiam musice in corde desiderantium gratiose perlustravit . . .” Explicit: “. . . Consideret ergo unusquisque per viam rationis quod omnis res plena atque perfecta si a plenitudine eius evacuetur non”
- 87v Blank

<sup>181</sup>According to von Fischer and Lütolf, *Handschriften*, vol. 1, p. 428, this Kyrie belongs to the treatise *Ad habendum discantum*, and has a concordance in “E-Bd853, f. 23r.” I have not been able to identify the concordance as given, which might be a misprint.

- 88rv Final part of *Libellus cantus mensurabilis secundum Johannem de Muris* (CS, 3:56–58). Incipit: “Sequitur de sincopa. Unde sincopa est divisio circumquaque figure per partes seperatas que numerando perfecciones ad invicem reddigu[[i]]ntur . . . Sequitur de pausis . . .” Fol. 88v: “Sequitur de diminutione . . . Sequitur de colore . . .” Explicit: “. . . licet servetur in quampluribus tenoribus mottetorum non tamen servatur [in ipsis *sup. lin.*] motettis. Exempla patent in motettis. Et hec predicta quamvis rudia sufficiant in arte praetica mensurabilis cantus anelantibus introducit.”
- 88v–89r Fragment on mensuration attributed to Johannes de Muris. “Secundum magistrum Johannem de muris de modo perfecto. Nota quod quinque sunt partes prolationis, scilicet Maxima, longa, brevis, semibrevis et minima, ut hic:  . . . Imperfecta est illa quando semibrevis valet duas minimas ut hic: ”
- 89v–91v Blank
- 92r Fragment in Italian on the monochord. “Parti el monacordo in tre compassi . . . e quello instesso e vero compasso.”
- 92rv Directions for making *saldatura* (= a welding?). “Si vis facere saldaturam . . . stagnum bonum et purga eum bene ad ignem cum sale armomatco . . . ad hoc ut cicius discurrerat saldatura superius.”
- 93r–94v Treatise on mensuration, *Anonini Tractatulus de figuris et temporibus* (Gallo, ed., *Mensurabilis Musicae Tractatuli*, pp. 77–85). Incipit: “Sciendum est quod quatuor sunt tempora discantus scilicet tempus perfectum maioris prolationis, Tempus perfectum minoris prolationis, Tempus imperfectum maioris prolationis et tempus imperfectum minoris prolationis . . .” Explicit: “. . . Item quando reperiuntur sic  prima est semibrevis secunda similiter et tertia est brevis. Et hec sufficiant. <examples>”
- 95r Four empty staves of five lines each
- 95v–96v Phylipottus de Caserta, *Regule contrapuncti* (Nigel Wilkins, “Some Notes on Philipoctus de Caserta (c. 1360?–c. 1435), with the Ballade Texts and an Edition of the Regule Contrapuncti,” *Nottingham Medieval Studies* 8 [1964]: 95–99; concordances: Florence, Biblioteca Medicea Laurenziana, Ashburnham, 1119, fols. 74v–77v; Rome, Biblioteca Vallicelliana, B 83, fols. 65r–67r; listed as “Sciendum est quod contrapunctus,” with concordances, by Sachs, *Contrapunctus*, p. 218). Incipit: “Incipiunt Regule contrapuncti secundum magistrum Phylippottum de Caserta. Sciendum est quod Contrapunctus est fundamentum discantj . . .” Explicit: “. . . Ficta vel falsa musica inventa fuit propter bonam consonanciam inveniendam et malam evitandam ergo non est falsa ymmo utilis. Expliciunt regule contrapunctj secundum Magistrum Phylippotum.”
- 97r Short treatise on counterpoint (listed as an additional part of “Sciendum est quod contrapunctus” by Sachs, *Contrapunctus*, p. 210). Incipit: “Et est sciendum quod in b fa l mi non possumus habere dyapente per istos duos modos

- nisi per fictam musicam . . ." Explicit: ". . . Causa vero pulcritudinis ut patet in cantilenis. Et hec de contrapuncto sufficiant."
- 97v A few words not dealing with music. "sistu... -a -um id est superbus . . ."
- 98rv Blank, except for some cursive script: "leva...us... amigo mio çarísimo"
- 99r-104v Treatise on mensuration. Incipit: "<P>ro introduçione cognicionis habende de valloribus notularum primo sciendum est quod quinque sunt figure in cantibus usitate, scilicet maxima, longa, brevis, semibrevis et minima, ut hic: ♩ ♪ ♫ ♮ . . ." Explicit: ". . . et si sint diversarum figurarum et tunc quando repetuntur eedem figure eciam si sint diversarum notum hoc vocatur taylla et ista differencia servatur in pluribus tenoribus motetorum et cetera Set certo modo color quando repetuntur eedem voces et per hoc sit finit abreviacionum de arte cantus."<sup>182</sup>
- 104v-107r Treatise on counterpoint (listed as "Pro notitia contrapunctus" by Sachs, *Contrapunctus*, p. 216). Incipit: "Secuntur regule contrapunctus per supradictum magistrum facte sive ordinate ut sequitur. Pro noticia contrapunctus habenda primo sciendum est quod [[nonim]] novem sunt species discantus, scilicet unisonus, tertia, quinta, sexta, octava, decima, duadecima, tertiadecima et quintadecima quarum quinque sunt perfecte et quatuor imperfecte . . ." Explicit: ". . . exempla b quadrj incipiendo in g sol re ut alto usque ad e la et cetera . . . e la: ut [vi sup. lin.] re [v sup. lin.] fa [iii sup. lin.] la [unisonus sup. lin.]. Et est finis deo gracias."
- 107v Note on mensuration. Incipit: "Quando tres mñjme pro semibreve tunc est maior prolacio, ut hic: ♩ ♪ ♫ ♮ maior prolacio . . ." Explicit: ". . . Quando due breves ordinantur pro longa tunc est modus imperfectus ut hic: ♩ ♪ ♫ ♮ modus imperfectus."
- 107v-108r Note on consonances (listed as "Primo en gama ut" by Sachs, *Contrapunctus*, p. 216). Incipit: "Primo en gamaut ha tres consonantes so es asaber ut mi sol, ut es octava, mi es x<sup>a</sup>, sol es xii<sup>a</sup> . . ." Explicit: ". . . en e la mj acut a iij consonantes so es assaber ut re fa la, ut es vi<sup>a</sup> de i<sup>9</sup>, re quinta de i<sup>9</sup>, fa iij de i<sup>9</sup>, la unisonus et debes saber que tot aquest contrapunt se content de ge sol re ut bay [[n]] entro sus en e la mj acut."
- 108rv Note on counterpoint (listed as "Item diu lo mestre" by Sachs, *Contrapunctus*, p. 212). Incipit: "Item diu lo mestre nos altres avere vii<sup>a</sup> species de contrapunt las qual sunt a questas: unisonus, terca, quinta, sesta, octava, x<sup>a</sup>, xii<sup>a</sup>, las quals las iij sunt perfectas et las tres imperfectas . . ." Explicit: ". . . e si la terca es imperfecta dara unisonus apres una vi<sup>a</sup> o duas o tres dara [[v...]] octava apres [[iii<sup>a</sup>]] ii<sup>a</sup> tres dehena daras xii<sup>a</sup> et apres x<sup>a</sup> pos fer octava."
- 108v Fragment of a medical prescription (?). Text: "letuarium ad me<sup>a3</sup> . . . ad faciendum pilulas . . . pistata cum aqua sinjculi"

<sup>182</sup>Part of fol. 99 is now missing, having been either cut or torn off.

- 109r Eight five-line staves, the first four containing music notated with white semibreves (first two staves) and vertical dashes (second two staves): plainchant excerpt? Single word below staves: "cantatorium."
- 109v Blank
- 110rv Short treatise on counterpoint (listed as "Nota quod novem sunt species contrapuncti videlicet" by Sachs, *Contrapunctus*, p. 214). Incipit: "Jhesus Xristus. Nota quod novem sunt species contrapunctus videlicet Unisonus, Tercia, Quinta, Sexta, Octava, Decima, Duadecima, Terциadecima et quintadecima. Quarum quinque sunt perfecte et quatuor imperfecte . . ." Explicit: "... Item nota quod si volumus faciunt [sic] contrapuntum [sic] be quatratj super clavem de c gravj debemus eum convertare ac si esset clavis de ef gravj et cantare super eam ac si esset ac si esset [sic] contrapunctus de natura. <table of consonances>"
- 111r-114r Treatise on mensuration (contains parallels with *Libellus cantus mensurabilis secundum Johannem de Muris*). Incipit: "Jhesus. Pro introduccione cognicionis habende de valoribus notularum. Prima est sciendum quod quinque sunt figure in cantibus usitate videlicet Massima longa brevis, semibrevis et minima, ut hic:  . . ." Fol. 112r: "... Item notetur bene regule que secuntur . . ." Fol. 112v: "... Sequitur de altaracione . . ." Fol. 113r: "... de ligaturis . . ." Fol. 113v: "... Sequitur de pausis . . . Sequitur de dimunicione . . ." Fol. 114r: "... Item nota quod color in musica dicitur . . ." Explicit: "... et sunt diversarum vocum que differencia licet servetur in quampluribus tenoribus mutectorum non tamen servatur in motectis."
- 114r-116r Anonymous, *Tractatus figurarum* (CS, 3:118-23; Schreier, ed., *Tractatus Figurarum*). Incipit: "Incipit tractatus figurarum per quas diversymodj discantatur non sequentes ordinem tenoris sed alterius temporis. Quoniam sicut Domino placuit scientia musice In corde desiderancium gratiose perlustravit . . ." Explicit: "... Et quatuor assenderit usque ad octo numerus sic difficeret sic ipsum quod ad complimentum unius operis consequutus fuj. Ideo refero gratias domino ihesu christo. Amen."
- 116r Note on mensuration. Incipit: "Nota quod quando quidem cantus cantatur in prolacione minoris perfecty semper tempus ante qualibet ligaturam est perfectum, ut hic:  . . ." Explicit: "... Sed quando ponitur iusta ... aumentacionis est ut hic demonstratur:  . . ."
- 116r-117v Petrus de Amalfia, *Compendium artis motectorum* (Gallo, ed., *Mensurabilis musicae tractatuli*, pp. 41-47). Incipit: "Incipit compendium artis motectorum marchecty edictum abatis petro capuano de amalfia. Quoniam tocius nove artis motectorum diffigulta [sic] circa temporum varietatem et semibrevium figuracionem accenditur [sic] . . ." Explicit: "... Et idem iudicium sicut [sic] opposita proprietate figurarentur, ut hic:  | Et hec de arte mutechorum M<archecty> uniuscuiusque cantoris dubiare [sic] solventis [sic] sub compendio declarata sufficiant. Detongy dicuntur grece latine secundum boecium sciipiuntur proslambanomenos, id est, ab a grave et cetera."

- 117v–119v      Treatise on plainchant that shares material with *Introductio musice* (CS, 1:157–66), *Ad evidenciam cam mensuralis quam immensurabilis*. Incipit: “Ad evidenciam cam [sic] mensuralis quam immensurabilis musice primo videndum est quid sid [[in]]introducio et unde dicatur . . .” Explicit: “. . . tam assendendo quam dessendendo sane vel gradatim ut hic. *<example>*”
- 120r–123v      Blank
- 124r–128r      Excerpts from Marchetto, *Lucidarium* (Herlinger, ed., *Lucidarium*, 3; 4; 5.Pref., 1, 2; 6.5; 7; 1.9; 15.1).<sup>183</sup> Incipit: “De numeris musicalibus et de consonancijs in specialj tractatus. Capitulum 1. Ad videndum autem de numeris musicalibus pro ut scilicet in consonancijs repperiuntur vel ex quibus consonantie sunt formate pressirj oportet quod species consonanciarum sunt sex scilicet dyateseron, dyapente, dyapason, dyapasondyateseron, dyapasondyapente [[et bisdyapente]] et bisdyapason . . .” Explicit: “. . . Detongy dicuntur grece latine qui secundum boecium incipiuntur a proslambanomenos id est ab g gravj et finiuntur in neteyperboleon id est ad a superacutum hoc modo . . . Alamire. grece nete yperboleon.”
- 128v–130r      Musical examples, possibly related to the previous treatise. Text: “Sexquialtera, emiolia, Dyapente . . . Subdyateseron in capitulo dim<in>ucionis et dupla superbisparciens, Tenor . . . secundam vel per terciam parus”
- 130v–136v      Blank
- 137rv      Fragment on modes. Incipit: “Ihesus Christus fillius tuus dominus noster. Ad habendum notitiam modorum seu tonorum [per *sup. lin.*] quos omnis cantus regitur et modulatur. Primo sciendum est quid sit tonus seu modus, secundo quot sint, tertio quando distinguntur . . .” Explicit: “. . . et si sit plagalis quando plus ascendit quam debeat assende<r>it tangens suj autentici ascensum ex quo infertur quod autenticus”
- 138r      White mensural notation on five five-lined staves (tenor part of a polyphonic piece?), followed by text (for this music?): “Precare natum virgo mater pia . . . Discordes [[pecata]] paťa o david stirpe sata.”

Folios 50r–53r (*S*<sub>1</sub>) and 117v–119v (*S*<sub>2</sub>) of this manuscript each transmit a treatise that shares material with *Introductio musice* (Appendix A). *S*<sub>1</sub> transmits parts of chapters 1, 2, 3, 4, and 7; *S*<sub>2</sub> transmits parts of chapters 1, 2, 3, 5, 7, and, additionally, text found also in the treatise *Nota generalem regulam quare inventum fuit b molle* (for this treatise see Appendix B, R, fols. 615v–616v). Both *S*<sub>1</sub> and *S*<sub>2</sub> contain several sentences different in sequence from those in *Introductio musice*, and include several non-relatable passages.

<sup>183</sup>Herlinger, “Marchetto’s Influence,” p. 252 and n. 35.

L Lucca, Biblioteca Governativa, 359  
 Paper; 98 folios; 295 x 215 mm  
 Italy: probably between 1425 and 1477<sup>184</sup>

This manuscript consists of folios numbered 2–91 grouped in nine quinos, plus eight other folios numbered 92, 93, 106–110, and 119.<sup>185</sup> The entire manuscript appears to have been copied in a single hand, consistently in two columns of forty lines.<sup>186</sup>

The script is a stylish transitional Carolingian reminiscent of the thirteenth century, but certain features reveal the modernity of the hand: the occasional use of the humanistic straight *s* in the final position (e.g., fol. 106vb: *graves*), use of juncture (e.g., fol. 106ra: *omnem*; fol. 106rb: *de*), relatively small number of abbreviations, use of the numeral 4 (fol. 109vb: *quatuor*, which, however, may be a later correction), use of the letter *y* for *i* in a mediant position (e.g., fol. 106rb: *arsym et thesym*), length of ascenders and descenders and the dropping of *f* and *s* below the bodies of letters (e.g., fol. 119ra: *finali* [fifth line from bottom], *plagales* [fourteenth line from bottom], the single-looped *a*, and open lower loop of *g*.

The uncrossed tironian *et* sign (7) is characteristically Italian. But some features are unusual for an Italian script, chiefly the use of the abbreviation (*q'*) for *-qui-* and *qui* (e.g., fol. 106ra/7: *quid*; fol. 109vb: *equipolent*; fol. 110vb: *requiescunt*; fol. 119vb: *qui*); in addition,

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<sup>184</sup>For descriptions of the manuscript and of its complete contents see also Jan Herlinger, ed., *Prosdocimo de' Beldomandi, Contrapunctus*, Greek and Latin Music Theory, vol. 1 (Lincoln and London: University of Nebraska Press, 1984), pp. 21–22; Jan Herlinger, ed., *Prosdocimo, Brevis summula proportionum quantum ad musicam pertinet, Parvus tractatulus de modo monacordum dividendi*, Greek and Latin Music Theory, vol. 4 (Lincoln and London: University of Nebraska Press, 1987), pp. 39–42; Gallo, "Trattati di Prosdocimo," pp. 77–82. Sachs, *Contrapunctus*, p. 195, lists Prosdocimo's *Contrapunctus*, and Michels, *Musiktraktate*, p. 121, refers to Prosdocimo's commentary on the *Libellus* of Johannes de Muris, and to Prosdocimo's *Contrapunctus*, based on Gallo, "Trattati di Prosdocimo," *Quadrivium* 6 (1964):28.

<sup>185</sup>Gallo, "Trattati di Prosdocimo," p. 79, also reads the last folio as "119"; Herlinger, in *Contrapunctus*, p. 22, and *Brevis summula*, p. 39, reads it as "115."

<sup>186</sup>Claudio Sartori, *La notazione italiana del Trecento in una redazione inedita del "Tractatus practice cantus mensurabilis ad modum ytallicorum" di Prosdocimo de Beldemandis* (Florence: Olschki, 1938), p. 30, has suggested that folios 106–110 and what is called here 119 (i.e., those that transmit *Introductio musice*) did not originally belong to this manuscript, because he believed that they were in a different but contemporary hand and contain red rubrics, unlike the rest of the manuscript.



the use of (') for *-er-* (e.g., fol. 106va: *litteris*; fol. 107rb: *vero*; fol. 108rb: *fieri*) is more characteristic of French scripts.

Prosdocimo's *Tractatus musice speculative* (folios 79ra–93rb: see description below) is the latest datable work contained in this manuscript (1425). According to the note at the end of the treatise sharing material with *Introductio musice*, Pietro Montagnana (d. 1477) donated the manuscript to the Paduan monastery of San Giovanni in Verdara. Assuming the folios bearing *Introductio musice* do belong to this manuscript, 1477 would be its terminus ante quem.<sup>187</sup>

Contents of the manuscript follow:

- |           |  |
|-----------|--|
| 2ra–27vb  | Prosdocimo, <i>Tractatus practice cantus mensurabilis</i> , revised version (CS, 3:200–28). Incipit: "Quoniam multitudo scripture lectoris animo sepius fastidium non parum infert . . ." Explicit: "... Si vero quis dubia aliaque prolixa hic dimissa atque ibi pertractata videre vellet illuc recurrat et ibidem videbit si quid boni erit. Ad laudem et gloriam omnipotentis dei. Amen. Explicit tractatus practice cantus mensurabilis a prosdocimo de beldemando de padua compilatus. Deo gratias. Amen."   |
| 28ra–33va | Prosdocimo, <i>Contrapunctus</i> , revised version (CS, 3:193–99; <sup>188</sup> Lise Watson Foss, "Contrapunctus and Tractatus planae musicae of Prosdocimus de Beldemandis: Edition, Translation, and Commentary" [MA thesis, Boston University, 1982], pp. 74–169; Jan Herlinger, ed., <i>Prosdocimo de' Beldomandi: Contrapunctus</i> , ed. Jan Herlinger, Greek and Latin Music Theory, vol. 1 [Lincoln: University of Nebraska Press, 1984]; listed by Sachs, <i>Contrapunctus</i> , p. 208). Incipit: "Scribit Aristotiles secundo elencorum capitulo ultimo facile fore inventis addere et ex hoc dignissimum esse de inventis infinitas inventoribus habere grates . . ." Explicit: "... Scire autem ubi hec signa dulcius cadunt auri tue dimitto quia de hoc regula dari non potest cum hec loca quodammodo infinita sint. Sufficiant ergo ista de contrapuncto per musicorum minimum prosdocimum de beldemando patavum anno domini .1412. in castro montagnane paduani districtus taliter compilata ad gloriam omnipotentis dei amen. Explicit contrapunctus Prosdocimi de beldemando de padua." |
| 33vb      | Blank  |
| 34ra–48ra | Prosdocimo, <i>Tractatus practice cantus mensurabilis ad modum Ytalicorum</i> , revised version (CS, 3:228–48; Sartori, <i>Notazione italiana</i> ). Incipit: "Ars practice cantus mensurabilis Duplex reperitur: Ars scilicet ytalica qua<m> soli ytalici ad presens utuntur et Ars Gallica quam omnes latine littere ytalicis exceptis ad presens amplectuntur . . ." Explicit: "... Si tamen  |

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<sup>187</sup>Herlinger, *Brevis summuula*, p. 41 and n. 34.

<sup>188</sup>Herlinger, ed., *Contrapunctus*, pp. 22–23.

figuratio ytalica ad presens usitata magis tibi grata foret recurrere ad huncmet tractatum quem primitus de arte ytalica ante eius correctionem compilavi et ibi tuum invenies intentum. Et sic sit finis huius tractatus per musicorum minimum Prosdocimum de beldemando patavum anno dominj .1412. in castro montagnane paduanj districtus compilati ad laudem et honorem omnipotentis dei totiusque curie supernorum. Amen. Explicit tractatus practice cantus mensurabilis ad modum ytalicorum per Prosdocimum de padua compilatus."

- 48rb–48v      Blank
- 49ra–71rb      Prosdocimo, *Tractatus plane musice*, revised version (Foss, "Contrapunctus and *Tractatus planae musicae*," pp. 170–361; Herlinger, in preparation). Incipit: "Multorum diversorum autorum artis practice cantus plani musica plana nominate volumina revolve . . ." Explicit: ". . . et hoc quando carmina sua componere intendunt. Sit ergo finis huius parvi operis plane musice per Prosdocimum de beldemando patavum in castro montagnane paduani districtus Anno domini .1412. taliter ordinati. Ad laudem et gloriam omnipotentis dei ac totius curie supercelestis. Amen. Explicit Tractatus plane musice. Prosdocimi de beldemando de Padua."
- 71v      Blank
- 72ra–78ra      Prosdocimo, *Parvulus tractatulus de modo monacordum dividendi*, revised version (CS, 3:248–58; Jan Herlinger, ed., *Prosdocimo de' Beldomandi: Brevis summula proportionum quantum ad musicam pertinet and Parvus tractatulus de modo monacordum dividendi*, Greek and Latin Music Theory, vol. 4 [Lincoln: University of Nebraska Press, 1987]). Incipit: "Et si facile sit inventis addere addenda tamen negligenda non sunt . . ." Explicit: ". . . Et ut ea que dicta sunt clarius videantur, omnes tres modos dividendi in margine extendam quos videas et bene considera quoniam ex ipsis in noticiam superius dictorum facile devenire poteris. Et sic sit finis huius parvi tractatuli de modo dividendi monacordum quem Prosdocimus de beldemando patavus anno domini .1413. padue compilavit. Ad laudem et honorem omnipotentis dei atque totius eius superne curie. Amen. Explicit parvus tractatulus de modo dividendi monacordum quem Prosdocimus de beldemando de padua compilavit. Deo gratias. Amen. [diagram showing three ways of measuring the monochord]"
- 78rb–78v      Blank
- 79ra–93rb      Prosdocimo, *Tractatus musice speculative* (D. Raffaello Baralli and Luigi Torri, "Il Trattato di Prosdocimo de' Beldomandi contro il *Lucidario* di Marchetto da Padova per la prima volta trascritto e illustrato," *Rivista musicale italiana* 20 [1913]:731–62). Incipit: "Dum quidam michi carus ac uti frater intimus lucas nomine de castro lendenarie . . ." Explicit: ". . . Multasque etiam alias falsitates scripsit supradictus Marchetus quas scribere dimisi propter brevitatem et etiam quia intellectis que suprahabita sunt poterit quilibet omnes eius cognoscere falsitates. Et sic sit finis huius tractatus per Prosdocimum de beldemando patavum anno dominj nostri Yhesu christi .1425. padue compilati. Ad laudem gloriam et honorem omnipotentis dei. Amen. Explicit tractatus Musice speculative quem Prosdocimus de beldemando

paduanus contra Marchetum de padua compilavit. Deo gratias. Amen." In a later hand: "Ab anno 1600, usque ad 1603 Praesul huius Monasterii Sancti Johannis in Viridario extitit Reverendus Dominus Benedictus Veranus. Vir vita ac moribus irreprehensibilis."

- 93v Blank
- 94r–105v Missing
- 106ra–110va Treatise on plainchant that shares material with *Introductio musice* (CS, 1:157–66), *Ars musice plane optima et perfecta*. Incipit: "Incipit ars musice plane optima et perfecta. Ad evidentiam tam mensurabilis musice quam immensurabilis . . ." Explicit: ". . . Et secundum quosdam in his duabus speciebus non fit divisio aliqua cum semitonium vel tonus componitur cum diapente Et similiter cum semidytonus vel dytonus componitur cum diapente. Et sic secundum illos non nisi xj speties cantus."
- 110vab Treatise on *ficta musica* that shares material with *De falsa musica* (CS, 1:166–67, as part of *Introductio musice*). Incipit: "de ficta musica. Falsa musica dicitur quando de tono fit semitonium vel econverso vel quodcumque per veram musicam non potest fieri consonantia . . ." Explicit: ". . . Ex tali enim divisione fit cantus dulcis placabilis et decorus et si fas est dicere angeli per diesim et thesim dulciter canunt de istis consonantijs coram benignissima et gloriosa maiestate dei. Et hoc patet in hac sequentia victime pascali et in ceteris locis similibus."
- 110vb, 119rab Treatise on modes that shares material with *De litteris finalibus* (CS, 1:167–70, as part of *Introductio musice*). Incipit: "de tonis. Primus et secundus tonus finitur in D gravi sed differunt seculorum primi toni incipit a accuto et seculorum secundi toni in f grave. . . fa. la. fa. sit tibi quintus" Fols. 111r–118v: missing. Fol. 119ra: "ordinatum. Sciendum est quod Antiqui quatuor tantum toni terminationes in quatuor finalibus litteris gravibus scilicet D. E. F. G. habebant. . . ." Explicit: ". . . Multos autem cantus invenimus qui sub finalibus non descendunt et supra fines raro ascendunt Diatessaron vel Diapente et tales dicuntur plagales. Amen." In a later hand: "Hunc librum dono dedit Canonicis regularibus Commorantibus in monasterio Sancti Ioannis in viridario dominus Petrus Montagnana bonarum artium cultor quare pro eius anima quisque precari meminerit."
- 119v Blank

Folios 106r–110v transmit a treatise that shares material with portions of chapters 1, 2, 3, 4, 5, and 7 of *Introductio musice* (Appendix A); several sentences in this treatise are in a sequence different from that in *Introductio musice*. Folios 110v and 119v–b transmit treatises that share material with *De falsa musica* and *De litteris finalibus* (Appendix B).

F Florence, Biblioteca Medicea-Laurenziana, Conventi Soppressi 388  
 Paper; III + 79 + III folios; 133 x 95 mm  
 Italy; late 15th century

This manuscript consists mostly of short treatises on plainchant topics (such as ratios, modes, and mutations) and counterpoint, as well as abridgements of *Introductio musice*, *Libellus cantus mensurabilis* of Johannes de Muris, and *Declaratio musicae disciplinae* of Ugolino of Orvieto, and a fragment from *Lucidarium* of Marchetto of Padua.

The entire manuscript appears to be in a single hand. Italian characteristics are predominant, as shown by the uncrossed tironian *et* sign (7), use of the abbreviation (¶) for *qui*, and certain spellings (e.g., fol. 40v, *demonstrare*); in addition, three treatises contain Italian text (*El contrapunto e semplice*, fols. 29r–34r; *Concioscia cossa* [partially], fols. 68r–70r, and a treatise on plainchant, fols. 75r–79v).

Several features suggest a late fifteenth-century dating of the manuscript: in particular, the humanistic straight *s* in a final position, and the ampersand, although they do not appear frequently; other humanistic features include the separate loops of the *g* (g), and the straight *d*. On the other hand, the uncial *d* and the single-looped *a* are also common.

An error in binding has resulted in the misplacement of folio 6: this folio should come after folio 13, since it bears the text of the opening of the *Libellus cantus mensurabilis* of Johannes de Muris.

Contents of the manuscript follow:<sup>189</sup>

1r–2v Medical prescriptions.

<sup>189</sup>For a listing of its complete contents, see also Albert Seay, "The *Declaratio musicae disciplinae* of Ugolino of Orvieto: Addenda," *Musica Disciplina* 11 (1957):132–33, *Ugolini Urbeventani Declaratio musicae disciplinae*, Corpus Scriptorum de Musica, no. 7, 3 vols. (Rome: American Institute of Musicology, 1959–1962), pp. 9–10; *Quatuor Tractatuli italici de Contrapuncto*, Colorado College Music Press Critical Texts, no. 3 (Colorado Springs: Colorado College Music Press, 1977), pp. i–iii; Herlinger, ed., *Lucidarium*, pp. 44–45. For partial listings, see Paul Oskar Kristeller, *Iter Italicum*, 2 vols. (London: Warburg Institute; Leiden: Brill, 1963–67), 1:74; RISM 2, p. 49; Michels, *Musiktraktate*, p. 120; Sachs, *Contrapunctus*, p. 191; Herlinger, *Lucidarium*, Vol. 1 (dissertation), pp. 89–90.

- 3r Note on music. Incipit: "Musica est peritia modulationis gradatim sono et cantu consistens vel musica est scientia veraciter canendi et facilis via ad cantandi perfectionem . . ." Explicit: "greci vero dicunt pitagoras fuisse ex maleorum sonitu in quodam forma fabrorum idest ex perfussa."
- 3v Blank
- 4r–5v First part of a set of tables of intervals in counterpoint. "Hec est manus contrapunti accipiendo originem in  $\flat$  grave . . . e: ut 13 re 12 fa 10 la 8"
- 6rv First part of an abridgement of Johannes de Muris, *Libellus cantus mensurabilis* (CS, 3:46–58). Incipit: "Iesus. Quilibet in arte praticha mensurabilis cantus erudiri efetans mediocriter ea scrabat [*sic*] dilligenter que secuntur sumarie compilata per Magistrum Johanem de muris . . . Item duplex est prolatio scilicet perfecta que vocatur maior et imperfecta que vocatur minor. Perfecta maior est quando"
- 7r Final part of a set of tables of intervals in counterpoint (begun on fol. 4r). "Incipit manus contrapuncti accipiendo suum originem in natura acuta . . . e: ut 10 mi 8 sol 6 la 8 de soto."
- 7v Blank
- 8r–11r Treatise on mensuration. Incipit: "Nota quod quatuor sunt prolationes videlicet perfecti maioris, perfecti [[videlicet]] minoris, imperfecti maioris et imperfecti minoris. Prolatio autem perfecti maioris partitur per novem minimas . . ." Explicit: "Item brevis potest imperfici a semibreve vel a valore eius tam a parte ante quam a parte post, ut hic."
- 11v–13v Treatise on mensuration. Incipit: "De cantu figurato. Partes prolationis sunt quinque: maxima  $\sqcap$  longa  $\sqsubset$  brevis  $\neg$  semibrevis  $\Delta$  et minima  $\text{J}$ . Nota quod duplex est modus perfectus et imperfectus . . ." Explicit: "De ligaturis in modo [*musical examples*] Qui scripsit."
- 14r–27r Continuation of the abridgement from Johannes de Muris, *Libellus cantus mensurabilis* (begun on fol. 6r). "semibrevis valet tres minimas. Imperfecta sive minor est quando semibrevis valet duas minimas . . ." Explicit: ". . . Item quarto notandum est quod quando tenor est de modo perfecta et tempore perfecto diminutio fit per tertium et non per medium. Et sic est finis sit laus trinis. Amen. Explicit tractatu [*sic*] Magistri Johannis de muris."
- 26r–27r Treatise on ratios. Incipit: "Omnis autem numerus ad alterum comparatus aut est ei equalis aut inequalis . . ." Explicit: ". . . fundamentum relationis 12 24 36 48."
- 27r–28r Treatise on mensuration. Incipit: "Secuntur distinctiones modis, temporis et prolationis, primo quod duplex est modus scilicet perfectus et imperfectus . . ." Explicit: "Imperfecta est quando semibrevis valet duas minimas. Et hec de modo tempore et prolatione sufficient."

- 28r Note on ratios.<sup>190</sup> Incipit: "Sequitur de proportione. Proportionis orationalis in equa ligaturis [exempla quere *sup. lin.*] quinque sunt species tres simplices et due composite . . ." Explicit: ". . . 12 ad 4 proportio superpartiens est quodammodo maius cumtinet [sic]."
- 28v Blank
- 29r–34r *El contrapunto e semplice* (Seay, ed., *Quatuor Tractatuli*, pp. 1–7). Incipit: "Iesus. Regule de contrapunto. El contrapunto e semplice de unica sola nota in grave o acuto . . ." Explicit: ". . . Fa contra mi ne mi contra fa imconsonantia [sic] perfecta in cuntrapunto per alcuno modo non se debe fare. Exemplum [musical example]. Finis, etc."
- 34v–52v Fragment from Marchetto, *Lucidarium* (Herlinger, ed., *Lucidarium*, 1.1–6.3). Incipit: "De arte musica [sic] plane. Qualiter autem Pictagoras adinvenit musicam membratum Marco libro [[p]] secundo post principium . . ." Explicit: ". . . fit enim dyapente sono suavior et auditui amicaliior in suarum partium divisione ternaria. qua . . ."
- 53r–55v Abridgement of Ugolino of Orvieto, *Declaratio musicae disciplinae* (Albert Seay, ed., *Ugolini Urbeventani Declaratio musicae disciplinae*, *Corpus Scriptorum de Musica*, no. 7, 3 vols. [Rome: American Institute of Musicology, 1959–62], 1.18). Incipit: "Brevis et universalis regula pro fiendis mutationibus Ugulinus Archipresbyter loquitur. Ex superioribus igitur variationum descriptionibus edocemus quomodo per arsim et tesim mutationem fiant . . ." Explicit: ". . . tritoni duritiam causam esse quare voces b mollis et ♮ duri ad invicem variando simul ascendunt vel descendunt. Finis."
- 56r–60v Treatise on plainchant that shares material with *Introductio musice* (CS, 1:157–66), *Quod musica est veraciter canendi ad omnem perfectum cantum via*. Incipit: "Quod musica est veraciter canendi ad omnem perfectum cantum via facilis et aperta . . ." Explicit: "In e la nulla fit mutatio ut dictum est superius et hic est finis ♮ quadri superacuti. Et de supra dicta materia ad presens dicta suffitiant."
- 60v–62v Treatise on modes. Incipit: "Sequitur de qualitate tonorum et quomodo debemus cognoscere. Et primo dicimus quod toni sunt octo in forma regulariter compositi . . ." Explicit: "Et seculorum antiphona octavi debet incipere in fa de c acuto et hec dicta sufficiant."
- 62v–65v Treatise on modes.<sup>191</sup> Incipit: "Nota quod cantus planus est compositio quedem que in numeris, proportionibus, quantitibus et speciebus consonantiarum consistit . . ." Explicit: ". . . Mistus plagalis dicitur quod supra sextam vocem a suo fine ascendit sui autentici tangens ascensum vel aliquid descensum, ut hic patet exemplo [musical examples]."

<sup>190</sup>Seay, "Addenda," p. 132; *Declaratio*, p. 9; *Quatuor Tractatuli*, p. i, regards this note and the preceding two treatises as a single treatise.

<sup>191</sup>Seay, "Addenda," p. 133; *Declaratio*, p. 10; *Quatuor Tractatulis*, p. ii, regards the text on fols. 56r–65v as comprising one single treatise.

- 66r–67r Examples of *differentie*.
- 67v Note on modes. Incipit: “Nota quod isti toni suprapositi quatuor sunt autentici et quatuor plagales . . .” Explicit: “. . . Septimus fa mi fa sol hec regula sit tibi memor.”
- 67v Note on the tritone.<sup>192</sup> “Tritonus est coniunctio quatuor vocum et dispositio trium tonorum sine aliquo semitonio et dicitur a tris quod est tres et tonus quasi de tribus tonis constans et invenitur inter f fa ut et  $\flat$  quadrum et inter b molle et e la mi gravibus, acutis et superacutis, sicut patet. Finis.”
- 68r–74r *Concioscia cossa* (Seay, ed., *Quatuor Tractatuli*, pp. 8–16). Incipit: “Concioscia cossa che el contrapuncto abbia duoe consonantie principali . . .” Explicit: “. . . et quia aliis modis non mutatur nisi forte per saltum igitur hec sufficiant. Et hec de regulis contrapuncti dicta sufficiant et cetera. Finis.”
- 74v Medical prescriptions for the voice. Incipit: “Ad faciendum optimam vocem.” Explicit: “. . . et accipe quantum una nucellam perfera.”
- 75r–79v Treatise on plainchant. Incipit: “A sapere la rasone e la praticha del canto fermo per insegnare ad altrui e cossa necessaria a cognoscere la via de li soni . . .” Explicit: “. . . et etiam lo principio e le consonantie per le quale sono composte li dicti toni et sic finis. De tonis dicta sufficiant. Finis.”
- 79v Note on the finals of the modes. Incipit: “Nam finem primi d continet atque secundi . . .” Explicit: “. . . Septimus et octavus finalem in g regestunt. Finis [*musical examples*].”

The treatise in folios 56r–60v of this manuscript shares material with a part of

*Introductio musice* chapters 1, 2, 3, and 5 (Appendix A). The portions not shared with

*Introductio musice* consist of a short dialog between disciple and master, and more detailed enumerations of the notes of the gamut and of mutations.

Vc Vatican City, Biblioteca Apostolica Vaticana, Capponiani 206  
Parchment and paper; III + 188 + III folios; 136–138 x 104 mm  
Italy (?); mid to late 15th century (16th century?)

This manuscript consists of a wide range of musical texts as well as musical-mathematical (fol. 169v), theological (fols. 1r–2v, 15v), and liturgical (fols. 35r, 100r–137v) writings; it also contains a versified treatise on plainchant (fols. 3r–15r) and chants for the

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<sup>192</sup>Seay, “Addenda,” p. 133; *Declaratio*, p. 10; *Quatuor Tractatuli*, p. iii, regards this and the previous note on modes as a single treatise.

office (fols. 47r–99r). The parts of the manuscript were at one time rearranged,<sup>193</sup> and this could have been partly responsible for the present haphazard conglomeration of its contents, some of which are misarranged within the manuscript (folios 168r, possibly 38r–39r, 184r–186r), and many of which are now fragmentary.<sup>194</sup>

Most of the folios are of paper: the parchment folios mostly comprise the inner and outer sheets of gatherings: 1, 2, 6, 7, 16, 21, 22, 27, 28, 33 (second), 34, 40, 41, 46, 51, 52, 57, 58, 63, 64, 69, 70, 75, 76, 81, 82, 90, 91, 99, 124, 125, 138, 145, 146, 153, 160, 161.<sup>195</sup>

The provenance of this manuscript is suggested by its containing a number of characteristically Italian texts: discussions on *coniuncte* (fols. 20r–22r), definitions of *tonus imperfectus*, *perfectus*, *plusquamperfectus*, *mixtus*, and *commixtus* (fols. 27r–28r), a treatise on counterpoint (fols. 33r–34r), abridgements of Marchetto, *Lucidarium* (fols. 41r–44v, 138r–167v, 171rv, and 184r–186r), and a fragment copied in Italian (fol. 187r).<sup>196</sup>

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<sup>193</sup>The present foliation was made after this rearrangement. In this process folio 33 was numbered twice: thus there are 188 folios and not 187 as the pagination would indicate. RISM 2, p. 104, and Giuseppe Salvo-Cozzo, *I codici capponiani della Biblioteca Vaticana* (Rome: Typografia Vaticana, 1897), p. 179 report erroneously that this manuscript contains 187 folios.

<sup>194</sup>Waite, "Two Musical Poems," p. 17, has described the manuscript as a typical compendium or a student/teacher's notebook; this would also account for the unsystematic layout of its contents. For a description of the contents of the entire manuscript see also Waite, "Two Musical Poems," pp. 18–19. Salvo-Cozzo, *Codici capponiani*, p. 179, and RISM 2, pp. 104–6, give less detailed listings, often arbitrarily combining adjacent texts (see Karl-Werner Gumpel, Review of *The Theory of Music from the Carolingian Era up to 1400, Volume II: Italy*, by Pieter Fischer, *Die Musikforschung* 25 [1972]:364, and Herlinger, *Lucidarium*, Vol. 1 (dissertation), p. 106, n. 1). For partial descriptions of its contents see Bannister, *Monumenti vaticani*, vol. 12, pp. 196–99; Michels, *Musiktraktate*, p. 123; Sachs, *Contrapunctus*, p. 201; Herlinger, *Lucidarium*, Vol. 1 (dissertation), pp. 106–7; Herlinger, "Marchetto's Influence," pp. 239–40, 247, 248.

<sup>195</sup>Herlinger, *Lucidarium*, Vol. 1 (dissertation), p. 105 n. 1, points out that Salvo-Cozzo, *Codici capponiani*, p. 280 and RISM 2, p. 104, list the parchment folios inaccurately. Bannister, *Monumenti vaticani*, vol. 12, p. 199, no. 1030–34, describes the manuscript as of paper, without giving further details.

<sup>196</sup>On the discussion on *coniuncte* see Albert Seay, "The 15th-Century *Coniuncta*: A Preliminary Study," in *Aspects of Medieval and Renaissance Music: A Birthday Offering to Gustave Reese*, ed. Jan LaRue (New York: Norton, 1966; reprinted, with corrections, emendations, and additions, New York: Pendragon, 1978), pp. 731–37. Klaus Wolfgang Niemöller, "Zur Tonus-Lehre der italienischen Musiktheorie des ausgehenden Mittelalters," *Kirchenmusikalisches Jahrbuch* 40 (1956):25 discusses the Italian provenance for the concepts of *toni imperfecti*, *perfecti*, etc. Sachs, *Contrapunctus*, p. 89 lists the Italian treatises and



The entire manuscript appears to be in a single hand. Italian characteristics are predominant, as shown by the uncrossed tironian *et* sign (7), use of the abbreviation (¶) for *qui* [e.g., fol. 39v, l. 2: *quid*,<sup>197</sup> use of the suprascript (¨) for *-re-* (e.g., fol. 39v: *Gregorio*), roundness of *b*, *p*, and *q*, relative equality of height and width of letters, certain spellings (e.g., fol. 39v, *demonstraccio*), and use of *y* in place of final *-i* (e.g., fol. 39v: *rey*). But an insular influence is apparent in the formation of some of the *d*'s (e.g., fol. 39v, l. 4: *quidsit*, which shows a "pointed insular" style) and the forked *r* (e.g., fol. 39v, last two lines: *continetur*, *organo*). In addition, several cursive traits are present: the single-looped *a*, with the upright stroke not extending above the loop, shape of the final *s* (S), and dropping of the straight *s*, *f*, and final *s* below the bodies of letters.

Several features suggest either a fifteenth- or sixteenth-century dating of the manuscript: the shape of 4 and 7 (more like our present forms rather than 𐌵 and 𐌶, which are characteristic of the fourteenth century), incomplete looping of *g*, absence of juncture, and relatively small number of abbreviations. Musical examples and works in the manuscript are mostly in black notation, but a small number are in white,<sup>198</sup> suggesting a period not earlier than the early fifteenth century, and the use of *y* in mediant positions (e.g., fol. 40r: *philosophye*) points to the late fifteenth century.<sup>199</sup>

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their sources related to the counterpoint treatise in fols. 33r–34r. For the *Lucidarium* abridgements see Herlinger, *Lucidarium*, Vol. 1 (dissertation), pp. 105–7 and Herlinger, "Marchetto's Influence," pp. 239, 247, 248.

<sup>197</sup>But see the line above, where the same word is uncharacteristically abbreviated with ('). Herlinger, *Lucidarium*, Vol. 1 (dissertation), p. 106, also points out the prominence of bulging initials throughout the manuscript, that are also unusual in Italian scripts.

<sup>198</sup>White from fol. 139v to fol. 148v (one black note [b acute] in the example on fol. 147v), changing from white to black a quarter of the way through an example on fol. 148v, and from fol. 168r, changing back to black on fol. 184r.

<sup>199</sup>Herlinger, *Lucidarium*, Vol. 1 (dissertation), p. 105, dates it late fifteenth and possibly early sixteenth century (in "Marchetto's Influence," p. 239, he allows more strongly for the possibility of the early sixteenth century); Waite, "Two Musical Poems," pp. 17, 20, describes the manuscript as belonging to the fifteenth century; so also Bannister, *Monumenti vaticani*, vol. 12, p. 185, no. 771; and RISM 2, p. 104; Vecchi, "Composizione del *Pomerium*," p. 154, dates it sixteenth century, a dating questioned by Waite ("Two Musical Poems," p. 17, n. 10).

## Contents of the manuscript follow:

- 1r–2v Notes on theological subjects. Fol. 1r: mostly illegible on microfilm. Fol. 1v: “[*peni from fol. 1r*]tenciales Cave tamen ne illa die de *ora* egrediantur verba notiva vel ociosa . . . De commestione quintum capitulum . . .” Fol. 2r: “. . . De modo conversandi cum secularibus XIIIm capitulum . . .” Fol. 2v: “De modo non iudicandi alios XVIIm capitulum . . . et quid de me illa fecisset si accepisset in me talem potestatem Non sicut ergo pronus”
- 3r–15r Versified treatise on plainchant with glosses. Incipit: “Postquam pro rudibus fabricam materiale Gramatice partes reserans cum carmine multo . . .” Explicit: “. . . Infima discipuli retinens et summa magistri Ipse magister erit nam pars doctorat uterque. Laus sit tibi christe. Quia explicit liber musice.”
- 15v Note on the seven capital sins. “De septem vicijs capitalibus superbia est appetitus proprie eccellente . . . Item ag<ustin>us invidia est odium felicitatis aliene”
- 16r–17v Diagrams showing mutations. Text: “Hec sunt mutac<i>ones ascendendo [*sic*] de  $\text{♭}$  quadru [*sic*] grave in naturam . . . Et iterum de b molli in naturam et de natura in  $\text{♭}$  quadrum et de  $\text{♭}$  quadrum [*sic*].”
- 18r Musical examples for the use of round b, intervals. Text: “Nota quod  $\text{g}$  [*space*] quando cantus ascendit ab f grave vel g grave vel a acutum usque ad b molle acutum . . . Exemplum de b molle”
- 18r–19r Musical examples of the various intervals. Text: “Tonus tonus, Semitonus Semitonus, Dytonus Dytonus . . . dyapason imperfecta, perfecta, plusquam perfecta”
- 19rv Diapente species in the eight modes. Text: “Prima species dyape<n>te primus tonus . . . Quarta species dyapente componitur septimus et octavus tonus ut supra”
- 19v Musical example showing the notes of the gamut. Text: “Tota manus gregorij”
- 20r–21r Eleven musical examples of hexachords beginning on E, F (both below Gamma), A B, D, E, a,  $\text{♭}$ , d, e, and aa. Text: “Nota quod decem sunt coniuncte et cetera. Deduccio prime coniuncte incipitur sub  $\Gamma$  secundum artem et cantatur per b molle ut hic [*first musical example*] . . . Deduccio decime coniuncte que incipitur in a superacutum et cantatur per  $\text{♭}$  quadrum ut hic [*eleventh musical example*].”
- 21r Definitions of *coniuncta* and *vox*. Incipit: “Coniuncta est alicuius proprieta[CClef]tis seu deducciones de loco proprio ad alienum locum secundum sub vel supra . . .” Explicit: “. . . Si queratur quid sit vox et unde dicatur breviter respondendum est vox est aer remissus intus naturalibus instrumentis formata. Naturalia instrumenta sunt hec scilicet pulmo, guctur, lingua, palatum [*space*] os, dentes, et duo labia simul.”

- 21v–22r Short treatise on *coniuncta*. Incipit: “Quoniam natura est cognicio coniunctarum per quam necessaria est in cantu plano seu organico idcirco de eis est videndum. Nota igitur quod octo sunt coniuncte, videlicet quatuor inferiores et quatuor superiores . . .” Explicit: “. . . Octava accipitur inter g acutam et a superacutam et signatur in a superacutam per b molle et erit ibi fa. Hanc tantum coniunctam quidam non assignant. [supradicta ... ponat... *after main text*]”
- 22rv Short treatise on mutations (cf. *Introductio musice* 5). Incipit: “Sequitur de mutationibus vorum de quibus dicendum est quod omnis mutatio desinens in ut re mi talis autem fit ascendendo . . .” Explicit: “. . . Sed permutatio est variacio vocis nominis vel note in eodem spacio vel linea et diverso sono.”
- 22v–27r Discussion of the thirteen interval species. Incipit: “Visum est superius de mutacionibus vorum. Nunc videndum est de speciebus cantus vel de simphonijs quod idem est. De elevac*ione* et deposic*ione* omnium vorum secundum rectam propor*tionem* et numerum dilligenter [*sic*] ac proprie observatum sicut magister guido asserit Sed obmissis omnibus istis videamus de speciebus mensurabilibus musice: Et primo notandum est quod tredecim species habemus in musca . . .” Explicit: “. . . dyapason plusquam perfectam constat et sex tonis uno semitono et reperitur inter b acutum et superacutum, ut hic: [*musical examples; text; “imperfecta, perfecta, plusquam perfectam”*]”
- 27r–28r Notes on *tonus imperfectus, perfectus, plusquamperfectus, mixtus*, and *commixtus*. Incipit: “Et nota quod invenitur tonus sive cantus imperfectus, perfectus, plusquam perfectus, mixtus et commixtus. Tonus ergo imperfectus est ille qui non implet modum suum supra et infra tam autenticus quam placalis . . .” Explicit: “Et nota quod ubi invenitur in aliquo cantu bisdyapente ibi non valet iudicium cordarum.”
- 28r–29r Note on irregular modes. Incipit: “Nota de tonis irregularibus vel confinalibus optime Nota quod omnes toni regulariter finiuntur in d e f g gravibus qui tantum in canto plano et alto in regulariter in a b c d acutas. Et plusquam irregulariter in Γ a ♭ c gravibus tali modo . . .” Explicit: “Et est sciendum quod nullus potest secundum artem iudicare de cantu cui tono subiaceat nisi prius audierit principium medium et fine, ascensum et descensum.”<sup>200</sup>
- 29rv Note on why soft b was invented. Incipit: “Nota quare fuit inventum [rob] molle. Nota quod tribus ex causis b molle fuit inventum a doctoribus musice. Primo causa necessitatis, Secundo causa tritoni, Tercio causa essencie . . .” Explicit: “Tunc ad mollificandum atque refrenandum tritoni duriciem b molle ergo fuit inventum. Unde versus: mi dure datur fa mollificatur.”
- 29v–31r Notes on diapente and diatessaron species, modes. Incipit: “De speciebus dyapente. Nota quod quatuor sunt species dyapente differentes. Prima species dyapente constat ex tono et semitono et duobus tonis . . . De speciebus dyatessaron . . . De compositione tonorum . . . [fol. 30r] De terminacione tonorum . . . De intonacione tonorum . . . [fol. 30v] De perfeccione notarum . . . Nota regulam de Responsijs . . . [fol. 31r] Ad cognoscendum tonum in antiphona

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<sup>200</sup>Cf. the end of the *Introductio musice* abridgement (39v–40v) in this manuscript.

- ... De conposicione cantus ...” Explicit: “Nota quod quando cantus super a acutum per unam ascendit et inferius revertitur tunc per eandem vocem debet per b molle cantare et statim ad primum modum reverti debet ut ait boecius.”
- 31v Notes on the letters of the hand, syllables, and proprieties. Incipit: “Nota quod septem sunt littere in manu ...” Explicit: “... Unde c naturam dat, f b molle tibi signat, ♮ quaque durum dat tibi cantare securum.”
- 31v–33r [2nd] Treatise on plainchant. Incipit: “Incipit manus secundum magistrum guidonem qui fuit grecus [sic!] et propter hoc incipit manum et dicit: gama, quod latine dicitur g ...” Explicit: “... E la est una littera et una nota, e est littera la est nota, et cantatur per ♮] quadrum et stat in spatio, et non fit aliqua mutacio. Explicit manus tocius cantus plani secundum magistrum guidonem qui fuit grecus.”
- 33r [2nd]–34r Treatise on counterpoint (listed as “Primo notandum quid” by Sachs, *Contrapunctus*, p. 216). Incipit: “Incipiunt regule contrapunctus. Videlicet primo notandum quid sit contrapunctus. Contrapunctus est quod vadit a perfecta ad imperfectam et e converso ...” Explicit: “... duodecima requirit octavam, octava requirit quintam.”
- 34v Note on various differentie of the modes depending on the initial notes. Incipit: “Nota quod quando primus tonus incipit in c habet hanc differenciam videlicet [musical example] ...” Explicit: “... Quando etiam incipit in a acuto habet differenciam ut hic supra. <example>”<sup>201</sup>
- 35r Note on which time of year to sing each of the four Marian antiphons. Incipit: “Nota quod ab adventu usque ad dominicam prime dicitur hec antiphona: Alma redemptoris mater et cetera ...” Explicit: “... Item ab octava pentecosten usque ad adventum dicitur hec sequens antiphona: Salve regina.”<sup>202</sup>
- 35r Instructions for performing the asperges. Incipit: “De ordine faciendi asperges que aspersio fit solum dominicis diebus hoc modo ...” Explicit: “... In dominica de passione et in die palmarum non dicitur gloria patris sed repetitur antiphona.”
- 35v Rules for the beginnings of chants in the various modes. Incipit: “Incipiunt quedam regule de varijs inceptionibus cantus cuiuslibet toni. Et primo de primo tono ...” Explicit: “... Cantus octavi toni potest incipere in c d e f et g gravibus vel a vel c acutis.”
- 35v–36r Treatise (fragment? see fol. 38r) on plainchant in the form of questions and answers. Incipit: “Quid est musica Scientiam veraciter canendi et facilis via ad perfeccionem canendi vel musica est rationabilis motus vocum ...”

<sup>201</sup>The transcription of this explicit given in RISM 2, p. 105, is inaccurate: “Quoniam non incipit in a acuto habet differencias ut hic sequitur.”

<sup>202</sup>RISM 2 and Waite do not describe this short note separately: Waite, “Two Musical Poems,” p. 18, considers this as part of the previous item; RISM 2, p. 105, describes this as “Non agunt de musica.”

Explicit: "... Quot sunt consonantie vocum artis musice Sex scilicet Tonus Semitonus dytonus Semidytonus dyatesaron Et dyapente."

- 36r Musical illustration of nine intervals in music (GS, 2:152–53). Incipit: "Siquis autem omnium clausularum exempla in cantu nosce desiderit discatj [sic] cantilenam istam que sequitur videlicet [musical example] Ter terni su<n>t modi quibus omnis cantilena contextitur . . ." Explicit: "... [musical examples] Nec prius ab huiusmodi studio quiescere donec vocum intervallis cognitis armonie tocius facillime queas comprehendere noticiam."
- 37v Note on mutation. Text: "Hec autem regula que sequitur ad cognoscendas omnes mutaciones adeo utilis est ut pueris etiam facillimum iter ad musicam prebeat [musical examples not of mutations, but of intervals] . . . [musical examples] Dyaphonie et intense et remisse pariter consonancia dyapason."
- 38r Note on plainchant in the form of questions and answers; possibly a continuation of the treatise on plainchant in fols. 35v–36r.<sup>203</sup> Text: "Quare dyapason et decacordon non connumerantur inter alias consonancias quia dyapason dicitur de octo et octava vox est idem cum prima . . . Quid est consonancia.<sup>204</sup> Temperacio sive bona sonoritas plurium vocum ad invicem."
- 39v–40v Abridgement of *Introductio musice* (CS, 1:157–66), *Introducciones in arte musica plane*. Incipit: "Introducciones in arte musica [sic] plane. Primo videndum est quid sit introductio ceteris pretermisiss . . ." Explicit: "... Non enim potest aliquis recte iudicare de cantu cui tono subiateat nisi primo audierit seu viderit principium medium et finem eiusdem cantus."<sup>205</sup>
- 41r Note on mutation. Incipit: "Dicit enim Boetius quod mutacio fuit inventa causa necessitatis . . ." Explicit: "... sed dum evenerit necessitas faciendj mutacionem tunc debet fieri et non aliter."
- 41r–44v Abridgement of Marchetto, *Lucidarium* (Herlinger, ed., *Lucidarium* 11.2.31–34, 11.3, 11.4.2–48). Incipit: "Tonus mixtus dicitur ille si auctenticus est qui plusquam unum tonum descendit a suo fine . . ." Explicit: "... Et talis tonus dicitur acquisitus, eo quod acquiritur eius species per varietatem signorum b rotundi et l quadrij et in alio loco quam in proprio terminatur."
- 45rv Note on the formulae of the modes. Incipit: "Formula seu qualitas vel figura primj tonj talis est quod semper finitur in d grave regulariter. Et cantus eiusdem tonj aliquando Incipit in C grave ut in antiphona: Que est ista . . ." Explicit: "... Et hoc specialiter conceditur ei propter semitonium quem habet prope finem quia esset satis inconveniens ut aliquis cantus autenticj."
- 46r–99r Chants of the mass and office, including psalm tones. Text: "Asperges me domine . . ." Fol. 47r: "de adventu: Benedicamus domino Credo in unum deum . . ." Fol. 51r: "Evovae" in the eight modes. Fol. 84v: "Formula primi toni in a hec quinque principia litteris inscriptis c d f g a . . ." Fol. 91v: "Nunc de

<sup>203</sup>Waite, "Two Musical Poems," p. 19.

<sup>204</sup>RISM 2, p. 105, gives "Quid est sonoritas."

<sup>205</sup>Cf. end of note on irregular modes, fol. 29r this manuscript.

- principiis Responsorium et versuum eorum cuiuscumque toni per sigla . . ." Fol. 96r: "Viso de Responsorijs et Versibus eorum Cosequens videndum est de principijs officiorum scilicet Introytuum et differencijs eorum . . ."
- 99v Blank
- 100r–137v Rubrics of the mass. Incipit: "Nota quod adventus domini celebratur in ea dominica que proximior est festo sancti Andree . . ." Explicit: ". . . Et dicto Ite missa est vel benedicamus domino benedicit populum dicens: In unitate sancti spiritus benedicat vos pater et filius. Responsio. Amen."
- 138r–167v Abridgement of Marchetto, *Lucidarium* (Herlinger, ed., *Lucidarium* 1.5, 1.16, 2.1–8, 3.3–6, 4, 5.1–5, 6.4–5, 7, 8.1, 9, 11.4, 13, 14, 15). Incipit: "Musica est ars spectabilis cuius sonus In celo et in terra modulatur. Item musica est scientia que in numeris proporcionibus quantitativis mensuris coniunctionibus et consonancijs assistit . . ." Explicit: ". . . Et multiplex superbiparciens In quo ponitur consonantia dyapason dyatessaron. Et hec de generibus inequalitate dicta sufficiant."
- 167v Quotations from Virgil, Ovid, and other unidentified sources: "Utinam invidi in omnibus civitatibus aures et oculos horrerent [ honorent?] ut de omnium profectibus cor querentur. Virgilius sexto eneydos. Non mihi si lingue sint centum, oraque centum . . . hec ovidius in libro tristium. litora quot concas quot amena rosaria flores . . . Idem in eodem. Ignorancia sui omnium scelerum causa est ecci 18 et latancius 2<sup>o</sup> divinarum institucion..."<sup>206</sup>
- 168r Fragment from Johannes de Muris, *Libellus cantus mensurabilis*: subsequent text to fol. 183v (CS, 3:50–51). "item quinque minimis vel earum valorum Et hoc quo ad totum et duas partes ut hic . . . Et de longis respecchio maximarum."
- 168v Fragment on mensuration. Above in another hand: "yhesus." Incipit: "Nota quod ubicumque inveneris hoc signum ☉ cognoscitur esset maioris [[prolationis]] perfecti . . ." Explicit: ". . . Ista prolacio habet unam alteracionem id est minimam et non a"
- 169r Note on alteration. Incipit: "Nota de alteratione Minima ante semibreve . . ." Explicit: ". . . omnibus sunt longe: [musical example]"
- 169v Explanation of pars aliquota. Incipit: "Quid est pars aliquota Pars aliquota est illa que aliquociens sumpta reddit suum totum . . ." Explicit: ". . . Et similiter quaternarius est pars aliquota octonarij quia bis replicatus constituit octonarium."
- 170rv Fragment on mensuration, possibly a continuation of fragment on mensuration in folio 168v. "Nota quod ubicumque inveneris tale signum ☿ cognoscitur esset minoris perfecti . . . Ita etiam Invenitur in Imperfecto maiorj punctus inter duas minimas."

<sup>206</sup>These passages were not noted in RISM 2 or Waite. The Virgil quotation actually comes from his *Georgics*, Bk. 2, line 43; cf. *Virgil: Georgics*, ed. R. A. B Mynors (Oxford: Clarendon, 1990), p. xxxvii.

- 171rv Abridgement of Marchetto, *Lucidarium* (Herlinger, ed., *Lucidarium* 2.5–8).<sup>207</sup> Incipit: "Qua<n>tum ad hoc est sciendum quod tonus habet quinque partes et non plures neque pauciores . . ." Explicit: "Dyasis est quinta pars toni puta cum aliquis tonus bipartitur propter aliquam consonanciam colorandam"
- 172r–178v Table of intervals (listed as "Incipit contrapunctus" by Sachs, *Contrapunctus*, p. 211). Incipit: "Incipit contrapunctus in  $\Gamma$  ut inferius [diagram] . . ." Explicit: "... E ut<sup>6</sup> re<sup>5</sup> fa<sup>3</sup> la unisonus Finis."
- 179r–183v Fragment from Johannes de Muris, *Libellus cantus mensurabilis* (CS, 3:46–50)<sup>208</sup>. Incipit: "Incipit ars cantus in mensuratus secundum Johannem de muris. Quilibet in arte pratica mensurabilis cantus erudiri mediocriter affectans scribat diligenter ea que sequuntur sumarie compilata per magistrum Jo<hannem> de muris. Sciendum est quod partes prolacionis sunt quinque scilicet Maxima longa brevis semibrevis et minima, ut in hoc exemplo: ♯ ♯ ♯ ♯ ♯ . . ." Explicit: "... Item a quatuor numerus vel earum valorum Et hoc quo ad totum et unam partem, ut hic [example]." Custos: "item quinque" (does not appear in the folio presently following, but see fol. 168r).
- 184r–186r Continuation of abridgement from Marchetto, *Lucidarium* on fol. 171rv. Text: "videlicet 3 6 et 10 tendendo ad aliquam consonanciam . . . Dicitur autem cromaticum a cromate grece, id est color pulcritudinis, quia propter pulcritudinem dulcedinemque disonanciarum dicitur tonus ultra divisionem dyatonicj et enarmonici generis."
- 186v Rules for the beginnings of chant verses in the various modes. Incipit: "Versus primi tonj in Responsorijs Incipit ad equalem vel in a acuto . . ." Explicit: "... Versus: octavj tonj vel plurimum Incipit ad equalem Sed nonnunquam ad quartam supra suum finem."
- 187r Fragment copied in Italian. "Nota che quello legno da loquale se fanno quellj bellj . . . se chiama quello begno micchj"
- 187v Fragment. "[[...]] chitene laramo altrotanto . . . quinque aoc septem oac"

Folios 39v–40v of this manuscript transmit an abridgement of *Introductio musice* that comprises chapters 1 fully, and 2 and 7 partially (Appendix A). Elsewhere in this manuscript folios 21r (what is *vox*), 22rv (mutations), and 41r (mutations) contain closely related passages (Appendix C).

Pe Perugia, Biblioteca Comunale Augusta, 1013 (*olim* M. 36)  
Paper; 139 folios; 210 x ca. 160 mm  
Venice; 1509

<sup>207</sup>See also Herlinger, "Marchetto's Influence," p. 247 and n. 23.

<sup>208</sup>Michels, *Musiktraktate*, p. 27, n. 40, mistakenly gives fols. 179r–186v from this manuscript as a concordance for the *Libellus*.

The principal scribe of this manuscript was Johannes Materanensis,<sup>209</sup> who left his name in the explicit on folio 45v and also recorded the following dates in the manuscript: 25 June, 1509 (same explicit, folio 45v) and 7 July, 1509<sup>210</sup> (explicit, folio 123r). Other scribes copied folios 1r–2r, 69v–70r, 136v–139v. The manuscript has remained in Perugia since the sixteenth century and once belonged to Raffaele Sozi (around 1550), one of the founders in 1561 of the Accademia degli Unisoni in that city.<sup>211</sup>

Contents of the manuscript follow:<sup>212</sup>

- 1r           Genealogy of Jubal and Tubalcain (cf. Genesis 4.20–22); three proverbs (cf. Proverbs 21.20, 14.13, Ecclesiastes 7.5 [Vulgate v. 5]). "Pater vero istorum fuit lamech, mater Iubalis fuit ada, Iubal frater iahel. Ipse fuit pater canentium cithara et organo. Tubalchain filius Selle, fuit ipse malleator et faber in cuncta opera eris et ferrj. Non omnibus dormio. Salomon Thesaurus desiderabilis requiescit in ore sapientis. Salomon Risus dolore miscebitur et extrema gaudij luctus occupat. Salomon Cor sapientium ubj tristitia est et cor stultorum ubi leticia."

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<sup>209</sup>"A professional scribe from Matera, south-east of Naples, who wrote a fine italic script"; Bonnie J. Blackburn, "A Lost Guide to Tinctoris's Teachings Recovered," in *Early Music History* 1, Studies in medieval and early modern music, ed. Iain Fenlon (Cambridge: Cambridge University Press, 1981), p. 34.

<sup>210</sup>Albert Seay, ed., *Anonymous (15th Century): Quaestiones et Solutiones*, Colorado College Music Press Critical Texts, no. 2 (Colorado Springs: Colorado College Music Press, 1977), p. ii, reads this date as 17 July, 1509.

<sup>211</sup>Blackburn, "Lost Guide," p. 32, n. 9, cites Allan W. Atlas, "The Accademia degli Unisoni: A Music Academy in Renaissance Perugia," in *A Musical Offering: Essays in Honor of Martin Bernstein*, ed. Edward H. Clinkscale and Claire Brook (New York: Pendragon, 1977), pp. 5–23, for information on the academy. According to Albert Seay, "An *Ave maris stella* of Johannes Stochem," *Revue belge de musicologie* 11 (1957):94, it was Sozi who copied the four canons on fols. 138v–139r (see description below, where the initials "S. P." are noted); this is denied by Blackburn, "Lost Guide," p. 35, who suggests that they may have been copied (composed?) by one of his friends who co-founded the Accademia degli Unisoni, although Blackburn also points out (p. 35, n. 21) that none of the members listed by Atlas in "Accademia degli Unisoni" has the initials "S. P."<sup>5</sup>

<sup>212</sup>For descriptions of the manuscript and its entire contents see also Seay, "*Ave maris stella*," pp. 93–94 (facsimile and transcription of fols. 69v–70r on pp. 103–8); Seay, ed., *Quaestiones et Solutiones*, pp. i–v; Blackburn, "Lost Guide," pp. 31–35 (content description incorporating revisions by Herlinger, *Lucidarium*, Vol. 1 (dissertation), pp. 100–2, of Seay, "*Ave maris stella*," pp. 93–94); Herlinger, ed., *Lucidarium*, pp. 51–53. Descriptions and partial lists are found in Giuseppe Mazzatinti, *Inventari dei manoscritti delle biblioteche d'Italia*, Vol. 5: *Ravenna, Vigevano, Perugia* (Forlì: Bordandini, 1895), p. 228; Herlinger, *Lucidarium*, Vol. 1 (dissertation), pp. 100–2. For facsimiles see Blackburn, "Lost Guide," pp. 59 (fol. 118v), 65 (fol. 119r), and 80 (fol. 121r).



1v–2r	Eleven-line staff of the gamut with clefs, hexachords, solmization syllables, and Greek note names; short discussion on mutation; text: “Proprietates cantus sunt tres, scilicet $\text{C}$ quadrij, nature et $\text{b}$ molli . . . Unde versus: ut re mj scandit, fa sol la quoque descendit”; four examples of melodic clausulae.
2v	Blank, except for calculation showing the division of the ratio 3:2 by 4:3 to produce 9:8.
3r	Nine-line poem on the characteristics of the seven letters that represent notes. Incipit: “[...] Ihesus. A movet Ingeminis vagus et eriminose morosus . . .” Explicit: “. . . Iste sonum fertur nam leviter graditur.”
3v	Diagram of the hand
4r–5r	Treatise on mutations, hexachords, clefs, attributed to Marchus de Padua. Incipit: “Ihesus. In nomine sempitene [ <i>sic</i> ] individueque trinitatis. Incipiunt regule musices plane Secundum Marchum de padua doctorem eiusdem. nOta quod septem sunt littere graves, silicet [ <i>sic</i> ] A.B.C.D.E.F.G. Et septem acute, scilicet a.b.c.d.e.f.g. Et quinque superacute, scilicet a.b.c.d.e . . .” Explicit: “. . . Sed [rob] molle respicit superius et Inferius. [Quid est chlavis <i>in marg.</i> ] Et clavis est reseratio notarum et ostencio vocum.”
5r–45v	Marchetto, <i>Lucidarium</i> (CS, 3:65–121; Herlinger, ed., <i>Lucidarium</i> ). Incipit: “Epistola. <M>agnifico militj et potentj domino suo domino Rainerio dominj Zacharie de urbe veterj. Illustris principis dominj Johannis clare et excelse memorie dominj Karolj Regis hierusalem . . .” Explicit: “. . . Nam musicus cognoscit, sentit, discernit, eligit, ordinat et disponit omnia que ipsam tangunt scientiam. Et per Cantorem Iubet tamquam per suum nuntium praticarij. Et de musica plana sufficiant Ibi dicta. Amen. finis. Deo gratias. In Venetijs MCCCCCVIII, Die xxj Junij. Domuis [ <i>sic</i> ] Johannes Materanensis ad suam utilitatem scripsit.”
46rv	Table of intervals and chords showing the rules of counterpoint. Text: “Regula de Contra punto . . . [-46v-] De Composizione . . . Deo gratias.”
47r–68v	Treatise on plainchant that shares material with <i>Introductio musice</i> (CS, 1:157–66), <i>Quaestiones et solutiones</i> (Seay, ed., <i>Quaestiones et Solutiones</i> ), otherwise largely drawn from Bonaventura da Brescia, <i>Regulae musicae planae</i> (1st edition, 1497). Incipit: “Ihesvs. Incipiunt questiones et solutiones. Ad videndum Tam mensurabilis Cantus quam Imensurabilis musica. Primo videndum est quid sit Introductio et unde dicatur . . .” Explicit: “. . . et In questo modo le nostre conscientie a presso el vero e superno Idio e ala Vergene maria et al agente del mondo serano excusatj. A laude de dio et de la gloriosa Vergene madre per infinita secula, Amen. Finis. Deo gratias.”
69r	Blank
69v–70r	Johannes Stochem, <i>Ave maris stella a 2</i> (Albert Seay, “ <i>Ave maris stella</i> ,” pp. 93–108). Text: “Johannes stochen [ <i>sic</i> ], Ave maris stella . . .”
70v	Blank

- 71r–78r      Treatise on mensuration. Incipit: “Ihesus. In nomine Sancte et Individue trinitatis. Incipiunt Regule figuratus Cantus, et cetera. <S>ciendum est quod decem sunt principales partes, videlicet, figura notarum . . .” Explicit: “. . . De modo Cantus cantatur tam maius quam minus potest dividj seu numerarj per maximas, longas, breves, ut supra in alijs demonstrationis est. Finite sunt. Deo gratias.”
- 78r–123r      Treatise on ratios, with extensive musical examples.<sup>213</sup> Incipit: “In nomine Iesu, et cetera. Incipiunt Regule de proportionibus Cum suis exemplis. [Quid est proportio *in marg.*] Proportio est duorum terminorum musicalium ad invicem habitudo . . .” Explicit: “. . . [musical examples] Dupla maxima perfecta. finis. Deo gratias, 1509, 7 Julij.”
- 123v–136r      Treatise in Italian on calligraphy. Incipit: “Ihesus. Incipiunt Regule scribendj secundum suam regulam et geometrie artis, et Cetera. Nota che e da sapere che la prima testa de tuctj litterj e questa de sta littera A . . .” Explicit: “. . . Nota questa littera choe z con lj suj circulj perfectj si disparte In pechi quarte. Como defecta dimonsta el suo signo ut hic: [figure] Deo gratias.”<sup>214</sup>
- 136v–139v      Musical compositions: fols. 136v–137r: Agricola, [*De tous biens plaine*] a 3 (Edward R. Lerner, ed., *Alexandri Agricola opera omnia*, 5 vols., *Corpus Mensurabilis Musicae* 22 [N. p.: American Institute of Musicology, 1970], vol. 5, pp. 81–82; concordance in Florence, Biblioteca del Conservatorio di Musica Luigi Cherubini, Basevi 2439, fol. 66v–67r); fols. 137v–138r: untitled duo, “Alex. agri.” below first voice, “[–138r–] Gislin” below second voice (Lerner, *Agricola*, p. 112); fols. 138v–139r: four canons, with heading “S. P. .1.5. Fuga: .5.2”; 139v: *De tous biens* (incomplete) (Fritz Feldmann, “Zwei weltliche Stücke des Breslauer Codex Mf. 2016: Aus der Zeit um 1500,” *Zeitschrift für Musikwissenschaft* 13 (1930–31):263–64; concordances in Cathedral, MS s.s. [“Segovia s.s.”], fol. 195v, and Warsaw, Biblioteka Uniwersytecka, MS Mf. 2016, fol. 25).<sup>215</sup>

Folios 47r–68v of this manuscript transmit uniquely a treatise that Seay has named *Quaestiones et solutiones*. A small part of this treatise shares material with chapters 1 (fols. 47r–48r), 2 (fol. 48r), and 5 (fol. 53r) of *Introductio musice* (Appendix A).

<sup>213</sup>For a descriptive list of these musical examples see Blackburn, “Lost Guide,” pp. 36–39 for a descriptive list of these musical examples. Blackburn has identified 40 of the 64 musical examples in this treatise, a substantial number of which (26) are by Tinctoris, including the motet much discussed by later theorists, *Difficiles alios delectat pangere cantus* (last example, fols. 118v–122r: composer identified in the manuscript as *Tentoris* [fol. 118v]). For a transcription of this motet see Blackburn, pp. 105–16.

<sup>214</sup>Seay, ed., *Quaestiones et Solutiones*, p. ii, mistakenly gives folios 124v–136r for this treatise.

<sup>215</sup>Details concerning these compositions, including concordances, taken from Blackburn, “Lost Guide,” pp. 34–35.

Folios 55r–59r of this treatise transmit text dealing with the thirteen intervals within the octave. Descriptions of the individual intervals are partly similar to those in *Introductio musice* chapter 7 in their definitions, derivations of the individual terms, and outlines of the solmizations and letter names representing the intervals. But they also discuss various issues found neither in *Introductio musice* chapter 7 nor in *De plana musica* chapter 16, including species of the whole tone (fol. 55v), semitone (fol. 55v), and ditone (56r), and spellings of the term “dyatesseron” (fol. 56v). From this part on the text consists of a mixture of Latin and Italian.

#### INTERRELATIONSHIP OF THE SOURCES

One wishes that more sources for *De plana musica* had survived. Of the three extant sources, *V* and *Vb* share several sections but both are obviously incomplete. *V* has a lacuna that deprives us of an important part of chapter 9, all of chapters 10–12, and much of chapter 13; *Vb* describes only two of the proposed thirteen intervals. Both *V* and *Vb* follow their interval descriptions with texts that are not found in *P* and that are totally different from each other. *V* concludes with a long formulaic passage showing all the possibilities of ascent and descent with the thirteen intervals;<sup>216</sup> *Vb* is joined erroneously to another highly controversial treatise, a version of the so-called *Ars nova* of Philippe de Vitry.

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<sup>216</sup>The formulaic pattern involves, for each of the thirteen intervals in turn, ascent from a given note by that interval followed by a descent by that interval, followed by a descent in turn by all the other smaller intervals contained within that initial interval. “Upon a given sound ascend a semitone and descend the same interval. Ascend a whole tone and descend the same interval; ascend a whole tone and descend a semitone. Ascend a semitone and descend the same interval; ascend a semitone and descend a semitone; ascend a semitone and descend a whole tone. Ascend a ditone and descend a ditone; . . . Ascend a diapason and descend a ditone plus diapente.” At the end of this passage are the words *Explicit secundus liber .ii.* It is not entirely clear where the *secundus liber* begins, but the size and appearance of the initial letter of the words *Super sonum datum . . .* (fol. 10r: the opening words of the formulaic passage), and the space of a few lines separating these words from the preceding text (which ends on fol. 9v) suggest that the *secundus liber* is the formulaic passage itself. That being the case, as Rasch suggests (*Iohannes de Garlandia*, p. 46), the preceding text, i.e., the rest of this version of *De plana musica*, would be the *primus liber*, and the *De mensurabili musica* text following would be (or could be called) the *tertius liber*.

*P*, on the other hand, contains much that is not shared in either *V* or *Vb*. The earlier portion that is unique to *P* has been shown to derive principally from Boethius. In chapter 9, *P* gives two monochord divisions, *Vb* gives one, and it is different from both of *P*'s; *V* might have contained a monochord division, but owing to the aforementioned lacuna we cannot be certain. The chromatic division in chapter 10 of *P* appears in neither of the other two sources.

Only *P* and *V* give musical examples and these are all for chapter 16 (intervals). Moreover *P* illustrates only the unison, whole tone, and semitone. For the other intervals only blank staves remain. None of the examples in *P* is identical to the corresponding one in *V*. *P* has only a minor error in the semitone example regarding the placement of the b flat accidental; *V* contains a few errors involving clefs, accidentals, and notes. *P* and *Vb* both give a diagram of the gamut but do so in different chapters: *P* in chapter 13 and *Vb* in chapter 11.

As reported above, *Introductio musice* survives in four versions (*B*, *W*, *R*, *D*) and one abridgement (*Vc*); it also shares material with five other treatises (*S*<sub>1</sub>, *S*<sub>2</sub>, *L*, *F*, *Pe*). The four "versions" are designated such because of their relative completeness and general agreement of text that they preserve. *D*, however, has a lacuna from 2.15 till 2.29,<sup>217</sup> and while the content of *B*'s chapters agree substantially with those of the other versions, the ordering of these chapters differs from the rest (chapters 5 and 7 come before 1–4).

Compared to the four versions each of the other sources contains material unique to itself. *S*<sub>1</sub> (*Introducendis in arte musice*) inverts a number of sentences common with *Introductio musice* and contains a fair number of passages that are not found in the other sources, although these passages deal closely with the subject at hand. Like *S*<sub>1</sub>, *L* (*Ars musice plane optima et perfecta*) also inverts a few sentences and contains a number of unique but relevant passages.<sup>218</sup> Interestingly, both these treatises occasionally share material unique

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<sup>217</sup>It another lacuna that truncates the treatises *De falsa musica* and *Sed quoniam cantor diu sine intermissione continuare non potest* (A.8–B.11 are now missing).

<sup>218</sup>Following the treatise that shares material with *Introductio musice*, *L* transmits two more treatises that share material with two adjunct treatises respectively, *De falsa musica* and *De litteris finalibus*.

to themselves. Among the other treatises, *S*<sub>2</sub> and *Pe* also share unique material: they are the only ones to incorporate a Boethian passage on the three genera of music as well as other similar categorizations of music (cf. passages after 1.13).

As was the case with the examples in *De plana musica*, none of the examples corresponding to each other in the *Introductio musice* sources are identical. In those sources that transmit chapter 5 (mutations) examples vary in details of actual note names and in the absence in some sources of illustrations for some of the possibilities in the steps that have six mutations. This last factor is particularly noticeable in *L*, whose examples are terse.

The examples for chapter 7 (intervals) have the most extensive variants among the sources, but these are mostly trivial and involve repetitive illustrations of individual intervals. *D* and *W* are particularly repetitious, while *S*<sub>2</sub> is quite succinct in the few examples it presents. As they were in chapter 5, those of *L* in chapter 7 are also brief, giving only a few combinations for most intervals.

Those sources that illustrate the gamut all vary in their representations. *R* superimposes the gamut upon a diagram of a hand, while the other sources (*W*, *S*<sub>1</sub>, *S*<sub>2</sub>, and *L*) represent the gamut in more abstract form using staff lines.

None of the examples is entirely free from error. *D* gives the most accurate, almost error-free, examples, while *B* has the largest percentage of errors, especially in the placement of accidentals, indicating either a very careless or a musically ignorant scribe. The first example that *S*<sub>1</sub> gives in chapter 7 (intervals) is erroneously the first example for chapter 5 (mutations), but *S*<sub>1</sub> otherwise lacks the mutation chapter. In general, errors involve misplacement of accidentals, introduction of foreign intervals in a sequence (e.g., a semitone in a sequence illustrating whole tones), misplacement of clefs, wrong notes resulting in wrong intervals, misplaced labelling (e.g., labelling “tritone” for the wrong set of intervals).

## PRINCIPLES AND FORMAT OF THE EDITION

This dissertation presents the first complete edition of *De plana musica* based on three sources (*P*, *V*, *Vb*), and the first edition of *Introductio musice* based on four sources (*B*, *W*, *R*, *D*). The only prior edition of the latter treatise was by Coussemaker, who based it on the only source then known, Saint-Dié, Bibliothèque Municipale, 42.<sup>219</sup>

The versions of *De plana musica* in *P*, *V* and *Vb* seem to bear equal authority; *P* is chosen as copy text because it is the most extensive of the three versions.<sup>220</sup> Where musical examples are missing from *P* they are supplemented by those from *V*.

Of the *Introductio musice* versions, *B* orders its chapters idiosyncratically and *D* has two lacunae and a text full of errors. Though *R* and *W* contain numerous small errors, either could serve as copy text. *R* was selected because only it contains what in this edition is called Chapter 6.<sup>221</sup> This version is supplemented and emended where necessary through comparison with the other sources. •

The texts of the treatises and their English translations appear in blocks of parallel columns to facilitate comparisons of respective passages. Musical examples and figures appear below the columns, spanning the width of the page and occurring in pairs, the first of every pair belonging to the Latin text and the second to the English. Musical examples belonging to the Latin text are transcribed to reflect their appearance in the manuscripts; musical examples belonging to the English text are transcribed using modern notation. The critical apparatus appears below the Latin and English texts following a single horizontal line; its format follows that of series like *Corpus Scriptorum de Musica*.<sup>222</sup> Commentaries

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<sup>219</sup>CS, 1:157–66.

<sup>220</sup>It is tempting but unfeasible to present the texts in three parallel columns because they order the contents differently and because such a procedure would have required coordination with three parallel columns of English translation.

<sup>221</sup>It is possible that Chapter 6 was an addition in *R*; but the opening text of the chapter (see 6.3) makes it seem that it was part of the original plan.

<sup>222</sup>Superscript numbers identify passages, and each block of the critical apparatus presents any variants that occur for each of these numbered passages. Usually the blocks present variant passages, whose initial and final words are identical to those of the

follow the critical apparatus after a double horizontal line; these are in the form of footnotes tagged to the relevant passages in the translation. In general the commentaries clarify obscure portions of the text, suggest possible interpretations not immediately obvious from the translation, point out significant emendations, highlight association of ideas with other theorists and treatises, indicate parallel passages, and trace sources of quotations and attributions.

Six appendices follow the two editions. Appendix A consists of transcriptions of six treatises that share material with *Introductio musice*, and of one that is an abridgement; Appendix B contains separate treatises that this dissertation has tried to show do not belong to *Introductio musice*; Appendix C contains passages transcribed from various manuscripts that are cited in the manuscript descriptions and the commentaries to the two main treatises; Appendix D is an edition of *Ars contrapunctus secundum Philippum de Vitry*: the first part of this treatise corresponds to the chapters on the thirteen intervals in both *De plana musica* and *Introductio musice*, as pointed out in the commentaries; Appendix E contains the parallel musical examples in *V*, fol. 12r, and *B*, fols. 68v–69r, that are discussed in the descriptions of the two manuscripts; Appendix F contains diagrams of monochord divisions presented in *De plana musica*, chapters 9 and 10.

In the critical editions of the two treatises, medieval orthography is employed throughout the main text; in the critical apparatus and the separate transcriptions of the various treatises as found in the appendices, on the other hand, the orthography of the corresponding passage in the main text: words different from the main text are thus those between the two delimiting words. Following the variant is a siglum of the variant source, and after the siglum six spaces separate this and the next variant (unless a line break occurs). Exceptions to the above method of flagging variants occur in cases of single, unequivocal words, and pairs of words that are simply inverted in the variants: in these instances the variants appear without any other adjacent corresponding words. In several cases the entire passage of the variant source appears at the beginning of the respective block instead of having its individual differences appear piecemeal: in these instances it should be obvious that the entire passage replaces the entire sentence or phrase of the main text. In the case of figures and musical examples, all occurrences in the various sources are presented: those belonging to the copy text appear in the main text (with necessary emendations), while those belonging to the other sources appear in the critical apparatus.

treatises is preserved. In both cases, however, the use of *u* and *v* is normalized according to vocalic or consonantal function, and *i* is substituted for *j*, except in the case of proper names (thus, *Johannes* instead of *Iohannes*). Abbreviations are expanded silently, punctuation modernized, and capitalization in the manuscripts ignored.

Musical examples in the Latin text and critical apparatus represent as closely as possible their appearance in the manuscripts, although of course regularized modern print represents clef signs and note shapes. On the other hand, the number of stave lines in the manuscripts are generally ignored and the examples presented with as few lines as are necessary to accomodate all the notes in the particular example; also, actual lengths of vertical lines are ignored.

I have tried to make the translations readable and at the same time to preserve the scholastic tone of the Latin text. For the most part I have translated terms consistently but when it is clear that the meaning of a Latin term differs in a particular context I have used a different English term.<sup>223</sup>

#### CONSPECTUS CODICUM ET NOTARUM

##### *De plana musica*

- P* Paris, Bibliothèque Nationale, Fonds latin 18514, fols. 85r–94r (France, late 13th to mid 14th century)
- V* Vatican City, Biblioteca Apostolica Vaticana, Vaticano latino 5325, fols. 1r–11v (France, mid 14th century)
- Vb* Vatican City, Biblioteca Apostolica Vaticana, Barberiniano latino 307, fols. 17r–19r (Italy, 14th to early 15th century)

##### *Introductio musice*

- B* Barcelona, Biblioteca Central, 883, fols. 71v–78r (Italy [?], 14th century)

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<sup>223</sup>In *De plana musica* 16.62 I have translated *ars* as “knowledge of theory” instead of “art” as I have done elsewhere for this term, since in this context *ars* contrasts with *usus* (practice); I have also translated *vox* variously as “syllable” (e.g., *De plana musica* 11.3, *Introductio musice* 2.22), “pitch” (*Introductio musice* 1.7, 5.6), and “voice” (*Introductio musice* 2.13).



- W Washington, Library of Congress, Music Division, ML 171.J 6, fols. 56r–70r (Venice and Piacenza, second half, 15th century)
- R Rio de Janeiro, Biblioteca Nacional, Cofre 50.18, fols. 610r–617r (Pavia and Rome, late 15th century [ca. 1489–90])
- D Saint-Dié, Bibliothèque Municipale, 42, fols. 68r–83r (Belgium [?] or Italy [?], mid or late 15th century)

Treatises that share material with *Introductio musice* (Appendix A)

- S<sub>1</sub> Seville, Biblioteca Capitular y Colombina, 5 2 25, fols. 50r–53r (Italy, late 14th century)
- S<sub>2</sub> Seville, Biblioteca Capitular y Colombina, 5 2 25, fols. 117v–119v (Italy, late 14th century)
- L Lucca, Biblioteca Governativa, 359, fols. 106r–110v, 119r (Italy, probably between 1425 and 1477)
- F Florence, Biblioteca Medicea-Laurenziana, Conventi Soppressi 388, fols. 56r–60v
- Pe Perugia, Biblioteca Comunale Augusta, 1013, fols. 47r–68v (Venice, 1509)

Abridgement of *Introductio musice* (Appendix A)

- Vc Vatican City, Biblioteca Apostolica Vaticana, Capponiani 206, fols. 39v–40v (Italy [?], mid 15th century)

Notes

<i>ante</i>	before
<i>bis</i>	twice
<i>deest/desunt</i>	is/are missing
<i>eras.</i>	erasure
<i>fort.</i>	perhaps
<i>in marg.</i>	in the margin
<i>infra lin.</i>	below the line
<i>lacuna</i>	lacuna
<i>lineae vacuae</i>	blank lines
<i>m. sec.</i>	in a second hand
<i>om.</i>	omitted
<i>post</i>	after
<i>sup.</i>	over
<i>sup. eras.</i>	over erasure
<i>sup. lin.</i>	above the line
<i>vacuum/vacua</i>	blank line/lines

An ellipsis ( ... ) indicates an illegible letter.  
Underlined letters indicate uncertain transcription.  
[[*text*]] indicate *text* deleted by the scribe.  
<*text*> indicate *text* supplied by editorial conjecture.

PART TWO

DE PLANA MUSICA

TRACTATUS DE MUSICA  
COLLECTUS EX HIIS QUE DICTA SUNT  
A BOETIO SUPRA  
ET  
DECLARATIO MUSICE PRACTICE

TREATISE ON MUSIC  
COLLECTED FROM THOSE THINGS SAID  
BY BOETHIUS ABOVE  
AND  
EXPOSITION ON PRACTICAL MUSIC

1. <sup>1</sup>De scientia

1. <sup>1</sup>Concerning science

<sup>2</sup>Scientia est cognitio rei sicut est. <sup>3</sup>Et  
dividitur in theoricam et practicam vel  
speculativam et operativam. <sup>4</sup>Theorica  
dividitur in theologicam sive divinam et in  
naturalem que est de cognitione rerum  
naturalium et in doctrinalem. <sup>5</sup>Doctrinalis  
scientia dicitur quandoque communiter sicut  
cum procedit per aliquas regulas certas et  
communes et ad hanc partem respicit trivium  
scientiarum. <sup>6</sup>Quandoque dicitur proprie et  
ad hanc spectat mathematica que est de  
quantitate.

<sup>2</sup>Science is the cognition of a subject  
just as it is. <sup>3</sup>It is categorized as  
"theoretical" and "practical," or  
"speculative" and "operative." <sup>4</sup>The  
theoretical category is subcategorized into  
the theological or the divine, the natural  
(which concerns the cognition of  
phenomena), and the doctrinal. <sup>5</sup>The  
doctrinal subcategory is sometimes spoken of  
in the usual sense as that branch of science  
that proceeds through a number of definite  
principles of wide application, to which  
aspect the trivium of the sciences refers,  
<sup>6</sup>and sometimes spoken of in the proper sense  
and it is this aspect which mathematics,  
which concerns quantity, investigates.

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P 85r; V 1r.

Titulus. Assit principio sancta Maria meo *pro* Tractatus de musica . . . musice practice V

P 85r.

1 De scientia om. P  
6 ad [hincab marg.] spectat mathematica P

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Titulus. Folios 1r-85r of P contain a version of *De institutione musica* of Boethius. *De plana musica*, however, is based on Boethius only in part; see p. 45 for the extent of its borrowings from Boethius and other writers.

2–6. Jerome of Moravia, *Tractatus de musica* 1 (Cserba, p. 10) attributes statements 1.2-9 and 2.2-3 (see note to 2.2) to *Johannes dictus de Garlandia/Johannes Gallicus*. This is one of the reasons scholars have attributed the present treatise to him (see pp. 8–9).

For similar categorizations of *scientia* see, e.g., William of Conches (Commentary on Boethius's *De consolacione philosophiae* London, British Library, MS Royal 15.B.III, fol. 7v; facsimile reproduction given in A. J. Minnis, *Medieval Theory of Authorship: Scholastic Literary Attitudes in the Later Middle Ages*, 2nd ed. [Philadelphia: University of Pennsylvania Press, 1988], p. 24); Hugh of St. Victor (*The Didascalicon of Hugh of St. Victor: A Medieval Guide to the Arts*, trans. Jerome Taylor [New York and London: Columbia University Press, 1961], p. 62); John of Garland (*De triumphis ecclesie*, ed. Thomas Wright [London: Roxburghe Club, 1856], pp. 100–101).

Cassiodorus, *Institutiones* 2.3.4–6, 21 (Mynors, pp. 110–111, 130), gives a categorization that parallels that of *De plana musica*, but that omits the twofold distinction of doctrinal science as “commonly” and “properly” spoken, instead directly dividing the doctrinal category into arithmetic, music, geometry, and astronomy; he also uses different, but equivalent terms: *philosophia* for *scientia*, *inspectiva* and *acutalis* for *theorica* and *practica*, respectively. *Scolica enchiridiadis* 2 (Schmid, p. 107), too, discusses mathematics as a doctrinal science.

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<sup>7</sup>Est autem duplex quantitas, scilicet continua et discreta. <sup>8</sup>Continua est de lineis, superficiebus et corporibus et est duplex quia alia est immobilis de qua est geometrica, alia mobilis de qua est astrologia. <sup>9</sup>Discreta quantitas est de numeris et est duplex, quia alia est absoluta de qua est arismetica in qua determinatur de numeris absolute, alia est relata de qua est musica in qua determinatur de numeris relatis ad sonos.

<sup>7</sup>Quantity is twofold: continuous and discrete. <sup>8</sup>Continuous quantity is concerned with lines, surfaces, and bodies, and is twofold because it is either immobile, which geometry concerns, or it is mobile, which astronomy concerns. <sup>9</sup>Discrete quantity concerns numbers, and is twofold because it is either absolute, which arithmetic concerns (which deals with numbers absolutely), or it is relative, which music concerns (which

deals with numbers related to sounds).

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7–9. For further discussions on continuous and discrete quantities, and their respective mathematical disciplines, see Boethius *Arithmetica* 1.1 (Friedlein, p. 8); Boethius *Musica* 2.3 (Friedlein, pp. 228–29); Cassiodorus *Institutiones* 2.3.6, 2.3.21, 2.4.6 (Mynors, pp. 111, 131, 139); Marchetto *Lucidarium* 12.1.4–12 (Herlinger, pp. 518–20).

For discussions based on the concept of music related to number, see *Introductio musicae* 1.22–24; Isidore of Seville *Etymologiae* 3.23.1–2; Aurelian of Réôme *Musica disciplina* 6.1 (Gushee, p. 70); Regino of Prüm *De harmonica institutione* 4 (LeRoux, pp. 30–31); Marchetto *Lucidarium* 2.10.5–8 (Herlinger, pp. 162–64); *Quatuor principalia* 1.6 (CS, 4:202).

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## 2. <sup>1</sup>De musica

<sup>2</sup>Unde musica sic diffinitur. Musica

est de numero relato ad sonos et hic quantum  
ad subiectum, item quantum ad opus.

## 2. <sup>1</sup>Concerning music

<sup>2</sup>Music is defined thus: Music

concerns number related to sounds. It is as  
much the subject as the basis of this work  
itself.

P 85r; V 1r.

1 De musica om. P V

2–4 Musica est veraciter canendi scientia et facilis ad canendi perfectionem via, vel aliter  
musica est de multitudine sonorum, vel aliter musica est scientia de numero relato ad  
sonum V

2 hinc pro hic P

=====

2. Music is here defined in terms of its relationship with number, a concept already stated in 1.9; cf. *Introductio musicae* 1.14, 7.4. Jerome of Moravia, *Tractatus de musica* 1 (Cserba, p. 10), attributes to *Johannes dictus de Garlandia/Johannes Gallicus* statements 2.2–3 (as well as 1.2–9: see note to 1.2–6).

For similar definitions of music relating to number, see Cassiodorus *Institutiones* 2.5.4 (Mynors, p. 144); *Scolica enchiridis* 2 (Schmid, p. 108); Guido *Micrologus* 20.8 (Smits van Waesberghe, p. 230); Anon. of St. Emmeram *De musica mensurata* Prologue, 1.1, 2 (Yudkin, pp. 66, 102, 186); Jerome of Moravia *Tractatus de musica* 1 (Cserba, p. 7); Philippe de Vitry (?) *Liber musicalium* (CS, 3:35); Walter Odington *Summa de speculatione musicae* 1.1.4, 2.1.4 (Hammond, pp. 44, 60); Aegidius de Zamora *Ars musica* 3.1 (Robert-Tissot, p. 54); Johannes de Grocheio *De musica* 61 (Rohloff, pp. 120–22); Marchetto *Lucidarium* 1.4.5, 2.10.7–8, 9.1.54–55 (Herlinger, pp. 84, 162–64, 336); Engelbert of Admont *De musica* 1.1, 2.4 (GS, 2:288, 301); *Quatuor principalia* 1.6 (CS, 4:202). Regino of Prüm, *De harmonica institutione* 10 (LeRoux, p.

53), declares that for one to be a complete musician, one must be completely instructed in arithmetic.

Johannes de Grocheio, *De musica* 61 (Rohloff, pp. 120–22), differentiates between the theoretical aspect of the present definition with the practical aspect of the definition given in 2.4.

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<sup>3</sup> Musica est de multitudine sonorum, item quantum ad modum. <sup>4</sup> Musica est vera canendi scientia facilis ad canendi perfectionem via.	<sup>3</sup> Music concerns the multitude of sounds, and equally their manner. <sup>4</sup> Music is the true science of singing and the easy way to perfection in singing.
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3. For similar definitions of music related to the multitude of sounds, see Anon. of St. Emmeram *De musica mensurata* Prologue (Yudkin, p. 66); Philippe de Vitry *Liber musicalium* (CS, 3:35); *Quatuor principalia* 1.12 (CS, 4:204); Johannes Gallicus *Ritus canendi* 1.1.2.6 (Seay 13, p. 4).

4. Cf. *Introductio musice* 1.12. This oft-quoted definition goes back at least to Augustine *Musica* 1.2.2; Petrus de Sancto Dionysio, *Tractatus de musica* 1.1.3 (Michels, p. 147), explicitly credits Augustine with this definition. Among innumerable instances of its use are those found in Cassiodorus *Institutiones* 2.5.2 (Mynors, p. 143); Isidore of Seville *Etymologiae* 3.15.1; Aurelian of Réome *Musica disciplina* 2.1 (Gushee, p. 61); *Dialogus* 1 (GS, 1:252); Roffredi *Summa musicae artis* Proemium (Seay, p. 71); Anon. 2 *Tractatus de musica* (CS, 2:484); *Summa musice* 1 (Page, pp. 142, 144); Lambertus *Tractatus de musica* (CS, 1:252); Anon. of St. Emmeram *De musica mensurata* Prologue (Yudkin, pp. 66, 70); Jerome of Moravia *Tractatus de musica* 1 (Cserba, p. 10); Philippe de Vitry *Liber musicalium* (CS, 3:35–36); Walter Odington *Summa de speculatione musicae* 2.1.5 (Hammond, p. 60); Johannes de Grocheio *De musica* 61 (Rohloff, pp. 120–22); Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, p. 507); *Quatuor principalia* 1.5, 1.6 (CS, 4:202); Johannes de Olomons *Palma choralis* 1 (Seay, p. 2); Bonaventura da Brescia *Venturina* 2.12, 27.2 (Seay, pp. 2, 87). Engelbert of Admont, *De musica* 4.39 (GS, 2:365), gives a somewhat circular definition that “to sing correctly is to sing in the proper manner and custom.”

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<sup>5</sup> Musica dividitur nam alia est mundana que versatur circa concordantiam situum sperarum planetarum ad invicem vel compagem elementorum vel varietatem temporum et sic est pars astrologie, <sup>6</sup> alia est	<sup>5</sup> Music is divided into categories, for it is either “cosmic,” which focuses on the harmony of the orbits of the planetary spheres with respect to each other or on the structure of the elements or on the diversity
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humana que versatur circa concordantiam  
 qualitatum elementarium ad invicem  
 oppositarum in composito contemporaneo vel  
 circa compositionem corporis et anime ex qua  
 resultat conveniens coniunctio partium tam  
 rationabilis quam irrationabilis et sic est  
 pars naturalis scientie, <sup>7</sup> alia est  
 instrumentalis que versatur circa instrumenta  
 armonice concordantie.

of the seasons, and in this manner it is a part  
 of astronomy; <sup>6</sup> or it is "human," which  
 focuses on the harmony of the qualities of  
 the opposing elements in a composite being  
 existing at a given time, or on the  
 composition of the body and soul, from  
 which results the harmonious conjunction of  
 the parts both rational and irrational, and  
 in this manner it is a part of natural science;  
<sup>7</sup> or it is "instrumental," which focuses on  
 instruments of harmonious concord.

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5-11 om. V  
 6 contemporanea P

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5-7. A concept derived from Boethius *Musica* 1.2 (Friedlein, pp. 187-89). Note that the "instrumental" category includes the human voice. For similar categorizations of music, see Aurelian of Réome *Musica disciplina* 3.1 (Gushee, p. 64); Roffredi *Summa musicae artis* Proemium (Seay, p. 71); Anon. of St. Emmeram *De musica mensurata* Prologue (Yudkin, p. 66); Aegidius de Zamora *Ars musica* 4.2 (Robert-Tissot, p. 56); Engelbert of Admont *De musica* 1.2 (GS, 2:288); *Quatuor principalia* 1.5 (CS, 4:202). Johannes de Grocheio, *De musica* 65-67 (Rohloff, p. 122), disagrees with this categorization, citing both Boethius and Johannes de Garlandia. *Introductio musice* 1.15-19 divides music into *plana*, *mensuralis*, and *instrumentalis*.

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<sup>8</sup>Instrumentorum quedam procedunt a pulsu,  
 ut est in cimbali bene sonantibus, quedam a  
 contactu in chordis, ut in lyra et cithara,  
 quedam vero a flatu, ut in fistulis. <sup>9</sup>Hanc  
 divisionem ponit Boetius supra in primo

<sup>8</sup>Among instruments some produce their  
 sounds by percussion, like good-sounding  
 bells; others by having their strings  
 plucked, like the lyre and the cithara; yet  
 others by being blown, like the pipes. <sup>9</sup>This

libro et capitulo proemii.

categorization is made by Boethius above in  
the preliminary chapter of his first book.

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8. There have been numerous categorizations of *musica instrumentalis*, many of these based on three mechanisms, as described in *De plana musica*: percussion, plucking, and blowing. Variations among categorizations arise depending on whether the human voice is to be considered a separate category, or as one of the wind instruments: cf. Cassiodorus *Institutiones* 2.5.6 (Mynors, p. 144); Isidore of Seville *Etymologiae* 3.19–22; Aurelian of Réome *Musica disciplina* 5.1–2, 6.2 (Gushee, pp. 68, 70); Regino of Prüm *De harmonica institutione* 7 (LeRoux, p. 44); *Summa musice* 4 (Page, pp. 150, 151); Lambertus *Tractatus de musica* (CS, 1:253); Anon. of St. Emmeram *De musica mensurata* Prologue (Yudkin, p. 66); Jerome of Moravia *Tractatus de musica* 7 (Cserba, p. 26); Marchetto *Lucidarium* 1.12.2, 1.13.2–6 (Herlinger, pp. 96, 98–100); *Quatuor principalia* 1.6, 1.14, 1.15 (CS, 4:202, 205). John, *De musica* 4.1–2 (Smits van Waesberghe, p. 57), makes a distinction between “natural” and “artificial” music. Johannes de Grocheio, *De musica* 133–34 (Rohloff, p. 134), declares that all sound-producing instruments are ultimately percussion instruments, as only air set into motion by impact can cause sound.

9. Boethius *Musica* 1.2 (Friedlein, pp. 187–89).

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<sup>10</sup>De instrumentis igitur musicis  
procedentibus a contactu accipiat solum  
unum videlicet monochordum quia de hoc est  
principale intentum.

<sup>10</sup>From the group of instruments that produce  
their musical sounds by being plucked, let  
just one be chosen, namely the monochord;  
for to discuss it is the principal intention [of  
this treatise].

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10. In the Middle Ages the monochord was used as a practical aid to singers, to explain intervals speculatively, and as a standard for the construction of other instruments (Adkins, “Theory and Practice of the Monochord,” p. 192), e.g.: *Dialogus* 1 (GS, 1:252–253); Guido *Micrologus* 1 (Smits van Waesberghe, pp. 91–92); Guido *Aliae regulae* (GS, 2:36); Theoger of Metz *Musica* (GS, 2:186); John *De musica* 1.1 (Smits van Waesberghe, p. 49); Aegidius de Zamora *Ars musica* 9.8 (Robert-Tissot, p. 78). It was the pedagogical instrument of choice: John *De musica* 7.5–7 (Smits van Waesberghe, p. 65).

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<sup>11</sup>Unde monochordum est quoddam  
instrumentum trium palmorum in

<sup>11</sup>The monochord is a certain instrument of



longitudine, in latitudine vero unius palmi	three palms in length, of one palm in width
vel circa habens unicam cordam sub qua	or thereabouts, having a single string by
proportionantur omnes armonie sumpte.	which all harmonies in use are apportioned.

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11. *Palma* is usually a feminine noun: in the forms used in *De plana musica* (*palmorum, palmi*), it is used as a masculine noun.

Reimer, ed., *De mensurabili musica*, part 1, pp. 6–7, has pointed out a parallel passage from the unedited *Tractatus de tonis a fratre guidone monacho monasterii sancti dionysii in francia compilatus* (London, British Museum, Harley 281, fols. 58v–96v [14th century]) that cites Johannes de Garlandia. For other descriptions of the monochord as a one-stringed instrument, see John *De musica* 7.2–4 (Smits van Waesberghe, p. 65); Aegidius de Zamora *Ars musica* 9.1 (Robert-Tissot, p. 78); Johannes Gallicus *Ritus canendi* 1.2.6.3–4 (Seay, 13, p. 33); Bonaventura da Brescia *Venturina* 27.4 (Seay, p. 87). Theoger of Metz, *Musica* (GS, 2:183), describes the monochord as an eight-stringed instrument. Engelbert of Admont, *De musica* 3.12 (GS, 2:327), defines the monochord as the series of notes spanning grave A to superacute aa.

3. <sup>1</sup> De concordantia et dissonantia	3. <sup>1</sup> Concerning concord and dissonance
<sup>2</sup> Concordantia enim est acuti soni	<sup>2</sup> A concord is a mixture of high and
gravisque mixtura suaviter uniformiterque	low sounds falling sweetly and uniformly
auribus accidens. <sup>3</sup> Dissonantia vero est	upon the ears. <sup>3</sup> A dissonance is a harsh and
duorum sonorum sibimetque permixtorum ad	unpleasant percussion of two intermingled
invicem veniens aspera atque iniocunda	sounds coming [upon the ears].
percussio.	

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P 85v.

1 De concordantia et dissonantia om. P

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2–3. These definitions are taken from Boethius *Musica* 1.8 (Friedlein, p. 195). The following also adopt Boethius's definitions: Regino of Prüm *De harmonica institutione* 10 (LeRoux, p. 47); Wolf Anon. 1 *Tractatus cuiusdam monachi de musica* (Wolf, p. 212); Walter Odington *Summa de speculatione musicae* 2.3.11–12 (Hammond, p. 63); Marchetto *Lucidarium* 5.1.2, 5.2.2 (Herlinger, pp. 196, 200); Frater Petrus dictus Palma ociosa *Compendium de*

*discantu mensurabili* (Wolf, p. 518); Anon. 1 *De musica antiqua et nova* (CS, 3:355); *Quatuor principalia* 1.12 (CS, 4:204); *Quatuor principalia* 4.16 (CS, 4:279); Ugolino of Orvieto *Declaratio* 1.10.4 (Seay, p. 29); Ramos de Pareia *Musica practica* 2.1.1 (Wolf, p. 63); Gaffurius *Apologia* (f. Aviiir); Rossetti *Libellus* 3.6 (Seay, p. 9). Frater Petrus dictus Palma ociosa, *Compendium de discantu mensurabili* (Wolf, p. 508), attributes the Boethian definition of *concordantia* (*consonantia* in his treatise) to Gregory.

For other definitions of concord and discord, see, e.g., Isidore of Seville *Etymologiae* 3.20.2; Aurelian of Réome *Musica disciplina* 5.4, 6.8 (Gushee, pp. 70, 71); *Musica enchiriadis* 9, 10, 13 (Schmid, pp. 20, 23, 37); *Scolica enchiriadis* 2 (Schmid, pp. 90–106); Guido *Micrologus* 6.12 (Smits van Waesberghe, p. 116); *Ad organum faciendum* 1 (Huff, p. 43 [Zaminer, p. 46]); *Item de organo* (Huff, p. 61 [Eggebrecht, p. 159]); Theoger of Metz *Musica* (GS, 2:188); John *De musica* 8.2–3 (Smits van Waesberghe, pp. 67–68); Anon. 2 *Tractatus de musica* (CS, 2:486); *Summa musice* 11 (Page, pp. 166–67, 168); Johannes de Garlandia *De mensurabili musica* 9.3–4 (Reimer 1, p. 67); Lambertus *Tractatus de musica* (CS, 1:260); Anon. of St. Emmeram *De musica mensurata* 4 (Yudkin, p. 258); Franco of Cologne *Ars cantus mensurabilis* 11.3–4 (Reaney and Gilles, p. 64); *De musica mensurabili positio* (CS, 1:104–5); Anon. 1 *Tractatus de consonantiis musicalibus* (CS, 1:297–98); Aegidius de Zamora *Ars musica* 10.1–5 (Robert-Tissot, p. 82); Johannes de Grocheio *De musica* 21 (Rohloff, p. 114); Marchetto *Lucidarium* 5.2.3–9, 5.3.2, 5.4.2–4, 5.5.2–3 (Herlinger, pp. 200–6); Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, pp. 517–18); *Quatuor principalia* 1.12, 4.16 (CS, 4:204, 279); Prosdocimo *Contrapunctus* 3.3 (Herlinger, p. 38); Rossetti *Libellus* 3.5 (Seay, p. 9).

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4. <sup>1</sup> De tribus generibus melorum	4. <sup>1</sup> Concerning the three genera of melodies
<sup>2</sup> Unde concordantia monochordi	<sup>2</sup> In the monochord, the concord
procedit secundum tria genera melorum,	proceeds according to three genera of
scilicet per diatonicum, chromaticum et	melodies, namely the diatonic, chromatic,
enarmonicum. <sup>3</sup> Diatonicum est quod procedit	and enharmonic. <sup>3</sup> The diatonic genus is that
per tonum et tonum et semitonium.	which proceeds by tone, tone, semitone;

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P 85v.

1 De tribus generibus melorum om. P

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2–6. These definitions of the three genera of melody paraphrase parts of Boethius *Musica* 1.21 (Friedlein, pp. 212–13). For similar discussions on the three genera, see, e.g., Martianus Capella *De nuptiis philologiae et mercurii* 9 (Dick, p. 507); Jerome of Moravia *Tractatus de musica* 15 (Cserba, p. 67); Marchetto *Lucidarium* 1.16.3 (Herlinger, p. 104); Berkeley Ms 4.5 (Ellsworth, pp. 226–30). Johannes de Grocheio, *De musica* 68–70 (Rohloff, pp. 122–24), however, declares that he does not understand this division.

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<sup>4</sup>Chromaticum est quod procedit per  
emitonium et emitonium et tria emitonia.

<sup>4</sup>the chromatic genus is that which proceeds  
by hemitone, hemitone, three hemitones;

<sup>5</sup>Enarmonicum est quod procedit per diesim et  
diesim et ditonum. <sup>6</sup>Chromaticum dicitur  
molle; enarmonicum dicitur durum;  
diatonicum dicitur comune. <sup>7</sup>De his tribus  
supra Boetius quarto atque quinto libro  
diffusius est prosequutus.

<sup>5</sup>the enharmonic genus is that which  
proceeds by diesis, diesis, ditone. <sup>6</sup>The  
chromatic genus is called soft, the  
enharmonic is called hard, and the diatonic  
is called common. <sup>7</sup>These three genera were  
pursued more extensively in the fourth and  
fifth books of Boethius.

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<sup>5</sup> Enarmonium P  
<sup>7</sup> prosequutus P hiis P

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6. For similar distinctions between the genera, see, e.g., John *De musica* 4.10 (Smits van Waesberghe, p. 58); *Quatuor principalia* 2.15 (CS, 4:214); *Berkeley Ms* 4.5 (Ellsworth, pp. 226–30).

7. In *Musica* 4.5–13 (Friedlein, pp. 314–37) Boethius describes the division of the tetrachords in the three genera based on Aristidean numbers (Adkins, “Theory and Practice of the Monochord,” p. 96); in *Musica* 5.16–19 (Friedlein, pp. 365–71) he describes how Aristoxenus, Archytas, and Ptolemy divided the tetrachord according to the three genera.

4. In using the term *emitonium* (hemitonium) rather than *semitonium*, *De plana musica* may be referring to “half a tone,” as opposed to an “imperfect tone”; cf. later statements on the semitone: in 6.7 the “major” and “minor” semitones are differentiated; in 10.15, 18 mention is made of the “major semitone” in relation to accidentals (*synemmena*); in 16.53 the diapason is said to constitute six whole tones, one of which is made up of two semitones; in 16.74 the semitone is defined as an “imperfect whole tone.”

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<sup>8</sup>De diatonico vero hic specialiter est  
aliquod dicendum aliis duobus obmissis.

<sup>8</sup>Some remarks particular to the diatonic  
genus will be made, putting aside the other

<sup>9</sup>Sed quia diffinitiones proportionum

two genera. <sup>9</sup>But because we cannot grasp or

diatonici generis non possumus apprehendere aut intellegere sine cognitione numerorum, ideo primo tractandum est de numero et eius partibus et speciebus.	understand the definitions of the ratios of the diatonic genus without a knowledge of numbers, we must first deal with numbers and their parts and species.
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8. Not surprisingly, medieval writers often expressed a preference for the diatonic genus over the other two genera, which by their time had already fallen out of use; cf. Martianus Capella *De nuptiis philologiae et mercurii* 9 (Dick, p. 511); Jerome of Moravia *Tractatus de musica* 9, 23 (Cserba, pp. 45, 170–71). John, *De musica* 4.10 (Smits van Waesberghe, p. 58), explains that the enharmonic genus is “too difficult” and the chromatic “too soft,” while *Quatuor principalia* 2.15 (CS, 4:214) explains that the diatonic genus is “moderate” between the extremes of softness of the chromatic and the hardness of the enharmonic.

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5. <sup>1</sup>De numero

5. <sup>1</sup>Concerning number

<sup>2</sup> Numerus est collectio unitatum agregata numerorum alius par, ut duo, alius impar, ut tria. <sup>3</sup> Item numerorum alius absolutus, ut ii, iii, iiii, v et cetera, alius relatus, ut duplum, triplum, quadruplum, sesquialter, sesquiquartus, sesquiquintus et sic procedendo in aliis pluribus.	<sup>2</sup> Number is a collection made up of unities. Numbers are either even, like 2, or odd, like 3. <sup>3</sup> Moreover, numbers are either absolute, like 2, 3, 4, 5, and so on, or relative, like duple, triple, quadruple, sesquialter, sesquiquartal, sesquiquintal, and so forth (proceeding thus to many other relations).
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P 85v; V 1r.

1 om. V

2 ... huius diffinicionis videndum est quid sit numerus et de partibus eius ante Numerus V ad  
invicem post unitatum V agregata . . . 3 om. V

3 om. V

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2. The definition comes from Boethius *Arithmetica* 1.3 (Friedlein, p. 13). For other definitions see Martianus Capella *De nuptiis philologiae et mercurii* 7 (Dick, p. 376);

Cassiodorus *Institutiones* 2.4.2 (Mynors, p. 133); Anon. 4 *De mensuris et discantu* 4.1 (Reckow, p. 64); Jerome of Moravia *Tractatus de musica* 16 (Cserba, pp. 77).

3. This list of related numbers (i.e., ratios) rather surprisingly omits the sesquitercial ratio, which is the numerical basis of the diatessaron (see 6.11). The duplex (octave), sesquialter (diapente), sesquitercial (diatessaron), and sesquioctave (whole tone) ratios are the elementary ratios of the Pythagorean tuning system: cf. Theoger of Metz *Musica* (GS, 2:185); Marchetto *Lucidarium* 4.2.2 (Herlinger, p. 182); Engelbert of Admont *De musica* 2.9 (GS, 2:305); Prosdocimo *De modo monacordum dividendi* 2.1 (Herlinger, p. 68).

For modern studies on issues of Greek mathematics, see Sir Thomas Heath, *A History of Greek Mathematics*, 2 vols. (Oxford: Clarendon, 1921), vol. 1, pp. 97–112; Richard L. Crocker, "Aristoxenus and Greek Mathematics," in *Aspects of Medieval and Renaissance Music: A Birthday Offering to Gustave Reese*, ed. Jan LaRue (New York: Norton, 1966; reprint ed., New York: Pendragon, 1978), pp. 96–110.

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<sup>4</sup>Item numerorum alius equalis, ut vi ad vi  
vel vii ad vii, alius inequalis cuius quinque  
sunt species, videlicet multiplex,  
superparticulare, superpartiens, multiplex  
superparticulare, multiplex superpartiens.

<sup>5</sup>Hec ipsa divisio ponitur a Boetio supra  
primo libro capitulo tertio.

<sup>4</sup>Among numbers some are either equal, like  
6:6 or 7:7, or unequal. There are five species  
of inequalities, namely the multiplex,  
superparticular, superpartient, multiplex  
superparticular, and multiplex

superpartient. <sup>5</sup>This categorization is laid  
out above by Boethius in the third chapter  
of the first book.

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4 et sunt numeri 5 genera scilicet *pro* Item . . . videlicet *V* vi ad vi vel vii ad vii *P*  
superparticularis, superpartiens, multiplex superparticularis *V*  
5 *om. V*

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4. In this chapter only relative numbers (i. e., ratios) are of concern.

5. Boethius *Musica* 1.4 (Friedlein, pp. 191–92). As with a previous reference to Boethius (*De plana musica* 2.9), *De plana musica* is evidently considering as a single chapter what in Friedlein's edition are separately the *proemium* and chapter 1.

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<sup>6</sup> Multiplex genus inequalitatis est	<sup>6</sup> The multiplex genus of inequality
quando aliquis numerus continet in se alium	occurs when any number subsumes another
numerus precise multociens. <sup>7</sup> Et sunt infinite	number in a precise multiple. <sup>7</sup> It has an
eius species, scilicet duplum, triplum,	infinite number of species, such as the duple,
quadruplum et cetera.	triple, quadruple, and so on.

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6 Hic declarat primum genus numeri *ante* Multiplex V 1, 6, 4, 2, 3, 2 *in marg.* V genus  
inequalitatis *om.* V in se *om.* V numerum precise *om.* V  
7 infinite sunt V

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6–38. For similar systematic discussions on the ratios, see Martianus Capella *De nuptiis philologiae et mercurii* 7 (Dick, pp. 388–92); Boethius *Arithmetica* 1.23–24, 28–29, 31 (Friedlein, pp. 46–51, 57–63, 65–66), Boethius *Musica* 1.4 (Friedlein, pp. 191–92); Cassiodorus *Institutiones* 2.4.5 (Mynors, pp. 135–38); Isidore of Seville *Etymologiae* 3.6.3–13; Theoger of Metz *Musica* (GS, 2:185–86); Roffredi *Summa musicae artis* 1 (Seay, pp. 71–72); Anon. 4 *De mensuris et discantu* 4.1 (Reckow, pp. 65–68); Marchetto *Lucidarium* 7.1.3–33 (Herlinger, pp. 256–66); Prosdocimo *Brevis summula proportionum* 3–12 (Herlinger, pp. 48–62).

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<sup>8</sup> Duplum est quando aliquis numerus continet	<sup>8</sup> The duple occurs when any number subsumes
alium in se bis, ut duo continet unum in se bis	another number twice, as 2 subsumes 1 twice,
et vocatur proportio duplicitatis. <sup>9</sup> Triplum	and is called duple ratio. <sup>9</sup> The triple occurs
est quando aliquis numerus continet alium	when any number subsumes another number
ter, ut ternarius unitatem ter continet et	thrice, as 3 subsumes unity thrice, and is
vocatur proportio triplicitatis.	called triple ratio. <sup>10</sup> The quadruple occurs
<sup>10</sup> Quadruplum est quando aliquis numerus	when any number subsumes another number
continet in se alium quater, ut quatuor ad	four times, like 4:1, and is called quadruple
unitatem et vocatur proportio quadrupli.	ratio.

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8 numerus continet *om.* V alium bis *pro* alium in se bis V ut binarius ad unitatem et  
quaternarius ad binarium et V 2'1 4' ad 2 *in marg.* V Proportio duplicitatis est  
habitus duorum numerorum ad inuicem *post* duplicitatis V

- 9 ad *post* ternarius *V* et senarius ad binarium *pro* ter continet et vocatur proportio triplicitatis *V* 3 1 | 6 2 in *marg. V*  
 10 in *se om. V* quaterni *pro* quater *V* et sic se habet quaternarius ad unitatem et octonarius ad binarium et sic de aliis speciebus in infinitum *pro* ut . . . q<sup>u</sup>adrupli *V* 4' 1 | 8 2 in *marg. V* 1 2, 8 9 10 in *marg. V*

<sup>11</sup> Superparticulare est quando	<sup>11</sup> The superparticular occurs when
aliquis numerus continet alium numerum	any number subsumes another number once
semel et insuper aliquam eius partem. <sup>12</sup> Et	and in addition any one of its parts. <sup>12</sup> It has
sunt infinite eius species, scilicet	an infinite number of species, such as the
sesquialterum, sesquitertium, sesquiquartum	sesquialter, sesquitertial, sesquiquartal, and
et cetera. <sup>13</sup> Sesquialterum est quando aliquis	so on. <sup>13</sup> The sesquialter occurs when any
numerus continet in se alium numerum et eius	number subsumes another number and in
medietatem, sic se habet ternarius ad	addition a half of it, like 3:2. <sup>14</sup> The
binarium. <sup>14</sup> Sesquitertium est quando aliquis	sesquitertial occurs when any number
numerus continet in se alium solum et insuper	subsumes another number once and in
terciam eius partem, ut quaternarius ad	addition a third part of it, like 4:3. <sup>15</sup> The
ternarium. <sup>15</sup> Sesquiquartum est quando	sesquiquartal occurs when any number
aliquis numerus continet in se alium semel et	subsumes another number once and in
eius quartam partem, ut quinarium ad	addition a fourth part of it, like 5:4; and so
quaternarium et sic in aliis numeris	forth through larger numbers.
ascendendo.	

- 11 Superparticularis *V* est ille numerus qui continet alium totum et *V* quando *om. P* perfectem *pro* eius partem *V*  
 12 illius infinite sunt species *pro* sunt infinite eius species *V* et cetera *om. V*  
 13 in *se om. V* alium et insuper mediam partem ut ternarius *V* 3.2 | 6.4 in *marg. V* et senarius ad quaternarium et cetera *post* binarium *V*  
 14 aliquis *V* in *se om. V* solum *om. V* eius *om. V* 4.3 | 8.6 in *marg. V* se habet *post* quaternarius *V* et octonarius ad senarium *post* ternarium *V*

15 in se *om. V* semel *om. V* insuper *pro eius V* 5.3 | 10.8 in *marg. V* ternarium *pro*  
 quaternarium *V* decem ad octo *pro sic in aliis numeris ascendendo V* 13 11.10.9.8.7  
 in *marg. V*

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<sup>16</sup>Superpartiens est quando aliquis  
 numerus continet alium numerum semel et  
 insuper multas partes ipsius. <sup>17</sup>Huius  
 infinite sunt species, scilicet superbipartiens,  
 supertripartiens, superquadripartiens et  
 cetera. <sup>18</sup>Superbipartiens est quando aliquis  
 numerus continet alium numerum semel et  
 insuper duas partes illius, ut se habet  
 quinarium ad ternarium et vocatur  
 superbipartiens tertias. <sup>19</sup>Supertripartiens  
 est quando aliquis numerus continet in se  
 alium numerum semel et insuper tres partes  
 illius, ut septenarius ad quaternarium et  
 vocatur supertripartiens quartas.  
<sup>20</sup>Superquadripartiens est quando aliquis  
 numerus continet in se alium semel et insuper  
 quatuor partes illius, ut novenarius ad  
 quinarium et vocatur superquadripartiens  
 quintas.

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<sup>16</sup>The superpartient occurs when any  
 number subsumes another number once and in  
 addition more than one of its parts. <sup>17</sup>It has  
 an infinite number of species, such as the  
 superbipartient, supertripartient,  
 superquadripartient, and so on. <sup>18</sup>The  
 superbipartient occurs when any number  
 subsumes another number once and in  
 addition two of its parts, like 5:3, called  
 superbipartient by thirds. <sup>19</sup>The  
 supertripartient occurs when any number  
 subsumes another number once and in  
 addition three of its parts, like 7:4, called  
 supertripartient by fourths. <sup>20</sup>The  
 superquadripartient occurs when any number  
 subsumes another number once and in  
 addition four of its parts, like 9:5, called  
 superquadripartient by fifths.

16 alium numerum semel *om. V* alias partes *pro partes ipsius V*

17 Et ante Huius *V*

18 aliquis numerus *om. V* 5.3 | 7.5 in *marg. V* numerum semel *om. V* illius *om. V* se  
 habet *om. V* vel superbitercias vel ut septenarius ad quinarium et vocatur  
 superbiparciens quintas vel superbiquintas *post tertias V*



- 19 in se *om. V* 7.4 | 8.5 *in marg. V* numerum semel *om. V* illius *om. V* octonarius ad  
 quinarium et vocatur supertriquartas prima supertriquintas secunda et cetera *pro*  
 vocatur supertripartiens quartas *V*
- 20 in se *om. V* semel *om. V* illius *om. V* 9.5 | 11.7 *in marg. V* superquadriquantas et  
 cetera et sic de aliis speciebus in infinitum *pro* superquadripartiens quintas *V* 13 2 3  
 4 5 *in marg. V*

<sup>21</sup>Multiplex superparticulare est  
 quando aliquis numerus continet alium  
 multociens et insuper aliquam eius partem.  
<sup>22</sup>Huius species similiter sunt infinite,  
 scilicet duplum sesquialterum, duplum  
 sesquitertium, duplum sesquiquartum et  
 cetera, et he ex parte duplicitatis. <sup>23</sup>A parte  
 vero triplicitatis sunt triplum sesquialterum,  
 triplum sesquitertium, triplum  
 sesquiquartum. <sup>24</sup>Duplum sesquialterum est  
 quando aliquis numerus continet alium bis et  
 insuper medietatem illius, ut se habet  
 quinarium ad binarium. <sup>25</sup>Duplum  
 sesquitertium est quando aliquis numerus  
 continet alium bis et insuper eius partem  
 tertiam, ut se habet septenarius ad  
 ternarium. <sup>26</sup>Duplum sesquiquartum est  
 quando aliquis numerus continet alium et  
 insuper quartam partem illius, ut novenarius  
 ad quaternarium. <sup>27</sup>Triplum sesquialterum  
 est quando aliquis numerus continet alium et

<sup>21</sup>The multiplex superparticular  
 occurs when any number subsumes another  
 number more than once and in addition any  
 one of its parts. <sup>22</sup>It also has an infinite  
 number of species, such as the duple  
 sesquialter, duple sesquitertial, duple  
 sesquiquartal, and so on. In the foregoing  
 species, the larger number subsumes the  
 smaller doubly. <sup>23</sup>The species in which the  
 larger number subsumes the smaller triply  
 are the triple sesquialter, triple  
 sesquitertial, and triple sesquiquartal.  
<sup>24</sup>The duple sesquialter occurs when any  
 number subsumes another number twice and in  
 addition a half of it, like 5:2. <sup>25</sup>The duple  
 sesquitertial occurs when any number  
 subsumes another number twice and in  
 addition a third part of it, like 7:3. <sup>26</sup>The  
 duple sesquiquartal occurs when any number  
 subsumes another number and in addition a  
 fourth part of it, like 9:4. <sup>27</sup>The triple

<p>insuper mediam eius partem, ut          quatuordenarius ad quaternarium. <sup>28</sup>Triplum          sesquitertium est quando aliquis numerus          continet alium ter et insuper tertiam eius          partem, ut denarius ad ternarium. <sup>29</sup>Triplum          sesquiquartum est quando aliquis numerus          continet alium ter et insuper eius quartam          partem, ut tredenarius ad quaternarium.</p>	<p>sesquialter occurs when any number subsumes          another number and in addition a half of it,          like 14:4. <sup>28</sup>The triple sesquitertial occurs          when any number subsumes another number          thrice and in addition a third part of it, like          10:3. <sup>29</sup>The triple sesquiquartal occurs when          any number subsumes another number thrice          and in addition a fourth part of it, like 13:4.</p>
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- 21 superparticularis *V* eius *om. V*  
 22 Et infinite sunt species *pro* Huius species similiter sunt infinite *V* Hic a *pro* et he ex *V*  
     ut sunt v ad ii, ut sunt vii ad iii, ut sunt ix ad iiii *infra P*  
 23 Et a parte *pro* A parte vero *V* sunt *V* et cetera *post* sesquiquartum *V*  
 24 sexquialtercium *pro* sesquialterum *V* mediam partem *pro* medietatem illius *V* se habet  
     *om. V* et denarius ad quaternarium et cetera *post* binarium *V* 5.2 | 10.4 *in marg. V*  
     v':ii *in marg. P*  
 25 eius partem . . . ad ternarium *om. V* vii':iii *in marg. P*  
 26 Duplum sesquiquartum . . . et insuper *om. V* quatuor partem *pro* quartam partem illius *V*  
     ix':iiii *in marg. P*  
 27 9.4 | 18.8 *in marg. V* eius *om. V* septenarius ad binarium vel *post* ut *V* 7.2 | 14.4 *in*  
     *marg. V* et cetera *post* quaternarium *V* xiii':iiii *in marg. P*  
 28 eius *om. V* et vingenarius ad senarium et cetera et sic de aliis speciebus in in infinitum  
     *post* ternarium *V* 10.3 | 20.6 *in marg. V* 29, 16 8 9 19 *in marg. V* x':iii *in marg. P*  
 29 *om. V* xiii':iiii *in marg. P*

25. Saut du même au même in *V* on et *insuper*.

<p><sup>30</sup>Multiplex superpartiens est quando          aliquis numerus continet alium multotiens et          insuper multas partes illius. <sup>31</sup>Huius sunt          species infinite, scilicet duplum          superbipartiens, duplum supertripartiens,          duplum superquadripartiensi et he a parte</p>	<p><sup>30</sup>The multiplex superpartient occurs          when any number subsumes another number          more than once and in addition more than          one of its parts. <sup>31</sup>It has an infinite number of          species, such as the duple superbipartient,          duple supertripartient, duple</p>
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duplicatatis. <sup>32</sup>A parte vero triplicitatis sunt triplum superbipartiens, triplum supertripartiens, triplum superquadripartiens. <sup>33</sup>Duplum superbipartiens est quando aliquis numerus continet alium bis in se et insuper duas partes illius, ut octonarius ad ternarium et vocatur duplum superbipartiens ad tertias.

<sup>34</sup>Duplum supertripartiens est quando aliquis numerus continet alium bis et eius tres partes, ut undenarius ad quaternarium et vocatur duplum supertripartiens ad quartas.

<sup>35</sup>Duplum superquadripartiens est quando aliquis numerus continet alium bis et insuper quatuor partes illius, ut quatuordenarius ad quinarium et vocatur duplum

superquadripartiens quintas. <sup>36</sup>Triplum superbipartiens est quando aliquis numerus continet in se alium ter et insuper duas partes illius ut undenarius ad ternarium et vocatur triplum superbipartiens tercias. <sup>37</sup>Triplum supertripartiens est quando aliquis numerus continet alium in se ter et insuper tres partes illius, ut quindenarius ad quaternarium et vocatur triplum supertripartiens quartas.

<sup>38</sup>Triplum superquadripartiens est quando

superquadripartient. In the foregoing species, the larger number subsumes the smaller doubly. <sup>32</sup>The species in which the larger number subsumes the smaller triply are the triple superbipartient, triple supertripartient, triple superquadripartient.

<sup>33</sup>The duple superbipartient occurs when any number subsumes another number twice and in addition two of its parts, like 8:3, called duple superbipartient by thirds. <sup>34</sup>The duple supertripartient occurs when any number subsumes another number twice and in addition three of its parts, like 11:4, called duple supertripartient by fourths. <sup>35</sup>The duple superquadripartient occurs when any number subsumes another number twice and in addition four of its parts, like 14:5, called duple superquadripartient by fifths. <sup>36</sup>The triple superbipartiens occurs when any number subsumes another number thrice and in addition two of its parts, like 11:3, called triple superbipartient by thirds. <sup>37</sup>The triple supertripartient occurs when any number subsumes another number thrice and in addition three of its parts, like 15:4, called triple supertripartient by fourths.

aliquis numerus continet alium ter et insuper  
quatuor partes illius, ut decemnovenarius ad  
quinarium et vocatur triplum  
superquadrupartiens quintas et hec  
sufficiant.

<sup>38</sup>The triple superquadrupartient occurs  
when any number subsumes another number  
thrice and in addition four of its parts, like  
19:5, called triple superquadrupartient by  
fifths. And let these words suffice.

- 
- 30 superartiens *P* est *om. P* alias partes *pro* partes illius *V*  
 31 Et infinite sunt species *pro* Huius sunt species infinite *V* et cetera *post*  
     superquadrupartiens *V* *he* est a *V*  
 32 vero *om. V* sunt *om. V* et cetera *post* superquadrupartiens *V*  
 33 8.3 | 16.6 *in marg. V* contine[[i]]t *V* in se *om. V* illius *om. V* superbipartiens tertias  
     ut sex denarius ad senarium et vocatur superbiparciens sextas et cetera *pro* duplum  
     superbipartiens ad tertias *V* viii':iii *in marg. P* superbiparciens [ad *sup. lin.*]  
     tercias *P*  
 34 insuper *pro* eius *V* duas *pro* tres *P* 11.4 | 22.8 *in marg. V* denarius *pro* undenarius *P*  
     et cetera *post* quaternarium *V* vocatur duplum supertriparciens quartas *V* et cetera  
     *post* quartas *V* x':iiii *in marg. P*  
 35 illius *om. V* quaternarius *pro* quatuordenarius *P* quindenarius *pro* quatuordenarius *V*  
     et cetera *post* quintas *V* 15.5 *in marg. V*  
 36 in se *om. V* illius *om. V* denarius *pro* undenarius *P* 11.3 *in marg. V* x':iii *in marg. P*  
 37 nus *pro* numerus *P* in se *om. V* illius *om. V* 15.4 *in marg. V* et cetera *post*  
     quaternarium *V* et vocatur . . . quartas *om. V* xv':iiii *in marg. P*  
 38 Triplum superquatriparciens est *V* illius *om. V* decem et octo ad quinque *pro*  
     decemnovenarius ad quinarium *P* 19.[[1]]5 *in marg. V* vocatur triplum superq[ua  
     *sup. lin.*]triparciens quintas *V* et cetera *post* quintas *V* ista *pro* hec *V* xviii':v *in*  
     *marg. P*
- 

6. <sup>1</sup>De speciebus musice  
et proportionibus musicis

<sup>2</sup>Nunc igitur de tercio genere musice,  
scilicet de instrumentali tractandum est.  
<sup>3</sup>Unde musica instrumentalis dicitur quicquid  
concurrit per aliqua instrumenta, ut viella,  
cithara et monochordo et ceteris. <sup>4</sup>De  
monochordo autem est principalis intentio de  
quo cuius forme sit instrumentum superius iam

6. <sup>1</sup>Concerning the species of music  
and musical ratios

<sup>2</sup>Now the third genus of music, that  
is to say, the instrumental, will be dealt  
with. <sup>3</sup>Thus instrumental music is said to be  
whatever occurs by means of any instrument,  
such as the vielle, cithara, monochord, and  
others. <sup>4</sup>The principal intention is to deal  
with the monochord, whose construction as

est dictum.

an instrument was spoken of just above.

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*P* 87r; *V* 2v; *Vb* 17ra.

1 *om.* *V* *Vb*

2 Musice enim sunt tria genera, scilicet mundanum, humanum et instrumentale. De duobus primis nichil ad presens, sed de instrumentali dicendum est *V* Musice tria sunt genera: mundanum, humanum et instrumentale[[m]]. De instrumentali ad presens est intentio *Vb*

3 Instrumentale *pro* Unde musica instrumentalis *P* esse *post* dicitur *V* contingit *pro* concurrat *Vb* in monacordo, cithara et cetera *pro* viella, cithara et monochordo et ceteris *V* chitara, viella, monochordum *pro* viella, cithara et monochordo et ceteris *Vb*

4 De omnibus ultimis nihil ad presens sed de monacordo solum. Unde monacordum est instrumentum habens unam cordam *V* De quo tantum ad presens est intentio. Unde monochordum est instrumentum habens unam cordam *Vb*

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1. In this chapter in general, *V* and *Vb* agree more often with each other than with *P*: cf. 6.2, 4, 5-6, 8, 9. From 6.12-20 *V* and *Vb* omit *in sonis* and *in numeris*; they describe the semiditone before the ditone (cf. 6.12-14), and use Arabic numerals while *P* uses Roman, cf. 6.13ff.

2. Both *V* and *Vb* outline the three genera of melody which *P* has already discussed in detail in 2.5-9.

4. *V* and *Vb* describe the monochord briefly, while *P* makes reference to an earlier description in 2.11. All three sources state that they intend to deal with only the monochord as an instrument.

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<sup>5</sup>Cuius tria sunt melorum genera per quod fit, scilicet chromaticum, enarmonicum et diatonicum quod concurrat per tonum et tonum et semitonium. <sup>6</sup>Et de isto tertio solum intendimus.

<sup>5</sup>There are three genera through which it produces its melodies, namely the chromatic, enharmonic, and diatonic, which proceeds through whole tone, whole tone, semitone. <sup>6</sup>We intend to discuss only this third genus.

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5-6 et eius concordancia fit per tria genera melorum, scilicet per diatonicum, cromanticum, enarmanicum. De duobus ultimis nichil ad presens sed de diatonico solum diffinitur

enim sic: diatonicum est quicquid concurrit per duos tonos et semitonium *V* et concordantia eius fit per tria genera modorum, scilicet per diatonicum, cromanicum et enarmomicum. Sed de diatonico hic intendimus. Unde diatonium est quicquid concurrit per duos tonos et semitonium *Vb*

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5. Cf. Boethius *Musica* 1.21 (Friedlein, p. 212).

<sup>7</sup> Sciendum quod diatonici generis sunt	<sup>7</sup> It must be known that there are thirteen
tredecim species, videlicet unisonus,	species of the diatonic genus, namely unison,
diapason, diapente, diatessaron, tonus,	diapason, diapente, diatessaron, whole
semitonium minus, semitonium maius,	tone, minor semitone, major semitone, ditone,
ditonus, semiditonus, tonus cum diapente,	semitone, whole tone plus diapente,
semitonium cum diapente, semiditonus cum	semitone plus diapente, semiditone plus
diapente, ditonus cum diapente, tritonus.	diapente, ditone plus diapente, and tritone.

7 Et sunt eius species tredecim *Vb* et eius *pro* Sciendum quod diatonici generis *V* scilicet *pro* videlicet *V* semitonium [minus, semitonium *in marg.*] maius *P* semitonus *pro* semitonium minus, semitonium maius *V* semitonium cum dyapente, tonus cum dyapente *pro* tonus cum diapente, semitonium cum diapente *V* semiditonus cum diapente *om. P*

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7–20. Cf. 16.3; *Introductio musice* 6.2, 7.9.

This passage discusses intervals purely as ratios; *De plana musica* 16 and *Introductio musice* 7 describe the thirteen intervals within the octave as they appear in music, but without making the distinction between melodic and harmonic intervals. Theorists who explicitly differentiate between harmonic and melodic intervals include Boethius *Musica* 4.18 (Friedlein, pp. 348–49); Hucbald *De harmonica institutione* (GS, 1:107); Berno of Reichenau *Prologus in tonarium* 3 (GS, 2:64–65); Johannes de Grocheio *De musica* 38, 45 (Rohloff, pp. 116, 118); Engelbert of Admont *De musica* 2.27 (GS, 2:318).

7. The use of the term *species* in *De plana musica* and *Introductio musice* to denote “interval” possibly stems from the use of *species* in the sense of, e.g., *species consonantiarum*: Anon. 2 *Tractatus de musica* (CS, 2:486) or *species intervallorum*: *Summa musice* 10 (Page, p. 163). The term *species* in Aristotelian terminology is closely linked with the term *genus*: for a certain *genus*, there may be several *species* that belong to it, as do several species of intervals to the diatonic genus.

The declaration that there are thirteen intervals (within the octave) implies the acceptance of the major and minor 7th intervals: these two intervals are conspicuously absent from lists of intervals given by earlier theorists. But note that at least one earlier theorist, Wilhelm of Hirsau (ca. 1069), *Musica* 21.2 (Harbinson, p. 54), had already stated that the minor 7th is found in Gregorian chant.

Johannes de Grocheio, *De musica* 45, 49 (Rohloff, p. 118), quotes Johannes de Garlandia for the numbering of thirteen intervals, but adopts the numbering of seven intervals by others. Anon. 4, *De mensuris et discantu* 4.1 (Reckow, pp. 63–64), informs us that some of the ancients used to say that there are nine modes [intervals] by which all *cantilene* are composed, but observes that “someone else” (*quidam alius*) placed four <more> unusual ratios [intervals]: could this also be a reference to the author of *De plana musica*?

The following, among others, concur with *De plana musica* and *Introductio musice* on the numbering of the intervals within the octave as thirteen: Jerome of Moravia *Tractatus de musica* 17 (Cserba, p. 148); Anon. 1 *Tractatus de consonantiis musicalibus* (CS, 1:296–97); Anon. 7 *De musica libellus* (CS, 1:381); *Quatuor principalia* 1.14, 3.11 (CS, 4:205, 226); Anon. 2 *Tractatus de discantu* (Seay, p. 16); *Ars contrapunctus secundum Philippum de Vitriaco* Prologus.5 (Appendix D); Johannes de Olomons *Palma choralis* 7 (Seay, p. 29); Nicolaus Capuanus *Compendium musicale* (De La Fage, p. 316); Bonaventura da Brescia *Venturina* 14.106 (Seay, p. 24); Rossetti *Libellus* 10.2 (Seay, p. 28). Also, a short passage by an anonymous author given in De La Fage (p. 362; ms: Florence, Bibliothèque Magliabechiana XIX. D. 19) states that thirteen species are required for discant, giving unison, semitone, “et cetera.”

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<sup>8</sup> Unisonus in sonis est idem quod	<sup>8</sup> The unison among sounds is the same
equalitas in numeris, ut unitas ad unitatem et	as equality among numbers, like 1:1 and 2:2.
binarius ad binarium. <sup>9</sup> Diapason in sonis est	<sup>9</sup> The diapason among sounds is the same as
idem quod duplum in numeris, ut quaternarius	the duple among numbers, like 4:2. <sup>10</sup> The
ad binarium. <sup>10</sup> Diapente in sonis est	diapente among sounds is the sesquialter
sesquialterum in numeris, ut ternarius ad	among numbers, like 3:2. <sup>11</sup> The diatessaron
binarium. <sup>11</sup> Diatessaron in sonis est idem	among sounds is the same as the sesquitercial
quod sesquitercium in numeris, ut	among numbers, like 4:3.
quaternarius ad ternarium.	

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- 8 Quarum prima species est *ante* Unisonus *Vb* sonis quod est equalitas *Vb* et in numeris est equalitas *pro* est idem quod equalitas in numeris *V* et binarius ad binarium *om. V Vb*  
 9 Secunda dyapason *Vb* sonis quod est duplum *Vb* et in numeris est duplum *pro* est idem quod duplum in numeris *V* binarius ad unitatem *pro* quaternarius ad binarium *V Vb*  
 10 Tertium diapente *Vb* in sonis *om. V* quod *post* sonis *Vb* in numeris *om. V*

- 11 Quantum est diateseron Vb Dyatesseron dicitur sesquitercium V sonis quod est sexquialterum in Vb in numeris om. V quaternariu[s corr. sup. [[m]]] V

8–20. Jerome of Moravia *Tractatus de musica* 17 (Cserba, pp. 148–49) parallels this passage.

For similar discussions of ratios relating directly to intervals, see Martianus Capella *De nuptiis philologiae et mercurii* 9 (Dick, pp. 496–97, 508–9); Boethius *Musica* 1.7, 2.21–31 (Friedlein, pp. 194, 253–67); Cassiodorus *Institutiones* 2.5.7 (Mynors, pp. 144–45); Aurelian of Réome *Musica disciplina* 8.29–37 (Gushee, pp. 80–81); *Scolica enchiridis* 2 (Schmid, pp. 106, 109–12); Regino of Prüm *De harmonica institutione* 10 (LeRoux, pp. 48–51); Wilhelm of Hirsau *Musica* 25 (Harbinson, p. 57); Johannes de Garlandia *De mensurabili musica* 10.1–17 (Reimer 1, pp. 72–74); Lambertus *Tractatus de musica* (CS, 1:257–59); Anon. 4 *De mensuris et discantu* 4.1 (Reckow, pp. 65–68); *De musica mensurabili positio* (CS, 1:106); Aegidius of Zamora *Ars musica* 10.9–10, 11.22 (Robert-Tissot, pp. 82, 88); Marchetto *Lucidarium* 2.4.2, 4.2.3, 4.3.1–4.11.13, 6.2.10–16 (Herlinger, pp. 110, 184–94, 228–30); *Quatuor principalia* 2.20, 3.18 (CS, 4:216, 229).

For discussions of ratios with explicit reference to monochord divisions, see *Dialogus* 4 (GS, 1:254); Guido *Micrologus* 6 (Smits van Waesberghe, pp. 114–16); Theoger of Metz *Musica* (GS, 2:185–86); Roffredi *Summa musicae artis* 1 (Seay, pp. 71–72); Prosdócimo *De modo monacordum dividendi* 2.2 (Herlinger, p. 70).

Johannes de Garlandia, *De mensurabili musica* 10.8–9 (Reimer 1, p. 73), makes a connection between ratios and degree of concordance by deriving the rule that “that which proceeds more from equality also concords more in sound, and that which less approaches equality also concords less, thus it sounds more discordant.”

<sup>12</sup>Tonus in sonis est idem quod sesquioctavum in numeris, ut novenarius ad octonarium.

<sup>12</sup>The whole tone among sounds is the same as the sesquioctave among numbers, like 9:8.

<sup>13</sup>Ditonus in sonis est idem quod super septendecim partiens sexagesimas quartas in numeris, ut lxxxi ad lxxiii. <sup>14</sup>Semiditonus in sonis idem est quod super quinque partiens xxviiis in numeris, ut xxxii ad xxvii.

<sup>13</sup>The ditone among sounds is the same as the super-17-partient by 64ths among numbers, like 81:64. <sup>14</sup>The semiditone among sounds is the same as the super-5-partient by 27ths among numbers, like 32:27. <sup>15</sup>The minor

<sup>15</sup>Semitonium minus in sonis idem est quod super tredecim parciens ccxliiis in numeris, ut cclvi ad ccxliii. <sup>16</sup>Semitonium cum diapente in sonis est idem quod super xlvii

semitone among sounds is the same as the super-13-partient by 243rds among numbers, like 256:243. <sup>16</sup>The semitone plus diapente among sounds is the same as the super-47-



partiens lxxxias in numeris, ut cxxviii ad	partient by 81sts among numbers, like 128:81.
lxxxi. <sup>17</sup> Tonus cum diapente in sonis est super	<sup>17</sup> The whole tone plus diapente among
xxii partiens xxxiiias in numeris, ut liiii ad	sounds is the super-22-partient by 32nds
xxxii. <sup>18</sup> Semiditonus cum diapente in sonis	among numbers, like 54:32. <sup>18</sup> The semiditone
est super septem partiens nonas in numeris, ut	plus diapente among sounds is the super-7-
xvi ad ix. <sup>19</sup> Ditonus cum diapente in sonis est	partient by ninths among numbers, like 16:9.
super cccxx partiens cclvias in numeris, ut	<sup>19</sup> The ditone plus diapente among sounds is
cccclxxxvi ad cclvi. <sup>20</sup> Tritonus in sonis est	the super-230-partient by 256ths among
super ccxvii partiens dxiiias in numeris, ut	numbers, like 486:256. <sup>20</sup> The tritone among
dccxxix ad dxii.	sounds is the super-217-partient by 512ths
	among numbers, like 729:512.

- 
- 12 Quintum est tonus quod est sesquioctavum Vb 8.9 in marg. m. sec. Vb Tonus dicitur  
sexquioctavum V in numeris om. V Vb ut bis V 13us ad 6 pro novenarius ad  
octonarium Vb
- 13 13 et 14 inversa V Vb Septimus ditonus quod est super 17 partiens 64, ut 81 ad 64 Vb  
Dytonus dicitur in ... partiens V xvii P 6 pro sexagesimas V in numeris om. V Vb  
81 ad 64 V
- 14 Sextus semiditonus quod est super Vb Semito[nium sup. lin. fort. m. sec.] minus pro  
Semiditonus P Semitonus pro Semiditonus V dicitur in pro in sonis idem est quod V  
v P partiens xxvii P 27mas V vicesimas septimas Vb in numeris om. V Vb  
32 ad 27 V Vb
- 15 Octavum semitonium quod est super 13 Vb Semitonium dicitur in 13 V Semitonium  
maius P xiii P partiens ccxliii P partiens 243as V partiens 243 Vb in numeris  
om. V Vb 256 ad 243 V 25 [vacuus] ad pro cclvi ad ccxliii Vb
- 16 Nonum est semitonium cum diapente super Vb dyapente dicitur in 47 partiens V ccviii  
pro xlvii P 41 pro xlvii Vb cccclxxx[as sup. lin.]vi[as sup. lin.] pro lxxxias P  
81as V 81 Vb in numeris om. V Vb dclxvi ad cccclxxxvi pro cxxviii ad lxxxi P  
128us ad 81m V 126 ad 81 pro cxxviii ad lxxxi Vb
- 17 Decimum est tonus cum diapente quod est super 22 Vb dyapente dicitur in super 22 V  
ccii[as sup. lin.] pro xxxiiias P 32as V 32 pro xxxiiias Vb in numeris om. V Vb 54  
ad 32 V Vb
- 18 Undecimum est semiditonus cum diapente quod est super 7 Vb Semiditonus cum dyapente  
dicitur in super 7 V vii P ix[as sup. lin.] P 9 pro nonas Vb in numeris om. V Vb  
xvi ad ix P 18 ad 9 V
- 19 Duodecimum est ditonus cum diapente quod est super 230 Vb Ditonus cum dyapente dicitur  
in super 230 V est sup. lin. P cccxx[a sup. lin.]P partiens ... ad cclvi om. Vb  
partiens cclvi P 256mas pro cclvias V in numeris om. V cccclxxxvi ad partiens  
cclvi P cccclxxxvi ad cclvi om. V

20 Decimus tertium tritonus quod est super 217 Vb Tritonus . . . ut om. V ccxvii[a sup. lin.]P  
 dx[as sup. lin.]ii[as sup. lin.] P 512 pro dxias Vb in numeris om. Vb dcccix ad  
 dxii P 729 a 512mas V 71 ad 512 Vb

19. *Saut du même au même* in V on ut. Vb, on the other hand, omits ut 486 ad 256, leaving a more than ample blank space after 230.

7. <sup>1</sup> Quod omnis inequalitas ab equalitate procedit	7. <sup>1</sup> That all inequality proceeds from equality
<sup>2</sup> Notandum quod omnis inequalitas ab equalitate procedit et hic sic patet: <sup>3</sup> si sumantur tres unitates quod dicitur equalitas et ponantur in uno loco.	<sup>2</sup> It must be noted that all inequality proceeds from equality. This becomes evident thus, <sup>3</sup> if three unities that are said to be equal are taken and [each] placed in a single location.

P 86r; V 3v; Vb 17rb.

1 om. P V Vb

2 Sciendum pro Notandum V Vb procedit ab equalitate Vb hoc patet pro hic sic patet Vb  
 patet [prima igitur ?] pro sic patet V

3 Si om. V dicitur esse equalitas Vb primo pro uno P

1. As *De plana musica* explicitly states in 7.10, this chapter derives clearly from Boethius *Arithmetica* 1.32 (Friedlein, pp 66–72); but see also *Arithmetica* 2.1, *Musica* 2.7 (Friedlein, pp. 77–79, 232–34).

2. Anon. 4, *De mensuris et discantu* 4.1 (Reckow, p. 67), uses this dictum to substantiate his statement that the diapason is called “the mother of all concords after its beginning, which is called the unison.”

3. Boethius, *Arithmetica* 1.32 (Friedlein, p. 66–72), states the same procedure and, in addition, supplies an arithmetical illustration that establishes multiplex ratios up to the quadruple ratio. The process can, however, be shown algebraically to be valid for any three factors set in the order 1, x, and x<sup>2</sup>, where x is a positive integer; for in the next series *per regulam*, the following factors will be produced: 1, x + 1, 1 + 2x + x<sup>2</sup>; looking at the third factor in this newly obtained series, we find (1 + 2x + x<sup>2</sup>) = (x + 1)(x + 1) = (x + 1)<sup>2</sup>, i.e., it is the square of the second factor.

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<sup>4</sup>Unde sequitur regula: si sumatur equale primo et ponatur in primo loco, <sup>5</sup>deinde sumatur equale primo et secundo et ponatur in secundo loco, <sup>6</sup>deinde sumatur equale primo et duplum secundo et equale tertio, et ponantur in tertio loco, <sup>7</sup>tunc provenit duplum quod est prima species multiplicatis.

<sup>4</sup>Whence follows the rule: if a [quantity] equal to the first is taken and placed in the first location, <sup>5</sup>then if another quantity equal to the first and yet another equal to the second are placed in the second location, <sup>6</sup>and then if a quantity equal to the first, together with two quantities, each equal to that in the second location, and another equal to the third are all placed in the third location, <sup>7</sup>there proceeds the duple, which is the first multiple species.

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4 quod *post* regula *V Vb* et ponatur in primo loco *om. P* in *om. V*  
 5 deinde sumatur equale primo *om. P* ponatur vel *ante* sumatur *V*  
 6 secundum *pro* secundo *Vb* et ponatur *pro* tertio, et ponantur *V* ponatur tertium *pro* tertio, et ponantur *Vb*  
 7 qui dicitur esse *pro* quod est *V* multiplicis *V* multiplici *Vb*

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<sup>8</sup>Et sic faciendo de duplo provenit triplum et de triplo quadruplum et sic de aliis. <sup>9</sup>Et sic per locum a primo ad ultimum, omnis inequalitas ab equalitate procedit. <sup>10</sup>Hec omnia diffusius pertractat Boetius primo libro arithmetice.

<sup>8</sup>By this operation the triple proceeds from the duple, the quadruple from the triple, and likewise the others. <sup>9</sup>And thus through this sequence, from the first to the last, all inequality proceeds from equality.

<sup>10</sup>Boethius treats all this more extensively in the first book of arithmetic.

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8 venit *pro* provenit *Vb* et de triplo quadruplum *om. Vb*

9 igitur *pro* sic *V* sic *om. Vb* provenit *post* inequalitas *Vb* procedit *om. V Vb*  
 10 Et hec de multiplici sufficient *V* Et hec de multiplicati dicta sufficient *Vb*

#### 8. <sup>1</sup>De proportionibus

<sup>2</sup>Sciendum quod ex duplo in

multiplici provenit sesquialterum  
 superparticulare terminis conversis, ut hic:  
 viii iii ii; et ex triplo sesquitercium; et ex  
 quadruplo sesquiquartum et sic de aliis  
 speciebus. <sup>3</sup>Et notandum quod ex sesquialtero  
 in superparticulari provenit superbipartiens  
 in superpartienti terminis conversis, et  
 similiter ex sesquitercio supertripartiens et  
 sic de aliis. <sup>4</sup>Item ex sesquialtero in  
 superparticulari provenit duplum  
 sesquialterum in multiplici superparticulari  
 terminis non conversis, ut hic: iii vi ix et sic  
 de aliis. <sup>5</sup>Sciendum etiam quod ex  
 superbipartienti in superpartienti provenit  
 duplum superbipartiens in multiplici  
 superpartienti terminis non conversis. <sup>6</sup>Sed  
 terminis conversis ex sesquitercio provenit  
 per eandem regulam supertripartiens et sic  
 de aliis speciebus in infinitum.

#### 8. <sup>1</sup>Concerning the ratios

<sup>2</sup>It must be known that the

sesquialter ratio of the superparticulars  
 proceeds from the duple ratio of the  
 multiples with terms in reverse order, as  
 here: 8 4 2; that the sesquitercial proceeds  
 from the triple; and the sesquiquartal from  
 the quadruple; and thus for the other  
 species. <sup>3</sup>And it must be noted that the  
 superbipartient ratio of the superpartients  
 proceeds [from] the sesquialter ratio of the  
 superparticulars with terms in reverse order;  
 and similarly the supertripartient from the  
 sesquitercial; and thus for the others. <sup>4</sup>In  
 the same way, the duple sesquialter ratio of  
 the multiple superparticulars proceeds from  
 the sesquialter ratio of the superparticulars  
 with terms not in reverse order, as here: 4 6  
 9; and thus for the others. <sup>5</sup>It must also be  
 known that the duple superbipartient ratio  
 of the multiple superpartients proceeds from  
 the superbipartient ratio of the  
 superpartients with terms not in reverse

order. <sup>6</sup>On the other hand, with terms in reverse order, the supertripartient ratio proceeds from the sesquiterial through the same procedure, and thus for the others, to infinity.

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P 87v; V 3v; Vb 17rb.

1 *om. P V Vb*

2 Et *ante* sciendum V Vb multiplicati *pro* in multiplici Vb in superiori *pro* superparticulare Vb superparticulares P terminis conversis *om. P* sexquialterum et [*va sup. lin.*] ex quadruplo sexquialterum [*dit sup. lin.*] in superparticulari terminis conversis et ex triplo V ut hic: viii iiiii ii; et *om. Vb* et ex quadruplo sesquiquartum *om. Vb* sexquialterum *pro* sesquiquartum V speciebus *om. V* duplum 1 2 4 triplum 1 3 9 quadruplum 1 4 16 *post* conversis Vb

3 sciendum *pro* notandum V Vb quod ex *bis* Vb ex sexquialtera superparticulari V sexquialterum *pro* ex sesquialtero P superiori *pro* superparticulari V superbipartiens Vb supertripartienti *pro* superpartienti P supercienti *pro* superpartienti V sesquiteria *pro* sesquiterio P Vb sesquitercia *pro* sesquiterio V cetera *pro* sic de aliis V

4 Et sciendum quod *pro* Item V Vb sexquialtera *pro* sesquialtero V Vb in superpartienti provenit Vb [[multiplici]] *ante* superparticulari provenit V multiplici superiori terminis Vb non *om. V* et cetera *post* conversis V ut hic . . . de aliis *om. V* ut hic: iiiii vi ix *om. Vb*

5 Et sciendum quod V Item sciendum quod Vb superparticulare in superparticulare *pro* ex superbipartienti in superpartienti P ex superbipartiente in superpartiente provenit Vb in superpartienti *om. V* multiplici superbipartiente terminis V multiplici superpartiente terminis Vb supertripartienti *pro* superpartienti P

6 *om. Vb* Sed . . . supertripartiens *om. V* ex sesquiterio *om. P* et sic patet de istis *post* infinitum V

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2–6. The derivation is described in 7.3–8 above. This portion of the chapter is also derived from Boethius *Arithmetica* 1.32 (Friedlein, pp. 66–72); but see also *Arithmetica* 2.3, *Musica* 2.7–8 (Friedlein, pp. 83–85, 232–37). Boethius supplies in addition an arithmetical illustration for transformations of the multiplex duple, triple, and quadruple ratios. The algebraic proof that the abovementioned process yields the superparticular from the corresponding multiplex ratio is as follows: the numbers in multiplex ratio set in reverse order can be represented thus:  $x^2$ ,  $x$ , 1, where  $x$  is an integer greater than 1; whereupon *per regulam* the following series of numbers is obtained:  $x^2$ ,  $x^2 + x$ ,  $x^2 + 2x + 1$  or  $x^2$ ,  $x(x + 1)$ ,  $(x + 1)^2$ ; the division of the third term by the second term of this series yields the superparticular ratio:  $(x + 1)/x$  or  $1 + 1/x$ .

3. Algebraically this can be shown to be true of any superparticular ratio, not just the sesquialter: from the derivation described in 8.2 the series of numbers containing in its last two terms the superparticular ratio is represented in reverse order thus:  $(x + 1)^2$ ,  $x(x + 1)$ ,  $x^2$ , where  $x$  is an integer greater than 1; whereupon *per regulam* the following series of numbers is obtained:  $(x + 1)^2$ ,  $(x + 1)^2 + x(x + 1)$ ,  $(x + 1)^2 + 2(x + 1)^2 + x^2$  or  $(x + 1)^2$ ,  $2x^2 + 3x + 1$ ,  $4x^2 + 4x + 1$  or  $(x + 1)^2$ ,  $(2x + 1)(x + 1)$ ,  $(2x + 1)^2$ ; the division of the third term by the second term of this series yields the superpartient ratio:  $(2x + 1)/(x + 1)$  or  $1 + x/(x + 1)$ .

4. Algebraically this can be shown to be true of any superparticular ratio, not just the sesquialter: from the derivation described in 8.2 the series of numbers containing in its last two terms the superparticular ratio is represented thus:  $x^2$ ,  $x(x + 1)$ ,  $(x + 1)^2$ , where  $x$  is an integer greater than 1; whereupon *per regulam* the following series of numbers is obtained:  $x^2$ ,  $2x^2 + x$ ,  $4x^2 + 4x + 1$  or  $x^2$ ,  $x(2x + 1)$ ,  $(2x + 1)^2$ ; the division of the third term by the second term of this series yields the duple superparticular ratio:  $(2x + 1)/x$  or  $2 + 1/x$ .

5. Algebraically this can be shown to be true of any superpartient ratio, not just the superbipartient: from the derivation described in 8.3 the series of numbers containing in its last two terms the superpartient is represented thus:  $(x + 1)^2$ ,  $(2x + 1)(x + 1)$ ,  $(2x + 1)^2$ , where  $x$  is an integer greater than 1; whereupon *per regulam* the following series of numbers is obtained:  $(x + 1)^2$ ,  $3x^2 + 5x + 1$ ,  $9x^2 + 12x + 4$  or  $(x + 1)^2$ ,  $(3x + 2)(x + 1)$ ,  $(3x + 2)^2$ ; the division of the third term by the second term of this series yields the duple superpartient:  $(3x + 2)/(x + 1)$  or  $2 + x/(x + 1)$ .

6. *V* omits the major portion of this sentence, *Vb* the entire sentence.  
See the algebraic proof in the note to 8.3.

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<p>7Notandum etiam quod si aliqua proportio multiplicetur per eundem numerum semper resultat eadem proportio.</p>	<p>7It must also be noted that if any ratio is multiplied by the same number [for both its terms] the same ratio always results.</p>
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7 Et sciendum *pro* Notandum etiam *V Vb* multiplicatur *P* resultabit *V Vb* ut patet per  
exempla *post* eadem proportio *V*

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7. Cf. Boethius *Musica* 2.30 (Friedlein, p. 264). For a similar statement, see Anon. 4  
*De mensuris et discantu* 4.1 (Reckow, p. 70)

Thus the ratio  $ax:ay$  is identical with  $x:y$ , where  $a$ ,  $x$ ,  $y$  are positive integers.

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<sup>8</sup>Item notandum quod si vis ex una  
proportione facere duas, multiplica primum  
in primo et secundum in secundo et habebis  
extremos: primum et ultimum, <sup>9</sup>deinde duc  
primum in secundum et habebis medium.

<sup>8</sup>It must be noted that if you wish to  
make two ratios from one, multiply the first  
[term] by the first and the second [term] by  
the second, and you shall have the extreme  
terms: the first and the last. <sup>9</sup>Then lead the  
first into the second and you shall have the  
middle term.

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8 Et sciendum *pro* Item notandum *V Vb* prima *pro* una *P* scire secundam *pro* facere duas *P*  
primo secundum *V* et habebis extremos: primum et ultimum *om. Vb* propositum *pro*  
extremos: primum et ultimum *V* extremum *pro* extremos *P*  
9 et *pro* deinde duc *V Vb* propositum *ante* primum *Vb* secundo *pro* secundum *V* duo *pro*  
secundum *Vb* sicut patet per exempla *post* medium *V*

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8–9. The implied object of the adjectives *primus* and *secundus* is *terminus*.

8. Thus from a ratio  $x:y$ , where  $x$  and  $y$  are positive integers, the following is obtained:  $x^2:xy:y^2$ . It can be seen that the ratio produced by the first and second terms and the ratio produced by the second and third terms are both identical to the original ratio,  $x:y$ .

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<sup>10</sup>Item si vis differentiam duarum  
proportionum invenire, scribe duas  
proportiones quascumque volueris, <sup>11</sup>ita quod  
primus sit sub primo, secundus sub secundo et  
multiplica per crucem sive per  
contradictoria, <sup>12</sup>ita quod primus inferioris  
ordinis in secundum superioris ordinis  
disponatur et primus superioris ordinis in  
secundum inferioris ordinis opponatur.

<sup>10</sup>Furthermore, if you wish to find the  
difference between two ratios, write down  
any two ratios that you wish, <sup>11</sup>such that  
the first [term of the second ratio] is below  
the first [term of the first ratio] and the  
second [term of the second ratio] is below the  
second [term of the first ratio], and then cross  
multiply, <sup>12</sup>so that the first term of the  
lower ratio is multiplied with the second  
term of the upper ratio, and the first term of

the upper ratio is multiplied with the  
second term of the lower ratio.

- 
- 10 Et sciendum quod *pro* Item *Vb* Sciendum quod *pro* Item *V* duas *om. Vb* quasque *pro* quascumque *Vb*
- 11 quod sit *V* sit *om. P* prima *pro* primus *P V* prima *pro* primo *P V Vb* secunda sub secunda *pro* secundus sub secundo *P V Vb* sive per contradictoria *om. Vb* vel *pro* sive per *V* contradictoria *P* contradictorium *V*
- 12 ita quod prima inferioris ordinis sit in secunda superioris ordinis et ultima inferioris in primam superioris et habebis propositum *V* ita quod prima b superior in secundam a inferior et ultima inferior in prima in prima inferiori, et habebis propositum *Vb* prima inferioris *pro* primus inferioris *P* secundam superioris *pro* secundum superioris *P* prima superioris in secundam *pro* primus superioris ordinis in secundum *P*

Dupla terminis conversis 4 2 1

Sexquialterum 9 6 4 4 4

Sexquialterum 4 6 9 terminis conversis 9 6 4

Superbipartiens 9 1 5 2 5

Sexquialterum 4 9

Dupliciter sexquialterum 4 10 25

Superbipartiens 9 1 5 2 5

Dupliciter superbipartiens 9 2 4 8 4

Eadem sexquialterum 6 4

Sexquialterum 9 4

Medium 6

Sexquialterum 3 2

Tonus 9 8

Diapente 3 2

Dyateseron 4 3 *post 8.12 Vb*

---

10. Cf. Anon. 4 *De mensuris et discantu* 4.1 (Reckow, p. 70). Anon. 4 also describes the process of "adding" one ratio to another.

A practical application of the concept of the "difference" between two ratios is made when the difference between two intervals is calculated by means of ratios.

11–12. As with 8–9, the implied object of the adjectives *primus* and *secundus* is *terminus*.

---

<sup>13</sup>Cum vis augere sesquioctavam  
proportionem vel aliam, multiplica omnes

<sup>13</sup>And if you wish to augment the



terminos eius per minorem terminum sue  
radicis, <sup>14</sup>deinde maiorem per maiorem  
terminum sue radicis et sic poteris eam  
augere in infinitum, sicut hic: xvi xviii.

<sup>15</sup>Radix istius proportionis est 8 et 9, fac  
igitur sicut dictum est et habebis cxxviii  
cxliiii clxii et isti habent proportionem  
sesquioctavam.

sesquioctave or any other ratio, multiply all  
its terms by the minor term of its root, <sup>14</sup>then  
multiply the major term by the major term of  
its root. You will thus be able to augment the  
ratio to infinity, as here: 16 18 . <sup>15</sup>The root  
of this ratio is 8 and 9: therefore do as has  
been said and you will have 128, 144, 162:  
these three terms make the sesquioctave  
ratio.

---

13-15 *om. V Vb*

15 8 et 9 [sic] *P* xliiii *pro* cxliiii *P*

=====

13. This is true for any ratio  $ax:ay$  where  $a, x, y$  are positive integers and  $x < y$ ; whereupon *per regulam* the following is obtained:  $ax^2, axy, ay^2$ . It can be seen that the ratio produced by the first and second terms and the ratio produced by the second and third terms are both identical to the original ratio  $ax:ay$ , and both augment the original ratio in the sense that  $ax^2 > ax$ ,  $axy > ay$ ,  $axy > ax$ , and  $ay^2 > ay$ .

15. *P*, which is the only source to bear this passage, uses Arabic numerals for "8" and "9": a departure from its otherwise consistent use of Roman numerals.

The arithmetic reasoning is as follows:  $16 * 8 = 128$ ,  $18 * 8 = 144$ ,  $18 * 9 = 162$ .

---

9. <sup>1</sup>De monochordi proportione

9. <sup>1</sup>Concerning the measurement of the  
monochord

<sup>2</sup>Sequitur de monochordi  
proportione.

<sup>2</sup>The discussion on the ratio of the  
monochord follows.

---

*P* 88r; *V* 4v; *Vb* 17va.

1 *om. V*

2 *proporcione monochordi V* *proportione monochordi Vb*

---

1. *P* describes three monochord divisions (the first two giving notes of the *musica recta* system [9.13 and 9.24] and the third giving chromatic notes [see the next chapter]) and *Vb* gives one, different from those given in *P* (in this edition after the second one given by *P* in 9.24). The three *musica vera* divisions given by *P* and *Vb* belong to a family deriving from Guido (the first of two divisions described in *Micrologus* 3.2–14 [Smits van Waesberghe, pp. 96–99] and including the divisions of Guido, *Epistola* (GS, 2:46); Jacques de Liège, *Speculum musicae* 5.18.3–7 (Bragard, 5:57–58); Johannes de Muris, *Musica speculativa* 2.7.4–31 (Fast, pp. 312–24); *Quatuor principalia* 2.7 (CS, 4:208–10); Carthusian monk, *Tractatus de musica plana* 4 (CS, 2:462–63); Prosdocimo, *De modo monacordum dividendi* 3 (Herlinger, pp. 72–80); and Ugolino, *Declaratio musicae disciplinae: Tractatum monochordi* 7 (Seay, 3:234–37), as delineated by Adkins, “Theory and Practice of the Monochord,” pp. 148–58, 179. Note that Adkins assigns the division in *Vb* to Philippe de Vitry (as part of the latter’s presumed treatise *Ars nova*; see also note to 9.24). For a schematic representation of all four divisions given in this edition, based on Adkins’s conventions (described in Adkins, pp. 32–34), see Appendix F (for the *Vb* division cf. Adkins, p. 155; see also note to 9.24).

---

<sup>3</sup> Si aliqua linea vel chorda abrevietur in quantitate, acuitur vel elevatur eius sonus.	<sup>3</sup> If any line or string is shortened, its sound is made high or elevated. <sup>4</sup> It must be known
<sup>4</sup> Et sciendum quod omnis medietas corde equaliter sonat suo toti. <sup>5</sup> Petitiones sunt due: similis soni simile signum quantum ad graves octo, secundum: septem acutas, tertium: quinque superacutas; item diversi soni diversa sunt signa.	that every half of a string sounds in the same manner as its whole. <sup>5</sup> There are two propositions: the sign is the same for the same sound, for all the eight grave, seven acute, or five superacute sounds; and the signs are different for different sounds.

---

- 3 Si aliqua linea in quantitate abbreviatur et acuitur vel elongatur in sonis *V* in trinitate [=tencitate?] abbreviatur, acuitur vel elongatur in sono *Vb* Si aliqua linea in trinitate abbreviatur, acuitur vel elongatur in sono *Vb*
- 4 quolibet pars *pro* omnis medietas *P* cordis *pro* corde *Vb* tono *pro* toti *Vb*
- 5 Petitiones sunt due, scilicet [[si]] signi diversi soni diversa signa *V* Petitiones sunt duo: scilicet similis soni simile signum, diversi soni diversa signa *Vb* graves viii ii vii acutas iii v superacutas *P*
- 

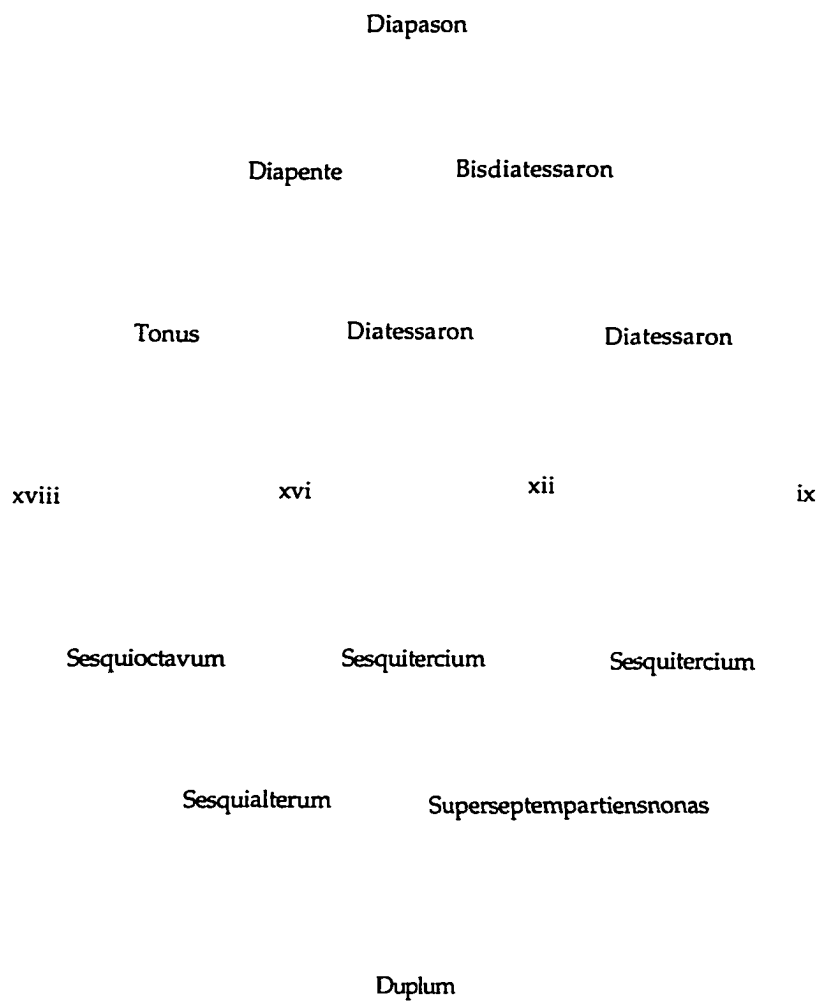
3. For similar statements, see Boethius *Musica* 1.3 (Friedlein, p. 190); Carthusian monk *Tractatus de musica plana* 4 (CS, 2:464).

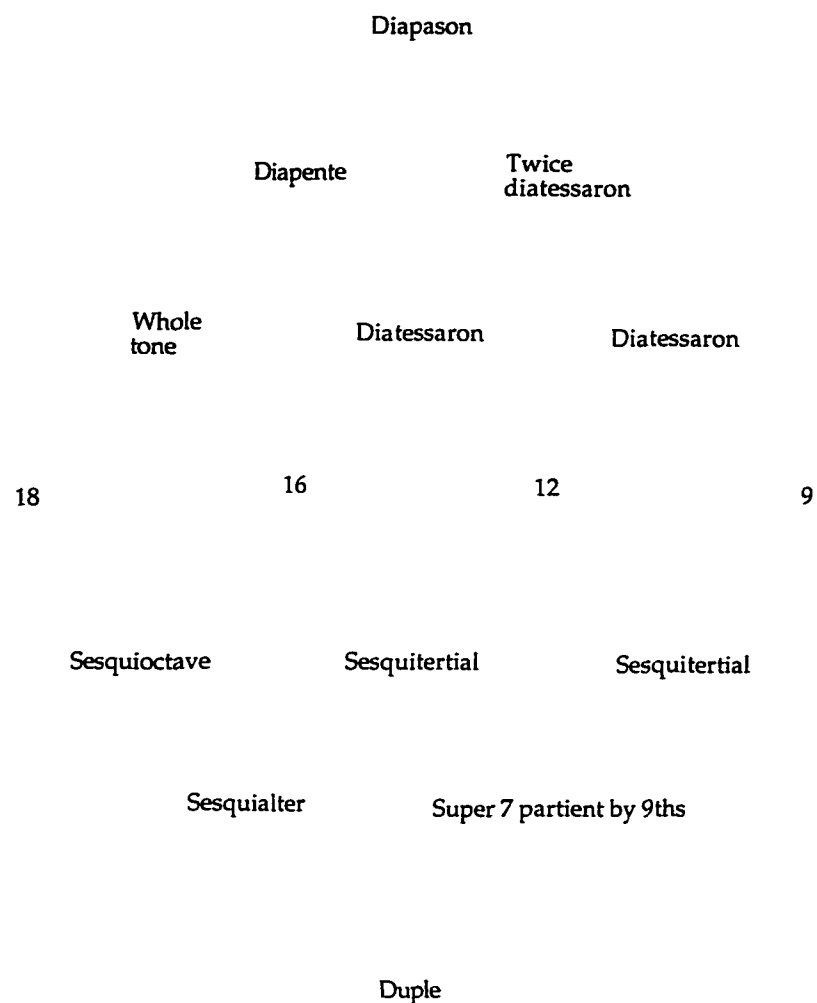
5. I.e., for the same pitch class.

---

¶Et sciendum quod bis diatessaron cum tono  
vel diatessaron cum diapente faciunt  
diapason, ut in sequenti figura declaratur.

¶It must be known that twice a diatessaron  
plus a whole tone or a diatessaron plus a  
diapente makes a diapason, as is made clear  
in the following figure.






---

6 bis dyatesseron tono *V*    tono vel diatessaron cum *om. P*    semitono *pro* tono *Vb*    diapente  
 cum dyateseron *Vb*    facit *pro* faciunt *V Vb*    dyapazon *Vb*    ut in sequenti figura  
 declaratur *om. V Vb*

*P*

Diapason

Diapente

Diatessaron

Tonus

Diapente

Diatessaron

xviii

xvi

xii

ix

Sesquiquartum

Sesquitercium

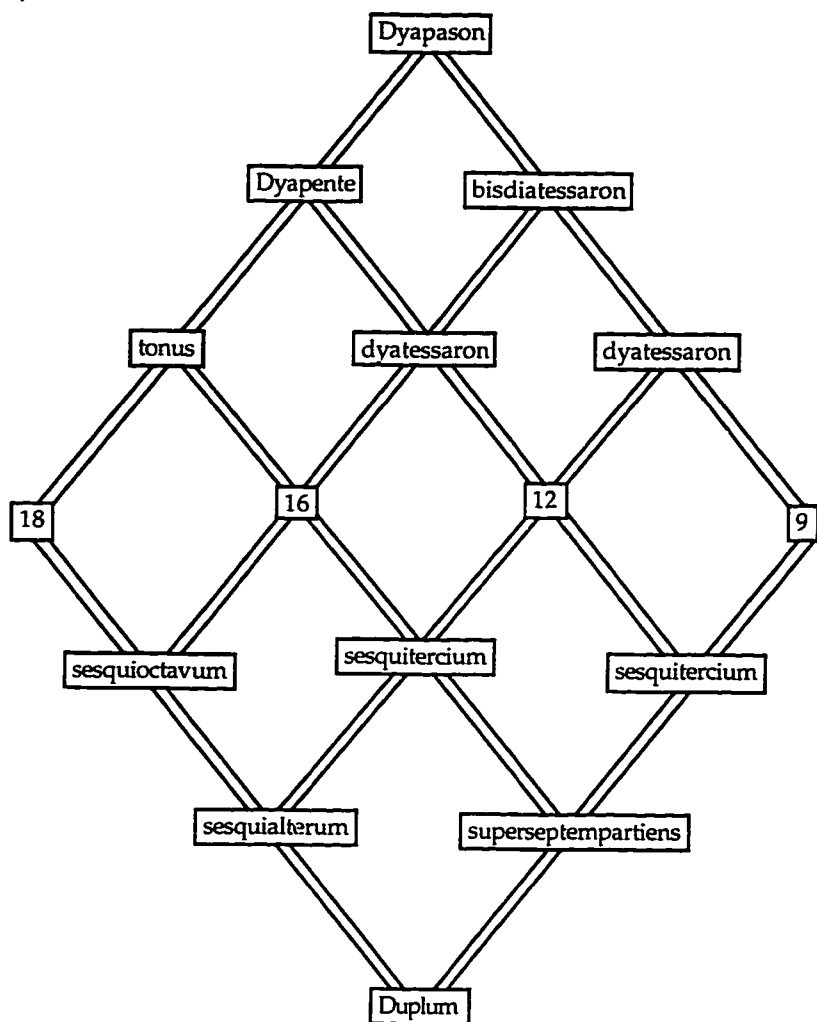
Sesquitercium

Sesquisuperparciens

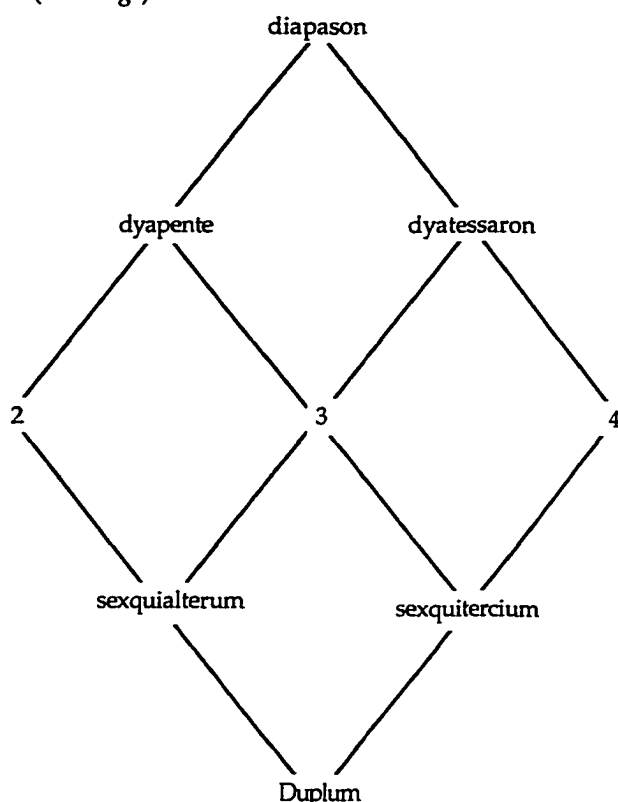
Nonas

Duplum

V



*V (in marg.)*




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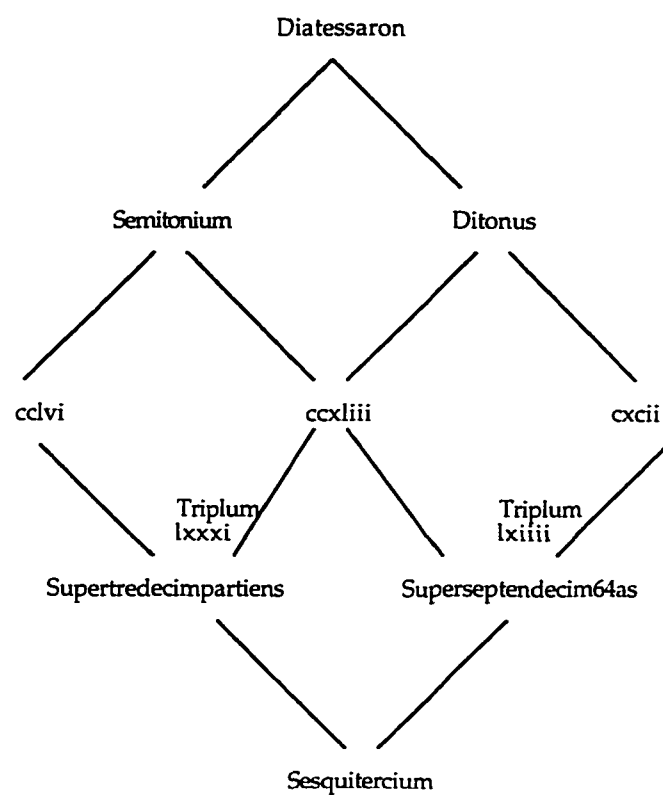
6. The statement that a diatessaron and a diapente make a diapason is very often made. Boethius, *Musica* 1.16 (Friedlein, p. 202), gives the arithmetical basis for this statement. Johannes Gallicus, *Ritus canendi* 1.2.2.20–22 (Seay 13, pp. 28–29), also gives this basis, relating it to the concept that the multiple and superparticular genera produce the sweetest sounds.

For this statement made in various contexts, see, e.g., *Musica enchiriadis* 10 (Schmid, p. 26); Regino of Prüm *De harmonica institutione* 19 (LeRoux, p. 51); Guido *Micrologus* 5.2, 8.3 (Smits van Waesberghe, pp. 107, 122); Guido *Regulae musicae rhythmicae* (Smits van Waesberghe, p. 101); Berno of Reichenau *Prologus in tonarium* 5 (GS, 2:67); Aribio *De musica* (Smits van Waesberghe, p. 35); *Item de organo* (Huff, pp. 63–65 [Eggebrecht, p. 160]); John *De musica* 9.13 (Smits van Waesberghe, p. 74); Lambertus *Tractatus de musica* (CS, 1:259); Anon. of St. Emmeram *De musica mensurata* 4 (Yudkin, p. 266); Anon. 4 *De mensuris et discantu* 4.1 (Reckow, pp. 66, 67); Anon. 1 *Tractatus de consonantiis musicalibus* (CS, 1:299); Anon. 7 *De musica libellus* (CS, 1:381); Aegidius de Zamora *Ars musica* 14.15 (Robert-Tissot, p. 100); Johannes de Grocheio *De musica* 57 (Rohloff, p. 120); Engelbert of Admont *De musica* 2.25, 3.19, 3.22, 4.12 (GS, 2:316, 334, 337, 346); *Quatuor principalia* 2.8 (CS, 4:210); Carthusian monk *Tractatus de musica plana* 1.5, 4, 6 (CS, 2:438–39, 463, 464, 469); Ugolino of Orvieto *Declaratio* 1.6.3, 1.52.4 (Seay, pp. 26, 90).

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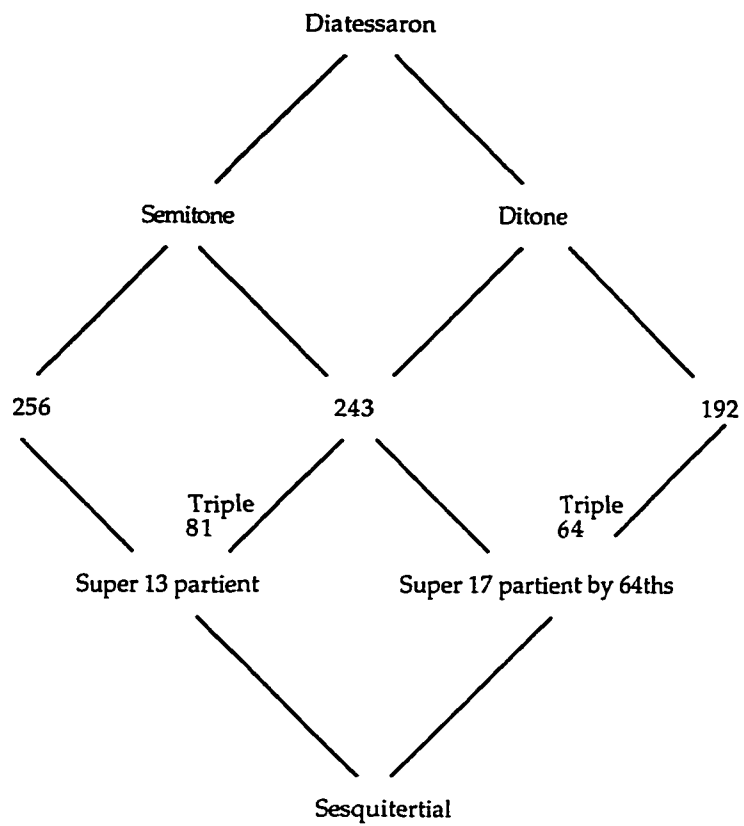
<sup>7</sup>Similiter sciendum quod ditonus cum  
semitonio facit diatessaron, ut hic patet.

<sup>7</sup>Similarly it must be known that a ditone  
plus semitone makes a diatessaron, as shown  
here.



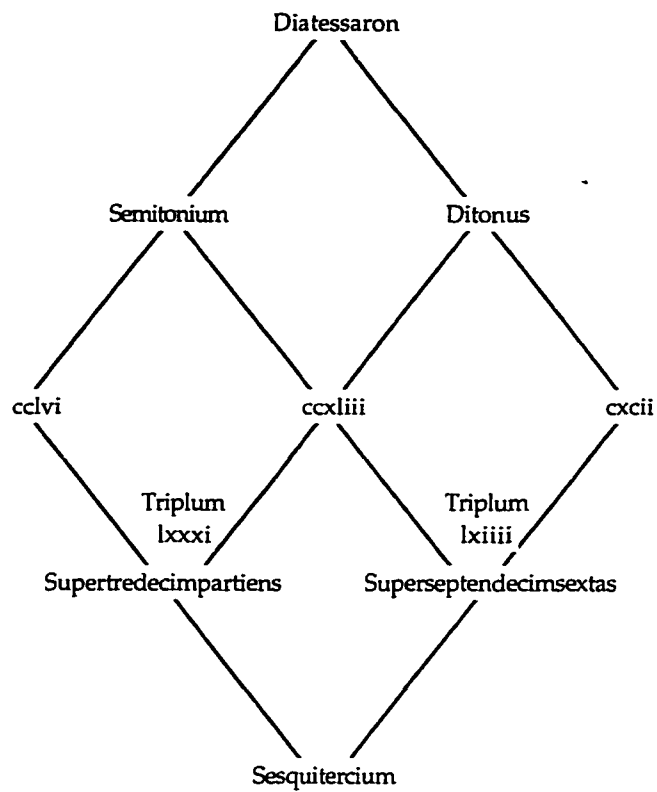
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7 Et dico *pro* Similiter sciendum *V* Et *pro* Similiter *Vb* s[[i]]ciendum *P* semitono *V* ut  
 hic patet *om. V Vb*

*P*


---

<sup>8</sup>Et sciendum quod ditonus ex duplici tono componitur et tonus ex duplici semitonio.

<sup>8</sup>It must also be known that a ditone is composed of two whole tones, and a whole tone of two semitones.

---

<sup>8</sup> om. *V Vb* tonus ex semitonio *P*

---

<sup>9</sup>Item si vis super lineam datam constituere omnes proportiones musice secundum diatonicum genus, <sup>10</sup>primo ponendus est tonus, deinde alius tonus postea semitonium et cetera usque ad xii d sequens

<sup>9</sup>If upon a given line you wish to construct all the ratios of music according to the diatonic genus, <sup>10</sup>first a whole tone has to be placed, then another whole tone, and thereafter a semitone, and ascending

quod finis dicitur primi ordinis diatonici  
generis propter confusionem differentiarum.

sequentially in this manner up to 12d, which  
is called the limit of the first series of the  
diatonic genus, in accordance with the  
combination of the distinct species of  
intervals.

---

9 Et sciendum quod *pro* Item V Item sciendum quod si tu vis super Vb *supra* V species *post*  
omnes Vb  
10 ponendum Vb et ante postea V Vb cetera om. Vb 12 d *pro* xii d sequens V 12 d Vb  
sequens om. Vb dicitur diatesseron propter V dicitur dyateseron propter Vb  
primi[[o]] ordinis P

---

9. See 9.13 for the demonstration on the monochord of this description of the progressions of the diatonic genus. Lambertus, *Tractatus de musica* (CS, 1:258), explains the same process of obtaining the semitone by measuring first two whole tones and then a diatessaron.

Hucbald, *De harmonica institutione* (GS, 1:114); *Musica enchiriadis* 7 (Schmid, pp. 13–15) describe the classical arrangement of the tetrachords in which the semitone occurs before the two whole tones in ascent.

10. The numbering of the notes used here, with Γ as the first, is less usual than that which names A as the first.

The meaning of “12d” here and in 9.11 is unclear: it may indicate the interval of the twelfth (d and dd) from Gamma and G respectively, or, to the contrary, it may indicate the interval of an octave from the beginning note of the first and second series of the diatonic genus (cf. 9.21). Reaney, Maillard, and Gilles, eds., *Ars nova*, p. 16, replace both instances of 12d (9.10 and 9.11, as they occur in Vb) with “octavum G” and “15g” respectively. Meyer, “*De synemmenis*,” pp. 87–88, on the other hand, suggests “12d” refers to “12 dieses [minor semitones],” and cites a table given in Catania, Biblioteche Riunite “Civica e A. Ursino-Recupero,” Fondo Ursino-Recupero, D.39, fols. 116rv, that lists the twelve dieses within each octave of the gamut. His emended translation of part of 9.10 (*tonus, deinde alius tonus postea semitonium . . . usque ad 12d*), and, by implication, also the corresponding part of 9.11 is: “. . . ton ton demi-ton, jusqu’à concurrence de 12 diesis.”

---

<sup>11</sup>Deinde ab viii incipiendo per tonum et  
tonum et semitonium usque ad xii d sequens et  
ita finis est secundi ordinis propter rationem  
supradictam. <sup>12</sup>Deinde incipiendo tertium

<sup>11</sup>Then beginning from 8 ascend sequentially  
through tone-tone-semitone up to 12d, the  
limit of the second series for the above-  
mentioned reason. <sup>12</sup>Then beginning from 15

ordinem diatonici generis a xv per tonum et  
tonum et semitonium usque ad xix et ultra si  
possibilitas sit in voce, sed non est secundum  
usum nostrum.

ascend sequentially the third series of the  
diatonic genus through tone-tone-semitone  
up to 19 and beyond if it is possible for the  
voice, although this is not our practice.

- 
- 11 Deinde ab g 8 usque ad 12 d sicut superius V Et continere ab G grave usque ad 12d sicut  
superius dictum est Vb  
12 Deinde a 15 g usque ad 20 e et ultra si possibilitas sit in voce sed secundum usum vel actum  
nostrum non V Deinde ab 15 g usque ad 20 et ultra si pluralitas sit in voce sed  
secundum usum nostrum non et ut habeatur magis planum sic pateat in figura  
t t s t t s t t s t t s t t s t t s t t s t t s t t s t t s  
G a b c d e f g a b c d e f g a b c d e f g a b c d Vb xv.viii. pro xv P et semitonium  
om. P
- 

12. P gives the upper limit in this description and the monochord division based on it as superacute dd, but see 9.24 for the second monochord division that adds one more note (superacute ee) to the range. V and Vb give superacute ee (20e and 20 respectively) as the upper limit in this description, but in the division given by Vb (see note to 9.24) superacute ff is reached.

---

<sup>13</sup>Certitudo passuum monochordi sic  
accipitur et hoc uno modo secundum  
Guidonem monachum Sancti Johannis. <sup>14</sup>Sit  
data corda monochordi et vocetur .Gamma-o.  
cuius dempta nona parte remanent octo  
partes et vocentur .Ao. cuius dempta nona  
parte remanent octo partes et vocentur .Ho.  
<sup>15</sup>Item .Gamma-o. dividatur in quatuor  
partes, quarta parte dempta remanent tres  
partes que vocentur .Co. <sup>16</sup>Et sic per  
diffinitionem diatonos genus est, continens

<sup>13</sup>A definition of the steps of the  
monochord is obtained in the following way,  
according to Guido, monk of Saint John. <sup>14</sup>Let  
there be a monochord string and let it be  
called Gamma-O. With its ninth part  
removed there remain eight parts: let them  
be called AO. With its ninth part in turn  
removed there remain eight parts: let them  
be called HO. <sup>15</sup>Then let Gamma-O be  
divided into four parts. With its fourth part  
removed there remain three parts: let them

tonum et tonum et semitonium. <sup>17</sup>Sed  
 intervallo .Gamma-A. et intervallo A-H est  
 tonus et tonus, ergo intervallo H-C est  
 semitonium. <sup>18</sup>Item divide .Co. per novem  
 partes octo erunt partes .Do. <sup>19</sup>Item .Do. per  
 novem partes divide octo partes erunt .Eo.  
<sup>20</sup>Item .Co. divide per quatuor partes tres  
 erunt .Fo., quare .Fo. erit diatessaron ad .Co.,  
 quare intervallum E-F erit semitonium.  
<sup>21</sup>Item .Fo. per novem partes dividatur octo  
 partes erunt .Go. et sic per ordinem usque ad  
 xii d. <sup>22</sup>Item eodem modo accipiendo in  
 acutis a .Go. usque ad xii d. <sup>23</sup>Item  
 incipiendo a .go. in superacutis ulterius  
 quantum placuerit et hoc secundum Guidonem  
 predictum.

be called CO. <sup>16</sup>By definition it is the  
 diatonic genus, comprising the sequence  
 whole tone, whole tone, semitone. <sup>17</sup>Now  
 the interval Gamma-A and the interval A-  
 H is the whole tone and whole tone,  
 therefore the interval H-C is the semitone.  
<sup>18</sup>Then divide CO into nine parts: eight  
 parts will be DO. <sup>19</sup>Then divide Do into nine  
 parts: eight parts will be EO. <sup>20</sup>Then divide  
 CO into four parts, three parts will be FO,  
 therefore FO will be a diatessaron from CO,  
 and the interval E-F will be a semitone.  
<sup>21</sup>Then let FO be divided into nine parts:  
 eight will be GO and thus in turn up to 12d.  
<sup>22</sup>Then obtaining in the same way in the  
 acutes, [go] from GO up to 12d. <sup>23</sup>Then by  
 beginning from gO, [obtain] in the  
 superacutes as far up as wished. This is  
 according to the above-mentioned Guido.

---

13-32 *desunt V*

De operatione monochordi. Sequitur de proportionibus monochordi secundum  
 operationem. Sic [*sic*] aliqua linea tota G cuius medietas sit alia G et eius medietatis  
 medietas sit tertium G. Ergo est autem partes primi C gravis sit cuius medietas sit  
 aliud C et istius medietatis medietas sit tertium C. C tertium vero partes primi C fit  
 F cuius [*cuius*] medietas fit ad secundum F et huius medietas fit ad tertium f. Item de  
 primo G grave due partes sunt D cuius medietas fit aliud D et huius medietatis fit  
 tertium d. Item dividatur d primum per 13 [*sic*], addita tertia versum primum G et  
 habetur primum A cuius medietas fit secundum A et eius medietatis medietas fit  
 tertium A. Item de primo A due partes fiunt E primum cuius medietas fit E secundum  
 cuius medietatis medietas E tertium. Item dividatur primum E per tres et addita

tertia versus primum G habetur primum  $\perp$  cuius medietas est b contractum et eius medietatis medietas tertium  $\perp$  quadratum. Item de prima F tres partes fiunt b primum rotundum cuius medietas fit b secundum rotundum et eius medietatis medietas tertium b rotundum. Vb

13 passionum *pro* passuum P

14 *sec. et sup. lin.* P .Ao. cuius dempta nona parte remanent octo partes et vocentur *om.* P

16 g *pro* genus P

18 Co quod partes *pro* Co per novem partes P

19 Co *pro* Eo P

21 O *pro* octo P xii d P

22 xii d P

13. Emendation of *passuum* in place of *passionum* in P (see also 9.24, 32). Meyer, in his transcription of this passage ("De synemmenis," p. 93), leaves this word unchanged, resulting in a senseless statement.

The monochord division given here derives notes of the gamut according to the diatonic genus: it is thus a concrete illustration of the process described in 9.9–12. It consists entirely of ascending divisions based on sub-sesquitercial and sub-sesquioctave ratios giving musica recta notes from  $\Gamma$  to dd, less b and bb. Like the process described in 9.9–12 the description of this division is incomplete and ambiguous (9.21: "... et sic per ordinem usque ad 12d"); moreover it does not specify the top note ("ulterius quantum placuerit").

Although attributed in the text to Guido, it is similar to but not identical with Guido's first division (*Micrologus* 3.2–14 [Smits van Waesberghe, ed., p. 96–99]; see also Adkins, "Theory and Practice of the Monochord," pp. 148, 150): both divisions derive all their notes in linear sequence (in *De plana musica* c and d are derived before  $\perp$ ), but in *De plana musica* notes of tetrachords beginning on  $\Gamma$ , C, G, c, and gg are consistently derived by a sequence of two sub-sesquioctave divisions followed by a sub-sesquitercial division, while in Guido only notes of the first tetrachord from  $\Gamma$  are derived in this way: subsequent notes up to b are obtained by sub-sesquitercial division and the rest by subduplex division. As pointed out above, the present division does not derive b and bb.

<sup>24</sup>Aliter secundum optimos practicos accipienda est certitudo passuum monochordi. <sup>25</sup>Sit data corda .Gamma-o. cuius medietas sit magnum .Go. et ipsius medietas sit parvum .go. <sup>26</sup>Item .Gamma-o. dividatur per tres partes cuius due partes sint magnum .Do. cuius medietas sit parvum .do. et istius medietatis sit ultimum .do.

<sup>24</sup>A definition of the steps of the monochord is to be obtained in another way according to the most highly skilled practitioners. <sup>25</sup>Let there be a given string Gamma-O whose half is great GO, with the half of great GO small go. <sup>26</sup>Then let Gamma-O be divided into three parts, from which two parts are great DO, with the

<sup>27</sup>Item .Gamma-o. dividatur per quatuor partes, cuius tres partes sint magnum .Co., cuius medietas sit parvum .co. et istius medietas sit ultimum .co. <sup>28</sup>Item magnum .Co. in quatuor partes dividatur, cuius tres partes sint .Fo. magnum, cuius medietas sit parvum .fo. <sup>29</sup>Item magnum .Do. in tres partes dividatur, cuius due partes sint .ao. parvum, cuius medietas sit ultimum .ao., sed parvum .ao. dupletur et efficietur magnum .Ao. <sup>30</sup>Item magnum .Ao. in tres partes dividatur, cuius due partes sint magnum .Eo., cuius medietas est parvum .eo. et istius medietatis medietas est ultimum .eo. <sup>31</sup>Item magnum .Eo. in tres partes dividatur, cuius due partes sunt .ho. quadratum parvum, cuius medietas est ultimum .ho., dupletur quod efficietur magnum .Ho. quadratum. <sup>32</sup>Item magnum .Fo. dividatur in quatuor partes, cuius tres partes sit parvum b rotundum, cuius medietas sit ultimum b rotundum et in hoc finitur certitudo omnium passuum monochordi secundum optimos praticos.

half of great DO small dO, and the half of small dO the last dO. <sup>27</sup>Then let Gamma-O be divided into four parts, from which three parts are great CO, with the half of great CO small cO, and the half of small cO the last cO. <sup>28</sup>Then let great CO be divided into four parts, from which three parts are great FO, whose half is small fO. <sup>29</sup>Then let great DO be divided into three parts, from which two parts are small aO, whose half is the last aO; in addition, let small aO be doubled and great AO will be produced. <sup>30</sup>Then let great AO be divided into three parts, from which two parts are great EO, whose half is small eO, with the half of small eO the last eO. <sup>31</sup>Then let great EO be divided into three parts, from which two parts are small square hO, whose half is the last hO; and when small square hO is doubled, great square HO will be produced. <sup>32</sup>Then let great FO be divided into four parts, from which three parts are small round b, whose half is the last round b. And in this manner the definition of all the steps of the monochord, according to the most skilled practitioners of the art, is

accomplished.

- 
- 24 *passionum pro passuum P*  
 25 *Co pro Go P*  
 27 *sit sit parvum pro sit parvum P    istius medietatis pro istius medietas P*  
 28 *medietatis P*  
 30 *Co pro Eo P*  
 32 *passionum pro passuum P*
- 

24. This monochord division is the earliest I have found to extend the range of derived notes from  $\Gamma$  to *ee*. It uses duplex, sub-duplex, sub-sesquialter, and sub-sesquitercial divisions to produce twenty-two notes in seventeen steps. The notes are differentiated in their registers by the adjectives *magnum*, *parvum*, and *ultimum*.

In place of the above *Vb* gives a division that uses sub-duplex, sesquialter, sub-sesquialter, sesquitercial, and sub-sesquitercial divisions to produce twenty-four notes in seventeen steps. This division includes grave B *fa* (also given in the divisions of Aribio, *De musica* [Smits van Waesberghe, p. 40], and Theoger of Metz, *Musica* [GS, 2:184]), and extends the range to *ff*: *Vb* seems to be the earliest source to incorporate this latter note. The various notes are differentiated in their registers by the adjectives *primum*, *secundum*, and *tertium*;  $\Gamma$  is referred to as *primus G* (these notes derived in *Vb* will nevertheless be referred to in the standard way).

The two divisions commented upon in this footnote are similar in several aspects: both consistently derive the notes of the first octave from  $\Gamma$  to F and for each of these in turn the notes one and two octaves above (up to *ee* for *P* and *ff* for *Vb*), the only exceptions being A and grave  $\perp$  in *P*; but they vary in the derivation order of the "base" notes: the base notes in *P* are determined in the following order:  $\Gamma$ , D, C, F, (A: determined after a), D, and (grave  $\perp$ : determined after acute  $\perp$ , while the base notes in *Vb* are determined thus:  $\Gamma$ , C, F, D, A, E, grave  $\perp$ , and grave B *fa*. Both divisions are fairly efficient (in terms of the number of notes produced relative to the number of steps taken: by definition a more efficient division would produce more notes in fewer steps than a less efficient one): *P* obtains two notes an octave apart in one step whenever it derives the lower note by sub-sesquialter division (D, a, E, and also  $\perp$ ); *Vb* obtains two notes an octave apart in one step whenever it derives the lower note by sub-sesquialter division (D and E); in addition *Vb* obtains three notes spanning two octaves in one step when it derives the lowest note by sesquitercial division (A and grave  $\perp$ ). Adkins's diagram (p. 155) of the division given in *Vb* (which he identifies with Philippe de Vitry) makes it appear far less efficient than it really is, by allocating separate steps for the notes that do not actually require separate steps, thus totalling twenty-three steps instead of seventeen for twenty-four notes. Since, as has been shown above, this division is also consistent in its pattern of note determination, Adkins's statement (p. 152) that it is "cumbersome and tedious" is not entirely justified.

25–32. In this monochord division, the term *magnum* refers to notes in the range A–g, *parvum* refers to notes in the range a–g', and *ultimum* refers to notes in the range a'–e". The use of the terms *magnum* and *parvum* is also found in *Sequitur de synemenis* (Herlinger, pp. 126–34).



10. <sup>1</sup>De synemmenis<sup>2</sup>Synemmenon est additio

superhabundantie vel restrictionis sive  
diminutio proportionum diatonici generis per  
modum armonie sumpte. <sup>3</sup>Et est nomen nervi  
sive chorde que fuit addita monochordo.

<sup>4</sup>Huius synemmenon quatuor sunt species  
scilicet in diatonico genere, videlicet  
prothosynemmenon, deutrisynemmenon,  
tresynemmenon, tetrasynemmenon, scilicet  
trite synemmenon, paranete synemmenon,  
nete synemmenon.

10. <sup>1</sup>Concerning synemmena<sup>2</sup>The synemmenon is the addition of

a superabundance or of a restriction, or the  
diminution of the ratios of the diatonic genus  
by means of the harmony used. <sup>3</sup>It is also the  
name of a string or chord that was added to  
the monochord. <sup>4</sup>There are four species of  
this synemmenon in the diatonic genus,  
namely, protosynemmenon,  
deutrisynemmenon, tresynemmenon, and  
tetrasynemmenon, that is, trite synemmenon,  
paranete synemmenon, and nete synemmenon.

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*P* 89r; *Vb* 17vb.

10. *desunt V*

1-18 *om. Vb*

1 *De synemmenis om. P*

2 *superhabundantie P sumpta pro sumpte P*

4 *scilicet in dyatonico genere sup. lin. P videlicet prothosynemmenon, dentrisynemmenon, tresynemmenon, tetrasynemmenon ab marg. P*

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2-5. Jerome of Moravia *Tractatus de musica* 23 (Cserba, pp. 172-73) parallels this passage. As Jerome also observes, *Tractatus de musica* 23 (Cserba, p. 168), none of the three proprieties alone suffices for the melodic requirements of the existing repertoire.

The term *synemmenon* usually denotes the conjunct tetrachord that is inserted at the Mese of the Greater Perfect System (cf. Hucbald *De harmonica institutione* [GS, 1:113]; Regino of Prüm *De harmonica institutione* 14 [LeRoux, p. 62]). The term was used by Theoger of Metz, *Musica* (GS, 2:187), to denote two extra tetrachords joined to the scale system comprising the tetrachords of the grave, final, higher (*superiores*), and highest (*excellentes*) notes. The chromatic inflection effected by the addition of the *synemmenon* to the Greater Perfect System came to be referred to by the same term, with Aribo, *De musica* (Smits van Waesberghe, pp. 10, 28), and John, *De musica* 5.3, 14.19 (Smits van Waesberghe, pp. 59, 102-3), applying the term to the note round b, the latter theorist applying it also to the

chromatic semitone below grave B of the medieval gamut. *De plana musica* has generalized this latter application of the term, and Jerome of Moravia, *Tractatus de musica* 23 (Cserba, pp. 172–73), adopts the definition and categorization given in *De plana musica* verbatim, but gives further details concerning its etymology and its use. A synonymous term is *coniuncta*, as used by *Berkeley Ms* 1.4 (Ellsworth, p. 52). Prosdocimo, *De modo monacordum dividendi* 9.7 (Herlinger, p. 116), recommends that the *synemmenon* or *coniuncta* be notated rather with “L” than with the cross (#). Hanboys(?), *Sinemmenon est figura quedam* (Lefferts, p. 364), defines the *synemmenon* as “a certain figure and it is said to be an alteration or a lessening of tones or semitones. It is the letter b.”

4. The *trite synemmenon*, *paranete synemmenon*, and *nete synemmenon* are the notes of the conjunct tetrachord of the Classical system: they do not correspond with the other four types of *synemmenon* species enumerated.

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<sup>5</sup>Tamen secundum optimos practicos plura  
inveniuntur in sectione chorde monochordi  
cuius extrahendi modus talis est processus.

<sup>6</sup>Magnum .Ho. quadratum in tres partes  
dividatur, cuius due partes sint .To. que  
scribitur inter .Fo. magnum et .G. magnum,  
cuius medietas ad .To. inter .f. et .g. parva.

<sup>7</sup>Item primum .To. in tres partes dividatur,  
cuius due partes sint .To. inter .c. et .d. parva,  
cuius medietas est .To. inter .c. et .d. ultima.

<sup>8</sup>Sed .To. inter .c. et .d. parva dupletur et  
efficietur .To. inter .C. et .D. magna. <sup>9</sup>Item  
.To. inter .C. et .D. magna in tres partes  
dividatur, cuius due partes sint .To. inter .G.  
magnum et .a. parvum, cuius medietas est  
illud .To. inter .g. parvum et .a. ultimum.

<sup>10</sup>Sed ipsa .To. inter .G. magnum et .a.  
parvum dupletur in longitudine et efficietur

<sup>5</sup>According to the most highly skilled  
practitioners of the art, however, more  
[notes] are found in a division of the  
monchord string, and the manner of its  
derivation is as follows. <sup>6</sup>Let great square  
HO be divided into three parts, from which  
two parts are TO, which is written between  
great FO and great G, whose half is TO  
between small f and g. <sup>7</sup>Then let the first TO  
be divided into three parts, from which two  
parts are TO between small c and d, whose  
half is TO between the last c and d; <sup>8</sup>in  
addition, let TO between small c and d be  
doubled and TO between great C and D will  
be produced. <sup>9</sup>Then let TO between great C  
and D be divided into three parts, from  
which two parts are To between great G and  
small a, whose half is that TO between

.To. inter .Gamma. et .A. magnum. <sup>11</sup>Item  
 parvum .b. dupletur in longitudine et  
 efficietur magnum .B'. non usitata inter .A. et  
 .H. magnum quadratum. <sup>12</sup>Sed si dividatur  
 per quatuor partes, tres partes sunt .To. inter  
 .D. et .E. magna, quod .To. inter .D. et .E.  
 mediat in longitudine efficitur .To. inter  
 .d. et .e. parva. <sup>13</sup>Sed eius medietas facit  
 diapason quod .To. inter .d. et .e. ultima.

small g and the last a; <sup>10</sup>in addition, let TO  
 between great G and small a be doubled in  
 length and TO between Gamma and great A  
 will be produced. <sup>11</sup>Then let small b be  
 doubled in length and great B (not used)  
 between [great] A and great square H will be  
 produced. <sup>12</sup>If this great B is divided into  
 four parts, three parts give TO between great  
 D and E, and if that is halved, TO between  
 small d and e will be produced. <sup>13</sup>This latter  
 TO's half produces the diapason which is  
 TO between the last d and e.

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6 C pro G P

7 est a To P

8 addantur pro inter P .Cd. et .D. P

9 duas pro tres P C pro G P

10 .C. pro .G. magnum P parvum et .ho. ultimum dupletur P O pro Gamma P

12 et .C. magna P

=====

5. This monochord division uses duplex, sub-duplex, and sub-superparticular divisions to produce twelve chromatic notes in nine steps. Only the sharped inflections of F, C, and G, and the flatted inflection of E are obtained in this division. This division parallels that given (up to the note between Gamma and A) in *Sequitur de synemenis* 1–4 (Herlinger, p. 127).

Cf. Jerome of Moravia, *Tractatus de musica* 23 (Cserba, pp. 172–73), who, instead of presenting a chromatic monochord division, proceeds to show how many more *synemmena* are created by allocating tetrachord segments upon the gamut and chromatically inflecting the notes contained within such that the ascending interval sequence semitone-whole tone-whole tone ensues.

6–17. For the use of the terms *magnum*, *parvum*, and *ultimum*, see note to *De plana musica* 9.25–32.

10. I.e., *synemmena* denote chromatic semitones.

11. An infrequent instance of the theoretical acknowledgement of B flat in the grave register: cf. Theoger of Metz *Musica* (GS, 2:184). The note between Γ and A created in 10.10 is, like the B flat, unusual.

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<sup>14</sup>Prothosynemmenon dicitur primum synemmenon inter .F. et .G. magna propter differentiam diapente ad .B. quadratum magnum et propter diatessaron ad .h. parvum quadratum et ne dissonantia tritoni in ordine sonorum misceatur et dicitur habundans .F. et minuens .G.

<sup>15</sup>Deutrisynemmenon dicitur secundum synemmenon quod est .b. parvum rotundum propter hoc quod minuat .h. parvum quadratum per maius semitonium.

<sup>16</sup>Tresynemmenon dicitur tertium synemmenon inter .d. et .e. parva propter differentiam diatessaron ad .b. parvum rotundum. <sup>17</sup>Tetrasynemmenon dicitur quartum synemmenon inter .A. et .B. quadratum magnum propter differentiam diapason ad .b. rotundum parvum, ut regula est: <sup>18</sup>omne synemmenon ex parte maioris semitonii accipitur sive denominatur.

<sup>19</sup>Supradictorum signorum octo dicuntur gravia quia gravem cantum reddunt sive depressum. <sup>20</sup>Alia vero dicuntur acuta quia

<sup>14</sup>The protosynemmenon is said to be the first synemmenon between great F and G, because of the diapente interval with great square B and because of the diatessaron interval with small square h, to avoid the mixture of the dissonance of the tritone with the series of sounds, and it is said to augment F and diminish G. <sup>15</sup>The deutrisynemmenon is said to be the second synemmenon, which is small round b because of that which diminishes square small h by a major semitone. <sup>16</sup>The tresynemmenon is said to be the third synemmenon between small d and e because of the diatessaron interval with small round b. <sup>17</sup>The tetrasynemmenon is said to be the fourth synemmenon between [great] A and great square B because of the diapason interval with small round b, as the rule is: <sup>18</sup>every synemmenon is considered or named from the major semitone. <sup>19</sup>Of the above-mentioned signs, eight are called grave because they render low or low-lying song. <sup>20</sup>The others are called acute because

acutum sonum reddunt. <sup>21</sup> Reliqua dicuntur	they render high sound. <sup>21</sup> The rest are
superacuta quia superacutum, id est valde	called superacute because they render super-
acutum, sonum reddunt vel quia super acutas	acute, that is, very high, sound or because
ponuntur.	they are placed above the acute letters.

14 synemmenon *om. P* dissona *P* C *pro G P*

15 Dentrisynemmenon *P*

17 quartum synemmenon *om. P*

19 Istorum signorum *G* et *G* dicuntur *Vb* graves *pro* gravia *Vb* id est depressimo *pro* sive depressum *Vb* *G* et *G* graves *in marg. m. sec. Vb*

20 Et septem acute quia acutum reddunt cantum *Vb*

21 Relique vero superacute quia *Vb* super acutas ponuntur vel quia *ante* superacutum *Vb* id est valde acutum *sup. lin. P* reddunt sonum *Vb* vel quia super acutas ponuntur *om. Vb*

14–17. The terms *prothosynemmenon*, *deutrisynemmenon*, *tresynemmenon*, and *tetrasynemmenon* are also used in *Sequitur de synemenis* 6 (Herlinger, p. 129) and by Jerome of Moravia, *Tractatus de musica* 23 (Cserba, pp. 172–73), to denote certain notes that are chromatically inflected (or ficta notes, as defined by *Sequitur de synemenis*), but of these three treatises only *De plana musica* links them to the notes F#, b, eb, and Bb, respectively.

The reasons for the prefixes *protho-*, *deutri-*, etc., are not clear, nor is the reference to the particular notes given in *P*. Herlinger, ed., *Sequitur de synemenis*, p. 129, n. 18, in speaking only about *Sequitur de synemenis* (in which no specific notes are linked to these terms), speculates that since in the synemmenon tetrachord of Greek music theory there is a note called “trite synemmenon,” the author of *Sequitur de synemenis* may have supposed that there had to be also a “prota-,” “deutera-,” and “tetrarda-” synemmenon. Meyer, “*De synemmenis*,” pp. 90–91, offers another explanation relating to all three treatises, and to *P* when concerning the reference to actual notes. It hinges upon the necessity in the first instance of F# for certain modal transpositions, and upon the necessity of this and the other three chromatic notes for the completion of the harmonic and arithmetic divisions of the diatonic notes of the gamut.

17. This is the note that was produced in 10.11.

19. Cf. *Introductio musice* 2.3; Jerome of Moravia *Tractatus de musica* 13 (Cserba, p. 173). The terms *gravita*, *acuta*, and *superacuta* as defined by *De plana musica* are the conventional ones applied to the registers of the gamut.

*B*, fols. 66r–68r (Appendix C) contains an extensive passage that parallels 10.19–21, and chapters 12–15, but in a considerably differing ordering of chapters, and sections thereof.

11. <sup>1</sup> De septem signis gammatis et sex vocibus	11. <sup>1</sup> Concerning the seven signs of the gamut and the six syllables
<sup>2</sup> Septem sunt signa monochordi, scilicet G, A, B, C, D, E, F que in infinitum posita. <sup>3</sup> Item secundum usum nostrum, sex sunt nomina vocum, scilicet ut, re, mi, fa, sol, la, et ista ponuntur supra signa predicta, <sup>4</sup> ita quod in quolibet G, C, F ponatur ut et in sequentibus signis voces sequentes, et in hoc finitur tota compositio Gammatis.	<sup>2</sup> There are seven signs of the monochord, namely G, A, B, C, D, E, and F, that are set down [from register to register] into infinity. <sup>3</sup> Likewise, according to our practice, there are six names of syllables, namely ut, re, mi, fa, sol, and la, and these are placed upon the above signs, <sup>4</sup> such that ut is placed upon any G, C, or F, with the following syllables upon the subsequent signs, and in this manner the entire composition of the gamut is determined.

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P 89v; Vb 17vb.

11. *desunt V*

1 *om. Vb*

2 Sed predicta *ante septem Vb* sunt *om. Vb* scilicet *om. Vb* et etiam *pro que Vb*  
potentia *pro posita Vb*

3 Sed *pro Item Vb* ista *om. Vb* predicta signa *Vb*

4 hoc fit compositio *Vb*

=====

1–2. Cf. *Introductio musice* 2.2; B, fols. 66rv (Appendix C). The earliest use of the letters A...G to designate musical notes appears to be that in *Dialogus* 2 (GS, 1:253). For other discussions on the seven letters, see, e.g., Hucbald *De harmonica institutione* (GS, 1:107); Guido *Micrologus* 5.17–19 (Smits van Waesberghe, p. 112); Theoger of Metz *Musica* (GS, 2:183); Lambertus *Tractatus de musica* (CS, 1:254); Elias Salomo *Scientiae artis musicae* 1 (GS, 3:18); Engelbert of Admont *De musica* 1.9, 1.14 (GS, 2:292, 296); *Quatuor principalia* 3.1 (CS, 4:219); Ugolino of Orvieto *Declaratio* 1.7.6 (Seay, p. 27). Roffredi, *Summa musicae artis* Proemium (Seay, p. 71), calls the letters *voces*: See also the note to 10.19 regarding a fragment in B that parallels this chapter.

3. Cf. *Introductio musice* 4.12. The earliest use of the syllables *ut...la* appears to be that by Guido *Epistola* (GS, 2:45). For other discussions on the six solmization syllables, see, e.g., Engelbert of Admont *De musica* 1.9 (GS, 2:292); Frater Petrus dictus Palma ociosa

*Compendium de discantu mensurabili* (Wolf, p. 508); *Quatuor principalia* 3.2 (CS, 4:219); Johannes de Olomons *Palma choralis* 2 (Seay, p. 5); Prosdocimo *Contrapunctus* 3.1 (Herlinger, p. 34); Prosdocimo *Plana musica* 1.2. Ugolino *Declaratio* 1.7.10 (Seay, pp. 27–28) also states that the syllable *ut* was added later to an existing series of five solmization syllables.

*De plana musica*, like *Introductio musice*, is often content to present the basic concepts without much elaboration. The concept of seven letters and six solmization syllables, for example, often serves as the springboard for various theoretical discussions among other theorists. For the pedagogic use of the six solmization syllables, see Guido *Epistola* (GS, 2:45–46); for other solmization systems, see John *De musica* 1.8 (Smits van Waesberghe, p. 50); *Summa musice* 7 (Page, p. 155); for the significance of the number six, see *Summa musice* 7 (Page, p. 156); for the concept that six hexachord degrees are sufficient, see *Summa musice* 7 (Page, p. 157); Aegidius de Zamora *Ars musica* 5.4 (Robert-Tissot, p. 62); Johannes de Olomons *Palma choralis* 2 (Seay, p. 5); for an explanation of why Guido only used six syllables see Johannes Gallicus *Ritus canendi* 2.2.2.3–7 (Seay 14, p. 51); for the statement that the position of the semitone is between the two middle syllables of the hexachord, see *Summa musice* 7 (Page, pp. 155, 157); Johannes de Grocheio *De musica* 89 (Rohloff, p. 126); for discussions on the use of vowels and consonants in the solmization syllables see *Summa musice* 7 (Page, pp. 156, 157).

*Quatuor principalia* 3.4 (CS, 4:220) declares that, whether made by Gregory or by Guido, the discovery of the six syllables had to be divinely inspired. According to Prosdocimo, *Plana musica* 1.19, the syllables *re*, *mi*, *fa*, and *sol* were invented before *ut* and *la*; and according to Bonaventura da Brescia, *Venturina* 10.7, 10.14 (Seay, p. 9), *re*, *mi*, *fa*, and *sol* are the principal syllables, and *ut* and *la* were invented out of necessity.

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<sup>5</sup>Unde Gamma nichil aliud est quam  
compositio signorum monochordi cum vocibus  
sic: ut, re, mi, et cetera, ut patebit in sequenti  
figura.

<sup>5</sup>Therefore the gamut is nothing other than  
the combination of the signs of the  
monochord with the syllables, thus: ut, re,  
mi, and so on, as will be shown in the  
following figure.

---

5 Gamma om. Vb      vocibus et sic planius apparebit in Vb





12. *desunt V*1 De partibus musice *om. P*2 Sciendum est quod *Vb* Gammatis *om. Vb* ipsius musice vel Gammatis *post* principales *Vb*3 Unde prima pars est *Vb*4 secunda de lineis et spatiis *Vb*5 tertia de proprietatibus *Vb*6 est *om. Vb*

=====

2. Cf. *B*, fol. 66r (Appendix C).

*Vb* lists the same four principal parts of music but in a different order; cf. Lambertus, *Tractatus de musica* (CS, 1:254), whose treatise parallels chapters 12–14. See also *Quatuor principalia* 3.1 (CS, 4:219) which lists a fifth part: modes.

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13. <sup>1</sup>De proprietatibus  
vorum<sup>2</sup>Habito de signis et vocibusdicendum est de aliis. <sup>3</sup>Et primo deproprietatibus. <sup>4</sup>Proprietas enim ut hic

accipitur idem est quod differentia.

<sup>5</sup>Differentiarum vero tres sunt species,scilicet  $\sqcap$  quadratum, natura et b molle sive b

rotundum.

13. <sup>1</sup>Concerning the proprieties of the  
syllables<sup>2</sup>The signs and syllables having been

dealt with, the other aspects now have to be

discussed; <sup>3</sup>and first, the proprieties.<sup>4</sup>Propriety as considered here is the same asa differentiation. <sup>5</sup>There are three species

of differentiation, namely square b, natural,

and soft or round b.

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*P* 89v; *V* 5r; *Vb* 18rb.13. 13 et 14 *inversa Vb*1-10 *desunt V*1-2 *om. Vb*3 Sequitur de proprietatibus *Vb*4 Unde proprietas nil aliud est quam differentia *Vb* de proprietatibus musice *in marg. Vb*5 Et sunt tres *pro* Differentiarum . . . sunt *Vb* b rotundum et natura et b molle *pro* natura et b molle sive b rotundum *P*

=====

3. Cf. *B*, fols. 66rv (Appendix C).

4. Cf. *Introductio musice* 3.3. Part of Lambertus's treatise, *Tractatus de musica* (CS, 1:255–56) parallels this entire chapter.

The term *proprietas* refers to an entity's characteristic that results from that entity's essence; the term *differentia* is used to indicate that characteristic which distinguishes one species from another in a particular genus. In the present context, the relevant genus is the diatonic genus (cf. *De plana musica* 4.8), and there are three species to be differentiated, as the rest of the chapter explains. For other explanations of the terms *proprietas* and *differentia*, see Johannes de Grocheio *De musica* 95–97 (Rohloff, p. 128); Marchetto *Lucidarium* 8.3.2–6 (Herlinger, pp. 298–300); *Quatuor principalia* 3.8 (CS, 4:222); Ugolino of Orvieto *Declaratio* 1.14.12 (Seay, p. 36).

Theorists also link *proprietas* to other concepts: Aribo, *De musica* (Smits van Waesberghe, p. 32), discusses *proprietas* in relation to modes; Anon. 2, *Tractatus de musica* (CS, 2:484), explains *proprietas* as a "distinction," ascribing qualities of firmness and weakness to the square  $\sqcap$  and round  $\circ$  proprieties (see also 13.6 below); Franco of Cologne, *Ars cantus mensurabilis* 7.15 (Reaney and Gilles, p. 45), defines *proprietas* in the context of mensural theory; Engelbert of Admont, *De musica* 4.17 (CS, 2:348), relates the term to the intervallic structure of the various modes.

5. *P* complicates its enumeration of the three proprieties by unnecessarily adding *et b molle*.

Cf. *Introductio musice* 3.2. For similar enumerations of the three species, see Jerome of Moravia *Tractatus de musica* 12 (Cserba, p. 50); *Quatuor principalia* 3.8 (CS, 4:222); Prosdocimo *Plana musica* 1.17; Ugolino of Orvieto *Declaratio* 1.14.8–9 (Seay, p. 36). For the significance of the number three, see Bonaventura da Brescia *Venturina* 9.2–3 (Seay, p. 8).

The three proprieties give rise to seven *deductiones* (hexachords): see, e.g., *Quatuor principalia* 3.2, 3.8 (CS, 4:219, 222); *Berkeley Ms* 1.1 (Ellsworth, p. 38), Johannes de Olomons *Palma choralis* 5 (Seay, p. 13), Bonaventura da Brescia *Venturina* 10.2–6 (Seay, p. 9). *Berkeley Ms* 1.1 (Ellsworth, p. 46) points out that the number of syllables used in describing a note (e.g. A re, C fa ut) corresponds to the number of *deductiones* of which the note can be a part. For a less usual use of the term *deductio*, see *Introductio musice* 4.12–14.

Johannes de Olomons, *Palma choralis* 4 (Seay, p. 12), points out that the natural propriety is that which accomodates, without alteration of pitch of any note, the desire of the human voice to sing a semitone after two whole tones.

Anon. 2, *Tractatus de musica* (CS, 2:496), states that all composed song is produced by nine consonances in the three proprieties, "artificially."

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<sup>6</sup>Unde  $\sqcap$  quadratum dicitur tonus ante  $\sqcap$  quadratum. <sup>7</sup>Item  $\circ$  rotundum dicitur semitonium ante  $\circ$  rotundum. <sup>8</sup>Item natura dicitur cantus sumptus sine aliquo  $\circ$ , id est sine differentia.

<sup>6</sup>Thus, the square  $\sqcap$  propriety is said to occur when there is a whole tone below square  $\sqcap$ , <sup>7</sup>and the round  $\circ$  propriety is said to occur when there is a semitone below round  $\circ$ . <sup>8</sup>A song taken without any note  $\circ$  is said to be natural, that is, without a differentiation.

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6 esse *post* dicitur *Vb* ante *b* rotundum *pro* ante  $\sqcup$  quadratum *Vb*

7 Et *b* molle dicitur esse semitonus ante  $\sqcup$  quadratum *Vb*

8 Item *om. Vb* aliquo *om. Vb*

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6-8. Cf. *Introductio musice* 3.5.

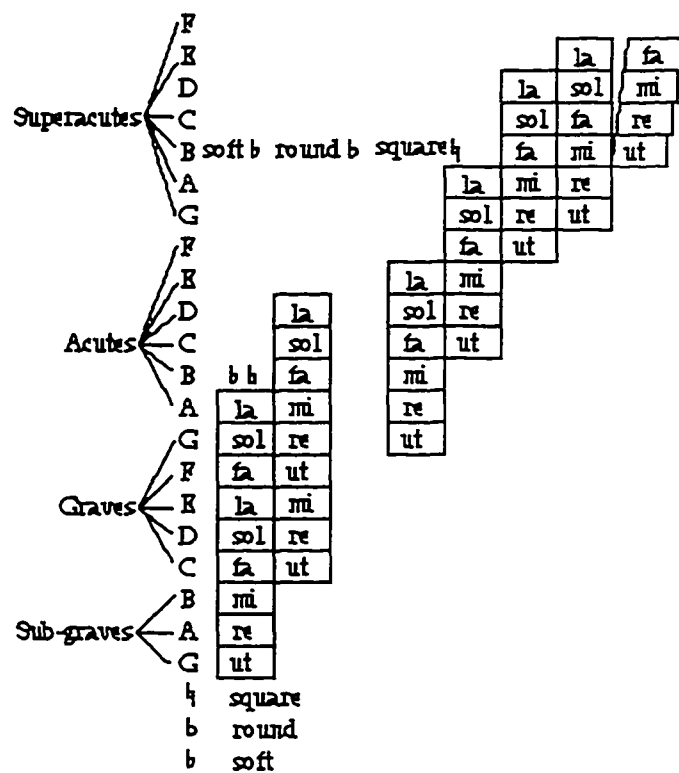
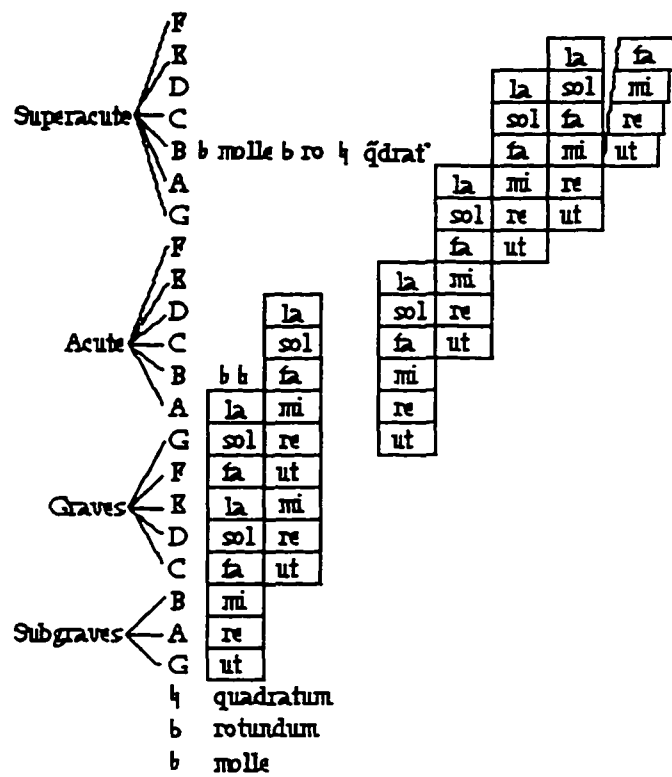
The soft *b* propriety gives a soft sound, while the hard *b* propriety gives a hard sound: Anon. 2 *Tractatus de musica* (CS, 2:484–85); Jerome of Moravia *Tractatus de musica* 12 (Cserba, p. 53).

Anon. 2, *Tractatus de musica* (CS, 2:485), reminds us that grave *B* has the square *b* propriety although it is not written as square *b*.

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<sup>9</sup>Unde regula: quod omne ut in *G* per  $\sqcup$  quadratum et voces sequentes; <sup>10</sup>item omne ut in *C* per naturam et voces sequentes; <sup>11</sup>item omne ut in *F* per *b* molle et voces sequentes. <sup>12</sup>Et hec omnia cum prioribus dictis apparent in figura.

<sup>9</sup>Whence the rule that every ut in *G* and the syllables following it are governed by square *b*, <sup>10</sup>every ut in *C* and the syllables following it are governed by the natural state, <sup>11</sup>and every ut in *f* and the syllables following it are governed by soft *b*. <sup>12</sup>And all these along with the earlier statements become clear in the following figure.



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9 quod *om. Vb*

10 et *pro* item *Vb* et voces sequentes *om. Vb*

11 et *pro* item *V Vb* Unde versus: C naturam dat, F b molle tibi signat, G quoque ~~L~~ durum  
facit te esse caniturum *post* molle *Vb* et voces sequentes *om. V Vb*

12 Et hec sufficiunt de proprietatibus ipsius musice *V* Et hec sufficiunt de proprietatibus  
musice *Vb*

=====

9–11. Cf. *Introductio musice* 3.6–8. For similar statements, see *Berkeley Ms* 1.1 (Ellsworth, p. 44); Johannes de Olomons *Palma choralis* 5 (Seay, p. 14); Prosdocimo *Plana musica* 1.11, 1.12; Bonaventura da Brescia *Venturina* 10.2–6 (Seay, p. 9).

*Vb* appends the oft-quoted verse: "C naturam dat, . . ." which also appears in *Introductio musice* 3.9.

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14. <sup>1</sup>De paritate et imparitate

<sup>2</sup>Sequitur de tertia parte Gammatis,  
scilicet de paritate et imparitate, id est de  
lineis et spaciis. <sup>3</sup>Unde omne illud quod est  
in linea dicitur imparitas et illud est in  
spatio dicitur paritas; <sup>4</sup>unde quodlibet  
signum quod sumitur in impari est in linea, et  
omne quod sumitur in pari est in spatio.

14. <sup>1</sup>Concerning evenness and oddness

<sup>2</sup>The discussion on the third aspect  
of the gamut follows, namely evenness and  
oddness, that is, lines and spaces. <sup>3</sup>Thus,  
everything that is on a line is called odd and  
everything that is in a space is called even;  
<sup>4</sup>thus any sign that is taken to be odd is on a  
line, and every letter that is taken to be even  
is in a space.

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*P* 90r; *Vb* 18ra.

14 et 13 *inversa Vb*

1 *om. Vb*

2 Habito de signis et vocibus, nunc est habendum de lineis et spatiis. Linea et spatium prout  
hic sumuntur: aliud nichil sunt quam paritas et imparitas *Vb* Gamatis *P*

3 omne quod *Vb* quod *pro* et illud *Vb* equalitas vel *ante* paritas *Vb*

4 quolibet *Vb* impari est in linea, et omne quod sumitur in *om. P*

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2. Part of Lambertus *Tractatus de musica* (CS, 1:255) parallels this entire chapter. Cf. also B, fol.66r (Appendix C). For similar remarks concerning lines and spaces, see Jerome of Moravia *Tractatus de musica* 11 (Cserba, p. 48); Johannes de Grocheio *De musica* 98–99 (Rohloff, p. 128); *Quatuor principalia* 3.7 (CS, 4:221); Johannes de Olomons *Palma choralis* 2 (Seay, p. 7); Bonaventura da Brescia *Venturina* 7.6 (Seay, p. 5).

For the concept of lines and spaces as a notational aid, see Guido *Aliae regulae* (GS, 2:35–36), John *De musica* 5.12–13 (Smits van Waesberghe, p. 61), *Summa musice* 13 (Page, pp. 171, 172). For the use of colored lines, see Guido *Aliae regulae* (GS, 2:36), *Ad organum faciendum* 3 (Huff, p. 53 [Eggebrecht, p. 112]), *Summa musice* 12 (Page, pp. 170, 171).

For the use of clefs, see *Introductio musice* 4, *Summa musice* 12, 13 (Page, pp. 170, 171, 172).

3. *Quatuor principalia* 3.7 (CS, 4:221) parallels 14.3–8. For similar explanations of the relationship of lines and spaces with the numerical properties of evenness and oddness, see *Summa musice* 8 (Page, pp. 160, 161); Johannes de Olomons *Palma choralis* 2 (Seay, p. 6); Prosdocimo *Plana musica* 1.7. Anon. 2, *Tractatus de musica* (CS, 2:484), names the notes that occur in spaces and those that occur on lines.

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<sup>5</sup>Unde sequitur per numerum naturalem quod si primum est in linea, semper reliquum erit in spatio. <sup>6</sup>Item omne octavum est oppositum, et quartum similiter; <sup>7</sup>sed in octavo loco sumitur equale signum primo. <sup>8</sup>Ergo si primum sit in spatio reliquum erit in linea et econverso, <sup>9</sup>et hoc secundum quadratum vel rectas lineas ipsius manus per primam et secundam, ter. <sup>10</sup>Et hic apparet in figura supradicta que palma vel Gamma nuncupatur.

<sup>5</sup>Whence it follows that, by natural number, if the first letter is on a line, the following one will always be in a space. <sup>6</sup>Likewise, every octave is in opposition, and similarly every fourth, <sup>7</sup>although in the octave position the same sign as the first is applied. <sup>8</sup>Therefore, if the first letter is in a space, the next one will be on a line and the converse. <sup>9</sup>This is in accordance with the square[s] or upright lines of the hand, through the first and second, thrice. <sup>10</sup>This is made clear in the figure spoken of earlier which is called the palm or the gamut.

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5 secundum pro per Vb sit pro est Vb semper om. Vb sit pro erit Vb  
 6 et insuper omne quartum oppositum primo et omne octavum Vb  
 7 tertio pro octavo P simile pro equale Vb primo om. Vb

8 si sit primum sit Vb linea pro spatio Vb spatio pro linea Vb  
 9 quadraturam Vb per primam et secundam, ter om. Vb  
 10 om. Vb

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5. For remarks on the nature of number, see also Cassiodorus *Institutiones* 2.4.2 (Mynors, p. 133); for the concept of the alternation of location of a note on a line and in a space, see also Aegidius de Zamora *Ars musica* 6.1–4 (Robert-Tissot, p. 64).

6. Cf. *Introductio musice* 4.9; *Summa musice* 12 (Page, pp. 169–70) explains this concept thus: "[L]ittera vel clavis que in gravibus est in linea in acutis in spacio invenitur et e contrario."

9. Paraphrasing: This is in accordance with the [syllables indicated in the] square[s] or upright lines [indicating columns] of the [above figure showing the notes of the] hand, through the first and second, thrice [i.e., within each hexachord, in groups of two, thrice each].

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15. <sup>1</sup>De mutationibus

<sup>2</sup>Sequitur de quarta parte, scilicet de  
 mutationibus. <sup>3</sup>Unde mutatio nichil aliud  
 est quam dimissio unius vocis propter aliam  
 sub eodem signo et sub eodem sono.

15. <sup>1</sup>Concerning mutations

<sup>2</sup>Now follows the discussion on the  
 fourth aspect, namely mutations. <sup>3</sup>A  
 mutation is nothing other than the  
 displacement of one syllable by another  
 with the same sign and the same sound.

---

P 90r; V 5r; Vb 18rb.

<sup>1</sup> om. V

<sup>2</sup> de quarta parte, scilicet om. V Vb definitio mutationibus in marg. m. sec. Vb

<sup>3</sup> nil pro nichil Vb sub eodem sono in eodem signo pro sub eodem signo et sub eodem sono Vb  
 in pro et sub V

---

1. Cf. B, fol. 68r (Appendix C). S<sub>2</sub> (fol. 118v, after 5.12) and Vc, fols. 22rv (Appendix C) both contain passages explaining the difference between *mutatio* and *permutatio*: *permutatio*, unlike *mutatio*, involves different pitches. For a similar explanation, see Marchetto *Lucidarium* 8.1.2–3 (Herlinger, pp. 270–72).

3. Cf. *Introductio musice* 5.6.

Lambertus *Tractatus de musica* (CS, 1:256) and *Quatuor principalia* 3.9 (CS, 4:223) contain extensive passages on the subject of mutation that are almost identical to those in *De plana musica* and also *Introductio musice*.

Both *De plana musica* and *Introductio* define *mutatio* as *dimissio unius vocis propter aliam*, with some sources of *Introductio* giving *divisio*, including Coussemaker's mistaken transcription of the term occurring in the Saint-Dié manuscript. In his edition of Lambertus *Tractatus de musica* (CS, 1:256), Coussemaker also gives *divisio*. Sources defining *mutatio* as *dimissio* include *Quatuor principalia* 3.9 (CS, 4:223); *Berkeley Ms* 1.2 (Ellsworth, p. 48); Johannes de Olomons *Palma choralis* 6 (Seay, p. 17); Rossetti *Libellus* 9.4 (Seay, p. 24). Nicolaus Capuanus, *Compendium musicale* (De La Fage, pp. 312, 315), defines *mutatio* as *dimissio proprietatis*. Cf. also *Vv*, fols. 74rv (Appendix C).

Among treatises examined, the earliest to discuss the term appears to be Anon. 2, *Tractatus de musica* (CS, 2:485), where it is defined as a progression (*progressio*) from one propriety to another. Other definitions or explanations for *mutatio* link it to the terms *transitio*: Jerome of Moravia *Tractatus de musica* 12 (Cserba, p. 49), *continuatio*: Johannes de Grocheio *De musica* 90 (Rohloff, p. 126), *variatio*: Marchetto *Lucidarium* 8.2.2 (Herlinger, p. 280), Prosdocimo *Plana musica* 1.8, Bonaventura da Brescia *Venturina* 13.2 (Seay, p. 12), and *acceptio*: Ugolino of Orvieto *Declaratio* 1.16.8 (Seay, p. 38). Prosdocimo, *Plana musica* 1.11, 1.12, links *mutatio* to the concept of *variatio per naturam*.

An associated process to *mutatio* is *disiuncta*, defined by *Berkeley Ms* 1.2 (Ellsworth, p. 48) as a transition from one deduction to another without change of syllable; this is presumably a more abrupt process compared to *mutatio*.

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<sup>4</sup>Ex quo sequitur quod ubicumque fit mutatio oportet quod ibi sint ad minus due voces.

<sup>5</sup>Sed in Gamma ut, in A re, in Be mi et in e la non est ibi nisi una vox, ergo non est ibi mutatio; <sup>6</sup>similiter in be fa be mi quoniam ibi sunt diversa signa et diverse voces, <sup>7</sup>et quia non ponuntur sub eadem voce neque sub eodem signo, <sup>8</sup>ideo non posset ibi esse mutatio, eo quod esset contra diffinitionem mutationis. <sup>9</sup>Quod autem non sit sub eodem signo apparet quia non dicitur b fa mi sed b fa b mi.

<sup>4</sup>From this it follows that whenever a mutation is made there ought to be at least two syllables. <sup>5</sup>But at Gamma ut, A re, B mi, and ee la there is but one syllable, therefore there is no mutation on these notes; <sup>6</sup>and similarly [there is no mutation] in b fa b mi because there are here diverse signs and diverse syllables, <sup>7</sup>and because these are placed under neither the same syllable nor the same sign. <sup>8</sup>Therefore a mutation is not possible on this note, as that would violate the definition of the term. <sup>9</sup>Also, the fact that such a mutation would not be under the



same sign is shown by the fact that the note

is called b fa b mi and not b fa mi.

- 
- 4 Unde *pro* ex quo V Vb insint *pro* ibi sint V due voces ad minus *pro* ad minus due voces V Vb
- 5 Sed *om.* V Gama ut, a re, b mi et e la Vb Gama P et post Gamma ut V et post A re V  
 ↳ *pro* be V he la *pro* e la V est nisi V Vb
- 6 Nec ante similiter V Vb b fa b mi V b fa ↳ mi Vb quia *pro* quoniam Vb
- 7 eisdem vocibus *pro* eadem voce V eisdem signis *pro* eadem voce Vb se habent sub uno sono  
*pro* sub eodem signo V sono se habent *pro* eodem signo Vb
- 8 Et ante ideo Vb non *om.* V potuit *pro* posset V potest *pro* posset Vb fieri *pro* esse Vb  
 quia *pro* eo quod Vb eo *om.* V tunc post esset V Vb mutationis *om.* V Vb
- 9 Si enim essent in uno sono deberet dici b fa mi V Si enim essent in uno sono deberet dici b fa ↳ mi et ut plenius pateat omnibus respiciat in monochordo Vb
- 

4. Cf. *Introductio musice* 5.10; Lambertus *Tractatus de musica* (CS, 1:256); *Quatuor principalia* 3.9 (CS, 4:223).

*De plana musica* says there must be at least two syllables for a mutation to be possible; *Introductio musice* (5.10) requires that there be no more nor less than two syllables. Marchetto, *Lucidarium* 8.2.3 (Herlinger, p. 280); Johannes de Olomons, *Palma choralis* 6 (Seay, p. 18); Bonaventura da Brescia, *Venturina* 13.3 (Seay, p. 12), on the other hand, say there must be two or three syllables; *Berkeley Ms* 1.2 (Ellsworth, p. 48) says there must be two "or more," while Prosdócimo, *Plana musica* 1.9 (10-11), says no more than three syllables can be found in any one *dictio* [expression]; Ugolino of Orvieto, *Declaratio* 1.18.6 (Seay, p. 43), states that the rule is that there be two syllables of identical sound.

5. For similar statements, see Vv, fols. 74rv (Appendix C); Jerome of Moravia *Tractatus de musica* 12 (Cserba, pp. 49, 52, 55); *Quatuor principalia* 3.9 (CS, 4:223); Johannes de Olomons *Palma choralis* 6 (Seay, p. 18); Prosdócimo *Plana musica* 1.9.

6. Cf. *Introductio musice* 5.37.

See also Jerome of Moravia, *Tractatus de musica* 12 (Cserba, p. 53), who declares that to have a mutation on b fa ↳ mi would result that which is *contra definitionem mutationis*. Jerome, *Tractatus de musica* 12 (Cserba, pp. 49, 53), Anon. 2, *Tractatus de musica* (CS, 2:486), and Anon. 1, *Tractatus de consonantiis musicalibus* (CS, 1:300), explain that there is more than one *clavis* on b fa ↳ mi. In addition Anon. 1 points out that between the *fa* and *mi* occurs a major semitone, thus on b fa ↳ mi there are diverse signs for its diverse syllables. *Berkeley Ms* 1.1 (Ellsworth, p. 46) points out that although there are two syllables on b fa ↳ mi, thus indicating two different proprieties, they do not represent the same pitch; cf. Johannes de Grocheio *De musica* 93 (Rohloff, p. 128); Johannes de Olomons *Palma choralis* 6 (Seay, p. 22); Prosdócimo *Plana musica* 1.9; Bonaventura da Brescia *Venturina* 13.6-8 (Seay, p. 12).

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<sup>10</sup>Sciendum quod ubicumque sunt due  
voces ibi sunt due mutationes, ut in C fa ut que  
dicuntur fa et ut, et ut fa. <sup>11</sup>Similiter  
ubicumque sunt tres voces ibi sunt sex  
mutationes, ut in G sol re ut, a la mi re et  
cetera, <sup>12</sup>quia ubi sunt tres voces potest prima  
mutari in secundam et econverso et prima in  
ultimam et econverso et secunda in ultimam  
et econverso, <sup>13</sup>et hac ratione ubi sunt tantum  
due non multiplicantur per quatuor sicut tres  
per sex.

<sup>10</sup>It must be known that wherever  
there are two syllables there are two  
mutations, as in C fa ut, which are called fa  
ut and ut fa. <sup>11</sup>Similarly, wherever there  
are three syllables there are six mutations,  
as in G sol re ut, a la mi re, and so on,  
<sup>12</sup>because where there are three syllables,  
the first can be mutated into the second and  
the converse, the first into the last and the  
converse, and the second into the last and  
the converse. <sup>13</sup>And by this reasoning when  
there are only two syllables, they are not  
multiplied to give four mutations, as three  
syllables are multiplied to give six.

- 
- 10 ubi *pro* ubicumque *Vb* ut in F fa ut quod dicitur fa ut *pro* ut in . . . ut fa *Vb* C fa ut . . . ut fa  
*om. V e pro C P*
- 11 Similiter . . . ut in *om. V* Et aliter *pro* Similiter *Vb* sex *om. P* et in aliis *post* G sol re  
ut *V* et in aliis *post* G sol re ut *Vb* a la mi re et cetera *om. V Vb*
- 12 quoniam *pro* quia *V Vb* due ibi *pro* sunt tres voces potest *V* ubi due sunt ibi prima *Vb*  
mutatur *V* mutatur *Vb* et prima in ultimam et econverso et secunda in ultimam et  
econverso *om. P* et prima in ultimam et econverso *om. Vb*
- 13 et ratione istius *pro* et hac ratione *V Vb* tantum *om. V Vb* non *om. Vb* dupplicantur  
*pro* multiplicantur *V Vb* quatuor sic tria duplicantur in sex *Vb*
- 14 Unde regula quod *pro* Regula est quod *V Vb* fieri *om. V Vb* descendens *pro* ascendendo  
*Vb* quia plus *pro* quod plus *V Vb* descendere *pro* ascendere *Vb* ascendere *pro*  
descendere *Vb*
- 

10–11. *Saut du même au même* in *V* on the words *ut in* (15.10).

Cf. Lambertus *Tractatus de musica* (CS, 1:256). For similar statements, see Johannes de Grocheio *De musica* 91–92 (Rohloff, pp. 126–28); *Quatuor principalia* 3.9 (CS, 4:223); Prosdocimo *Plana musica* 1.9.

*Berkeley Ms* 1.2 (Ellsworth, pp. 48–50) points out that for two mutations to be made from two syllables, the latter have to be at least “a whole tone away from each other (*ad*

*minus tono ab invicem distantes*),” meaning that no mutation can be made between the syllables *mi* and *fa*, as found in *b fa ̣ mi*.

12. Both *P* and *Vb* omit several words, obscuring the meaning of the sentence; I have emended the passage based on the reading from *V*.

13. Cf. Anon. 2 *Tractatus de musica* (CS, 2:486); Lambertus *Tractatus de musica* (CS, 1:256); *Quatuor principalia* 3.9 (CS, 4:223). *Vv*, fols. 74rv (Appendix C) explains that each *modus* of mutation can be designated both as ascending and as descending.

14. E.g., mutations on *C fa ut* from *fa* to *ut*, on *D sol re* from *sol* to *re*, on *E la mi* from *la* to *mi*: the “ends” of the names of these mutations are *ut*, *re*, and *mi*, respectively. See also 15.15. Here and in 15.15, *Vb* confuses the terms *ascendere* and *descendere*.

Cf. *Introductio musice* 5.2; Lambertus *Tractatus de musica* (CS, 1:256); *Quatuor principalia* 3.9 (CS, 4:223). Similar descriptions are given by Jerome of Moravia *Tractatus de musica* 12 (Cserba, p. 49); Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, p. 515); *Berkeley Ms* 1.2 (Ellsworth, p. 50); Ugolino of Orvieto *Declaratio* 1.18.2 (Seay, p. 43); Bonaventura da Brescia *Venturina* 13.15–16 (Seay, p. 13).

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<sup>14</sup>Regula est quod omnis mutatio desinens in ut re mi dicitur fieri ascendendo quod plus habet ascendere quam descendere. <sup>15</sup>Item omnis mutatio desinens in fa sol la dicitur fieri descendendo quia plus habet descendere quam ascendere. <sup>16</sup>Causa mutationis dicitur dupliciter: aut causa ascensionis aut causa descensionis, <sup>17</sup>ut in *C fa ut*, nam si aliquis a *fa* ascenderet usque ad tertiam vocem et velit sumere quartam, necesse est ei sumere *fa-ut* quod est mutatio de *fa* in *ut* et similiter descendendo suo modo.

<sup>14</sup>The rule is that every mutation that ends on *ut*, *re*, and *mi* is said to be made in ascent because it accommodates more ascent than descent. <sup>15</sup>In the same way every mutation that ends on *fa*, *sol*, and *la* is said to be made in descent because it accommodates more descent than ascent. <sup>16</sup>There is said to be a twofold reason for mutation: either to ascend, <sup>17</sup>as in the case of *C fa ut*, where having ascended from *fa* to the third syllable from it [*la*], should one wish to reach a fourth, it will become necessary to take the combination *fa-ut*, making a mutation from *fa* into *ut*; or, similarly, to descend in the same manner.

- 
- 15 Et *pro* Item *V Vb* fieri *om. V Vb* ascendere *pro* descendendo *Vb* ascendere *pro*  
descendere *Vb* descendere *pro* ascendere *Vb*
- 16 Sumitur autem causa ascensionis aut descensionis *Vb* sumitur *pro* dicitur *V* aut causa  
descensionis *om. P*
- 17 ut patet in *V Vb* e *pro C P* quoniam *pro* nam *V Vb* Si in ipso aliquis sumat ut posset  
descendere usque ad quartam vocem *Vb* Si in ipso sumeret a *c* fa ut posset ascendere  
usque ad tertiam *V* quoniam si vellet *pro* et velit *V* qui si vellet *pro* et velit *Vb*  
vocem *post* quartam *V Vb* esset *pro* est ei *V* ei *om. Vb* sumere ut in ipso *C fa* ut *Vb*  
sumere in ipso *C fa* ut *V* ut *ante* quod *V* ut in *fa pro* *fa* in *ut Vb* ascendendo *pro*  
descendendo *Vb* et ista sufficiant *post* modo *V Vb*
- 

15. E.g., mutations on *C fa ut* from *ut* to *fa*, on *D sol re* from *re* to *sol*, on *E la mi* from *mi* to *la*. See also 15. 14.

Cf. *Introductio musicae* 5.3.

16. Cf. especially Lambertus *Tractatus de musica* (CS, 1:256). For similar statements on the ascending and descending aspects of mutation, see, e.g., Elias Salomo *Scientiae artis musicae* 20 (GS, 3:42); Ugolino of Orvieto *Declaratio* 1.18.7 (Seay, p. 43).

17. There is a slight ambiguity in *V* (*a c fa ut*): a possible emendation is "... quoniam si in ipso sumeret <fa> posset ascendere usque ad tertiam vocem ..." *Vb*'s description is entirely incorrect: a possible emendation is "... quoniam si in ipso aliquis sumat <fa> posset descendere usque ad quartam vocem. Qui si <vero> vellet <ascendere> quartam vocem necesse est sumere ut in ipso *C fa ut*, quod est mutatio de <fa> in <ut> ..."

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16. <sup>1</sup>De speciebus  
singulis musicae

16. <sup>1</sup>Concerning the individual species  
of music

<sup>2</sup>Nunc ad declarandum species supra  
positas musicae accedamus ponendo singulas  
sub exemplo. <sup>3</sup>Et sunt tredecim quarum prima  
est unisonus.

<sup>2</sup>Now let us attempt to elucidate the  
species of music enumerated above by giving  
examples of each. <sup>3</sup>There are thirteen  
species of which the first is the unison.

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*P* 90v; *V* 5v; *Vb* 18va.

1 De musica *Vb om. V*

2 Sequitur de consonantiis in eodem tempore vel in diversis temporibus. Musica est veraciter  
canendi scientia et facilis ad canendi perfeccionem via vel aliter musica est scientia  
de multitudine sonorum. Musica est scientia de numero relato ad sonum vel ad sonos.  
Et dicitur a moys quod est aqua et ycos scientia quia inventa erat iuxta aquas *V Nota*

cum musica est scientia veraciter canendi vel facilis ad canendi perfectionem via. Et dicitur a moys quod est aqua et ycos scientia quia inventa fuit iuxta aquas Vb ponenda P diffinitio musice et inventio et species 13 in marg. m. sec. Vb

- 3 Ipsius musice tredecim sunt species pro Et sunt tredecim V eius species post sunt Vb scilicet unisonus, tonus, semitonius et cetera post tredecim pro quarum prima est unisonus Vb dicitur pro est V unisonus om. P secunda semitonium, tertia tonus, quarta semiditonus, quinta ditonus, sexta diatesseron, septima tritonus, octava dyapente, nona semitonium cum dyapente, decima tonus cum dyapente, undecima tonus cum diapente, duodecima ditonus cum dyapente, tredecima diapason post unisonus V

1. Cf. *De plana musica* 6.7, *Introductio musice* 6, 7.

Among other theorists and treatises giving systematic and detailed descriptions of individual species (of intervals) are the following: Hucbald *De harmonica institutione* (GS, 1:105); *Dialogus* 4–5 (GS, 1:254–56); Guido *Micrologus* 4.2–13 (Smits van Waesberghe, pp. 103–5); Guido: *Epistola* (GS, 2:46–47); Berno of Reichenau *Prologus in tonarium* 2 (GS, 2:64); Wilhelm of Hirsau 22–25 (Harbinson, pp. 55–57); Theoger of Metz *Musica* (GS, 2:184–85); John *De musica* 8 (Smits van Waesberghe, pp. 67–71); Roffredi *Summa musicae artis* 2 (Seay, pp. 73–74); Anon. 2 *Tractatus de musica* (CS, 2:486–91); *Summa musice* 10 (Page, pp. 163–66); Lambertus *Tractatus de musica* (CS, 1:257–58); Anon. of St. Emmeram *De musica mensurata* 4 (Yudkin, p. 262); Jerome of Moravia *Tractatus de musica* 14 (Cserba, pp. 58–60); Anon. 1 *Tractatus de consonantiis musicalibus* (CS, 1:296–301); Anon. 7 *De musica libellus* (CS, 1:381); Aegidius de Zamora *Ars musica* 14 (Robert-Tissot, pp. 98–100); Johannes de Grocheio *De musica* 49–57 (Rohloff, pp. 118–20); Marchetto *Lucidarium* 9.1.16–122 (Herlinger, pp. 316–66); Engelbert of Admont *De musica* 2.1–2, 2.28–29 (GS, 2:298–300, 318–19); *Quatuor principalia* 3.11–18 (CS, 4:226–29); Anon. 2 *Tractatus de discantu* (Seay, pp. 16–22); *Ars contrapunctus secundum Philippum de Vitriaco* 1 (Appendix D); *Berkeley Ms* 1.9 (Ellsworth, pp. 98–108); Johannes de Olomons *Palma choralis* 7 (Seay, pp. 29–38); Prosdocimo *Contrapunctus* 2.5 (Herlinger, pp. 44–48); Ugolino of Orvieto *Declaratio* 1.19–44 (Seay, pp. 46–80); Johannes Gallicus *Ritus canendi* 1.1.3 (Seay 13, pp. 5–10); Nicolaus Capuanus *Compendium musicale* (De La Fage, p. 316); Rossetti *Libellus* 10 (Seay, pp. 28–35).

The following specifically describe harmonic intervals (see note to 3.2): Martianus Capella *De nuptiis philologiae et mercurii* 9 (Dick, pp. 496–97); Boethius *Musica* 1.16 (Friedlein, pp. 201–3); Cassiodorus *Institutiones* 2.5.7 (Mynors, pp. 144–45); Regino of Prüm *De harmonica institutione* 16 (LeRoux, pp. 65–68); *Item de organo* (Huff, p. 65 [Eggebrecht, p. 160]); Anon. of St. Emmeram *De musica mensurata* 4 (Yudkin, pp. 260–68); Anon. 4 *De mensuris et discantu* 4.1 (Reckow, p. 63); Aegidius de Zamora *Ars musica* 10 (Robert-Tissot, pp. 82–84), Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, p. 508).

2. V begins this sentence with a unique passage that recurs in fol. 20r (in the treatise following *De plana musica* in this manuscript: *De mensurabili musica*); V also repeats definitions it has given before (see 2.2). Both V and Vb vary from P in including the *moys-aqua* analogy (see note to *Introductio musice* 1.13).

<sup>4</sup>Unisonus est quicquid accipitur in eadem

linea seu in eodem spatio, ut ubicumque in

<sup>4</sup>The unison is whatever is obtained on the

Gammate est in quolibet signo gammatis vel  
in qualibet voce. <sup>5</sup>Et dicitur ab hoc nomine:  
unus, -na, -num et sonus quasi habens unum et  
eundem sonum, ut hic.

same line or in the same space, occurring  
anywhere in the gamut under any sign or  
syllable. <sup>5</sup>It is named from *unus*, -a, -um  
[one]—having, as it were, one and the same  
sound—as here.

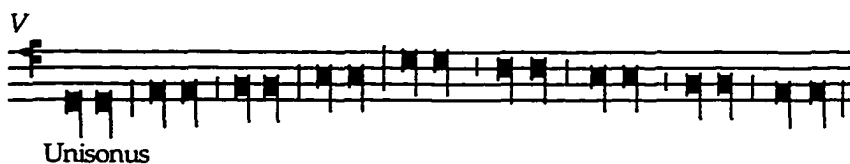


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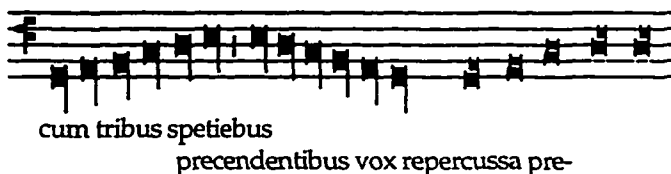
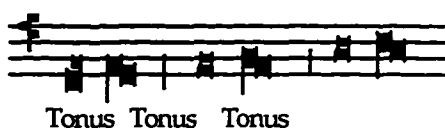
- 4 Hic incipit specialiter diffinire *ante* Unisonus V Unde *ante* Unisonus Vb prima in marg.  
P sed non *pro* seu P linea vocis et sic ubique V Vb scilicet in quolibet *pro* est in  
quolibet V Vb
- 5 hoc nomine *om.* Vb -na, -num *om.* Vb -num *om.* V unum et *om.* V sonum et eundem *pro*  
et eundem sonum Vb secundum figuram et secundum sonum *pro* ut hic Vb secundum  
figuram et ut secundum sonum sic [*sine exemplo*] *post* hic V Item alio modo unisonus  
dicitur sonus unius vocis a qua non fit progressio unum semper habet esse vel in eadem  
linea vel in eodem spatio. Si vero progrediatur ab aliqua voce, vocem tangendo  
propinquam, tunc aliquando fit tonus aliquando semitonium. Tamen sciendum est quod  
unisonus non est consonantia per se ipsum sed est principium aliarum consonantiarum et  
sine ipso unisono nulla consonantia esse potest. Quid est unisonus? Unisonus est vox per  
quam primo incipimus cantare, que quidem [*unisoni diffinitio in marg. m. sec.*] vox non  
ascendit nec descendit et in potestate cantoris est imponenda sive in excelsa sive in  
humili voce. Et ponitur in quacumque clave fuerit necessarius. *post* hic Vb



=====

4. Cf. *Introductio musice* 7.12. Cf. also the variant reading of Vb.  
For various other definitions of the unison, see Boethius *Musica* 5.5 (Friedlein, p.  
356); Guido *Aliae regulae* (GS, 2:36); Anon. 2 *Tractatus de musica* (CS, 2:496); Lambertus

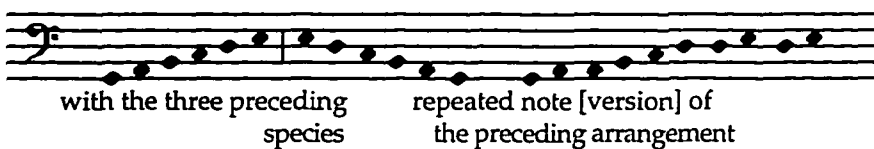
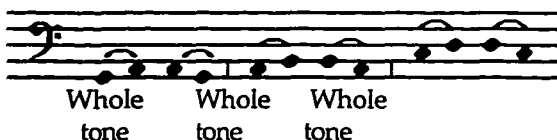
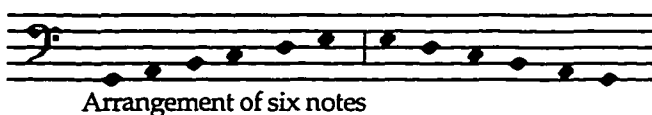




[vacua]  
cedentis ordinis ascendendo vel descendendo Con-

[vacua]  
versio precedentium ascendendo et descendendo

-----



[empty staff]  
in ascent and in descent. The converse of the preceding notes  
in ascent and in descent.

6-68 om. Vb

6 secunda in marg. P spatium pro spatia V

7 inter G A et A H et C D et D E vel F G vel b c scilicet V omnia signa V

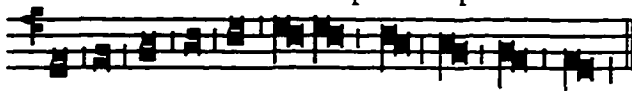
8 mi pro re mi P fa pro fa sol P et om. V

9 tonus om. V vel pro sive V quia non sonaretur sed audiretur post sonando V ut hic  
secundum figuram pro ut patet hic V

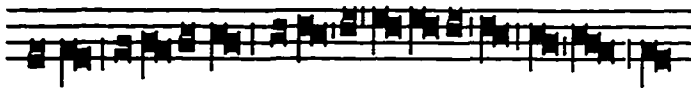




Ordinatio 6 vocum in tribus speciebus precedentibus



vox repercussa precedentis ordinis.



Coniunctio precedencium

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6. Cf. *Introductio musice* 6.5, 7.14.

For other definitions and descriptions of the whole tone, see Martianus Capella *De nuptiis philologiae et mercurii* 9 (Dick, pp. 495, 512); Hucbald *De harmonica institutione* (GS, 1:108); Guido *Micrologus* 4.2–5 (Smits van Waesberghe, p. 103); *Summa musice* 10 (Page, pp. 164, 166); Lambertus *Tractatus de musica* (CS, 1:257); Anon. of St. Emmeram *De musica mensurata* 4 (Yudkin, pp. 262–64); Jerome of Moravia *Tractatus de musica* 14, 20 (Cserba, pp. 59, 154); Anon. 1 *Tractatus de consonantiis musicalibus* (CS, 1:300–1); Aegidius de Zamora *Ars musica* 12.7 (Robert-Tissot, p. 90); Marchetto *Lucidarium* 2.1.2–3, 2.2.2–3, 2.3.2–4 (Herlinger, pp. 106–8); Engelbert of Admont *De musica* 2.1, 2.10, 2.12 (GS, 2:299, 306, 308); Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, p. 508); *Berkeley Ms* 1.9 (Ellsworth, pp. 98–100); Prosdocimo *Plana musica* 1.10.

Marchetto, *Lucidarium* 2.1.2 (Herlinger, p. 106), differentiates *tonus* as referring both to pitch and to the whole tone. For other terms referring to the whole tone, see Marchetto *Lucidarium* 2.3.8 (Herlinger, p. 110); for the connection between *tonus*, *tropus*, and *modus*, see Marchetto *Lucidarium* 11.1.5–8 (Herlinger, pp. 370–72). Marchetto, *Lucidarium* 2.5.7, 2.8.6, 8.1.3 (Herlinger, pp. 132, 150, 270–72), is also responsible for the division of the whole tone into five parts; *Berkeley Ms* 5 (Ellsworth, p. 240), on the other hand, divides the whole tone into three parts.

In contrast to those who consider the unison to be the origin of the intervals (note to 16.4), at least one theorist considers the whole tone to be that origin: cf. Anon. of St. Emmeram *De musica mensurata* 4 (Yudkin, pp. 262–64).

Bonaventura da Brescia, *Venturina* 14.23–26 (Seay, p. 16), categorizes the whole tone into *perfectus*, *imperfectus*, and *plusquam perfectus*; Engelbert of Admont, *De musica* 2.19, 2.20 (GS, 2:312–13), describes the smaller constituents of the whole tone.

Aegidius de Zamora, *Ars musica* 11.12–21 (Robert-Tissot, pp. 86–88), outlines the various arguments concerning the status of the whole tone as a consonance, concluding that “we still argue these points, just as did the ancients.”

9. For this derivation of the term, see also Guido *Micrologus* 6.15 (Smits van Waesberghe, p. 116); Theoger of Metz *Musica* (GS, 2:186); Lambertus *Tractatus de musica* (CS, 1:257); Marchetto *Lucidarium* 2.2.2 (Herlinger, p. 106); Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, p. 508); *Quatuor principalia* 2.12 (CS, 4:212).

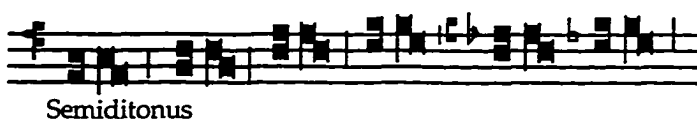
<sup>10</sup>Semiditonus est spatium inter duos

<sup>10</sup>The semiditone is the interval

unisonos continens in se tonum cum semitonio.

<sup>11</sup>Et accipitur inter quodlibet A C,  $\flat$  D, D F, E  
G, G  $\flat$ . <sup>12</sup>Sed re fa, mi sol accipiuntur inter  
ista, ergo faciunt semiditonum. <sup>13</sup>Et dicitur a  
semis quod est dimidium et tonus quasi  
habens tonum cum dimidio, ut hic patet.

between two single sounds comprising a  
whole tone plus a semitone. <sup>11</sup>It is obtained  
between any A and C, B and D, D and F, E  
and G, and g and  $\flat$ . <sup>12</sup>But, re fa and mi sol are  
obtained between these letters; therefore  
they produce the semiditone. <sup>13</sup>It is named  
from *semis*, which is "a half," and  
*tonus*—having, as it were, a whole tone plus  
a half—as is shown here.



-----



- 10 *tertia in marg. P* et cetera *pro* spatium inter duos unisonos *V* inter *bis P* vel tonum et  
semitonium *post* semitonio *V*  
11 accidit *pro* accipitur *V* D E, F G *pro* D F, E G *P*  
12 re fa et mi sol sunt inter *V* solum *pro* sol *P* semitonium per *ypotesim pro* semiditonum *V*  
semitonium *pro* semiditonum *P*  
13 quod est *om. V* et dimidium *pro* cum dimidio *V* ut hic patet [*vacuum: Semiditonus*  
Semidytonus] *P*

=====

10. Cf. *Introductio musice* 6.11, 7.29. Anon. 1, *Tractatus de consonantiis musicalibus* (CS, 1:298), says that the semiditone is a better consonance than a ditone. For the use of the semiditone in organum, see *Ad organum faciendum* 3 (Huff, p. 55 [Eggebrecht, p. 113]).

Engelbert of Admont, *De musica* 2.15 (GS, 2:310), calls the semiditone and ditone "minor" intervals. Frater Petrus dictus Palma ociosa, *Compendium de discantu mensurabili* (Wolf, pp. 509–10), gives the alternate name *tertia minor* to the semiditone (see also note to *De plana musica* 16.16).

12. Both *P* and *V* substitute in error for *semiditonum*: *P* has *semitonium*, *V* has *semitonium per yposesim*.

13. Both *P* and *V* equate *semis* with *dimidium*: this varies with the usual statement made by theorists that *semis* does not mean “half” but “incomplete.” In 16.74 all three sources of *De plana musica* make this more common statement.

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<sup>14</sup>*Semiditonus videtur potius duos tonos continere cum dimidio quam unum cum dimidio quia ditonus simpliciter per se continet duos tonos et adiuncto semitonio facit duos tonos cum dimidio.*

<sup>15</sup>*Respondendum est per illam regulam: quando minor numerus preponitur maiori, ut unum ante duo, abicienda est unitas a maiori numero, similiter quando semitonium quod minor est tono preponitur ditono abicit secundum tonum et sic restat tonus cum dimidio.*

<sup>14</sup>The semiditone might appear to contain two whole tones plus a half rather than one whole tone plus a half, since a ditone by itself comprises two whole tones and, with the annexation of a semitone produces two whole tones plus a half. <sup>15</sup>To this it must be the reply by the following rule: when a smaller number is placed before a larger, such as the number one before two, the number one must be subtracted from the larger number, and so similarly when the semitone, which is a smaller interval than a whole tone, is placed before a ditone, it reduces the second whole tone, leaving a whole tone plus a half.

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14 *Semiditonus om. V continere duos tonos pro duos tonos continere V et om. V facit duos cum dimidio V*

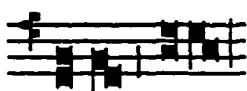
15 *istam pro illam V sic post regulam V sic 9 vel 1 ante decem pro ut unum ante duo V una post unitas V cum ditono perfectio pro tono preponitur ditono abicit secundum tonum et sic restat tonus cum dimidio P*

=====

14–15. The scholarly argument presented here takes the form of a *quaestio*; the key words in this instance are *videtur* and *respondendum est*.

<sup>16</sup>Ditonus est spatium inter duos  
unisonos continens in se duos tonos. <sup>17</sup>Et  
accipitur inter quodlibet G H quadratum vel  
C E vel F a vel b d. <sup>18</sup>Sed ut mi et fa la sunt  
inter huius signa, ergo faciunt inter se  
ditonum. <sup>19</sup>Et dicitur a dya quod est duo et  
tonus quasi habens duos tonos, ut hic.

<sup>16</sup>The ditone is the interval between  
two single sounds comprising two whole  
tones. <sup>17</sup>It is obtained between any G and  
square B, or C and E, or F and A, or b and d.  
<sup>18</sup>But, between these signs are ut mi and fa  
la; they therefore produce between them  
the ditone. <sup>19</sup>It is named from *dya*, which is  
"two," and *tonus* [whole tone]—having, as it  
were, two whole tones—as here.

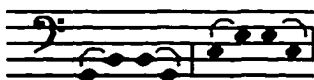


Ditonus

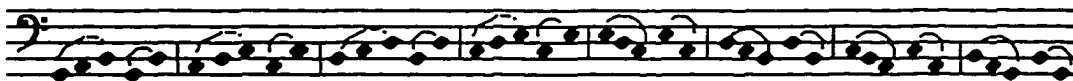


Hic est operatio eiusdem cum probacione

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Ditone



Here is the working of the same with conjunct motion

- 16 quarta in marg. P  
17 quadratum om. V et b pro vel b V  
18 et om. V signa om. V inter se faciunt dytonum pro faciunt inter se ditonum V  
19 sic pro ut hic V ut hic [*vacuum*: Dytonus Dytonus] P

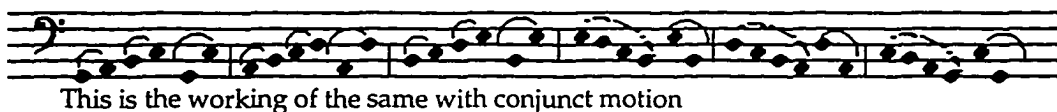
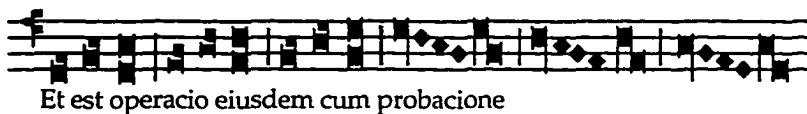
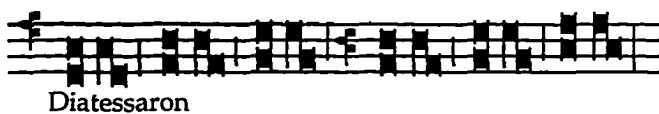
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16. Cf. *Introductio musice* 6.9, 7.25. Johannes de Grocheio, *De musica* 54 (Rohloff, p. 120), quotes Johannes de Garlandia as having categorized the ditone as a consonance, but as Grocheio himself considers it an imperfect one and harsh-sounding, dismisses it.

Engelbert of Admont, *De musica* 2.15 (GS, 2:310), calls the ditone and semiditone "minor" intervals. Frater Petrus dictus Palma ociosa, *Compendium de discantu mensurabili* (Wolf, pp. 509–10), gives the alternate name *tertia maior* to the ditone (see also note to *De plana musica* 16.10).

<sup>20</sup>Diatessaron est spatium inter duos unisonos continens in se duos tonos cum semitonio. <sup>21</sup>Et accipitur inter quodlibet G C, A D, C F, D G, F b rotundum. <sup>22</sup>Sed ut fa, re sol, mi la sunt inter huius signa, ergo faciunt diatessaron. <sup>23</sup>Et dicitur a dia quod est de et tessar quod quatuor quasi de quatuor vocibus facta, ut hic patet.

<sup>20</sup>The diatessaron is the interval between two single sounds comprising two whole tones plus a semitone. <sup>21</sup>It is obtained between any G and C, A and D, C and F, D and G, and F and round b. <sup>22</sup>But, between these signs are ut fa, re sol, and mi la; they therefore produce the diatessaron. <sup>23</sup>It is named from *dia*, which is "from," and *tessar*, which is "four"—made, as it were, of four syllables—as shown here.



---

20 quinta in marg. P distantia pro spatium V  
 21 H E post A D V E a post D G V b rotundum F pro F b rotundum P rotundum om. V  
 22 sed pro sunt V signa om. V  
 23 quod est om. V tessar quatuor V sic pro ut hic patet V ut hic patet [vacuum:  
 Diatessaron Diatessaron] P

---

20. Cf. *Introductio musice* 6.13, 7.34. Rasch, *Iohannes de Garlandia*, p. 48, erroneously claims that P omits the section on the diatessaron. For other definitions and descriptions of the diatessaron see *Musica enchiriadis* 10 (Schmid, p. 24); Aribio *De musica* (Smits van Waesberghe, p. 17); Lambertus *Tractatus de musica* (CS, 1:258); Anon. 4 *De mensuris et discantu* 4.1 (Reckow, pp. 66–69); Aegidius de Zamora *Ars musica* 14.6–9 (Robert-Tissot, p. 98).

In Pythagorean tuning, the semitone which the diatessaron contains is a minor semitone. Boethius, *Musica* 3.3 (Friedlein, pp. 273–75), demonstrates against Aristoxenus that the diatessaron does not comprise two whole tones and a semitone that is exactly half a whole tone; cf. Martianus Capella *De nuptiis philologiae et mercurii* 9 (Dick, pp. 496–97, 508).

For discussions on diatessaron species, see Boethius *Musica* 4.14 (Friedlein, p. 338); *Musica enchiriadis* 12 (Schmid, p. 34); Berno of Reichenau *Prologus in tonarium* 5 (GS, 2:67–68); Wilhelm of Hirsau *Musica* 24.2 (Harbinson, p. 56); Aribio *De musica* (Smits van Waesberghe, pp. 11–12, 25); Theoger of Metz *Musica* (GS, 2:188); Marchetto *Lucidarium* 11.4.214–230 (Herlinger, pp. 488–508); Engelbert of Admont *De musica* 1.14, 2.24, 3.16, 3.18 (GS, 2:296, 315, 331–34).

Marchetto, *Lucidarium* 8.3.9–10 (Herlinger, p. 300), defines a “natural” melody as one in which every fourth is a diatessaron, since the human voice likes to sing a semitone within every fourth; cf. Johannes de Olomons *Palma choralis* 4 (Seay, p. 12). Aribio, *De musica* (Smits van Waesberghe, p. 10), discusses the close relationship between the diatessaron and diapente. *Summa musice* 22 (Page, p. 197) observes that the diatessaron and diapente are “delectable” intervals. Engelbert of Admont, *De musica* 2.14 (GS, 2:309), describes these intervals as “true” and “customary.”

21. *Falsa musica* is necessary for intervals of the fourth that do not create the diatessaron: Anon. 2 *Tractatus de discantu* (Seay, p. 28).

23. For this derivation of the term, see also Regino of Prüm *De harmonica institutione* 16 (LeRoux, p. 66); Guido *Micrologus* 6.11 (Smits van Waesberghe, p. 115); Aegidius de Zamora *Ars musica* 10.16 (Robert-Tissot, p. 84). Marchetto, *Lucidarium* 9.1.37 (Herlinger, p. 328), distinguishes between Greek and Latin spellings of *dya-/dia-*; cf. Bonaventura da Brescia *Venturina* 14.49, 14.52 (Seay, p. 18).

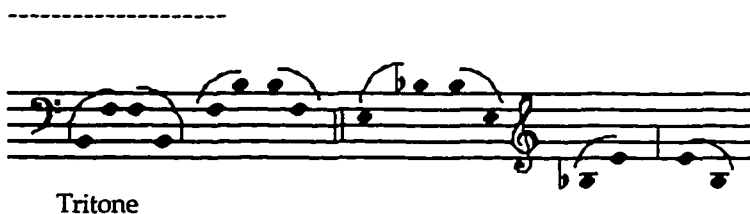
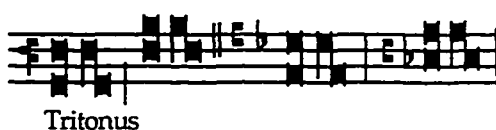
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<sup>24</sup>Tritonus est spatium inter duos  
 unisonos continens in se tres tonos. <sup>25</sup>Et  
 accipitur inter quodlibet  $\sqsubset$  quadratum et F et

<sup>24</sup>The tritone is the interval between  
 two single sounds comprising three whole  
 tones. <sup>25</sup>It is obtained between any square B

econverso. <sup>26</sup>Et dicitur a tris quod est tres et  
tonus quasi de tribus tonis facta. <sup>27</sup>Sed mi fa,  
fa mi, ut mi et econverso sunt inter huius  
signa per disiunctionem vocum que  
accipiuntur in huius signis, ergo faciunt  
tritonum, sicut hic patet. <sup>28</sup>Et nota quod ista  
species non debet adhuc sciri quia  
difficillima est omnium aliarum specierum  
et quomodo scitur patebit.

and F, and the converse. <sup>26</sup>It is named  
from *tris*, which is "three," and *tonus* [whole  
tone]—made, as it were, of three whole  
tones. <sup>27</sup>But, between these signs are mi fa,  
fa mi, and ut mi and the converse by  
disjunction of the syllables that are obtained  
in these signs; the signs therefore produce  
the tritone, as shown here. <sup>28</sup>Note that this  
interval ought not to be learned at this point  
because it is the most difficult of all the  
other species. It will be shown later in what  
way it is perceived.



- 24 sexta in marg. P distantia et cetera pro spatium inter duos unisonos V in se om. V  
25 quadratum et om. V E b post F V et hoc ascendendo post econverso V  
27 ut mi et econverso om. P inter om. P per disiunctionem vocum que accipiuntur in huius  
signis om. P et cetera post signis V tritonium P sic per figuram pro sicut hic patet  
V  
28 Et nota quod om. V dicitur pro debet P ideo non ponitur modo exemplum sed post alias  
habebitis pro quomodo scitur patebit V patebit [vacuum: Tritonus Tritonus] P

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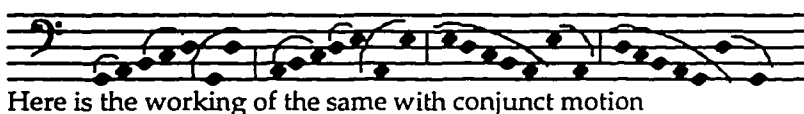
24. Cf. *Introductio musicae* 7.39.

*Berkeley Ms* 1.9 (Ellsworth, p. 102) adds the *semitonatus* as the seventh species with the tritone as the eighth.

28. For other descriptions of the tritone, see, e.g., *Summa musicae* 23 (Page, pp. 199, 200); Jerome of Moravia *Tractatus de musica* 14 (Cserba, p. 61). For the forming of a diapente from a tritone by *musica ficta*, see Bonaventura da Brescia *Venturina* 14.91 (Seay, p. 22).

<sup>29</sup>Diapente est spatium inter duos  
unisonos continens in se tres tonos cum  
semitonio. <sup>30</sup>Et habet sibi inter quodlibet G  
D, A E, C G, D a, E ♯ quadratum, F c, b f.  
<sup>31</sup>Sed ut sol, re la vel mi mi, fa fa per  
disiunctionem vocum sunt inter huius signa,  
ergo faciunt diapente. <sup>32</sup>Et dicitur a dia quod  
est de et pente quod est quinque, quasi de  
quinque vocibus vel de quinque signis, ut hic  
patet.

<sup>29</sup>The diapente is the interval  
between two single sounds comprising three  
whole tones plus a semitone. <sup>30</sup>It is obtained  
between any G and D, A and E, C and G, D  
and a, E and square b, F and c, and b and f.  
<sup>31</sup>But, between these signs are ut sol, re la, or  
mi mi, fa fa by disjunction of the syllables;  
they therefore produce the diapente. <sup>32</sup>It is  
named from *dia*, which is "from," and *pente*,  
which is "five"—as it were, from five  
syllables or five signs—as shown here.





- 29 Sequitur de diapente *ante* Diapente V septima *in marg.* P et cetera *pro* inter duos unisonos V medios *pro* duos P
- 30 vel *post* G D V C G *om.* V quadratum *om.* V
- 31 31 et 32 *inversa* V vel *post* sol V vel *post* mi mi V disiunctionem V sic *post* diapente V
- 32 dya quod est duo et penta quinque quasi V facta *post* vocibus V ut hic patet *om.* V ut hic patet [*vacuum*: Diapente Diapente Diapente. Exemplum semitonii et dytoni cum probatione. Conversio eorundem sine probatione ascendendo et descendendo. Exemplum diatessaron cum probatione ascendendo et descendendo. Conversio eiusdem sine probatione ascendendo et descendendo. Diapente cum probatione ascendendo et descendendo. Conversio eiusdem sine probatione ascendendo et descendendo] P



huius signa per disiunctionem vocum et ergo  
faciunt semitonium cum diapente. <sup>36</sup>Et  
dicitur a semitonio et diapente vel a semis  
quod est dimidium et tonus cum diapente, ut  
hic patet.

c. <sup>35</sup>But, between these signs are re fa, mi sol,  
and mi fa by disjunction of the syllables;  
they therefore produce the semitone plus  
diapente. <sup>36</sup>It is named from *semitonium*  
and *diapente* or from *semis*, which is "a  
half," and *tonus cum diapente* [whole tone  
plus diapente], as is shown here.



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33 octava in marg. P et cetera pro inter duos unisonos V hinc semitonium et dyapente post  
tonos V

34 c e pro ē c V

35 re mi, fa la pro re fa, mi sol, mi fa P et cetera post mi fa V accidunt pro sunt V signa  
per disiunctionem vocum et om. V

36 [t sup. lin.]onus P et pro cum V sic, similiter de isto non habebitis ad huc sed cum ultimis  
habebitis pro ut hic patet V ut hic patet [vacuum: Semitonium cum diapente  
Semitonium cum diapente] P

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33. Cf. *Introductio musicae* 7.53.

In Pythagorean tuning, this interval comprises three whole tones and two minor semitones.

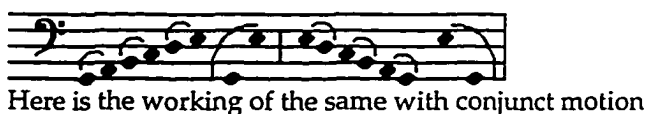
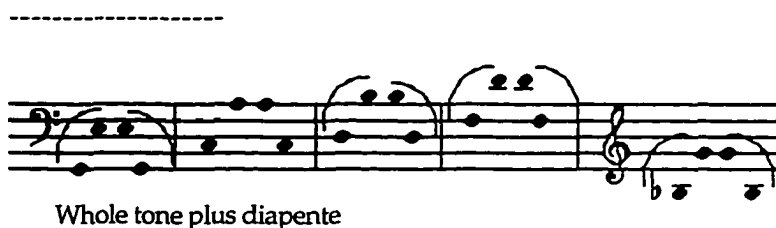
Lambertus, *Tractatus de musica* (CS, 1:259), remarks that this and the major sixth intervals are rarely found in plainchant; cf. notes to *De plana musica* 16.29 and 16.33.

<sup>37</sup>Tonus cum diapente est spatium  
inter duos unisonos continens in se quatuor

<sup>37</sup>The whole tone plus diapente is

tonos cum semitonio. <sup>38</sup>Et accipitur inter G e,  
C a, D b, F d, b g. <sup>39</sup>Sed ut la, re mi, fa sol per  
disiunctionem vocum sunt inter huius signa,  
ergo faciunt tonum cum diapente. <sup>40</sup>Et dicitur  
a tono et diapente, ut hic patet.

the interval between two single sounds  
comprising four whole tones and a semitone.  
<sup>38</sup>It is found between G and e, C and a, D and  
h, F and d, and b and g. <sup>39</sup>But, between these  
signs are ut la, re mi, fa sol by disjunction of  
the syllables; they therefore produce the  
whole tone plus diapente. <sup>40</sup>It is named from  
*tonus* and *diapente*, as shown here.



- 37 nona in marg. P et cetera pro inter duos unisonos V continens tonus et diapente vel quatuor V  
38 G E<sup>2</sup> pro G e P A<sup>2</sup> pro a P F d om. P G<sup>2</sup> pro g P  
39 et cetera post sol V accidunt pro sunt V signa om. V  
40 ut hic patet om. V ut hic patet [vacuum: Tonus cum diapente. Tonus cum diapente. Conversio eiusdem cum probatione ascendendo et descendendo.] P



37. Cf. *Introductio musice* 6.17, 7.52. See also notes to *De plana musica* 16.29 and 16.33.

39. The disjunction occurs only for re mi and fa sol; ut la produces this interval *immediate*.

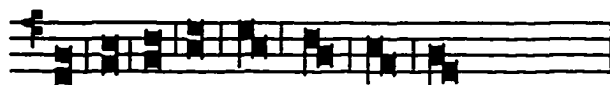
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<sup>41</sup>Semiditonus cum diapente est spatium inter duos unisonos continens in se semiditonum et diapente, id est quinque tonos. <sup>42</sup>Et accipitur inter quodlibet G f, a g, B a, C b, D c, E d. <sup>43</sup>Sed ut fa, re sol, mi la, fa fa sunt inter huius signa per disiunctionem vocum, ergo faciunt semiditonum cum diapente. <sup>44</sup>Fit enim ex septem vocibus in septimo signo, et quolibet signo potest accipi nisi inter F et e, ita quod ♭ quadratum et b rotundum recte observentur. <sup>45</sup>Et dicitur a semiditono et diapente.

<sup>41</sup>The semiditone plus diapente is the interval between two single sounds comprising a semiditone and a diapente, that is, five whole tones. <sup>42</sup>It is obtained between any G and f, A and g, B and a, C and b, D and c, and E and d. <sup>43</sup>But, between these signs are ut fa, re sol, mi la, and fa fa by disjunction of the syllables; they therefore produce the semiditone plus diapente. <sup>44</sup>It is produced from seven syllables on the seventh sign, and can be obtained with any sign except between F and e, so long as square and round b are correctly observed. <sup>45</sup>The semiditone plus diapente is named from *semiditonus* and *diapente*.



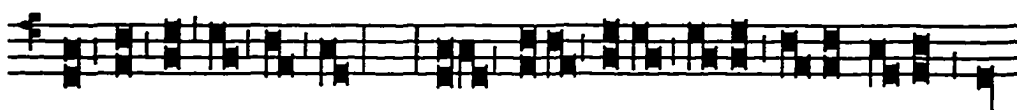
- 41 *decima in marg. P* Sequitur de conversionibus precedentium [[dicemus]] quinque et primo [[et p]] sine probatione dicemus et postea de conversionibus



Semitonus ... dicemus sine probatione.



Hic est conuercio eiusdem cum probatione.



Dyatessaron sine probatione. Conversio eiusdem.



Dyapente sine probatione. Conversio eiusdem.



Tonus cum dyapente sine probatione. Conversio eiusdem.

*ante Semiditonus V* et cetera *pro* duos unisonos *V* semitonium *pro* semiditonum *P*  
hoc *pro* id *V*

- 42 quodlibet *om. V* *G* *F*<sup>2</sup> *pro* *G* *f* *P* *A* *G*<sup>2</sup> *pro* *a* *g* *P* *B* *a*<sup>2</sup> *pro* *B* *a* *P* *b*<sup>2</sup> *pro* *b* *P* *c*<sup>2</sup> *pro* *c* *P*  
*d*<sup>2</sup> *pro* *d* *P*

- 43 *fa* *fa*, *re* *sol*, *re* *la*, *mi* *sol* et cetera *per* disiunctionem vocum accidit inter huius ergo *V*  
distinctione *pro* disiunctionem *P*

- 44 Et *pro* *Fit V* in *ante* quolibet *V* incipi *pro* accipi *V* quadratum *om. V* rotundum *om.*  
*V* [[t]] cum inter predicta signa ascendendo vel econverso sit tonus solummodo *post*  
observentur *V*

- 45 semitonio *pro* semiditono *P* diapente [*vacuum*: Semidytonus cum diapente] *P*

*V*



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41. In Pythagorean tuning, the interval of a semiditone plus diapente contains four whole tones and two minor semitones.

Cf. *Introductio musice* 6.18, 7.55.

Jerome of Moravia, *Tractatus de musica* 14 (Cserba, p. 61), calls this interval, as *duplex diatesseron*, an "irregular" interval, together with the tritone and the ditone plus diapente. See also note to *De plana musica* 16.46.

43. *V* gives more possibilities of the semiditone plus diapente derived from solmization syllables, although the fifth pair will have to be emended to *re fa*.

44. The intervals involving the scale step B, C-b and B-a, require that the distinction between square and round b be "correctly observed."

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<sup>46</sup>Ditonus cum diapente est spatium inter duos unisonos continens in se ditonum cum diapente, scilicet quinque tonos cum dimidio. <sup>47</sup>Et accipitur inter B quadratum b rotundum, C ♮, F e, b aa. <sup>48</sup>Sed non e converso ascendendo quia inter b rotundum et ♮ quadratum est semitonium, <sup>49</sup>et sic esset diapason cum semitonio inter alias, scilicet H c, A b, E f el esset semitonium tantummodo. <sup>50</sup>Sed mi fa vel fa mi et cetera per disiunctionem vocum sunt inter huius signa, ergo faciunt ditonum cum diapente. <sup>51</sup>Et dicitur a ditono et diapente.

<sup>46</sup>The ditone plus diapente is the interval between two single sounds comprising a ditone plus diapente, that is, five whole tones plus a half. <sup>47</sup>It is obtained between square b and round b, C and ♮, F and e, and b and aa, <sup>48</sup>but not the converse in ascending because there is a semitone between round and square b, <sup>49</sup>and between all the others there would be a diapason plus semitone, that is, H and c, a and b, and e and f, or there would be only just a semitone. <sup>50</sup>But, between these signs are mi fa and fa mi, and so on by disjunction of the syllables; they therefore produce the ditone plus diapente. <sup>51</sup>It is named from *dytonus* and *diapente*.





Ditone plus diapente

- 46 et cetera *pro* inter duos unisonos *V* continens dytonum et dyapente *V* dytonium *P*  
undecima *in marg.* *P*
- 47 quadratum *om.* *V*  $\text{♭}$  *pro* B *P*  $\text{b}^2$  rotundum *pro* b rotundum *P* rotundum *om.* *V*  $\text{♭}^2$  *pro*  $\text{♭}$  *P*  
f  $\text{e}^2$  *pro* F *e* *P* b  $\text{a}^2$  *pro* b *aa* *P* a *pro* aa *V*
- 48 scilicet *ante* ascendendo *V* rotundum et *om.* *V* quadratum est semitonium *om.* *V*
- 49 et sic *om.* *V* diapason [cum semitono] inter alia, scilicet  $\text{♭}$  c, a b, e f semitonium *in marg.*] *P*  
tantummodo *V*
- 50 vel ut mi *post* fa mi *V* disiunctionem *pro* distinctionem *P* signa *om.* *V*
- 51 diapente [*vacuum*: Dytonus cum diapente] *P*



46. In Pythagorean tuning, the interval of a ditone plus diapente contains five whole tones and one minor semitone (not half a whole tone).

Cf. *Introductio musice* 7.54.

Jerome of Moravia, *Tractatus de musica* 14 (Cserba, p. 61), calls this interval, as *diatesseron cum tritono* or *minus diapason*, an "irregular" interval, together with the tritone and the semiditone plus diapente. See also note to *De plana musica* 16.41.

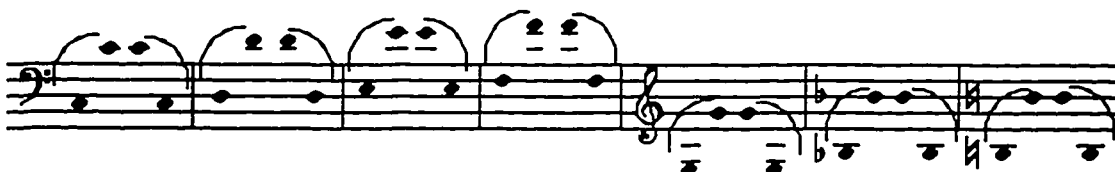
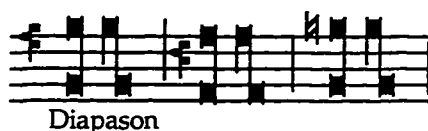
47. Strictly speaking,  $\text{♭}$  to b is a diminished octave, not a major seventh.

<sup>52</sup>Diapason est spatium inter duos  
unisonos continens in se diatessaron cum  
diapente. <sup>53</sup>Hoc est sex tonos per  
equipollentiam, quia sunt in eo duo semitonia  
inter quinque tonos que valent unum tonum.  
<sup>54</sup>Et accipitur inter quamlibet similem  
litteram vel signum, scilicet octavum ex octo

<sup>52</sup>The diapason is the interval  
between two single sounds comprising a  
diatessaron and a diapente, <sup>53</sup>that is, six  
whole tones by means of equipollence because  
in it are two semitones, which equal a whole  
tone, among five whole tones. <sup>54</sup>It is  
obtained between any similar letter or sign,

vocibus, ita quod  $\text{b}$  quadratum respondeat  $\text{b}$  quadrato et  $\text{b}$  rotundum,  $\text{b}$  rotundo et  $\text{G}$  ad  $\text{Ge}$  et sic de aliis. <sup>55</sup>Et dicitur a  $\text{dya}$  quod est duo et  $\text{pason}$  quod est sonus quasi habens duplicem sonum, <sup>56</sup>vel a  $\text{dya}$  quod est de et  $\text{pan}$  quod est totum quasi continens in se et sub se omnes consonantias et litteras et accipitur inter similes litteras.

that is, the octave from eight syllables, such that square  $\text{b}$  corresponds to square  $\text{b}$ , round  $\text{b}$  to round  $\text{b}$ ,  $\text{G}$  to  $\text{G}$ , and so on. <sup>55</sup>The diapason is named from  $\text{dya}$ , which is “two,” and  $\text{pason}$ , which is “sound”—having, as it were, a doubled sound—<sup>56</sup>or else from  $\text{dya}$ , which is “from,” and  $\text{pan}$ , which is “all”—comprising, as it were, all the consonances and letters—and it is found between same letters.



52 duodecima in marg.  $P$  et cetera pro inter duos unisonos  $V$  et pro cum  $V$

53 quia sunt in eo duo semitonia inter quinque tonos que valent unum tonum om.  $V$  ea pro eo  $P$

54 finalem pro similem  $P$  inter quodlibet signum consimile pro signum  $V$  et pro ex  $V$   
itaque pro ita quod  $V$  quadratum om.  $V$  quadrato om.  $V$  rotundum om.  $V$   
rotundo om.  $V$  sic  $\Gamma$   $g$ ,  $a$   $a$ ,  $h$   $h$ ,  $b$   $b$ ,  $c$   $c$ ,  $d$   $d$ ,  $e$   $e$ ,  $f$   $f$ ,  $g$   $g$  pro et  $G$  ad  $Ge$   $V$  singulis pro  
aliis  $V$



55 a dya duo et pason sonus V et litteram. Accipitur a simili sicut sonus quia secundum a est  
 duplum in numero primo alter a duplum secunda et sic est quatuor primo *post* sonum V  
 56 et aliter dicitur *pro* vel V quod est de *om.* V pan totum V et sub se *om.* V sic *pro* et  
 litteras et accipitur inter similes litteras V similes litteras [*vacuum*: Diapason  
 Diapason] P



52. Cf. *De plana musica* 9.6, *Introductio musicae* 6.19, 7.49. For other definitions, see *Musica enchiriadis* 10 (Schmid, pp. 26–27); *Scolica enchiriadis* 2 (Schmid, p. 90); *Summa musicae* 10 (Page, pp. 165, 166); Lambertus *Tractatus de musica* (CS, 1:259); Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, p. 510).

For discussions on diapason species see Boethius *Musica* 4.14 (Friedlein, pp. 340–41); Berno of Reichenau *Prologus in tonarium* 5 (GS, 2:67–68); Wilhelm of Hirsau *Musica* 24.4 (Harbinson, pp. 56–57); Aribo *De musica* (Smits van Waesberghe, pp. 27, 35); Theoger of Metz *Musica* (GS, 2:189); Engelbert of Admont *De musica* 2.25, 3.19, 4.10–16 (GS, 2:316, 334–35, 345–48); Johannes Gallicus *Ritus canendi* 1.3.5.12–13 (Seay 13, p. 64 [cf. Aribo *De musica* (Smits van Waesberghe, p. 35) this note]).

The diapason is the “greatest,” or “most perfect,” among the three primary consonances: *Musica enchiriadis* 17 (Schmid, p. 48); Regino of Prüm *De harmonica institutione* 16 (LeRoux, p. 68); Anon. 4 *De mensuris et discantu* 4.1 (Reckow, p. 67); Aegidius de Zamora *Ars musica* 14.15–16 (Robert-Tissot, p. 100); Engelbert of Admont *De musica* 2.1, 2.10 (GS, 2:298–99, 306); Ugolino of Orvieto *Declaratio* 1.19.5 (Seay, p. 46); Johannes Gallicus *Ritus canendi* 1.2.1.16, 1.3.5.2 (Seay 13, pp. 27, 63); but cf. Guido, *Regulae musicae rhythmicae* (Smits van Waesberghe, p. 101), who calls the unison the *maxima symphoniarum et vocum*. Anon. 1, *Tractatus de consonantiis musicalibus* (CS, 1:302), remarks that an interval exceeding the diapason is not used in plainsong; cf. Engelbert of Admont *De musica* 2.1 (GS, 2:298–99).

53. In Pythagorean tuning, the two semitones found within the diapason, being both minor semitones, do not add up to one whole tone: thus, the diapason is not equivalent to six whole tones under this tuning system to which *De plana musica* evidently subscribes, judging from earlier statements (6.8 ff; but see notes to 4.4 and 16.74). Boethius *Musica* 2.31, 3.4 (Friedlein, pp. 266–67, 275) states that the comma is the amount by which six whole tones are greater than the diapason. The definition here is at least consistent with an earlier definition given on the chromatic genus (4.4).

For other definitions, see *Musica enchiriadis* 10 (Schmid, p. 26); Regino of Prüm *De harmonica institutione* 10 (LeRoux, p. 54); Anon. 7 *De musica libellus* (CS, 1:382); Johannes de Grocheio *De musica* 57 (Rohloff, p. 120); *Quatuor principalia* 2.8 (CS, 4:210); Carthusian monk *Tractatus de musica plana* 4 (CS, 2:463); Berkeley Ms 1.9 (Ellsworth, p. 106); Prosdócimo *Plana musica* 2.20; Johannes Gallicus *Ritus canendi* 1.1.3.30 (Seay 13, pp. 7–8); Bonaventura da Brescia *Venturina* 14.72 (Seay, p. 20).

In logic, *equipollentia* refers to the quality of equivalence of propositions; see Yudkin, “Influence of Aristotle,” p. 184, and n. 26. Anon. of St. Emmeram *De musica mensurata* 1.1 (Yudkin, p. 86) defines one of the possible meanings of *equipollentia* as “a character or an

unwritten sounding note" that (presumably) is concordant with another. Cf. *Introductio musice* 4.7–8 for another use of this term.

54. The Anon. of St. Emmeram, *De musica mensurata* 4 (Yudkin, p. 262), points out that some intervals of eight notes do not make a diapason, e.g., H to b. *Falsa musica* is necessary for such intervals: Anon. 2 *Tractatus de discantu* (Seay, p. 30).

55. Cf. Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, p. 510).

For the concept of the pitches of the diapason being equal sounding, see also *Musica enchiriadis* 10, 17 (Schmid, pp. 26, 48); *Scolica enchiriadis* 2 (Schmid, p. 90); Regino of Prüm *De harmonica institutione* 17 (LeRoux, p. 75); Guido *Micrologus* 5.5, 5.24, 9.10 (Smits van Waesberghe, pp. 108, 113, 132); Guido *Epistola* (GS, 2:47a); *Ad organum faciendum* 3 (Huff, p. 53 [Eggebrecht, p. 112]); Theoger of Metz *Musica* (GS, 2:183); John *De musica* 9.12 (Smits van Waesberghe, p. 74); Anon. of St. Emmeram *De musica mensurata* 4 (Yudkin, p. 266); Marchetto *Lucidarium* 6.4.23–25 (Herlinger, p. 246); *Quatuor principalia* 2.8, 2.9 (CS, 4:210–11); Carthusian monk *Tractatus de musica plana* 4 (CS, 2:464); Johannes Gallicus *Ritus canendi* 1.2.8.2, 1.2.8.9 (Seay 13, pp. 37–38).

56. For this derivation of the term *diapason*: cf. Guido *Micrologus* 6.6 (Smits van Waesberghe, p. 115); Theoger of Metz *Musica* (GS, 2:185); John *De musica* 9.9 (Smits van Waesberghe, p. 73); *Summa musice* 10 (Page, pp. 165, 166); Aegidius de Zamora *Ars musica* 10.18, 14.16 (Robert-Tissot, pp. 84, 100); Johannes de Grocheio *De musica* 57 (Rohloff, p. 120); Engelbert of Admont *De musica* 2.1 (GS, 2:298–99); *Quatuor principalia* 2.8, 3.18 (CS, 4:210, 229); Carthusian monk *Tractatus de musica plana* 4 (CS, 2:463). *Scolica enchiriadis* 2 (Schmid, p. 90) explains that since the ancient cithara had only eight strings, the diapason was the interval that encompassed the entire range of this instrument.

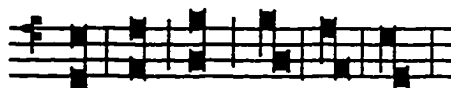
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<sup>57</sup> Et sciendum quod quatuor species	<sup>57</sup> It must be known that the four
penultime, scilicet semitonium cum diapente,	species mentioned prior to the diapason,
tonus cum diapente, semiditonus cum	namely semitone plus diapente, whole tone
diapente, ditonus cum diapente non nisi	plus diapente, semitone plus diapente, and
mediante diapason sciuntur. <sup>58</sup> Nam	ditone plus diapente are perceived only by
semitonium cum diapente scitur diapason	means of the diapason, <sup>58</sup> for the semitone
elevando ditonum deprimendo, [ <i>vacuum</i> ]	plus diapente is perceived by ascending a
<sup>59</sup> tonus cum diapente scitur diapason	diapason and descending a ditone; [ <i>empty</i>
elevando semiditonum deprimendo, [ <i>vacuum</i> ]	staff] <sup>59</sup> the whole tone plus diapente is
<sup>60</sup> semiditonus cum diapente scitur diapason	perceived by ascending a diapason and
elevando tonum deprimendo, ut supra,	descending a semitone; [ <i>empty staff</i> ] <sup>60</sup> the

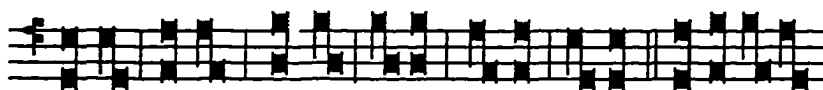
<sup>61</sup>ditonus cum diapente scitur diapason  
elevando semitonium descendendo. <sup>62</sup>Sed  
quidam sciunt sine arte, scilicet usu.

semitone plus diapente is perceived by  
ascending a diapason and descending a  
whole tone, as shown above; <sup>61</sup>the ditone  
plus diapente is perceived by ascending a  
diapason and descending a semitone. <sup>62</sup>Yet  
some know this without knowledge of  
theory, but through practice.

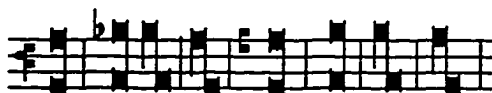
- 
- 57 numquam sumitur *post* quod *V* ditonus cum diapente *om. P* nisi sit mediante *pro* non nisi  
mediante *V* ascendendo et postea semitonium descendendo vel econverso *pro* sciuntur  
*V*
- 58 Et *pro* Nam *V* per *pro* scitur *V* descendendo *pro* deprimendo *V*
- 59 per *pro* scitur *V* diapason elevando *om. V* semitonium *pro* semiditonum *P*  
descendendo *pro* deprimendo *V*
- 60 per *pro* scitur *V* diapason elevando *om. V* descendendo *pro* deprimendo *V* ut supra  
*om. V*
- 61 ditonum *V* per *pro* scitur *V* diapason elevando *om. V* semiditonum *pro* semitonium *P*  
semiditonum *pro* semitonium *V*
- 62 per usum *pro* usu *V* Sed per istud exemplum quod sequitur scitur semitonium cum dyapente,  
tonus cum dyapente, semiditonus cum dyapente, ditonus cum dyapente et tritonus



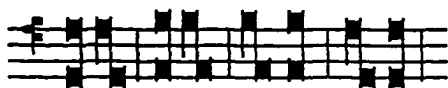
operatio toni cum dyapente sive semitonii cum dyapente sine probacione supra dicta  
debet sciri set scitur in respectu vocis aut cedentis.



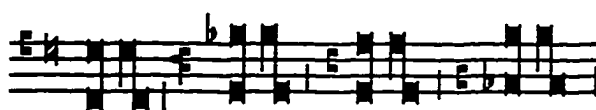
Conversio eiusdem. Semiditonus cum dyapente sine probacione debet sciri



nisi sit probatum per dyapason.



Conversio eiusdem.



Dytonus cum dyapente scitur sine dyapason ut dicitur supra. *post 16.62 V*

62. Johannes de Olomons, *Palma choralis* 1 (Seay, p. 5), says that those who sing without knowledge of theory (*qui non canit arte*) sing badly.

<sup>63</sup>Tritonus autem scitur per diapente  
vel per diatessaron. <sup>64</sup>Primo per diapente:  
ipsum diapente elevando et semitonium  
descendendo. <sup>65</sup>Item per diatessaron: scitur  
tritonus scilicet diatessaron sumendo et  
postea semitonium elevando, ut hic.

[*vacuum*: Tritonus per diapente  
Tritonus per diatessaron]

<sup>63</sup>The tritone is perceived through  
either the diapente or the diatessaron:

<sup>64</sup>through the diapente by ascending this  
interval and descending a semitone,

<sup>65</sup>through the diatessaron by taking this  
interval and afterwards ascending a

semitone, as here. [*empty staves*: Tritone  
through the diapente. Tritone through the  
diatessaron]

63–65 *om. V*

63. Cf. *Introductio musice* 7.42.

65. Cf. *Introductio musice* 7.39.

<sup>66</sup>Diapason autem scitur sine  
probatione aliqua quia levissima est omnium  
aliarum et sic unisonus. <sup>67</sup>Et tritonus scitur  
per diapente, similiter per diatessaron, ut  
supradictum est. <sup>68</sup>Hec etiam sciuntur per

<sup>66</sup>The diapason is perceived without  
any progression by conjunct motion because it  
is the mildest of all the other intervals; so  
also the unison. <sup>67</sup>The tritone is perceived  
through the diapente, similarly through

prosam sequentem.

[*vacuum*: Letabundus exultet fidelis  
chorus alleluya. Letabundus exultet fidelis  
chorus alleluya. Regem regum intacte  
profudit chorus res miranda.]

the diatessaron, as was said above. <sup>68</sup>These

are also perceived through the following  
verse. [*empty staves*: Letabundus exultet  
fidelis chorus alleluya. Letabundus exultet  
fidelis chorus alleluya. Regem regum  
intacte profudit chorus res miranda.]



Dyapason sine probatione debet sciri quia V aliarum specierum sicut et unisonus V

67 Et om. V sive pro similiter V dicitur superius super sonum datum constituere omnes consonantias ascendendo [[et conuertendo]] vel retrogradiendo super sonum datum constituere omnes consonancias ascendendo et convertendo. Est etiam sciendum quod omnes consonantie possunt adiungi dyapason ut si diceretur et diceret semitonium cum dyapason, tonus cum dyapason et cetera, ut cum accurit ad bis dyatessaron similiter de bisdyapason sicut et de duplici et sic omnes consonantias in infinite possunt ascendere. Super sonum datum

ascendere semitonium et ab eodem alium et similiter descendere  
ascendere tonum et ab eodem alium et cetera et similiter descendere  
ascendere tonum et descendere semitonium et ab eodem alium et cetera et similiter descendere  
¶ ascendere semiditonus et ab eodem alium et cetera et similiter descendere.  
ascendere semiditonus descendere semitonium et cetera et similiter descendere.  
ascendere semiditonus descendere tonum et similiter descendere.  
¶ ascendere ditonus et ab eodem alium et similiter descendere.  
ascendere ditonus descendere semitonium et cetera et similiter descendere.  
ascendere ditonus descendere semiditonus et cetera et similiter descendere.  
ascendere ditonus descendere tonum et cetera et similiter descendere.  
¶ ascendere dyatessaron et ab eodem alium et cetera et similiter descendere.  
ascendere dyatessaron descendere semitonium et cetera et similiter descendere.  
ascendere dyatessaron descendere tonum et cetera et similiter descendere.  
ascendere dyatessaron descendere semiditonus et cetera et similiter descendere.  
ascendere dyatessaron descendere ditonus et cetera et similiter descendere.  
¶ ascendere tritonum et ab eodem alium et cetera et similiter descendere.  
ascendere tritonum descendere semitonium et cetera et similiter descendere.  
ascendere tritonum descendere tonum et cetera et similiter descendere.  
ascendere tritonum descendere semiditonus et cetera et similiter descendere.  
ascendere tritonum descendere dytonum et cetera et similiter descendere.  
ascendere tritonum descendere dyatessaron et cetera et similiter descendere.  
¶ ascendere dyapente et ab eodem alium et cetera et similiter descendere.  
ascendere dyapente descendere semitonium et cetera et similiter descendere.  
ascendere dyapente descendere tonum et cetera et similiter descendere.  
ascendere dyapente descendere semiditonus et cetera et similiter descendere.  
ascendere dyapente descendere ditonus et cetera et similiter descendere.  
ascendere dyapente descendere dyatessaron et cetera et similiter descendere.  
ascendere dyapente descendere tritonum et cetera et similiter descendere.  
¶ ascendere semitonium cum dyapente et ab eodem alium et cetera et similiter descendere.  
ascendere semitonium cum dyapente et descendere semitonium et cetera et similiter descendere.  
ascendere semitonium cum dyapente et descendere tonum et cetera et similiter descendere.  
ascendere semitonium cum dyapente et descendere semiditonus et cetera et similiter descendere.  
ascendere semitonium cum dyapente et descendere ditonus et cetera et similiter descendere.

ascendere semitonium cum dyapente et descendere dyatessaron et cetera et similiter descendere.  
 ascendere semitonium cum dyapente et descendere tritonum et cetera et similiter descendere.  
 ascendere semitonium cum dyapente et descendere dyapente et cetera et similiter descendere.  
 ¶ ascendere tonum cum dyapente et ab eodem alium et cetera et similiter descendere.  
 ascendere tonum cum dyapente descendere semitonium et cetera et similiter descendere.  
 ascendere tonum cum dyapente descendere tonum et cetera et similiter descendere.  
 ascendere tonum cum dyapente descendere semiditonum et cetera et similiter descendere.  
 ascendere tonum cum dyapente descendere ditonum et cetera et similiter descendere.  
 ascendere tonum cum dyapente descendere diatessaron et cetera et similiter descendere.  
 ascendere tonum cum dyapente descendere tritonum et cetera et similiter descendere.  
 ascendere tonum cum dyapente descendere dyapente et cetera et similiter descendere.  
 ascendere tonum cum dyapente descendere semiditonum et cetera et descendere.  
 ¶ ascendere semiditonum cum dyapente et ab eodem alium et cetera et similiter descendere.  
 ascendere semiditonum cum dyapente descendere semitonium et cetera et similiter descendere.  
 ascendere semiditonum cum dyapente descendere tonum et cetera et similiter descendere.  
 ascendere semiditonum cum dyapente descendere semiditonum et cetera et similiter descendere.  
 ascendere semiditonum cum dyapente descendere ditonum et cetera et similiter descendere.  
 ascendere semiditonum cum dyapente descendere [diatessaron *sup. lin.*] [[ditonum]] et cetera et similiter descendere.  
 ascendere semiditonum cum dyapente descendere tritonum et cetera et similiter descendere.  
 ascendere semiditonum cum dyapente descendere dyapente et cetera et similiter descendere.  
 ascendere semiditonum cum dyapente descendere semitonium cum dyapente et cetera et similiter descendere.  
 ascendere semiditonum cum dyapente descendere tonum cum dyapente et cetera et similiter descendere.  
 ¶ ascendere ditonum cum dyapente et ab eodem alium et cetera et similiter descendere.  
 ascendere ditonum cum dyapente descendere semitonium et cetera et similiter descendere.  
 ascendere ditonum cum dyapente descendere tonum et cetera et similiter descendere.  
 ascendere ditonum cum dyapente descendere [semiditonum *ab marg.*] et cetera et similiter descendere.  
 ascendere ditonum cum dyapente descendere ditonum et cetera et similiter descendere.  
 ascendere ditonum cum dyapente descendere diatessaron et cetera et similiter descendere.  
 ascendere ditonum cum dyapente descendere tritonum et cetera et similiter descendere.  
 ascendere ditonum cum dyapente descendere dyapente et cetera et similiter descendere.  
 ascendere ditonum cum dyapente descendere semitonium cum dyapente et cetera.  
 ascendere ditonum cum dyapente descendere tonum cum dyapente et cetera.  
 ascendere ditonum cum dyapente descendere semiditonum cum dyapente et cetera et similiter descendere.  
 ¶ ascendere dyapason ab eodem sono alium et cetera et similiter descendere.  
 ascendere dyapason descendere semitonium et cetera et similiter descendere.  
 ascendere dyapason descendere tonum et cetera et similiter descendere.  
 ascendere dyapason descendere semiditonum et cetera et similiter descendere.  
 ascendere dyapason descendere ditonum et cetera et similiter descendere.  
 ascendere dyapason descendere diatessaron et cetera et similiter descendere.  
 ascendere dyapason descendere tritonum et cetera et similiter descendere.  
 ascendere dyapason descendere dyapente et cetera et similiter descendere.  
 ascendere dyapason descendere semitonium cum dyapente et cetera et similiter descendere.  
 ascendere dyapason descendere tonum cum dyapente et cetera et similiter descendere.  
 ascendere dyapason descendere semiditonum cum dyapente et cetera et similiter descendere.  
 ascendere dyapason descendere ditonum cum dyapente et cetera et similiter descendere.

Explicit secundus liber .ii. *pro supra dictum est V*



68 om. V

66. Johannes de Olomons, *Palma choralis* 7 (Seay, p. 37), defines the term *probatio* as follows: “*Probatio fit quando in cantu gradatim capitur ascensus vel descensus per voces ordinatas [Probatio occurs when, in a song, ascent or descent is taken through notes in conjunct succession]*”; for a similar definition see *Fl*, fol. 113r (Appendix C). The words *sine probatione* are here accordingly translated as “without any progression by conjunct motion.”

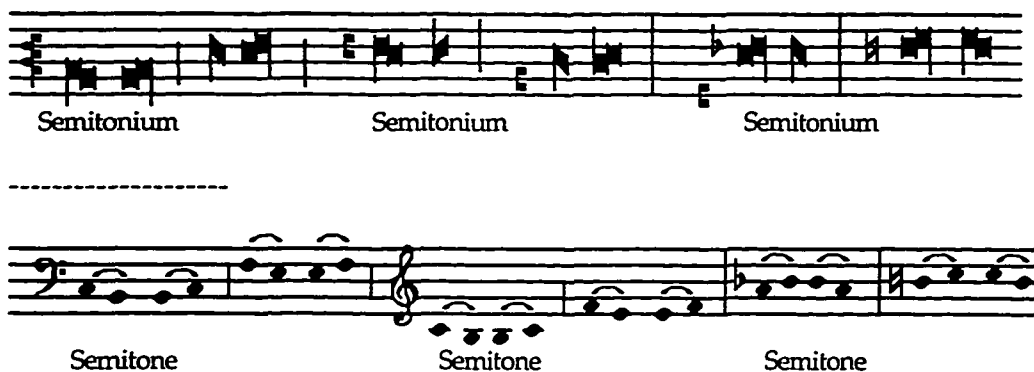
67. Cf. *De plana musica* 16.63, 16.65, *Introductio musice* 7.39, 7.42.

<sup>69</sup>Semitonium est spatium inter duos unisonos quod secundum vocem hominis non licet dividi secundum diatonicum genus vel ponere medium. <sup>70</sup>Et accipitur inter quodlibet  $\sqcup$  quadratum et C vel E et F vel a et b rotundum immediate <sup>71</sup>et non mediate, vel per disiunctionem vocum, scilicet inter F et e quia ibi est ditonus cum diapente. <sup>72</sup>Sed mi fa accipiuntur inter ista quia nomina vocum talem habent distantiam, sicut signa addita in qualibet specie. Hoc est supponendum, <sup>73</sup>ergo inter mi fa est semitonium. <sup>74</sup>Et dicitur a semi quod est imperfectum et tonus quasi imperfectus tonus, ut hic.

<sup>69</sup>The semitone is the interval between two single sounds which, in the human voice, will not allow a division in the diatonic genus or the placement of an intermediate pitch. <sup>70</sup>It is obtained between any square B and C, E and F, and a and round b directly <sup>71</sup>and not directly, or through the disjunction of the syllables, namely between F and E, because in this case there is a ditone plus diapente. <sup>72</sup>But, mi and fa are obtained between these signs because the names of these syllables have the interval that is produced by signs added to any [interval] specie. This is to be assumed, <sup>73</sup>therefore between mi and fa there is a semitone. <sup>74</sup>It is named from *semi* which is “incomplete”

and *tonus* [whole tone]—as it were,

“incomplete whole tone”—as here.



69-74 *post 16.5 V Vb*

- 69 De semitonio *ante Semitonium Vb* *tredecima in marg. P* *potest nec post non Vb*  
*secundum diatonicum genus om. V Vb*
- 70 quolibet *Vb* *E F pro E et F V* *in mediate pro immediate Vb* *scilicet ex istis vocibus mi*  
*et fa post immediate V*
- 71 et non immediate *om. Vb* *mediate pro immediate P* *scilicet pro vel V Vb*  
*distinctionem pro disiunctionem Vb* *quia pro scilicet V Vb* *fit pro quia ibi est V Vb*
- 72 nominis *post ista Vb* *quia nomina om. Vb* *et pro quia V* *habent talem V Vb* *singula*  
*pro signa V* *in supraproposito vel supraproposito vel supposito pro supponendum Vb*
- 73 *mi et fa V* *fit pro est V Vb*
- 74 *semis V Vb* *dimidium pro imperfectum V Vb* *quod habens dimidium tonum pro quasi*  
*imperfectus tonus Vb* *habens dimidium pro imperfectus tonus V* *patet secundum*  
*figuras, ut hic secundum figuras sic pro hic V* *patet figuram. Item dicitur autem*  
*semitonium quasi imperfectus [semitonium in marg. m. sec.] tonus. Non enim dicitur*  
*semitonium a semis quod est dimidium ut quidam putant quia [Bernardus in marg. m.*  
*sec.] minus est quam medietas toni sicut manifeste apparet in dispositione monocordi,*  
*sed dicitur a semus, -ma, -mum quod est imperfectum quasi imperfectus tonus.*  
*Semitonium ut dicit Bernardus est dulcedo et condimentum totius cantus et sine ipso*  
*cantus esset corrosus, transformatus et dilaceratus. Boetius autem determinat de*  
*semitonio per solutionem cuiusdam questionis. Nam ita est quod aliquando per falsam*  
*musicam facimus semitonium ubi non debet esse. Nam in mensurabili musica illud*  
*videmus quod tenor sive biscantus [biscantus, moctectus uel rondellus in marg. m. sec.]*  
*alicuius moctecti vel rondelli stat in b fa ̣ mi dicendo per ̣ durum, tunc accipientem in*  
*diapente superius suum biscantum, oportet dicere mi in f acuta, et sic per falsam*  
*musicam. Nam facere diapente a mi et fa non est bona concordantia, eo quod ab ipsa ̣*  
*quadrata usque ad ipsum f acutum sunt duo toni et duo semitonia quorum coniunctio*  
*nulla est consonantia. Et oportet quod ubi est diapente ab una uoce in aliam, ibi sit*  
*bona et vera consonantia. Et ideo oritur questio ex hoc videlicet que fuit necessitas in*  
*musica regulari de falsa musica siue de falsa mutatione, cum nullum regulare debeat*  
*accipere falsum sed potius verum. Ad quod dicendum est quod mutatio falsa sive falsa*  
*musica non est inutilis, immo est necessaria propter bonam consonantiam inveniendam*



et malam vitandam. Nam, sicut dictum est, si velimus habere diapente de necessitate oportet quod habeamus tres tonos cum semitonio. Ita quod si aliqua figura sit in b fa $\text{♭}$  mi sub $\text{♭}$  quadrato et alia sit in f acuta per naturam, tunc non est ibi consonantia quia ibi non sunt tres toni cum semitonio sed tantum duo toni cum semitonio duplici. [falsa musica necessaria sed inusitata quia b molle non est de origine aliarum clavium *in marg. m. sec.*] Verumtamen fieri potest ibidem quod per falsam musicam appellamus, scilicet quando facimus de semitonio tonum vel econverso. Non tamen est falsa musica sed inusitata. Unde notandum est quod b molle non est de origine aliarum clavium. Hoc autem cognoscitur per signum $\text{♭}$  quadrati vel b rotundi in loco inusitato locati, ita quod dicamus mi durum in f acutam cum signo $\text{♭}$  quadrati, vel si b rotundum ponamus in b fa $\text{♭}$  mi vel in consimilibus, ita quod sit in toni proportionem et tunc erit cum diapente consonantia. Et ideo falsa musica est necessaria quandoque et etiam ut omnis consonantia seu melodia in quolibet signo perficiatur. Igitur scire debes, sicut dictum est, duo sunt signa false musice, scilicet b rotundum et ista alia figura $\text{♭}$ , et talem potestatem habent, videlicet quod b rotundum habet facere de semitonio tonum tantum [*in sup. lin.*] descendendo et de semitonio [*in sup. lin.*] ascendendo habet facere tonum. Et econversio [*sic*] fit de alia figura ista $\text{♭}$ , scilicet quod de tono descendente habet facere semitonium et de semitonio ascendente habet facere tonum. Tamen in illis locis ubi ista signa requiruntur, et ut superius dictum est, non falsa sed vera et necessaria quia nullus moctectus siue rondellus sine ipsa cantari non possunt et ideo uera. Quia id quod falsum est, sequitur quod non sit uerum, sed hoc non est falsum ergo. [Nota de semiditono. Videtur quod potius debet continere duos tonos cum dimidio quam unum cum dimidio, quia ditonus per se continet duos tonos. Ergo, adiuncto uno, videtur facere duos tonos cum dimidio uel semitonio. Respondendum est per istam regulam: quando in compositione numerorum minor numerus proponitur maiori, sicut 14 1 ante 4, abicienda est unitas una a minori numero. Sic similiter est de semiditono. *in marg.*] *pro hic Vb*



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69. Cf. *Introductio musice* 6.7, 7.20.

The scribe of P may possibly have intended this section to come between sections on the unison and the whole tone (cf. V and Vb).

Cf. Lambertus *Tractatus de musica* (CS, 1:257–58); Anon. 1 *Tractatus de consonantiis musicalibus* (CS, 1:299); Anon. 7 *De musica libellus* (CS, 1:381); *Quatuor principalia* 3.13 (CS, 4:227); *Berkeley Ms* 1.9 (Ellsworth, p. 98).

The semitone is an especially problematical interval to sing: Regino of Prüm *De harmonica institutione* 17 (LeRoux, pp. 71, 74); *Summa musice* 13 (Page, pp. 171, 172); this may be partly due to its small size, although not all theorists agree that the semitone is the smallest practical or discernible interval: cf. Regino of Prüm *De harmonica institutione* 17 (LeRoux, p. 72); Carthusian monk *Tractatus de musica plana* 4 (CS, 2:465).

For the relation between the semitone and *musica ficta*, see Prosdocimo *De modo monacordum dividendi* 4.1 (Herlinger, p. 82).

71. *Vb* substitutes *distinctionem* for *disiunctionem* (cf. note to 16.43).

72–73. I.e., it is to be assumed that the interval *mi-fa* is the semitone and not any other interval.

73. For similar statements, see Lambertus *Tractatus de musica* (CS, 1:257); Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* *Compendium de discantu mensurabili* (Wolf, p. 508); Anon. 2 *Tractatus de discantu* (Seay, p. 18); Prosdocimo *Plana musica* 1.10; Bonaventura da Brescia *Venturina* 14.28 (Seay, p. 16). *Dialogus* 3 (GS, 1:254) states that the interval between the first and second ninth steps, *b* and  $\flat$ , is neither a tone nor a semitone.

74. Both *V* and *Vb* equate *semis* with *dimidium* (cf. *De plana musica* 16.13). In an earlier chapter (4.4) a statement was made concerning the chromatic genus that used the terms for equal semitones (*emitonium*).

The present statement is often accompanied with the emphasis that “semitone” does not mean “half a tone”: cf. *Introductio musice* 7.21. It must be one of the most frequently made statements in Medieval and Renaissance music theory: e.g., Boethius *Musica* 2.28 (Friedlein, p. 260); Hucbald *De harmonica institutione* (GS, 1:109); *Musica enchiriadis* 9 (Schmid, p. 21); *Scolica enchiriadis* 1 (Schmid, p. 65); Regino of Prüm *De harmonica institutione* 4, 10, 17 (LeRoux, pp. 28–29, 50, 69); Guido *Micrologus* 4.5 (Smits van Waesberghe, p. 103); Theoger of Metz *Musica* (GS, 2:184); John *De musica* 8.8 (Smits van Waesberghe, pp. 68–69); Roffredi *Summa musicae artis* 2 (Seay, pp. 73–74); *Summa musice* 10 (Page, p. 164); Lambertus *Tractatus de musica* (CS, 1:257); Jerome of Moravia *Tractatus de musica* 14 (Cserba, p. 59); Anon. 1 *Tractatus de consonantiis musicalibus* (CS, 1:299); Aegidius de Zamora *Ars musica* 12.10 (Robert-Tissot, p. 90); Johannes de Grocheio *De musica* 53 (Rohloff, p. 120); Engelbert of Admont *De musica* 2.1 (GS, 2:299); *Quatuor principalia* 2.12, 3.13 (CS, 4:212, 227); Anon. 2 *Tractatus de discantu* (Seay, p. 18); Prosdocimo *Plana musica* 1.10; Prosdocimo *De modo monacordum dividendi* 4.1 (Herlinger, p. 82); Johannes Gallicus *Ritus canendi* 1.1.3.16 (Seay 13, p. 6); Bonaventura da Brescia *Venturina* 14.28 (Seay, p. 16); Rossetti *Libellus* 10.10 (Seay, p. 29).

The basis of this statement lies in the concept that the whole tone is constituted of two different kinds of imperfect whole tones, one larger than the other. For discussions on two types of semitones called “major” and “minor” respectively, see Hucbald *De harmonica institutione* (GS, 1:109); Anon. 1 *Tractatus de consonantiis musicalibus* (CS, 1:299, 300); Aegidius de Zamora *Ars musica* 12.11 (Robert-Tissot, p. 90); Engelbert of Admont *De musica* 2.20 (GS, 2:313); Carthusian monk *Tractatus de musica plana* 4 (CS, 2:465); Prosdocimo *Plana musica* 1.10; Prosdocimo *De modo monacordum dividendi* 4.1, 4.2, 6.1 (Herlinger, pp. 82–84, 88, 94).

On the other hand, a small number of theorists have described the semitone as “half a tone,” e.g., Martianus Capella *De nuptiis philologiae et mercurii* 9 (Dick, p. 494); Anon. 7 *De musica libellus* (CS, 1:381); Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, p. 508).

Engelbert of Admont, *De musica* 2.10 (GS, 2:306), and Prosdocimo, *Plana musica* 1.10, refer to the semitone as an “imperfect consonance” and “imperfect resonance” respectively, both evidently in comparison with the whole tone.



*DE PLANA MUSICA AND INTRODUCTIO MUSICE:*  
A CRITICAL EDITION AND TRANSLATION, WITH COMMENTARY, OF  
TWO TREATISES ATTRIBUTED TO  
JOHANNES DE GARLANDIA

VOLUME II

A Dissertation

Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
in partial fulfillment of the  
requirements for the degree of  
Doctor of Philosophy

in

The School of Music

by  
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December 1996

INTRODUCTIO MUSICE

IN NOMINE DOMINI  
INCIPIT  
INTRODUCTIO MUSICE PLANE  
ET ETIAM MENSURALIS  
SECUNDUM MAGISTRUM  
JOHANNEM DE GALANDIA  
MUSICE SAPIENTISSIMORUM  
PROLOGUS

1. <sup>1</sup>Introductiones in arte musice

IN THE NAME OF THE LORD  
HERE BEGINS  
INTRODUCTION TO BOTH PLAIN  
AND MEASURED MUSIC  
ACCORDING TO MAGISTER  
JOHANNES DE GARLANDIA  
ONE OF THE WISEST IN MUSIC  
PROLOGUE

1. <sup>1</sup>Introductions in the art of music

---

R 610r; B 76r; D 68ra; W 56r; CS, 1:157a.

Titulus. Incipit introductio musice plane et eciam musice mensurab[i *sup.* a]lis secundum  
magistrum Johannem de Galandia musice sapientissimum D Ex tractatu Magistri  
Johannis de Galadia de musica [plana *in marg.*] W

1 *post 7.60 B* Introducendis in artem musice B Pro introductione artis musice W  
ntroductiones D

---

<sup>2</sup>Primo videndum est quid sit  
introductio, ceteris pretermis; <sup>3</sup>secundo,  
quot modis dividitur; <sup>4</sup>tertio, quid sit musica  
et unde dicatur et de quo loquitur; etiam quid  
sit ars musice et unde dicatur; et similiter  
quid sit cantus et a quo derivatur; <sup>5</sup>quarto,  
quot modis ipsa musica dividitur; <sup>6</sup>quinto,  
quid sit subiectum et predicatum musice;

<sup>2</sup>First, it must be seen what an  
introduction is, passing over all others;  
<sup>3</sup>second, in how many ways it is categorized;  
<sup>4</sup>third, what music is, how it is named, and  
of what it speaks; also what the art of  
music is and how it is named; and similarly  
what song is and from what it is named;  
<sup>5</sup>fourth, in how many ways music itself is  
categorized; <sup>6</sup>fifth, what the subject and  
predicate of music are;

---

2 *est pro sit W*  
3 *quid pro quot D*

4 quid est musica W quid musicha D musica et ude dicatur et de quo B dicatur de qua  
loquitur W et ante etiam B etiam R musice et unde dicitur B musyce et unde  
dicitur D musice et unde dicatur R cantus a quo D  
6 qinto W musyca D in musica pro musice B

---

<sup>7</sup>sexto, quot sunt littere graves, acute et  
superacute, et quot sunt voces universales ad  
omnem musicam, et quot sunt eius species;  
<sup>8</sup>septimo, quot sunt proprietates cantus et  
quot mutationes vocum et quomodo  
dividuntur.

---

<sup>7</sup>sixth, how many grave, acute, and  
superacute letters and how many common  
syllables for all music there are, and how  
many species of music there are; <sup>8</sup>seventh,  
how many proprieties of song there are, how  
many mutations of syllables there are, and  
how they are categorized.

---

7 sexto quot sunt D superacute, et etiam quot sunt voces B superacute, et quid sunt voces D  
uni[versales in marg.] W musicam et quid [[fit]] sunt eius species D musicam et sunt  
ipsius species W speties eius B  
8 et quot sunt mutaciones B et quot sunt mutationes W dividitur D W dividuntur R

---

<sup>9</sup>Primo, introductio est aliquorum  
compendiosa traditio que ad totius artis  
intelligentiam est necessaria. <sup>10</sup>Vel sic:  
introductio est brevis et aperta rei  
demonstratio. <sup>11</sup>Dicitur autem introductio ab  
intro quod est intus, et deduco, deducis quia  
deducit intus artem et ab ignorantia ducit in  
scientiam.

---

<sup>9</sup>First, an introduction is a concise  
commentary that is necessary for the  
understanding of an entire art. <sup>10</sup>Or thus: an  
introduction is a brief and clear description  
of a subject. <sup>11</sup>The word "introduction" is  
derived from *intro*, which is "inwards," and  
*deduco*, *deducis* [to lead], because it leads us  
into the realm of art and from ignorance into  
knowledge.

---

- 9 De introductione *pro* Primo W Primo *om.* B D compediosa D ad *om.* W  
intelligentiam W
- 10 sic *om.* W demonstratio R
- 11 introducco D duco, -cis *pro* deduco, deducis B deduco, -cis W quod *pro* quia B ducit  
nos *pro* deducit B artem ad ignorantiam et scientiam W in arte *pro* artem et B  
ignorantia ad scientiam B ignorancia scienciam D

10. Cf. Nicolaus Capuanus *Compendium musicale* (De La Fage, p. 310); Rossetti *Libellus* 3.15 (Seay, p. 9).

<sup>12</sup> Musica secundum Guidonem	<sup>12</sup> Music, according to Guido, is
diffinitur sic: musica est scientia veraciter	defined thus: music is the science of singing
canendi et recte modulandi ad omnem	truly and the right, easy, and clear way of
perfectionem cantus via recta facilis et	singing correctly, leading toward all
aperta. <sup>13</sup> Dicitur etiam musica a moys, quod	perfection of song. <sup>13</sup> The word "music" is
est aqua, et ycos, quod est scientia iuxta	named from <i>moys</i> , which is "water," and
aquas inventa <sup>14</sup> et loquitur de numero relato	<i>ycos</i> , which is "knowledge" found next to
ad sonos.	water. <sup>14</sup> It speaks of number related to
	sounds.

12-14 *om.* B

13 autem [etiam *sup. lin.*] *pro* etiam W [[q]] ante aquas D

12-13. Cf. *De plana musica* 2.4.

13. *Introductio musice* gives the most common derivation of the term *musica* from *moys* (water); for other examples of this derivation, see *Summa musice* 1 (Page, pp. 142-43, 144); Anon. of St. Emmeram *De musica mensurata* Prologue (Yudkin, p. 66); Marchetto *Lucidarium* 1.6.3 (Herlinger, p. 86). Other derivations relating music to water include those of rain water producing different sounds by falling on various objects: *Summa musice* 1 (Page, pp. 142-43); and of the physical and physiological necessity of water for producing sounds: Anon. of St. Emmeram *De musica mensurata* Prologue (Yudkin, p. 66); Jerome of Moravia *Tractatus de musica* 2 (Cserba, p. 12); Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, p. 507); *Quatuor principalia* 1.7 (CS, 4:203); Johannes de Olomons *Palma choralis* 1 (Seay, p. 2). For the connection of *moys* with Moses, see Anon. 2 *Tractatus de musica*



(CS, 2:484). Other common interpretations of *musica* include *musa* as “bagpipes”: Regino of Prüm *De harmonica institutione* 8 (LeRoux, p. 45); John *De musica* 3.1 (Smits van Waesberghe, p. 54); *Summa musice* 1 (Page, pp. 143, 144); and *Musa* as “muse”: John *De musica* 3.7 (Smits van Waesberghe, p. 55); Lambertus *Tractatus de musica* (CS, 1:252); Anon. of St. Emmeram *De musica mensurata* Prologue (Yudkin, p. 66); Johannes de Grocheio *De musica* 11 (Rohloff, p. 112); Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, p. 507). Marchetto, *Lucidarium* 1.6.2 (Herlinger, p. 86), makes an oblique analogy between music and water. The use of *ycos* as “wind” is less usual: cf. Bonaventura da Brescia *Venturina* 3.2 (Seay, p. 2). *Summa musice* 1 (Page, p. 144/206 53–54) also states that music derives its name because it “strenghtens singers by practice.” Aegidius de Zamora, *Ars musica* 3.6–10 (Robert-Tissot, p. 54), summarizes the various derivations and adds another: that music originated with the universe because the Creation was accomplished by the song of the universe.

For modern studies on this topic, see Noel Swerdlow, “Musica Dicitur a Moys, Quod Est Aqua,” *Journal of the American Musicological Society* 20 (1967):3–9, and Joseph Smits van Waesberghe, “Treatise Translated into Hebrew,” pp. 146–47.

For claims of Tubal, Pythagoras, and others as the inventors of music itself, see John *De musica* 3.12–15 (Smits van Waesberghe, pp. 55–56); Anon. of St. Emmeram *De musica mensurata* Prologue (Yudkin, p. 66); Aegidius de Zamora *Ars musica* 1.5–7 (Robert-Tissot, p. 36); Johannes de Grocheio *De musica* 17 (Rohloff, p. 112).

14. Cf. *De plana musica* 1.9.

<sup>15</sup>Musica in tres partes dividitur, scilicet in musicam planam, mensuralem et instrumentalem. <sup>16</sup>Musica plana est illa que ad honorem Dei nec non et gloriosissime Dei genetricis Marie et omnium sanctorum, a beato Gregorio primo fuit edita et postea a Guidone monacho fuit correctata, composita et ordinata.

<sup>15</sup>Music is categorized into three parts, namely plain, measured, and instrumental. <sup>16</sup>“Plain” music is that which was first brought forth by the blessed Gregory to the honor of God and of the most glorious Mary, mother of God, and of all the saints, and which was later improved, organized, and systematized by the monk Guido.

15 enim *post* Musica B mensurabilem B D instrumen[ta corr. sup. sta]bilem D  
 16 nec non ad honorem beate Marie B necessario *pro* nec non R nec non om. W  
 gloriosissime virginis matris Marie W gloriosissime D genitricis D Dei *post*  
 sanctorum B D W et beato *pro* a beato B inventa *pro* edita W correpta B  
 coreta W

=====

15. A parallel categorization to the one adopted in *Introductio musice* is a twofold one that omits the instrumental category: Anon. of St. Emmeram *De musica mensurata* Prologue (Yudkin, pp. 70–72); Johannes de Grocheio *De musica* 72 (Rohloff, p. 124); Marchetto *Lucidarium* 1.15.2 (Herlinger, p. 100); Johannes de Olomons *Palma choralis* 1 (Seay, p. 4). In this twofold classification of music, *cantus planus* is regarded as fundamental to the study of music: Lambertus *Tractatus de musica* (CS, 1:269); Johannes de Olomons *Palma choralis* 1 (Seay, p. 4); Prosdocimo *Contrapunctus* 2.3 (Herlinger, p. 32); its rhythmic property is described as either “unmeasured”: Anon. of St. Emmeram *De musica mensurata* Prologue (Yudkin, pp. 70–72); Franco of Cologne *Ars cantus mensurabilis* 1.4 (Reaney and Gilles, p. 25); Johannes de Grocheio *De musica* 74 (Rohloff, p. 124) or “uniform”: Johannes de Olomons *Palma choralis* 1 (Seay, pp. 4–5); Prosdocimo *Plana musica* 1.1. Aegidius de Zamora, *Ars musica* 4.20–22 (Robert-Tissot, p. 58), cites a classification into instrumental, vocal, and “that which rationally judges instrumental and vocal music.” Engelbert of Admont, *De musica* 1.3 (GS, 2:289), distinguishes between vocal organs and musical instruments.

16–18. Pre-Garlandia sources seem to agree generally that Gregory is a central figure in the early development of ecclesiastical music, or of music in general, e.g.: Guido *Epistola* (GS, 2:49); Aribo *De musica* (Smits van Waesberghe, p. 31); *Ad organum faciendum* 3 (Huff, p. 53 [Eggebrecht, p. 112]). Among later sources to link Gregory with *musica immenurabilis* are Elias Salomo *Scientiae artis musicae* Proemium (GS, 3: 17); Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, p. 507); Johannes Gallicus *Ritus canendi* 2.1.4.3 (Seay 14, p. 13). Roffredi, *Summa musicae artis* 7 (Seay, p. 76), names Gregory as responsible for *cantus prosaicus* (plainchant) and Ambros for metrical composition.

The following highlight the musical work of Saints Ambrose and Ignatius: John *De musica* 17.6–7 (Smits van Waesberghe, p. 115); *Summa musice* 3 (Page, pp. 147, 148).

The reference by *Introductio musice* to Guido is clearly a result of a reverence for his authority. Fictitious accounts of the achievements of Gregory coupled with the pedagogical discoveries of Guido also appear in *Quatuor principalia* 3.1, 3.4 (CS, 4:219, 220).

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17Musica mensuralis est illa que proportionaliter secundum rectam mensuram et mensuralem modo debito ac proprie observato efficitur. 18Musica instrumentalis est que in instrumentis musicalibus exercetur sicut in psalterio continetur: 19“Laudate eum in sono tube; laudate eum in psalterio et cithara; laudate eum in timpano et choro; laudate eum in cordis et organo” et sic de aliis.

17“Mensural” music is that which is made proportionally according to correct measure in a way that is apt and properly carried out. 18“Instrumental” music is that which is produced by musical instruments, as is included in the Psalter: “19Praise him with the sound of the trumpet; praise him with the psaltery and the cithara; praise him with the drum and in chorus; praise him with strings and the organ” and so on.

- 
- 17 mensurabilis *B D W* proportionabiliter *B W* proporcionabiliter *D* mensuram  
mensuratam et mensurabilem modo *B D W*  
18 illa *post* est *B* que instrumentis *B D W* exercetur *R* sicut in psalmista David  
continetur *B W* sicut in psalmista David continetur *D*  
19 "Laudate Dominum in sono tube; laudate eum et cetera; laudate eum in choro et timpano et  
cetera," et sic de aliis *B* sono et tube *D* *cithara* *R* laudate eum in timpano . . . et  
sic de aliis *om. R* choro laudate in *D*
- 

17. For various definitions of *mensurabilis musica* and *mensura*, see Franco of Cologne *Ars cantus mensurabilis* 1.1–4 (Reaney and Gilles, pp. 24–25); Jerome of Moravia *Tractatus de musica* 25 (Cserba, p. 180); Marchetto *Lucidarium* 10.1.2–5 (Herlinger, p. 368).

18–19. The association of David, his psalter, and Psalm 150 carries great authority in medieval music theory, e.g., Regino of Prüm *De harmonica institutione* 6 (LeRoux, p. 41); *Dialogus* 7 (GS, 1:257); *Summa musice* 3 (Page, pp. 148, 149); Johannes de Grocheio *De musica* 37 (Rohloff, p. 116); it is usually cited as an exhortation to praise God through plainsong or musical instruments, e.g., John *De musica* 17.12–14 (Smits van Waesberghe, pp. 115–16); Elias Salomo *Scientiae artis musicae* Proemium (GS, 3: 17). The practice of singing, as borne by the testimony in both the Old and New Testament, provided Gregory with the authority to preach the use of singing in worship: *Summa musice* 3 (Page, p. 148).

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20 Ars cuiuslibet scientie est collectio	20 The theory of any science is the
multorum preceptorum et cetera. 21 Dicitur	collection of many rules. 21 The word
autem ars ab hoc verbo: arto, artas quod	"theory" is derived from <i>arto</i> , <i>artas</i> [to
idem est quod restringo, restringis, quia artat	restrict], which is the same as <i>restringo</i> ,
nos, id est restringit, ne aliter faciamus quam	<i>restringis</i> [to restrain], because theory
ipsa docet.	restricts us, that is, restrains us, lest we do
	other than what the theory teaches.

---

- 20 [[membrorum]] ante multorum *R*  
21 ad *pro* ab *D* arto, -as *B W* restringo, -gis *B W* et *pro* id est *B W* [et *sup. lin.*] *pro* id  
est *D* astringi[t corr. *sup. s*] *pro* restringit *D* fatiamus *B* quod *pro* quam *W* ipse  
*B*
-

20. Cf. Nicolaus Capuanus *Compendium musicale* (De La Fage, p. 310); Rossetti *Libellus* 3.14 (Seay, p. 9).

*Ars* is here translated as "theory." Other possible translations are "treatise," or "science," (cf. Guido *Micrologus* 1 [Smits van Waesberghe, p. 92; Warren Babb, trans., and Claude V. Palisca, ed., *Hucbald, Guido, and John on Music*, Music Theory Translation Series [New Haven and London: Yale University Press, 1978], p. 59).

Guido, *Aliae regulae* (GS, 2:35), expresses his hope for a common rule of art, which, according to *Summa musicae* 11 (Page, p. 168), desires to "supply deficiencies" but "is also concerned to discard superfluities." In his discussion of the nature of *ars* Aribo, *De musica* (Smits van Waesberghe, p. 47), distinguishes between "natural" and "artificial" musicians: his description of the latter outlines the theory of music as then studied. Elias Salomo, *Scientiae artis musicae* 17 (GS, 3:35), observes that art imitates nature as much as it can.

21. For similar derivations of the term *ars*, see Remigius of Auxerre *Commentum* (Fox, p. 2); Aribo *De musica* (Smits van Waesberghe, p. 46).

---

<sup>22</sup> Cantus est dulcis consonantia	<sup>22</sup> Song is an agreeable consonance of
vocum que per proportiones armonicas	notes, which is composed and ordered
dulciter secundum rectum numerum	agreeably by means of harmonic ratios,
mensuratum ad sonos relatum componitur et	according to correctly measured number
ordinatur.	related to sounds.

---

22 consonantia W qui B per om. B R armonias pro armonicas B [[armonicas]] arimonias  
 armonitas pro armonicas D armonias armonizat pro armonicas W dulciter  
 armoniatas secundum B numerum rectum B mseratum pro mensuratum B

=====

22. *Vox* here translated as "note"; in *Introductio musicae* 3 *vox* takes on the meaning of "solmization syllable."

For other definitions and descriptions of *cantus*, see Bernardus *Tonale* (GS, 2:267); Engelbert of Admont *De musica* 3.14 (GS, 2:329); Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, p. 507); Johannes de Olomons *Palma choralis* 1, 5 (Seay, pp. 5, 13); Capuanus *Compendium musicale* (De La Fage, p. 310); Rossetti *Libellus* (Seay, p. 9).

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<sup>23</sup> Subiectum in musica est aliquarum	<sup>23</sup> The subject in music is the joining
vocum seu pausationum coniunctio modo	of any notes or rests in a way that is apt and
debito ac proprie observato. <sup>24</sup> Predicatum	properly carried out. <sup>24</sup> Its predicate is the

est ipsius musice ars legitima proportionata      true proportionate art diligently observed in  
omnibus suis modis diligenter observatis.      all its ways. To which part of philosophy is  
Cui parti philosophie supponatur?      it assigned? To arithmetic.  
Arismetrice.

---

23 seu per pausationum W

24 Predicatum ipsius musice est ars W    legitime B    legitime R    proporcionate D  
proportiona.. R    partim D R    philosophie W    ars metrice D

=====

23. Music uses discrete sounds, i.e., those that can be definitely measured. Its opposite, continuous sound, finds no place in the medieval concept of music as number related to sound: see Jerome of Moravia *Tractatus de musica* 9 (Cserba, p. 41).

24. In contrast to *De plana musica*, *Introductio musice* generally refrains from discussion of the arithmetical aspect of music, confining itself to explanations of immediate pedagogical value. Anon. of St. Emmeram *De musica mensurata* 4 (Yudkin, p. 268) likewise leaves certain topics to the arithmeticians, whom he calls "the philosophers who deal with the ratio of numbers."

For a modern discussion of the concept behind the wording *cui parti philosophie supponatur* see Minnis, *Medieval Theory of Authorship*, pp. 23–27.

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2. <sup>1</sup>De litteris gravibus, acutis  
et superacutis

2. <sup>1</sup>Concerning the grave, acute, and  
superacute letters

<sup>2</sup>Notandum est quod sicut septem sunt  
dies in ebdomada, ita sunt septem littere in  
musica: a, b, c, d, e, f, g, quarum prime  
dicuntur graves, alie acute, alie superacute.

<sup>2</sup>It must be noted that, just as there  
are seven days in a week, so also there are  
seven letters in music: A, B, C, D, E, F, G, of  
which the first are called grave, others  
acute, others superacute.

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R 610r; B 76v; D 68va; W 57r; CS, 1:158a.

<sup>1</sup> om. B D R W

2 sicut sunt septem dies B D W    scilicet post musica B W    E om. R    ipse pro prime B    et  
post acute W

---

2. Cf. *De plana musica* 11.2. The earliest use of the seven letters of the alphabet to denote musical notes appears to be in *Dialogus* 2 (GS, 1:253).

For similar discussions of the grave, acute, and superacute registers, see John *De musica* 5.16–18, 10.17–20 (Smits van Waesberghe, pp. 61–62, 78–79); Roffredi *Summa musicae artis* 1 (Seay, p. 73); Anon. 2 *Tractatus de musica* (CS, 2:484, 498); *Summa musicae* 8 (Page, pp. 160–61); Johannes de Grocheio *De musica* 94–97 (Rohloff, p. 128); *Quatuor principalia* 2.5, 3.6 (CS, 4:208, 221); *Berkeley Ms* 1.1 (Ellsworth, pp. 36–38); Prosdocimo *Plana musica* 1.6 (6–7); Ugolino of Orvieto *Declaratio* 1.10.2, 1.11.2–10 (Seay, pp. 29–30, 31).

For similar applications of the simile of seven days, see Guido *Micrologus* 5.7–8 (Smits van Waesberghe, p. 108); Guido *Regulae musicae rhythmicae* (Smits van Waesberghe, p. 96); Guido *Epistola* (GS, 2:46, 49); *Ad organum faciendum* 3 (Huff, p. 53 [Eggebrecht, p. 112]); John *De musica* 9.4 (Smits van Waesberghe, p. 72); *Quatuor principalia* 2.9 (CS, 4:210–11); Carthusian monk *Tractatus de musica plana* 4 (CS, 2:464). For other similes involving the number seven see Elias Salomo *Scientiae artis musicae* 1 (GS, 3:18): gifts of the Holy Spirit; Johannes de Olomons *Palma choralis* 2 (Seay, p. 5): planets; Bonaventura da Brescia *Venturina* 10.2, 11.4 (Seay, pp. 9, 10): seven deductions and keys based on the seven virtues of the Holy Spirit, and the seven *claves* in the three registers.

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<sup>3</sup>Graves dicuntur inferiores a gravitudine quia primo inferius pro fundamento ponuntur et ideo grossum sonum gravem et profundum habent. <sup>4</sup>Acute altum sonum et acutum supra graves optinent. <sup>5</sup>Superacute altiore sonum et superacutum optinent. <sup>6</sup>Idem sicut se habent acute super graves, ita se habent superacute super acutas simili modo et ratione.

<sup>3</sup>The lower letters are called *graves* from *gravitudo* ["a heavy or oppressed condition"] because they are placed first below as a foundation, and for that reason have a heavy sound, low and deep. <sup>4</sup>The acutes possess a high and acute sound above the graves. <sup>5</sup>The superacutes possess a higher sound above the acute. <sup>6</sup>Just as there are acutes above the graves, so also there are superacutes above the acutes, in the same way and for the same reason.

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3 dicuntur in gravitudine W inferiores D et post inferiores B gravidine R primo om. B proponuntur D proponuntur W gratiosum pro grossum B grave pro gravem D

4 sonum R super pro supra W

5 Super[[ra]]acute D sonum W habent pro optinent B D W

6 id est *pro* Idem *B* sicut se haberent *D* sicut se hererit acute *W* acute supra graves *B*  
acute sup graves *D* ~~et~~ ante ita *W* et etiam ratione *B D W*

3–6. Cf. *De plana musica* 10.19; for similar descriptions, see Jerome of Moravia *Tractatus de musica* 13 (Cserba, p. 56); Johannes de Olomons *Palma choralis* 3 (Seay, pp. 8–9); Prosdócimo *Plana musica* 1.6; Ugolino of Orvieto *Declaratio* 1.9.7 (Seay, p. 29).

<p><sup>7</sup>Sciendum est quod omnis vox humana se habet in triplici differentia: aut est pectoris aut gutturis aut capitis. <sup>8</sup>Si sit pectoris tunc se habet in gravibus, in fundamento cantus debet ordinari. <sup>9</sup>Si sit gutturis mediocriter se habet ad utrasque, scilicet ad graves et ad superacutas. <sup>10</sup>Et sicut vox pectoris tantummodo se habet in gravibus, ita vox capitis tantummodo se habet in superacutis.</p>	<p><sup>7</sup>It must be known that every human voice obtains in three different states: it is either of the chest, throat, or head. <sup>8</sup>If it is of the chest then it occurs among the graves, and it should be placed in the foundation of song. <sup>9</sup>If it is of the throat then it occurs between the graves and the superacutes. <sup>10</sup>Just as the voice of the chest occurs only among the graves, so also the voice of the head occurs only among the superacutes.</p>
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7 De voce ante Sciendum *W* aut pectoris *B* aut gutturis aut capitis *ab marg. D* est ante gutturis *W*  
8 Si sit pectoris *ab marg. D* habet se *W* et ante in fundamento *B*  
9 Si *R* utriusque *B* et superacutas *B W*  
10 post 2.12 *B* Et voces capitis semper in superacutis vel acutis postremum locum debent obtinere *B* et ante in gravibus *D*

7–10. For similar descriptions, see *Summa musice* 5 (Page, pp. 152, 153); Jerome of Moravia *Tractatus de musica* 25 (Cserba, p. 188); Marchetto *Lucidarium* 14.1.10–11, 14.1.21 (Herlinger, pp. 540–42); Ugolino of Orvieto *Declaratio* 1.11.11–13 (Seay, p. 31).

For discussions on vocal production and the vocal instrument, see Martianus Capella *De nuptiis philologiae et mercurii* 9 (Dick, pp. 501–2); John *De musica* 4.2 (Smits van Waesberghe, p. 57); *Summa musice* 7, 11 (Page, pp. 156, 157, 167).

<sup>11</sup>Et sic in omni cantu voces pectoris debent  
ordinari cum suo proprio, scilicet in  
fundamento. <sup>12</sup>Et voces gutturis semper in  
acutis medium locum debent optinere.

<sup>11</sup>Thus in every song, voices of the chest  
should be arranged with their proper  
location, that is, at the foundation. <sup>12</sup>The  
voices of the throat should always maintain  
the middle place, that is, among the acutes.

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11 *post 2.9 B* sicut *pro* sic *D* pecto... *R* scilicet fundamento *B* fundato *R*

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<sup>13</sup>Si queratur quid sit vox et unde  
dicatur, respondendum est sic: <sup>14</sup>vox est aer  
remissus in ore verberatus rectus naturalibus  
instrumentis formatus. <sup>15</sup>Et dicitur ab hoc  
verbo voco, vocas quia in ascensu et descensu  
plene et semiplene intemerate sonum agendo  
vocamus.

<sup>13</sup>If it is asked what voice is and  
how it is named, the reply should be:  
<sup>14</sup>voice is air set into regular vibration in the  
mouth and formed by natural instruments.  
<sup>15</sup>It is named from the word *voco*, *vocas* [to  
call] because we vocalize by means of making  
a sound purely, by whole tone or semitone, in  
ascent or descent.

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13 *post 2.10 B* Quid sit vox *ante* Si *W* questio *in marg.* *W* qui *pro* quid *D* dicitur *D*  
14 [[re]] *ante* aer *D* ore *R* locus *pro* rectus *B* rectis *pro* rectus *R* instrumentis formatur *D R*  
responsum *in marg.* *W*  
15 ab hoc verbo . . . vocamus *desunt D* asc.... *R* voco, -cas *B W* assensu de dessensu *W*  
intemerarie *pro* intemerate *B R* temerarie *pro* intemerate *W* augendo *pro* agendo  
*W* vocando *ante* vocamus *B*

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13–15. Cf. F.32–33; for similar discussions, see Isidore of Seville *Etymologiae* 3.20.2; Regino of Prüm *De harmonica institutione* 9 (LeRoux, p. 46); Marchetto *Lucidarium* 1.9.2, 1.10.2–6 (Herlinger, pp. 90–94); Engelbert of Admont *De musica* 1.5 (GS, 2:290); Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, p. 508); *Vc*, fol. 21r (Appendix C); Bonaventura da Brescia *Venturina* 5.2 (Seay, p. 3). Bonaventura, *Venturina* 4.2 (Seay, p. 3), also defines sound as “the aural perception of air set in motion”: cf. Burtius *Florum libellus* 1.7.45 (Massera, p. 70).



For general discussions on sound and the human voice, see Regino of Prüm *De harmonica institutione* 4, 9 (LeRoux, pp. 32, 46); *Summa musice* 4, 5 (Page, pp. 150–52); Anon. of St. Emmeram *De musica mensurata* 2 (Yudkin, p. 224); Johannes de Olomons *Palma choralis* 2 (Seay, pp. 5–6); Rossetti *Libellus* 2.1–11 (Seay, p. 5).

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<sup>16</sup>Instrumenta sunt hec: os, lingua, dentes, palatum et pulmo. <sup>17</sup>Versus: instrumenta novem sunt pulmo, lingua, palatum, quatuor dentes et duo labia simul.

<sup>16</sup>The instruments are these: mouth, tongue, teeth, palate, and lungs. <sup>17</sup>[Whence] the verse: “the nine instruments are the lungs, tongue, palate, four teeth, and two lips together.”

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16–29 *desunt D*

16 Instrumenta. R naturalia post Instrumenta B scilicet post hec W similia pro pulmo B supulmo pro pulmo W

17 unde ante versus B W instrumentalia R pulmo R quatuor et dentetes B simul W

16–17. For further discussions on the vocal instrument, see Berno of Reichenau *Prologus in tonarium* 2 (GS, 2:64); Lambertus *Tractatus de musica* (CS, 1:253); Aegidius de Zamora *Ars musica* 4.33 (Robert-Tissot, p. 60); Frater Petrus dictus Palma ociosa *Compendium de discantu mensurabili* (Wolf, p. 507); *Quatuor principalia* 1.15 (CS, 4:205); Johannes de Olomons *Palma choralis* 2 (Seay, pp. 5–6); Vc, fol. 21r (Appendix C). Jerome of Moravia, *Tractatus de musica* 5 (Cserba, p. 22), names different components for the vocal instrument, derived from Al Farabi’s *De scientia*. Marchetto, *Lucidarium* 1.9.3–5 (Herlinger, pp. 90–92), discusses vocal production.

The number nine has numerological significance: Regino of Prüm, *De harmonica institutione* 17 (LeRoux, p. 77), and Frater Petrus dictus Palma ociosa, *Compendium de discantu mensurabili* (Wolf, p. 507), associate the number with the nine muses. Anon. of St. Emmeram, *De musica mensurata* 2 (Yudkin, p. 212), comments that “some people” (implying Lambertus) associate the nine natural instruments with the nine rhythmic modes; Johannes de Grocheio, *De musica* 160–65 (Rohloff, p. 140), cites the same association commented upon by the Anon. of St. Emmeram, but prefers Johannes de Garlandia’s numbering of the rhythmic modes as six.

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<sup>18</sup>Sciendum est quod octo sunt claves tantum et in gravi ponimus, scilicet G quod representat gamaut, A quod representat A re,

<sup>18</sup>It must be known that there are only eight keys and that we place them in the grave register as follows: G, which

B: B mi, C: C fa ut, D: D sol re, E: E la mi, F: represents Gamma ut; A, which represents A  
 F fa ut, G: G sol re ut. re; B, B mi; C, C fa ut; D, D sol re; E, E la  
 mi; F, F fa ut; G, G sol re ut.

18 Sequitur de clavibus *ante* Sciendum *W* Sciendum quod *B* sunt *om. B* et *om. B R*  
 gravibus *B* *A* *A* re representat *pro A* quod representat *A* re *B* *A* quod representat  
*om. W* ♭: ♭ mi *B* ♭ [b sup. lin.] my *W* mi F fa ut *B* et sic de singulis *post* G sol re  
 ut *B*

18, 21, 25. Cf. F.32, 33. For similar descriptions, see Anon. 2 *Tractatus de musica* (CS, 2:484); Lambertus *Tractatus de musica* (CS, 1:254, 257); Jerome of Moravia *Tractatus de musica* 13 (Cserba, p. 56); Elias Salomo *Scientiae artis musicae* 3, 7, 28 (GS, 3:19, 21, 56); Engelbert of Admont *De musica* 1.13 (GS, 2:295); *Quatuor principalia* 2.4 (CS, 4:207). Theoger of Metz, *Musica* (GS, 2:184), identifies the *B synemmenon in gravibus*, and calls Γ an “extra” note.

<p>19Iste octo littere que in principio istarum          ponuntur dicuntur claves 20et ratio est quia          sicut mediante clave intramus hostium et per          hostium domum, ita mediante clave que in          principio dictionis apponitur intramus in          propriam notitiam atque evidentiam          tonorum et semitoniorum simpliciter et          composite, coniunctim et divisim.</p>	<p>19These eight letters that are placed at the          beginning of these [expressions] are called          keys 20and the reason is that just as we enter          the door—and through the door the          house—by means of a key, so also by means          of a key that is placed at the beginning of          the expression we enter into a proper          understanding and enlightenment of the          whole tones and semitones, simply and          compositely, jointly and separately.</p>
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19 primo *pro* principio *B* dictionum *post* istarum *B* graves *pro* claves *W*  
 20 et est ratio talis quare claves dicuntur quia *B* ratio talis est quare claves dicuntur quia *W*  
 sicut mediante clavi intramus *B W* ita mediante clavi que *B W* [[cantus]] *post*  
 notitiam *R* semitoniorum *B R W* coniunctim divisim *B*

20. For similar uses of this simile, see Jerome of Moravia *Tractatus de musica* 11 (Cserba, pp. 47–48); Marchetto *Lucidarium* 14.1.2–4 (Herlinger, p. 538); Prosdocimo *Plana musica* 1.17; Bonaventura da Brescia *Venturina* 11.3, 11.8 (Seay, p. 10).

<sup>21</sup>Et sic similiter octo littere in acutis  
componuntur propter b quod in b fa ̣ mi bis  
apponitur, scilicet b rotundum et ̣ quadrum.

<sup>22</sup>Primum b dicitur esse molle et est signum  
prime vocis, scilicet fa; <sup>23</sup>secundum dicitur  
esse durum et est signum secunde vocis,  
scilicet mi, <sup>24</sup>ita quod b molle et rotundum  
significant idem, similiter ̣ quadrum et  
durum equipollent ad invicem.

<sup>21</sup>Similarly, eight letters are placed in the  
acute register, because of b that is notated  
twice in b fa ̣ mi, that is, round b and square  
b. <sup>22</sup>The first b is called soft and is the sign  
of the first syllable, that is, fa; <sup>23</sup>the second  
is called hard and is the sign of the second  
syllable, that is, mi, <sup>24</sup>such that soft and  
round b signify the same thing and similarly  
square and hard b are equivalent to each  
other.

21 que *pro* quod B quod est b fa ̣ mi R apropiantur *pro* bis apponitur B appropriatur *pro*  
apponitur R  
22 et est R  
23 ̣ signum est *pro* et est signum B  
24 molle et b rotundum B W idem significat *pro* significant idem B quadrum *om.* R  
quadrum et ̣ durum B ad se invicem equipolent *pro* equipollent ad invicem B a se  
invicem equipolent *pro* equipollent ad invicem W

22–24. For similar remarks concerning the softness and hardness of b and ̣ respectively, see John *De musica* 5.7 (Smits van Waesberghe, p. 60); Jerome of Moravia *Tractatus de musica* 12 (Cserba, pp. 50, 53); Johannes de Olomons *Palma choralis* 4 (Seay, pp. 11–12); Prosdocimo *Plana musica* 1.13; Bonaventura da Brescia *Venturina* 12.2–3 (Seay, p. 11).

<sup>25</sup>Similiter in superacutis inveniuntur sex  
claves propter b quod simili modo in b fa ̣ mi

<sup>25</sup>Similarly, in the superacute register are

superacuto bis reperitur sicut in acuto <sup>26</sup>et sic  
per totam manum sinistram, que dicitur  
fundamentum primum et initium alphabetum  
ignorantibus vel ingredientibus discipulis in  
arte cantus seu in arte totius musice. <sup>27</sup>Tamen  
figurantur viginti due claves seu littere, nec  
plures nec pauciores.

found six keys—because of b, which is found  
twice in b fa  $\frac{1}{2}$  mi superacute, just as in the  
acute. <sup>26</sup>Thus, [the letters are placed]  
through the entire left hand, which is  
called the primary fundamental, initial,  
the alphabet for unschooled or novice  
disciples in the art of song or in the art of all  
music. <sup>27</sup>A total of twenty-two keys or  
letters are figured, no more, no less.

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25 propter b molle W que pro quod B repetitur pro reperitur B W  
26 dicitur primum fundamentum initium et abphabetum in ignorantibus B primum initium R  
alphabeti W discipulis in artem cantus seu in artem totius B  
27 Tamen figuratur B seu littere om. B neque plures pauciores pro nec plures nec pauciores  
W

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26. Cf. *De plana musica* 11.5. The appellation *manus sinistra* is a synonym for the gamut, defined in *De plana musica* and *Quatuor principalia* 3.9 (CS, 4:223) as “the composition of the signs of the monochord and of syllables.”

Besides *Introductio musice* and *De plana musica* 9.30, Lambertus, *Tractatus de musica* (CS, 1:257), and Jerome of Moravia, *Tractatus de musica* 11, 12 (Cserba, pp. 48, 55), are among the earliest to mention superacute ee, thus bringing the total number of notes of the gamut to 22 (cf. Ellsworth: *The Berkeley Manuscript*, p. 33, note 1: “the note ee-la . . . did not appear in theory until the writings of Jerome of Moravia . . .”); *Berkeley Ms* 1.1 (Ellsworth, pp. 36–38) is among the earliest to mention grave F. Marchetto, *Lucidarium* 4.1.20 (Herlinger, p. 543), explains that ee la was added to complete the hexachord beginning on acute g. *Quatuor principalia* 3.4 (CS, 4:220) states that superacute ee was not added by Guido.

For other descriptions of the notes of the gamut (or hand), see Martianus Capella *De nuptiis philologiae et mercurii* 9 (Dick, pp. 495–96); Cassiodorus *Institutiones* 2.5.8 (Mynors, pp. 145–48); Hucbald *De harmonica institutione* (GS, 1:105, 108, 110); *Musica enchiridis* 1 (Schmid, pp. 4–5); Regino of Prüm *De harmonica institutione* 10 (LeRoux, p. 54–55); Guido *Micrologus* 2 (Smits van Waesberghe, p. 94); John *De musica* 5 (Smits van Waesberghe, pp. 59–62); *Summa musice* 8 (Page, pp. 158–61); Aegidius de Zamora *Ars musica* 5 (Robert-Tissot, p. 62); Johannes de Grocheio *De musica* 85–89 (Rohloff, p. 126); Engelbert of Admont *De musica* 1.6, 1.9, 1.13, 3.12, 4.24 (GS, 2:291, 292, 295, 327, 354); *Quatuor principalia* 3.4, 3.10 (CS, 4:220, 225); *Berkeley Ms* 1.1 (Ellsworth, pp. 32–34); Johannes de Olomons *Palma choralis* 2, 3 (Seay, pp. 6–9); Prosdocimo *Plana musica* 1.3; Ugolino of Orvieto *Declaratio* 1.6, 1.7 (Seay, pp. 26, 27–28); Bonaventura da Brescia *Venturina* 7.2–5 (Seay, pp. 4–5).

For the use of the hand to demonstrate the notes of the gamut, see John *De musica* 1.9 (Smits van Waesberghe, p. 50); *Summa musice* 8, 9, 12 (Page, pp. 158–163, 169); Elias Salomo *Scientiae artis musicae* 7, 19 (GS, 3:2–24, 41); Aegidius de Zamora *Ars musica* 9.10 (Robert-Tissot, p. 78); Johannes de Grocheio *De musica* 102 (Rohloff, p. 128); *Quatuor principalia* 3.7 (CS, 4:222). Bonaventura da Brescia, *Venturina* 26.10–12, 26.20–24 (Seay, pp. 83, 84), advocates a tripartite hand owing to the “insufficiency” of the standard hand; but cf. Bartolomeo Ramos de Pareia who, in his *Musica practica* (1482) 1.2.3 (Wolf, pp. 30–31), already discusses a *manus composita*.

Ugolino of Orvieto, *Declaratio* 1.8.2, 1.11.3 (Seay, pp. 28, 31), refers to the hand as *manus latina*. Sigebertus Gemblacensis (*Chronica*, in *Patrologiae cursus completus*, Series latina, vol. 160, ed. Jacques-Paul Migne [Paris: Garnier, 1844–64; supps. 1958–74], col. 204) appears to be the first writer to attribute the hand to Guido. Strangely enough, this association of the hand with Guido is otherwise rarely found in theoretical writings: Johannes Gallicus, *Ritus canendi* 2.1.2.30, 2.2.3.8, 2.2.3.49 (Seay 14, pp. 4, 54, 57), is among the few after Sigebertus to make this connection.

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<sup>28</sup>Notandum est quod in gravibus  
situantur quatuordecim voces, in acutis  
octodecim, in superacutis decem, ita quod  
inter graves, acutas et superacutas litteras  
assignantur quadraginta due.

<sup>28</sup>It must be noted that among the  
grave letters are placed fourteen syllables;  
among the acute, eighteen; among the  
superacute, ten; so that, among the grave,  
acute, and superacute letters taken together  
there are assigned forty-two syllables.

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28 Nota bene *ante* Notandum *W* voces *om.* *R* et *ante* in acutis *B* et *ante* in superacutis *B*  
*infra pro* inter *B* in *pro* inter *R* litteras *om.* *W* voces *post* quadraginta due *B W*

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<sup>29</sup>Omnia ista predicta apparent in exemplis  
cuilibet intuenti lucide, clare, distincte et  
aperte, ut hic patet.

<sup>29</sup>All these that have been spoken of are  
shown in the examples below, clearly and  
distinctly to anyone who looks into them.



29-31 *om. B*

29 *predicta om. W* cuiuslibet intuentis *R* licite *pro* lucide *W* et *ante* distinte *W*  
apertum *W*

*W*



<sup>30</sup>Hic apparent exempla de omnibus  
vocibus totius artis cantus per graves, acutas  
et superacutas litteras. <sup>31</sup>Unde istis  
prelibatis nobis sufficiat ad presens.

<sup>30</sup>Here are shown examples on all  
syllables of the entire art of song through  
the grave, acute, and superacute letters.  
<sup>31</sup>Thus with these having been examined let  
the discussion suffice for us at present.

30 cantus artis *W*

31 vobis *pro* nobis *D* nobis sufficiant quo ad presens *W* sufficiat quo ad presens *D*

3. <sup>1</sup>Hiis visis, videndum est de  
proprietatibus cantus

<sup>2</sup>Sunt autem in omni cantu tres

proprietates cum iste tres ad  
demonstrationem et evidentiam totius cantus  
sufficiant, scilicet  $\sqcup$  quadrum, natura vel  
proprius cantus quod idem est et *b* molle.  
<sup>3</sup>Ratio quare proprietates dicuntur talis est:  
quia naturaliter proprie in notitiam vere  
canendi tonos et semitonia agendi legitime

3. <sup>1</sup>These having been seen, we shall now  
discuss the proprieties of song

<sup>2</sup>There are in every song three

proprieties, since these three suffice for the  
description and clarity of all song. They are  
square *b*; natural or proper song, both terms  
meaning the same thing; and soft *b*. <sup>3</sup>The  
reason these proprieties are so called is as  
follows: they naturally lead us properly  
into the knowledge of true singing and  
correctly into the knowledge of the

nos introducunt.

performance of tones and semitones.

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R 610v; B 77v; D 69ra; W 58r; CS, 1:158b.

2 autem *om.* W proprietat[[e.]]es D et *pro* cum B iste est ad W tres a demonstracione et  
evidencia tocius D demonstrationem B quadrum *om.* R et *ante* natura W idem  
sunt b molle B idem sunt et D R W

3 Ratio R regulariter *pro* naturaliter B veracitatem *pro* vere B semitonos D R W  
agenda B addendi *pro* agendi W nos legitime W legiptime B

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2. Cf. *De plana musica* 13.5.

Bonaventura da Brescia, *Venturina* 17.2 (Seay, p. 47), claims that according to Marchetto [not found] the proprieties were invented because of three reasons: of truth, of the signs, and of the necessity of avoiding the tritone.

3. Cf. *De plana musica* 13.4; Rossetti *Libellus* 7.17 (Seay, p. 22): "Et ratio quare proprietates dicuntur talis est, quia naturaliter et proprie in notitiam veram canendi tonos et semitonos addendi legitime introducunt."

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<sup>4</sup>Natura dicitur naturalis cantus vel proprius  
et econverso quia naturaliter habet medium  
optinere, id est, intra  $\sqcup$  quadrum et b molle  
habet stare. <sup>5</sup>Et dicitur proprius cantus quia  
sine aliqua variatione tonorum et  
semitoniorum cantatur.

<sup>4</sup>By nature, a song is called natural or proper  
and the converse because it naturally holds a  
middle position, that is, it stands between  
square b and soft b. <sup>5</sup>The song is called  
proper because it is sung without any  
variation of tones or semitones.

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4 autem *ante* dicitur B proprius *om.* W naturaliter medium B D W optinet B W infra  
*pro* intra B D R W b molle stare B  
5 proprie *post* quia B semitonorum B D R W

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4. Cf. *De plana musica* 13.8.

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<sup>6</sup>Ɑ quadrum autem cognoscimus quia incipit in G, scilicet in Gamaut vel in G sol re ut gravi vel acuto et terminatur in E gravi, acuto et superacuto. <sup>7</sup>Natura autem cognoscimus quia semper incipit in C gravi, acuto et non superacuto et terminatur in a acuto et superacuto. <sup>8</sup>B molle autem cognoscimus quia incipit in F fa ut gravi et acuto et terminatur in d acuto et superacuto.

<sup>6</sup>We recognize the square b propriety because it begins on G, that is on Gamma ut or on G sol re ut, grave or acute, and ends on grave, acute and superacute E. <sup>7</sup>We recognize the natural propriety because it always begins on C—grave, acute, but not superacute—and ends on acute and superacute a. <sup>8</sup>We recognize the soft b propriety because it begins on F fa ut, grave and acute, and ends on acute and superacute d.

6 Gamaut, in G sol re ut B E gravi et acuto B

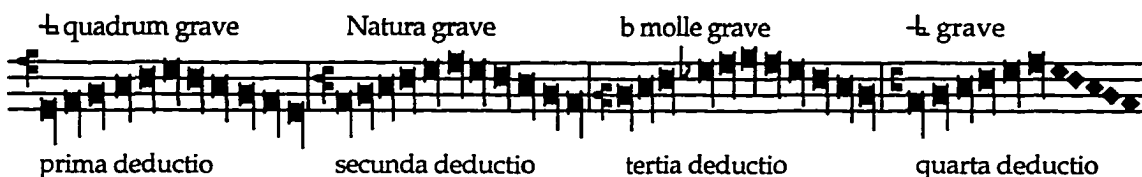
7 Natura . . . superacuto om. B grave R

8 fa ut om. B D W gravi, acuto et terminatur W grave R et superacuto om. W

6-8. Cf. *De plana musica* 13.9-11.

<sup>9</sup>Unde extat versus: "C naturam dat, F b molle, G quoque quadrum." <sup>10</sup>Et sic de singulis subsequentibus in ascendendo et descendendo gravibus, acutis et superacutis litteris, sicut hic apparet proprie in exemplis.

<sup>9</sup>Whence the verse: "C gives the natural, F the soft b, and G the square." <sup>10</sup>Thus follow each of the other grave, acute, and superacute letters in ascent and in descent, as shown here appropriately in the examples.



Natura acuta b molle acutum ♮ quadrum acuto

quinta deductio sexta deductio septima deductio

---

grave square b grave natural grave soft b grave square b

1st deduction 2nd deduction 3rd deduction 4th deduction

acute natural acute soft b acute square b

5th deduction 6th deduction 7th deduction

9 *om. B D W*

10 *dessendedo W sicut . . . exemplis om. B et ante apparet D proprio R ex[[exmplis]] D infra scriptis post exemplis W*

*D*

♮ quadrum

natura

b molle

♮ quadrum

natura

[[♮ quadrum]] b molle

♮ quadrum

R

♭ quadrum grave      Natura grave      b molle grave      ♭ grave

prima deductio      secunda deductio      tertia deductio      quarta deductio

Natura      acuta      b molle      acutum      ♭ quadrum      acuto

quinta deductio      sexta deductio      septima deductio

W

♭ quadrum      Natura      b molle      ♭ quadrum acutum

Natura acuta      b molle acutum      ♭ quadrum superacutum

9. Among many instances of the use of this verse are those by Lambertus *Tractatus de musica* (CS, 1:256); *Quatuor principalia* 3.8 (CS, 4:222); Johannes de Olomons *Palma choralis* 5 (Seay, p. 15); Prosdocimo *Plana musica* 1.14; Bonaventura da Brescia *Venturina* 10.5 (Seay, p. 9).

Ugolino of Orvieto, *Declaratio* 1.15.6 (Seay, p. 37), gives a related verse: "Naturae modum per C cantare solemus, F B molle notat, sed G ♭ quadrum ostendit."

<sup>11</sup>Notandum est quod iste  
 proprietates predictae debent ordinari  
 secundum quod in deductionibus artis manus  
 sinistre, voces et claves appropriantur hoc  
 modo, scilicet <sup>12</sup>Gamaut in regula vel in  
 linea habet unam clavem et unam vocem.  
 Gamma est clavis, ut est vox. <sup>13</sup>Cantatur per  
 ♭ quadrum et ad semetipsum descendit.

<sup>11</sup>It must be noted that these  
 abovementioned properties should be  
 ordered in such a way that the syllables and  
 keys are arranged in the deductions of the  
 gamut in this way: <sup>12</sup>Gamma ut, on a  
 straight length, that is to say, line, has one  
 key and one syllable. G is the key, ut the  
 syllable. It is sung by means of the square b

propriety and descends to [ut of Gamma ut]  
itself.

- 
- 11 *est om. B R* *predicte om. W* *secundum [quod sup. lin. fort. m. sec.] D* *manus om. B*  
*scilicet om. B D W*  
 12 *G pro Gamma D R W* *enim pro est vox B*  
 13 *Cantatur vox per B* *a semetipso pro ad semet ipsum R W* *a pro ad D*
- 

11–21. For similar descriptions, see *Summa musice* 8 (Page, pp. 157–61); Aegidius de Zamora *Ars musica* 7 (Robert-Tissot, pp. 66–70); *Quatuor principalia* 3.4 (CS, 4:220); *Berkeley Ms* 1.1 (Ellsworth, p. 46); Johannes de Olomons *Palma choralis* 1 (Seay, p. 7); Bonaventura da Brescia *Venturina* 7.2–6 (Seay, pp. 4–5); Rossetti *Libellus* 4.17–19 (Seay, p. 12). See also texts in *Vc*, fols. 31v–32r (Appendix C), and in the treatise sharing material with *Introductio musice* in *F*, fol. 56v (Appendix A), where *clavis* and *vox* are referred to as *littera* and *nota*, and *littera* and *vox*, respectively.

11. For the use of the term *deductio* in this treatise, see *Introductio musice* 4.12.

- 
- |   |   |
|---|---|
| <p><sup>14</sup>A re in spatio habet unam clavem<br/>et unam vocem. A est clavis, re est vox.<br/><sup>15</sup>Cantatur per ♭ quadrum et descendit ad ut<br/>de Gamaut.</p> | <p><sup>14</sup>A re, in a space, has one key and<br/>one syllable. A is the key, re the syllable.<br/><sup>15</sup>It is sung by means of the square b propriety<br/>and descends to ut of Gamma ut.</p> |
|---|---|
- 

- 14 *et ante re est B W* *re [[..]] est vox D*  
 15 *Et ante Cantatur W* *quadrum om. R* *et descendit om. B* *ab pro ad W* *G[[r]]amaut D*
- 

- |   |  |
|---|--|
| <p><sup>16</sup>B mi in linea habet unam clavem et<br/>unam vocem. B est clavis, mi est vox.<br/><sup>17</sup>Cantatur per ♭ quadrum ad ut de Gamaut.</p> | <p><sup>16</sup>B mi, on a line, has one key and one<br/>syllable. B is the key, mi the syllable. <sup>17</sup>It<br/>is sung by means of the square b propriety<br/>down to ut of Gamma ut.</p> |
|---|--|

18C fa ut in spatio habet unam  
clavem et duas voces. C est clavis, fa ut sunt  
due voces. 19Fa cantatur per ♭ quadrum ad ut  
de Gamaut; ut cantatur per naturam et ad  
semetipsum descendit.

18C fa ut, in a space, has one key and  
two syllables. C is the key, fa and ut the  
two syllables. 19Fa is sung by means of the  
square b propriety down to ut of Gamma ut;  
ut is sung by means of the natural propriety  
and descends to [ut of C fa ut] itself.

---

16 [[.]] ante ♭ mi D et ante mi est B W  
17 et ante cantatur W et descendit post quadrum W ab pro ad W  
18 in spatio om. W clavis, fa et ut D W voces due W  
19 quadrum et descendit ab ut de W et a semetipsum D et a semetipso R et a smetipso  
descendit W et sic de singulis supervenientibus post descendit B

---

20D sol re in linea habet unam  
clavem et duas voces. D est clavis, sol et re  
sunt due voces. 21Sol cantatur per ♭ quadrum  
ad ut de Gamaut; re cantatur per naturam ad  
ut de C fa ut. Et sic de singulis  
supervenientibus.

20D sol re, on a line, has one key and  
two syllables. D is the key, sol and re the  
two syllables. 21Sol is sung through the  
square b propriety down to ut of Gamma ut;  
re is sung through the natural propriety  
down to ut of C fa ut. And thus for each one  
of the higher notes following.

---

20–21 om. B  
20 clavis, sol re D W due om. W  
21 quadrum et dessendit ab ut de Gamaut W naturam et dessendit ab ut de C fa ut W  
supervenientibus D W

---

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21. *Supervenientes* refers to successively higher notes, which would be notated by symbols placed in physically higher positions on the page; see Karol Berger, "The Hand and the Art of Memory," *Musica Disciplina* 35 (1981):115.

---

<sup>22</sup>Et est necesse quod omnis cantus  
secundum illas tres proprietates  
suprascriptas procedat ubique in omni modo  
operandi cantum. <sup>23</sup>Et est notandum quod  
unaqueque illarum trium proprietatum  
incipiet sub hac voce "ut": ubi fundamentum  
suum facit a terminatione sua, facit illud in  
gravibus, in acutis et in superacutis. <sup>24</sup>Et sic  
quelibet proprietas sex litteras et sex voces  
continet et comprehendit.

<sup>22</sup>It is necessary that every song  
proceeds everywhere and in every manner of  
its conduct according to those three  
abovementioned proprieties. <sup>23</sup>It should  
also be noted that any of the three  
proprieties will begin upon the syllable  
"ut," where it makes its foundation by its  
termination, and it makes it among the  
grave, acute, and superacute notes. <sup>24</sup>Thus  
any propriety contains and encompasses six  
letters and six syllables.

- 
- 22 sciendum *pro* necesse *W* proprietates illas tres *pro* illas tres proprietates *B*  
infrascriptas *pro* suprascriptas *B* procedit *B W* procedant *R* ubicumque *pro*  
ubique *B* ibique *pro* ubique *D* modi *R* cantatur *pro* cantum *B*  
23 unamquamque *B* unaquaque *D W* proprietum *W* ac *pro* hac *D* ut et ibi suum  
fundamentum fatiat et terminationem suam fatiet in illa in gravibus, acutis et  
superacutis *B* ut ibi suum fundamentum faciat ad terminationem suam faciat illa in  
gravibus, acutis et superacutis *W* suum fundamentum *D* illa *D W* et ante in  
acutis *D*  
24 proprietates *B*
- 

23. For similar statements on the primacy of the syllable *ut*, see Jerome of Moravia *Tractatus de musica* 12 (Cserba, p. 50); Engelbert of Admont *De musica* 3.11 (GS, 2:326); Johannes de Olomons *Palma choralis* 5 (Seay, p. 14); Prosdocimo *Plana musica* 1.11.

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<sup>25</sup>Et ideo ista vox "ut" non ad alias voces,  
scilicet re, mi, fa, sol, la reducitur, <sup>26</sup>sed alie  
voces, scilicet re, mi, fa, sol, la ad ipsam  
primam, scilicet "ut" causa dignitatis  
referuntur quia a digniori inchoandum est ut

<sup>25</sup>For this reason the syllable "ut" is not led  
back to the other syllables, that is, re, mi,  
fa, sol, la, <sup>26</sup>but rather these other syllables  
are brought to the first syllable itself, that  
is, "ut," owing to its dignity, because one

dicit philosophus, <sup>27</sup> vel quia in omnibus	must begin with what is of greater dignity,
rebus naturalibus tam integralibus quam	as says the Philosopher; <sup>27</sup> or because in all
etiam subiectivis constituitur fundamentum	natural things, both integral and subjective,
ad quod omnia referuntur, <sup>28</sup> et propter hoc	a foundation is established towards which
dicimus quod ad semetipsum descendit et non	all other things are referred. <sup>28</sup> Because of
ad alias, sed alie ad ipsum, sicut dictum est.	this we say that ut should descend to itself,
	and not to the other syllables, and the other
	syllables should descend to ut, as stated
	above.

- 
- 25 illa R ut om. W alie pro ad alias R ad sup. lin. fort. m. sec. D reducit R  
 26 et ideo pro sed alie voces, scilicet R alie corr. ab alii D vocem post primam B  
     relantur pro referuntur B propter post est D propterea post est W est prout dicit  
     B philosophus dicit W  
 27 vel om. D B W naturaralibus B tam in regularibus ante tam integralibus B tam om.  
     W subicetivis W relantur pro referuntur B  
 28 propter pro et propter W quod a se ipso me dessendit W quia pro quod D R a  
     semetipso R a semetipsum D et non [[et]] ad alias D ab aliis pro ad alias W ab  
     ipsa pro ad ipsum W ipsam B D R
- 

26. The philosopher referred to here is probably Aristotle (see p. 46). Cf. Aristotle, *Analytica posteriora* (trans. Gerardus), in *Aristoteles Latinus* IV<sup>3</sup>, ed. Lorenzo Minio-Paluello (Bruges and Paris: Desclée de Brouwer, 1968), pp. 191 ("... res propter quam existunt res in capitulo esse est dignior..."), 205 ("... res quibus declarantur principia sunt digniores..."), 216 ("figura prima est dignior figurarum..."), 234 ("... universale est dignius in capitulo intentionis cause, ... tunc universale est causa..."); *Categoriae*, in *Aristoteles Latinus* I<sup>2</sup>, ed. Lorenzo Minio-Paluello (Bruges and Paris: Declée de Brouwer, 1961), p. 76 ("... melius est et honorabilius, prius naturaliter esse videtur...").

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4. <sup>1</sup>Visum est igitur de proprietatibus. <sup>2</sup>Nunc videndum est de principalibus signis que scilicet sunt duo: ut F grave et c acutum

<sup>3</sup>Unde F grave habet respectum ad  
 omnes graves. <sup>4</sup>Et c acutum habet respectum

4. <sup>1</sup>The proprieties have thus been examined. <sup>2</sup>Now we shall discuss the clefs, which are two, namely grave F and acute c

<sup>3</sup>The scope of the grave F clef  
 encompasses the grave notes. <sup>4</sup>The scope of

ab ubique in acutis usque ad superacutas.

the acute c clef extends from anywhere in the acute register up to the superacute.

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R 611r; B 78r; D 70ra; W 59v; CS, 1:159b.

1 Sequitur de signis ante Visum W

2 Modo pro Nunc B est fort. m. sec. D figuris pro signis B qui R licet pro scilicet B  
duo sunt D scilicet pro ut B de post ut R F om. W c om. B acuto W

3 Unde om. B D W suum ante respectum B D W ubicumque in gravibus usque ad acutas pro  
ad omnes graves B usque in acutis pro ad omnes graves D usque ad acutas pro ad  
omnes graves W

4 Et c acutum . . . in acutis om. D suum ante respectum B W ubicumque pro ab ubique B ad  
pro ab R ab om. W ibique pro ubique W

=====

2-3. L and S<sub>1</sub> have similar variants.

2. *Principale signum* is here translated as "clef."

For further descriptions of clefs, see Guido *Regulae musicae rhythmicae* (GS, 2:30 [but not in Smits van Waesberghe's edition]); *Summa musicae* 12 (Page, p. 170); *Quatuor principalia* 3.11 (CS, 4:226); *Berkeley Ms* 1.1 (Ellsworth, p. 42); Johannes de Olomons *Palma choralis* 5 (Seay, p. 15); Prosdocimo *Plana musica* 1.15–17. Prosdocimo *Plana musica* 1.16 also describes a third sign, the round b, that was placed sometimes on a line and sometimes in a space.

*Summa musicae* 13 (Page, pp. 171, 172) recommends that in reading music the clefs be considered first. They are like keys in the way they reveal the notes written in music: Elias Salomo *Scientiae artis musicae* 28 (GS, 3:56); Marchetto *Lucidarium* 14.1.2–4 (Herlinger, p. 538); Bonaventura da Brescia *Venturina* 11.7, 12.5 (Seay, pp. 10, 11). Prosdocimo, *Plana musica* 1.17, calls clefs the keys by which the proprieties are indicated. Of the two clefs described in *Introductio musicae* and other treatises, F is customarily associated with the color red and C with yellow: Guido *Regulae musicae rhythmicae* (Smits van Waesberghe, p. 119); Guido *Aliae regulae* (GS, 2:36a, 119); *Ad organum faciendum* 3 (Huff, p. 53 [Eggebrecht, p. 112]); John *De musica* 21.57–58 (Smits van Waesberghe, p. 41); Roffredi *Summa musicae artis* 8 (Seay, p. 77).

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<sup>5</sup>Et aliquotiens in mottetis vel in cantu  
mensurabili seu in cantu organico propter  
cantum ascendentem, in superacutis vocibus  
istud signum G acutum figuramus <sup>6</sup>et istud fit  
propter causam necessitatis et propter

<sup>5</sup>Sometimes in motets or in measured song or  
in instrumental music, because of their  
ascent, we draw the acute G clef for the  
superacute notes. <sup>6</sup>This is because of  
necessity and the lack of lines, <sup>7</sup>for in



defectum linearum, <sup>7</sup> quia in cantu plano vel	plainsong or ecclesiastical song we draw out
ecclesiastico tantum quatuor lineas	only four lines, since there are seven notes
protrahimus, quia sunt septem corde que	that are equivalent through equipollence;
equipollent per equipollentiam, <sup>8</sup> et in cantu	<sup>8</sup> while in measured song we use five lines,
mensurabili quinque, quia sunt novem corde	since there are nine notes that are equivalent
que equivalent per equipollentiam.	through equipollence.

---

5 et *pro* vel in *B* cantus mensurabilis *D* propter . . . figuramus *om. B* propterea in cantu  
 ascendente *pro* propter cantum ascendentem *W* ascenden[t corr. sup. c]em *D* istud  
 signum *om. D W*

6 et [[ist]] istud *D* fit causa necessitatis *W* fit *om. B* cantum *pro* causam *R*

7 lineae protrahimus *D* lineas protrahamus que sunt *W* que *pro* quia *B* sex cordarum  
 equivalet *pro* septem corde que equipollent *B* cordarum *D W* pollent *pro*  
 equipollent *W*

8 *om. B* mensurabilis *D* sunt *om. D W* cordarum *D W* que *om. D W* equipolleciam *D*

---

6–8. Cf. Rossetti *Libellus* 8.5 (Seay, p. 22): “Aliquotiens invenitur *G* acutum pro clavi propter defectum linearum, quia in cantu plano vel ecclesiastico tantummodo quatuor lineae vel rigae protrahuntur, in cantu mensurabili seu in cantu organico quinque, itaque quandocumque cantus ascendet ad *C*, *D* et *E* superacutos, multotiens *G* acutum figuramus, sed tamen raro invenitur.”

6. For a further discussion on the various number of lines used in a stave, see Anon. 4 *De mensuris et discantu* 3 (Reckow, p. 60). Elias Salomo, *Scientiae artis musicae* 28 (GS, 3:55), notes that ten lines are necessary to encompass the notes of the entire gamut, but that the notator should normally use a stave of up to five lines. *Corda* may be a reference to the notes produced on a stringed instrument, e.g., the ancient cithara, which has been described as possessing various numbers of strings: Hucbald *De harmonica institutione* (GS, 1:109, 110); *Scolica enchiridis* 2 (Schmid, p. 90). Regino of Prüm, *De harmonica institutione* 13 (LeRoux, p. 59), makes passing reference to the additions of various strings during the course of history.

7. For the meaning of *equipollentia* as the term is used in logic, see note to *De plana musica* 16.53. As the Anon. of St. Emmeram *De musica mensurata* 1.1 (Yudkin, p. 86) points out, this is an equivocal term. In the present context the terms *equipollere*, *equipollentia*, and *equivalere* may be referring to the representation of notes by the staff, or to the interaction of these notes (melodically in the case of plainsong, harmonically in the case of mensurable music).

---

<sup>9</sup>Et sic ponimus unam litteram et deductionem in linea et aliam in spatio dicendo sic: <sup>10</sup>Gamaut in linea, A re in spatio, B mi in linea, C fa ut in spatio, D sol re in linea, E la mi in spatio, <sup>11</sup>et sic de aliis gravibus, acutis et superacutis litteris ascendendo et descendendo; ascendendo de Gamaut in E la mi, descendendo de E la mi usque in Gamaut.

<sup>9</sup>So we place one letter and deduction on a line and another [letter] in a space, by the following description: <sup>10</sup>Gamma ut on a line, A re in a space, B mi on a line, C fa ut in a space, D sol re on a line, E la mi in a space, <sup>11</sup>and thus for the other grave, acute, and superacute letters in ascent and descent, ascending from Gamma ut up to E la mi, and descending from E la mi down to Gamma ut.

---

9 Ut si *pro* et sic W [[ed]] *ante* et deductionem D alia D W

10 Gamaut in linea R [[E la]] *post* E la mi in spatio D

11 ascendendo et descen; ascendendo de Gamma usque ad f la mi, descendendo in e la mi usque [ad sup. lin.] Gamma *pro* ascendendo et descendendo . . . usque in Gamaut D ascendendo de Gamaut . . . usque in Gamaut om. W usque in e la *pro* in e la mi B de e la usque B

---

<sup>12</sup>Si queratur quid sit deductio et unde dicatur, respondendum est sic: <sup>13</sup>deductio est totalis dictio, scilicet Gamaut, A re, B mi, C fa ut, D sol re, E la mi, et sic de aliis supervenientibus per totam sinistram manum. <sup>14</sup>Et dicitur ab hoc verbo: deduco, deducis quia unam et aliam subsequentem deducit propter signum quod in principio dictionis apponitur. <sup>15</sup>Omnia ista que scripta sunt superius apparent in exemplis precedentibus et cetera.

<sup>12</sup>If it is asked what a deduction is and how it is named, the reply should be: <sup>13</sup>a deduction is an aggregate expression, namely Gamma ut, A re, B mi, C fa ut, D sol re, E la mi, and likewise for the higher ones following through the entire gamut. <sup>14</sup>It is named from the word *deduco*, *deducis* [to lead] because it leads one note and another following because of the sign that is placed at the beginning of the expression. <sup>15</sup>All these which were written of above are

shown in the preceding examples.

- 
- 12 Sequitur quid sit deductio *ante* Si W q[uid m. sec.] D [[.....]] *post* deductio D dicitur W  
est om. D
- 13 ductio *pro* dictio R sic om. W supravenientibus B D W manum sinistram W  
ma[[.]]num D
- 14 deduco, -cis B quia de una ad aliam B deducitur B D
- 15 Omnia infrascripta superius B sunt scripta W sunt om. D in m. sec. D et cetera om.  
B W Deo Gratias. Amen *post* 4.15 B
- 

13. Emendation of *dictio* (given in D, B, and W) in place of *ductio* (given in R).

Prosdocimo, *Plana musica* 1.3, uses the term *dictio* to mean the combination of a letter with one or more syllables to designate a note of the gamut, and this use of *dictio* is adopted in the present translation. The definition of the term *deductio* in terms of *dictio* given in this treatise would then appear to be at variance with the usual meaning of *deductio*, which is "hexachord": e.g., Johannes de Grocheio *De musica* 85 (Rohloff, p. 126); *Quatuor principalia* 3.2, 3.3 (CS, 4:219); Anon. 2 *Tractatus de discantu* (Seay, p. 22); *Berkeley Ms* 1.1 (Ellsworth, pp. 38–40); Nicolaus Capuanus, *Compendium musicale* (De La Fage, p. 315); Bonaventura da Brescia *Venturina* 10.2 (Seay, p. 9); *Pe*, fol. 49r (Appendix A). R's reading of *ductio* (instead of *dictio*) is not entirely implausible, however, and may represent a corrupt reading; e.g., Tinctoris, *Terminorum Musicae Diffinitorium* (Parrish, p. 18), defines *deductio* in terms of *ductio* thus: "Deductio est vocum de uno loco ad alium per aliquam proprietatem ordinatam ductio." In *Introductio musice* 3.11 (musical examples), the term *deductio* clearly means "hexachord"; on the other hand, the use of the terms *deductio* and *dictio* elsewhere in *Introductio musice* (2.20, 4.9, 5.40) is consistent with the definition given here.

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5. <sup>1</sup>De mutationibus

5. <sup>1</sup>Concerning mutations

<sup>2</sup>Nota quod omnis mutatio in ut vel in

<sup>2</sup>Note that every mutation that ends

re vel in mi desinens talis dicitur ascendens.

on ut or re or mi is called ascending;

<sup>3</sup>Similiter omnis mutatio in fa vel in sol vel

<sup>3</sup>similarly every mutation that ends on fa or

in la desinens dicitur descendens.

sol or la is called descending.

---

R 611r; B 71v; D 70va; W 59v; CS, 1:160a.

- 1 om. R Sequitur de mutationibus de quibus dicendum est B Sequitur de mutacionibus de quibus dictum est D Sequitur de mutationibus de quibus [dictum est *in marg.*] W
- 2 Nota om. B ut [[I]] vel D vero *ante* dicitur B
- 3 so *pro* sol W talis vero *pro* desinens B talis *ante* dicitur D descendendo B

---

1. Cf. *Vc*, fol. 22rv and 41r (Appendix C). Rossetti, *Libellus* 9 (Seay, pp. 24–28), has borrowed heavily from this chapter.

2. Cf. *De plana musica* 15.14.

3. Cf. *De plana musica* 15.15.

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<sup>4</sup>Unde versus: “ut re mi scandunt, fa sol la quoque descendunt.” <sup>5</sup>Mutatio secundum Guidonem sapientissimum musice diffinitur sic: <sup>6</sup>mutatio est dimissio unius vocis propter aliam sub eodem signo, eadem voce et eodem sono. <sup>7</sup>Dicitur autem mutatio ab hoc verbo: muto, mutas quia unam proprietatem vel vocem sub eodem sono in aliam subsequentem mutamus.

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<sup>4</sup>Whence the verse: “Ut re mi ascend, fa sol la descend.” <sup>5</sup>According to Guido, the most wise [teacher] of music, mutation is defined thus: <sup>6</sup>mutation is the displacement of one syllable by another with the same sign, pitch, and sound. <sup>7</sup>Mutation is named from *muto*, *mutas* [to mutate], because we mutate one propriety or syllable into another under the same sound.

---

4 *om. B D W*

5 *autem post Mutatio B D W sapientis... R musice om. W*

6 *divisio B dimissio D divissio W eadem voce[[m]] et eciam sono D eadem vocem et etiam sono W et etiam sono B*

7 *au[t m. sec.]em D muto R muto, -tas W vel ante sub W eandem pro aliam R sequentem pro subsequentem W*

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4. For among many instances of the use of this verse, see *Quatuor principalia* 3.9 (CS, 4:223), Ugolino of Orvieto *Declaratio* 1.18.5 (Seay, p. 43), Bonaventura da Brescia *Venturina* 13.16 (Seay, p. 13).

5. Not found in Guido. *S*<sub>2</sub> and *Pe* attribute this definition to Boethius (not found).

6. Cf. *De plana musica* 15.3, also the note to 15.3 on the terms *dimissio* and *divisio*. A distinguishing feature of *Introductio musice*’s definition of *mutatio* is the stipulation that the displacement process be governed by the same *vox* [*sub eadem voce*], which is incorrect if the term *vox* as used here is translated as “syllable,” since mutation involves a change of syllable. I have therefore translated *eadem vox* as “the same pitch.” There is a remote

possibility that the given definition is a corrupt reading of that given in *Quatuor principalia* 3.9 (CS, 4:223: "mutatio . . . nihil aliud est quam dimissio unius vocis propter aliam sub uno signo et in eodem sono facta ratione proprietatis vel vocis."

---

<sup>8</sup> Et sciendum est quod quantumcumque	<sup>8</sup> It must be known that as far as it is
possumus operari cantum per has voces	possible for us to perform a song by means of
universales ad omnem musicam, scilicet ut,	these common syllables, namely ut, re, mi,
re, mi, fa, sol, la debemus mutationes evitare	fa, sol, la, we should avoid mutations by
eas precavendo. <sup>9</sup> Et solum dum venerit	being wary of them. <sup>9</sup> Only when it is
necessitas mutationem agendi tunc debet	necessary to effect a mutation ought it to be
fieri et non aliter quia causa necessitatis	made, and not otherwise, because mutation
inventata fuit mutatio.	was born of necessity.

---

8 est sciendum B W operare B operi W voces ut re mi fa sol la universales B scilicet . . . la om. B evitando et eas precavendo nisi quia taliter possint evitari vel precaveri pro evitare eas precavendo D vitare pro evitare R et vitando et eas precavendo nisi quia taliter possint evitari vel precaveri pro evitare eas precavendo W et eas precavere, non quia totaliter possint evita nec precaveri pro eas precavendo B

9 Sed pro Et solum B D W advenerit pro venerit B debe W fuit inventa W

=====

8–9. Cf. *Vv*, fol. 46v (Appendix C).

8. Restraint in the use of *mutatio* is also urged by *Berkeley Ms* 1.2 (Ellsworth, p. 50) and Prosdócimo, *Plana musica* 2.23. Johannes de Olomons *Palma choralis* 6 (Seay, pp. 17–18) explains that *mutatio* is made *ratione necessitatis* and *ratione commoditatis*. Like *falsa musica*, *mutatio* is to be made only when necessary (cf. A.3).

9. *S*<sub>2</sub> and *Pe* credit Boethius as saying that mutation was discovered out of necessity (not found in Boethius). Subsequent statements on *mutatio* in these sources are partly relatable to *Introductio musice* 5.37–44 and to *De plana musica* 15.10–12.

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<sup>10</sup> Et ad mutationem agendam necessarium est	<sup>10</sup> To make a mutation it is necessary that
quod sint due voces neque plures neque	

pauciores, unisonum representantes, id est, in unisono permanentes. <sup>11</sup>Et sic in Gamaut, A re, B mi non fiunt mutationes. <sup>12</sup>Ratio quia de una sola voce non potest fieri mutatio, ut supradictum est.

there be two syllables, no more and no less, representing one single sound, that is, remaining on one single sound. <sup>11</sup>Thus, mutations cannot occur on Gamma ut, A re, and B mi: <sup>12</sup>the reason is that a mutation cannot be made from one single syllable, as has been mentioned above.

- 
- 10 agendum *D* agendi *W* est necesse *pro* necessarium est *B* est necessarie *pro* necessarium est *D* est necessarium *W* sicut *pro* sint *B* s[[u]]int *D* voces non plures nec pauciores *W* unisono repetentes *pro* unisonum representantes *W* unisono *pro* unisonum *D R* id est *om. B* in *sup. lin. D* uno sono *pro* unisono *B D W*  
 11 in *om. D* Gamaut et in *A re* et in  $\natural$  *mi B* Gamaut, in *A re D* Gamaut, in *A re*, in  $\natural$  *mi W* fit mutatio *B W*  
 12 postet *pro* potest *D* superius *pro* supra *W*
- 

10. Cf. *De plana musica* 15.4.

For there to be no more and no less than two syllables representing the same pitch is a sufficient but not a necessary condition for a mutation. It would be more correct to say that there be *at least* two syllables representing the same pitch, as does *De plana musica* (15.4); see also note to *De plana musica* 15.4.

11. Cf. *De plana musica* 15.5.

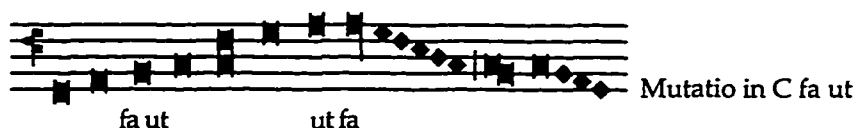
12. Both *Pe* and *S*<sub>2</sub> refer to the analogy that a single person is not able to create a population.

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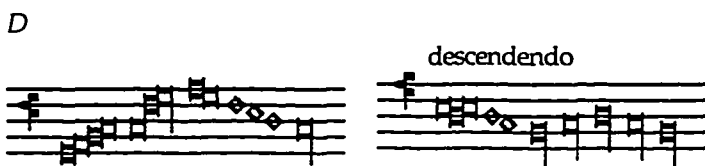
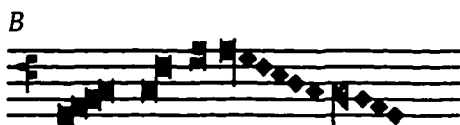
<sup>13</sup>In *C fa ut* sunt due mutationes, scilicet *fa ut*, *ut fa*. <sup>14</sup>*Fa ut* ascendendo de  $\natural$  quadro in naturam de primo saltu in *F* et de ultimo ad *a*; <sup>15</sup>*ut fa* descendendo de natura in  $\natural$  quadrum de primo gradu in *B mi* et de ultimo in *G*, sicut patet hic.

<sup>13</sup>On *C fa ut* there are two mutations, namely *fa ut* and *ut fa*: <sup>14</sup>*fa ut* in ascending from the square *b* propriety into the natural propriety in the first place for a leap to *F* and in the last place to *a*; <sup>15</sup>*ut fa* in descending from the natural propriety into

the square b propriety in the first place for a step to square B and in the last place to G, as is shown here.



- 13 fiunt *pro* sunt B scilicet fa [[et]] ut, ut fa R fa et ut *pro* fa ut, ut fa D W una ascendendo et alia descendendo *post* ut fa B
- 14 de ♮ quadro *om.* D W natura B D ad F fa ut *pro* in F B ad F *pro* in F D W E *pro* F R in a la mi re *pro* ad a B
- 15 de natura *om.* B quadrum . . . B mi *om.* B quadro D W de primo gradu in B mi *om.* W saltu *pro* gradu R ♮ quadro *pro* B mi D Gamaut *pro* G B infra *post* hic W



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13. Cf. *De plana musica* 15.10.

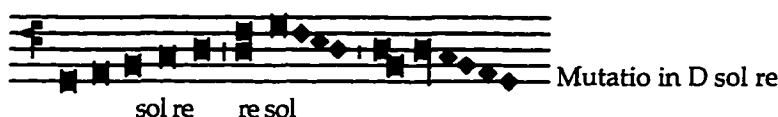
For similar systematic treatments of the available mutations in the gamut, see Jerome of Moravia *Tractatus de musica* 12 (Cserba, pp. 49–55); Aegidius of Zamora *Ars musica* 8 (Robert-Tissot, pp. 72–76); Marchetto *Lucidarium* 8.2 (Herlinger, pp. 280–99); Johannes de

Olomons *Palma choralis* 6 (Seay, pp. 17–29); Ugolino of Orvieto *Declaratio* 1.17 (Seay, pp. 40–43). Bonaventura da Brescia, *Venturina* 13.9–13 (Seay, pp. 12–13), lists the mutations up to acute a only. Lambertus *Tractatus de musica* (CS, 1:256–57); *Quatuor principalia* 3.9 (CS, 4:222–25); *Berkeley Ms* 1.8 (Ellsworth, pp. 92–94) present the same information in diagrammatic form.

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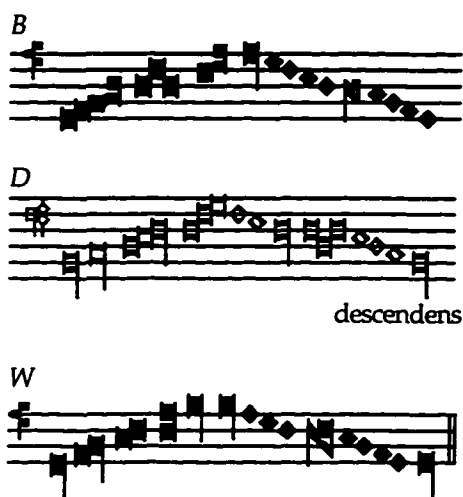
<sup>16</sup>In D sol re fiunt due mutationes,  
 scilicet sol re et re sol. <sup>17</sup>Sol re ascendendo de  
 ♮ quadro in naturam de primo saltu ad F de  
 secundo ad a acutum; <sup>18</sup>re sol descendendo de  
 natura in ♮ quadrum de primo saltu in B et de  
 ultimo in G, sicut patet hic.

<sup>16</sup>On D sol re two mutations are  
 made, namely sol re and re sol: <sup>17</sup>sol re in  
 ascending from the square b propriety into  
 the natural propriety in the first place for a  
 leap to F, in the second place to a acute; <sup>18</sup>re  
 sol in descending from the natural propriety  
 into the square b propriety in the first place  
 for a leap to B and in the last place to G, as  
 is shown here.



- 16 et om. B una ascendendo et alia descendendo post re sol B una ascendendo alia descendendo post re sol D una ascendedo [sic] et alia descendendo post re sol W  
 17 asscendendo W quadru[m m. sec.] D quadro om. R natura B D in F pro ad F B et de ultimo pro de secundo B D W in G pro ad a acutum B G pro a acutum D W G pro a R  
 18 re sol om. D quadro B D quadrum om. R gradu pro saltu B D W ad ♮ quadrum pro in B W ad G pro in G B W



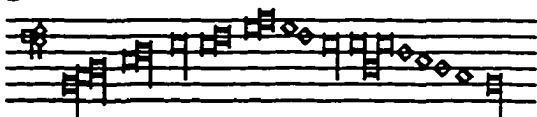
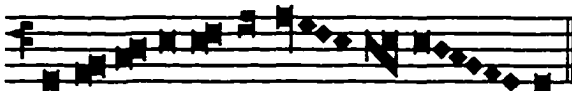


<sup>19</sup>In E la mi fiunt due mutationes,  
scilicet la mi et mi la. <sup>20</sup>La mi ascendendo de  
♭ quadro in naturam de primo gradu ad F et  
de ultimo in a; <sup>21</sup>mi la descendendo de  
natura in ♭ quadrum de primo saltu in B et de  
ultimo in G, ut patet.

<sup>19</sup>On E la mi two mutations are  
made, namely la mi and mi la: <sup>20</sup>la mi in  
ascending from the square b propriety into  
the natural propriety in the first place for a  
step to F and in the last place to a; <sup>21</sup>mi la in  
descending from the natural propriety into  
the square b propriety in the first place for a  
leap to B and in the last place to G, as is  
shown here.



- 19 sunt *pro* fiunt *W* et *om.* *B* une ascendendo et alia descendendo *post* mi la *B* una  
ascendendo et alia descendendo *post* mi la *D W*  
20 quadro *om.* *B* in natura de *B* natura *D* saltu *pro* gradu *B R W* psaltu *pro* gradu *D*  
in *pro* ad *B W*  
21 quadro *B D R* saltu *om.* *B* gradu *pro* saltu *D R W* in *B B* ♮ quadrum *pro* *B W* ad *G*  
*pro* in *G W* sicut patet hic *pro* ut patet *B D W*

*B**D**W*

<sup>22</sup>In *F* fa ut due fiunt mutationes,  
scilicet fa ut et ut fa. <sup>23</sup>Fa ut ascendendo de  
natura in *b* molle de primo saltu ad *b*, de  
ultimo ad *d*; <sup>24</sup>ut fa descendendo de *b* molli  
in naturam de primo gradu in *E* et de ultimo  
in *C*, sicut patet hic.

<sup>22</sup>On *F* fa ut two mutations are made,  
namely fa ut and ut fa: <sup>23</sup>fa ut in ascending  
from the natural propriety into the soft *b*  
propriety in the first place for a leap to *b*, in  
the last place to *d*; <sup>24</sup>ut fa in descending from  
the soft *b* propriety into the natural  
propriety in the first place for a step to *E*  
and in the last place to *C*, as is shown here.

Mutatio in *F* fa ut

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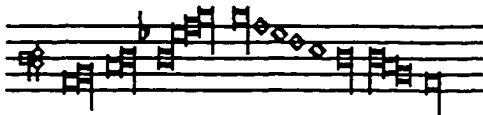


- 22 fiunt due *B D W* muta[c corr. sup. l]iones *D* et om. *B D* una ascendendo et alia  
 descendendo *post ut fa D W*  
 23 molli *D* mol *R* in *b pro* ad *b B* et ante de ultimo *B D* et ultimo *pro* de ultimo *W* in  
*d pro* ad *d B*  
 24 molle *B* mol *R* natura *B* ut *pro* sicut *B*

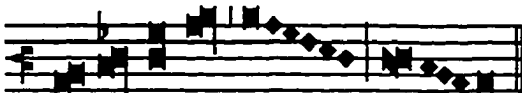
*B*



*D*



*W*

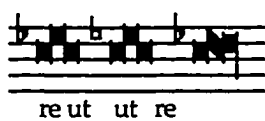


<sup>25</sup>In *G* sol re ut fiunt sex mutationes,  
 scilicet sol re, re sol, sol ut, ut sol, re ut, ut re.  
<sup>26</sup>Sol re ascendendo de natura in *b* molle de  
 primo saltu ad *b* de ultimo in *d*; <sup>27</sup>re sol  
 descendendo de *b* molli in naturam de primo  
 saltu in *E* et de ultimo in *C* grave; <sup>28</sup>sol ut, ut  
 sol: sol ut ascendendo de natura in  $\natural$  quadrum  
 de primo saltu in  $\natural$  et de ultimo in *e* acutum;  
<sup>29</sup>ut sol descendendo de  $\natural$  quadro in naturam  
 de primo gradu ad *F* et de ultimo in *C*; <sup>30</sup>re

<sup>25</sup>On *G* sol re ut six mutations are  
 made, namely sol re, re sol, sol ut, ut sol, re  
 ut, and ut re: <sup>26</sup>sol re in ascending from the  
 natural propriety into the soft *b* propriety in  
 the first place for a leap to *b*, in the last  
 place to *d*; <sup>27</sup>re sol in descending from the  
 soft *b* propriety into the natural propriety in  
 the first place for a leap to *E* and in the last  
 place to *C* grave; <sup>28</sup>sol ut and ut sol: sol ut in  
 ascending from the natural propriety into  
 the square *b* propriety in the first place for a

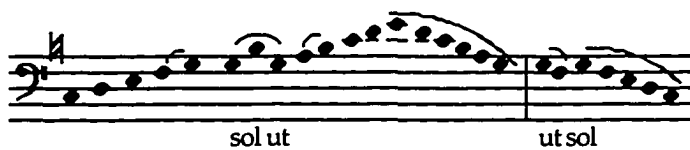
ut, ut re: iste due mutationes fiunt  
 ascendendo de b molli in  $\text{♩}$  quadrum, et de  $\text{♩}$   
 quadro in b molle, ut hic patet per exemplum.

leap to  $\text{♩}$  and in the last place to e acute; <sup>29</sup>ut  
 sol in descending from the square b propriety  
 into the natural propriety in the first place  
 for a step to F and for the last to C; <sup>30</sup>re ut  
 and ut re: these two mutations are made in  
 ascending from the soft b propriety into the  
 square b propriety and from the square b  
 propriety into the soft b propriety  
 [respectively], as shown here by the  
 example.



G sol re ut

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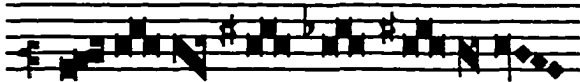




G sol re ut

- 25 ses *pro* sex B scilicet *om.* B sol re et re sol, sol ut et ut sol, re ut et ut re D  
 26 molli D molle *om.* B mol R in *pro* ad B W *et ante* de ultimo B et *ante* de ultimo D  
 W  
 27 molle B mol R natura B D gradu *pro* saltu D R W grave *om.* B D W gravi R  
 28 sol ut, ut sol *om.* W et *ante* ut sol D quadro B D W et *ante* de primo D b *pro* R c  
*pro* e acutum B g *pro* e acutum W acutum *om.* D acuto R  
 29 natura B D in *pro* ad B  
 30 et *ante* ut re D tantum *post* fiunt B ascendo B tantum *post* ascendendo W molle *pro*  
 molli B R quadro *pro* quadrum B et de quadro in b mol R et in B quadru  
*pro* quadro D patet hic B patet per exemplum *om.* D per exemplum *om.* B W

B



D

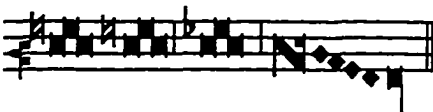


W



Prima et secunda mutatio

Tertia et quarta mutatio



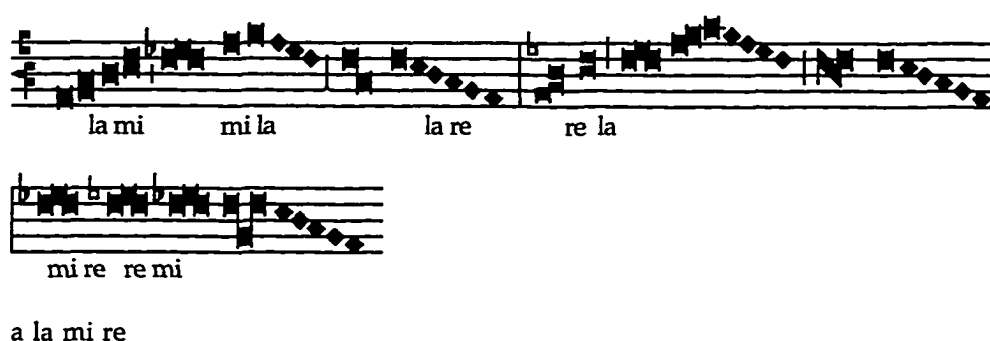
Quinta et sexta mutatio

31 In a la mi re fiunt sex mutationes,  
 scilicet la mi, mi la, la re, re la, mi re, re mi.

31 On a la mi re six mutations are

<sup>32</sup>La mi ascendendo de natura in b molle de primo gradu in b et de ultimo in d; <sup>33</sup>mi la descendendo de b molli in naturam de primo saltu in E et de ultimo in C; <sup>34</sup>la re ascendendo de natura in  $\natural$  quadrum de primo gradu in  $\natural$  et de ultimo in e; <sup>35</sup>re la descendendo de  $\natural$  quadro in naturam de primo saltu in F et de ultimo in C; <sup>36</sup>mi re, re mi: iste due mutationes fiunt ascendendo tantum de b molli in  $\natural$  quadrum et de  $\natural$  quadro in b molle, ut patet hic.

made, namely la mi, mi la, la re, re la, mi re, and re mi: <sup>32</sup>la mi in ascending from the natural propriety into the soft b propriety in the first place for a step to b and in the last place to d; <sup>33</sup>mi la in descending from the soft b propriety into the natural propriety in the first place for a leap to E and in the last place to C; <sup>34</sup>la re in ascending from the natural propriety into the square b propriety in the first place for a step to  $\natural$  and in the last place to e; <sup>35</sup>re la in descending from the square b propriety into the natural propriety in the first place for a leap to F and in the last place to C; <sup>36</sup>mi re and re mi: these two mutations are made in ascending only from the soft b propriety into the square b propriety and from the square b propriety into the soft b propriety [respectively], as is shown here.

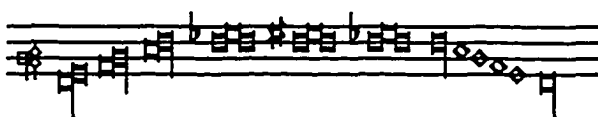
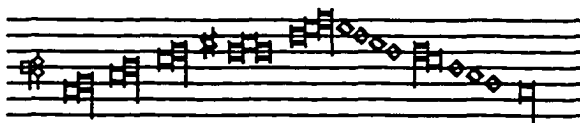
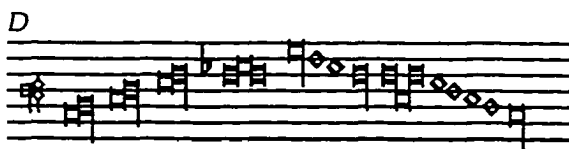
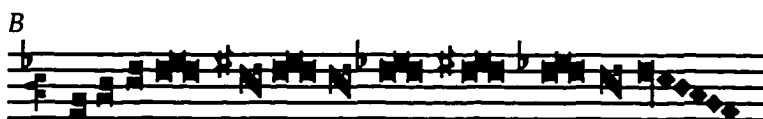




a la mi re

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- 31 In a la mi re R la mi et mi la, [[ascendendo]] la re et re la, mi re et re mi D la mi et mi la, la re et re la W
- 32 molli D et ante de primo W saltu pro gradu B D R W
- 33 molli om. B molle R W natura B D gradu pro saltu B D R W
- 34 om. R quadro B D W saltu pro gradu B D W
- 35 quadro om. B natura B D in primo pro de primo D uno pro primo B gradu pro saltu B D R W
- 36 molle pro molli B W mol pro molli R quadro pro quadrum B D quadrum pro quadro W sicut hic apparet pro ut patet hic W sicut apparet pro ut patet D sicut pro ut B





<sup>37</sup>In b fa ʘ mi non fit mutatio.

<sup>38</sup>Breviter ratio talis assignatur: quia sicut dictum est superius ubi diffinitur mutatio, non potest fieri nisi sub uno signo. <sup>39</sup>Et in b fa ʘ mi sunt duo signa, b molle vel rotundum et ʘ durum sive quadrum que inter se diversimode se habent, <sup>40</sup>ergo, in b fa ʘ mi non potest fieri mutatio, quia signum solum in principio dictionis appositum equalitatem vocum proprie deductionis in qua apponitur significat <sup>41</sup>et propter inequalitatem illarum duarum vocum de b fa ʘ mi acuto et superacuto appropriantur duo signa.

<sup>37</sup>On b fa ʘ mi no mutation is made.

<sup>38</sup>Briefly, the reason is given as follows: as mentioned above where it was defined, a mutation cannot be made unless it is under a single sign; <sup>39</sup>now in b fa ʘ mi there are two signs, soft or round b and hard or square b, both of which are different from each other.

<sup>40</sup>For this reason a mutation cannot be made on b fa ʘ mi because a single sign placed at the beginning of an expression signifies the equality of the syllables of the respective deduction in which the sign is placed.

<sup>41</sup>Because of the inequality of the two syllables of b fa ʘ mi, acute and superacute, two signs are placed.



- 37 In b fa- mi R  
 38 Talis breviter ratio assignatur *pro* Breviter ratio talis assignatur W taliter *pro* talis B  
 diffinitur D  
 39 scilicet *ante* b molle B W vel rotundum *om.* B quod est unum et idem *post* rotundum W  
 rotundum vel durum R quadrum sive durum W durum sive *om.* B quod *pro* que R  
 diversimode inter se *pro* inter se diversimode se W  
 40 deductionis *pro* dictionis B deductionis proprie B  
 41 [[aliarum]] *ante* illarum D illarum *om.* B de [[fa]] b fa B ibi *post* appropriantur B

37. Cf. *De plana musica* 15.6.

42Item alia ratio de eodem fieri  
 potest, quia sicut supradictum est mutatio  
 non potest fieri nisi sub eadem voce et sub  
 eodem sono. 43Ille due voces de b fa- mi non  
 sunt sub eadem voce nec sub eodem sono,  
 44ergo, in b fa- mi non potest fieri mutatio.

42Another reason for this can be  
 given. As has been mentioned above, a  
 mutation cannot be made unless it is under  
 the same pitch and the same sound. 43Those  
 two syllables of b fa- mi are not under the  
 same pitch nor the same sound. 44Thus on b  
 fa- mi a mutation cannot be made.

- 42 [[[]]]Item D voce[[m]] D et eodem B D W signo *pro* sono R  
 43 *om.* R sunt *om.* D  
 44 possunt D mutationes D

42. *Vox* translated as "pitch," cf. 5.6.

45In c sol fa ut sunt mutationes sex,  
 scilicet sol fa, fa sol, sol ut, ut sol, fa ut, ut fa.  
 46Sol fa, fa sol: iste due prime mutationes  
 fiunt descendendo tantum de b molli in-

45On c sol fa ut there are six  
 mutations, namely sol fa, fa sol, sol ut, ut sol,  
 fa ut, and ut fa; 46sol fa, and fa sol: these  
 first two mutations are made only in

quadrum et de ♭ quadro in b molle. <sup>47</sup>Et sciendum est quod sicut due mutationes ultime de G gravi et acuto et de a la mi re acuto et superacuto fiunt ascendendo tantum, <sup>48</sup>ita iste due prime mutationes, scilicet in c acuto et superacuto fiunt descendendo tantum; <sup>49</sup>sol ut, ut sol: sol ut ascendendo de b molli in naturam de primo saltu in e et de ultimo in aa superacutum, <sup>50</sup>ut sol descendendo de natura in b molle de primo gradu in b et de ultimo in F; <sup>51</sup>fa ut, ut fa: fa ut ascendendo de ♭ quadro in naturam de primo saltu in f et de ultimo in aa, <sup>52</sup>ut fa descendendo de natura in ♭ quadrum de primo gradu in ♭ acutum et de ultimo in G, sicut hic patet per exemplum.

descending from the soft b propriety into the square b propriety and from the square b propriety into the soft b propriety [respectively]. <sup>47</sup>It must be known that just as the last two mutations of G grave and acute and of a la mi re acute and superacute are made only in ascent, <sup>48</sup>so also these two first mutations on acute and superacute c are made only in descent. <sup>49</sup>Sol ut and ut sol: sol ut in ascending from the soft b propriety into the natural propriety in the first place for a leap to e and in the last place to superacute aa; <sup>50</sup>ut sol in descending from the natural propriety into the soft b propriety in the first place for a step to b and in the last place to F; <sup>51</sup>fa ut and ut fa: fa ut in ascending from the square b propriety into the natural propriety in the first place for a leap to f and in the last place to aa; <sup>52</sup>ut fa in descending from the natural propriety into the square b propriety in the first place for a step to acute ♭ and in the last place to G, as is shown here by the example.

c sol fa ut



c sol fa ut



- 45 In R fiunt sex mutationes *pro* sunt mutationes sex B D W sol fa, fa sol, . . . ut fa *om.* W  
 46 Sol fa et fa sol W ite *pro* iste B prime due D prime *om.* B mutationes prime W  
 molle *pro* molli B W quadro *pro* quadrum B D et *m. sec.* D econverso *post* et B b  
 quadro D quadrum *pro* quadro R quadro *om.* B [[vel]] ante b molle D  
 47 est sciendum B W est *om.* D sunt *pro* sicut D ultime mutationes B D W G sol re ut  
 gravi B grave D R W a ante acuto et de D R descendendo *pro* ascendendo B  
 tantum *om.* B D  
 48 *om.* W iste *om.* B prime due B de *pro* scilicet in B [i *m. sec.*] n D d acuto *pro*  
 superacuto R et de d acuto et superacuto *post* superacuto B  
 49 sol ut [et *sup. lin.*] ut sol D molle B W natura B D ad e *pro* in e W et *om.* B ad a  
*pro* in aa W a B D R superacutum *om.* B D W superacuto R  
 50 mol R ultimo in F R  
 51 quadro *om.* B R natura B D R a B D R W  
 52 descendendo de R quadro *pro* quadrum B D R W b *pro* acutum B quadro *pro* acutum D  
 R W ut patet hic inferius *pro* sicut . . . exemplum B sicut patet hic in exemplis D W

*B*

*D*

*W*

Prima et secunda mutatio

Tertia et quarta mutatio

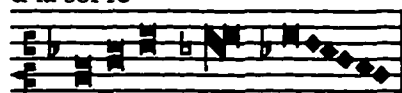
<sup>53</sup>In d la sol re fiunt sex mutationes,  
 scilicet la sol, sol la, la re, re la, sol re, re sol.  
<sup>54</sup>La sol, sol la: iste due mutationes fiunt  
 descendendo tantum de b molli in  $\text{L}$  quadrum  
 et de  $\text{L}$  quadro in b molle; <sup>55</sup>la re, re la: la re  
 ascendendo de b molli in naturam de primo  
 gradu in e et de ultimo in aa; <sup>56</sup>re la  
 descendendo de natura in b molle de primo  
 saltu in b molle et de ultimo in F; <sup>57</sup>sol re, re  
 sol: sol re ascendendo de  $\text{L}$  quadro in naturam

<sup>53</sup>On d la sol re six mutations are  
 made, namely la sol, sol la, la re, re la, sol  
 re, and re sol. <sup>54</sup>La sol and sol la: these two  
 mutations are made only in descending from  
 the soft b propriety into the square b  
 propriety and from the square b propriety  
 into the soft b propriety [respectively]; <sup>55</sup>la  
 re and re la: la re in ascending from the soft b  
 propriety into the natural propriety in the  
 first place for a step to e and in the last

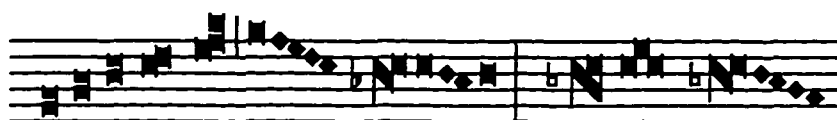
de primo saltu in f et de ultimo in aa, <sup>58</sup>re sol  
descendendo de natura in  $\text{b}$  quadrum de primo  
saltu in b et de ultimo in G, sicut patet hic in  
exemplis.

place to aa; <sup>56</sup>re la in descending from the  
natural propriety into the soft b propriety in  
the first place for a leap to soft b and in the  
last place to F; <sup>57</sup>sol re and re sol: sol re in  
ascending from the square b propriety into  
the natural propriety in the first place for a  
leap to f and in the last place to aa; <sup>58</sup>re sol  
in descending from the natural propriety into  
the square b propriety in the first place for a  
leap to b and in the last place to G, as is  
shown here in the examples.

d la sol re



la sol sol la



la re re la sol re re sol

d la sol re



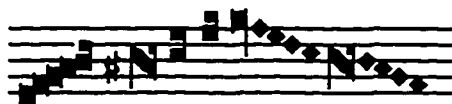
la sol sol la



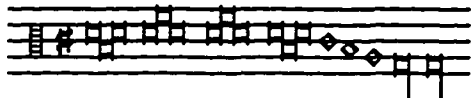
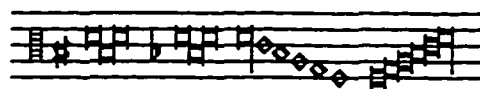
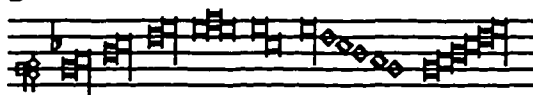
la re re la sol re re sol

- 53 d [[sol]] la sol re D scilicet la sol et sol la W  
 54 tantum descendendo B molle *pro* molli B W mol *pro* molli R quadro *pro* quadrum B D  
 R quadro *om.* R mol *pro* molle R  
 55 la re, [[mi]] re la D la re, re la *om.* W molli *om.* B mol R molle W natura B D  
 saltu *pro* gradu B R W [[de]] saltu *pro* gradu D d *pro* e R et ultimo W a B D R  
 W  
 56 *om.* R primo gradu in b et de ultimo in f de natura in b molle *pro* natura . . . in F B natura  
 in b molli [[s]] de primo gradu in b molli et D gradu *pro* saltu W  
 57 sol re, re sol *om.* D W quadro *om.* W natura B D et *om.* W a B D R W  
 58 quadro B D R W gradu *pro* saltu B D R W b molle *pro* b D b molle *pro* b W in  
 exemplis *om.* B D exemplo W

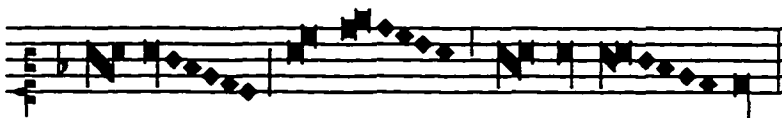
B



D



W



<sup>59</sup>In e la mi et in f fa ut acutis fiunt  
 mutationes sicut in gravibus simili modo et  
 etiam ratione. Et sic de aliis  
 supervenientibus in acutis et superacutis.

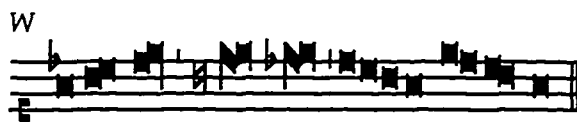
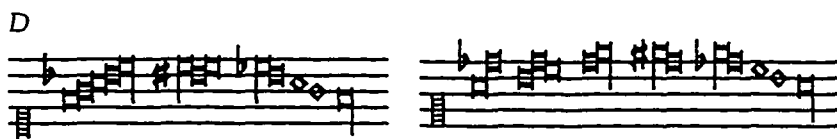
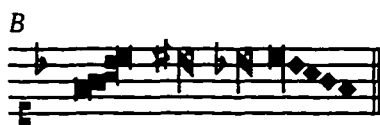
<sup>59</sup>On e la mi and on f fa ut acute  
 mutations are made in the same way and by  
 the same reckoning as they are made on E  
 and F grave; thus also for the notes  
 following in the acute and superacute.

<sup>60</sup>In cc sol fa fiunt due mutationes,  
 scilicet sol fa et fa sol, ambe descendentes de  
 b molli in  $\text{♩}$  quadrum et econverso, ut hic  
 patet in exemplis.

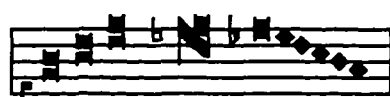
<sup>60</sup>On cc sol fa two mutations are  
 made, namely sol fa and fa sol, both  
 descending, from the soft b propriety into the  
 square b propriety and the converse  
 [respectively], as is shown here in the  
 examples.



59 et f fa ut B ut acuto fiunt B D W simili modo om. R supravenientibus B D W  
 60 c B D R W scilicet sol [[ut]] fa et fa sol D scilicet sol fa, fa sol B W molle B W mol R  
 quadro B D de  $\text{♩}$  quadro in b molle pro econverso B sicut patet hic pro ut . . .  
 exemplis B patet exemplis D in exemplis om. W



<sup>61</sup>In dd la sol fiunt due mutationes,  
scilicet la sol, sol la, ambe fiunt descendendo  
de b molli in  $\text{L}$  quadrum et de  $\text{L}$  quadro in b  
molle, ut patet in exemplo.



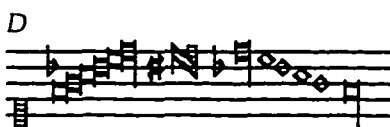
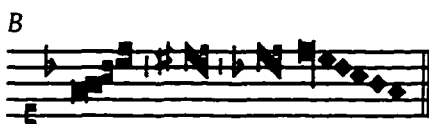
la sol solla  
<dd> la sol

-----



la sol sol la  
dd la sol

61 d B D R W scilicet sol la, la sol D W et ante ambe W descendeno.. R descendeno W  
molle *pro* molli B W mol *pro* molli R quadro *pro* quadrum B D quadrum *om.* R  
econverso *pro* de  $\text{L}$  quadro in b molle W molli *pro* molle D mol *pro* molle R sicut  
hic patet *pro* ut patet in exemplo D hic patet *pro* patet in exemplo W hic *pro* in  
exemplo B Nunc de mutationibus vocum artis manus significare cantus suffitiat nobis  
post 5.61 B



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<sup>61</sup>On dd la sol two mutations are  
made, namely la sol and sol la. Both are  
made in descending, from the soft b propriety  
into the square b propriety and from the  
square b propriety into the soft b propriety,  
as is shown here in the example.



<sup>62</sup>In ee la non potest fieri mutatio  
propter rationem superius alligatum.

<sup>62</sup>On ee la a mutation cannot be made  
for the reason given above.

---

62 om. B D W e R muta... R

---

6. <sup>1</sup>De novem speciebus

6. <sup>1</sup>Concerning the nine [interval] species

<sup>2</sup>Notandum generaliter quod novem  
sunt consonantie cantus seu novem modi <sup>3</sup>et  
quamvis pro veritate sint tredecim, ut  
patebit inferius, tamen quatuor componuntur  
et deducuntur ab istis novem modis. <sup>4</sup>Primus  
est tonus, secundus semitonus, tertius ditonus,  
quartus semiditonus, quintus diatessaron,  
sextus diapente, septimus exacordum,  
octavus eptacordum, nonus diapason.

<sup>2</sup>It must be noted generally that  
there are nine consonances or modes in song.  
<sup>3</sup>Although there are in fact thirteen  
[intervals], as will be shown below, four of  
these are composed and brought about from  
the first nine. <sup>4</sup>The first consonance is the  
whole tone, the second the semitone, the  
third the ditone, the fourth the semiditone,  
the fifth the diatessaron, the sixth the  
diapente, the seventh the hexachord, the  
eighth the heptachord, and the ninth the  
diapason.

---

R 612r.

1 om. R

3 [[D]] ante deducuntur R ab istos novem modos R

4 thetracordum pro eptacordum R

---

3. If the thirteen intervals referred to are those within the octave (as described in *Introductio musice* 7 and *De plana musica* 6) the four composite intervals are those that are compounded with the diapente, i.e., semitone plus diapente, whole tone plus diapente, semiditone plus diapente, and ditone plus diapente; cf. *Introductio musice* 7.10. In this case

the “first nine” intervals would be those from the unison to the diapente, together with the diapason, which is really also a composite interval. The nine intervals actually given (6.4), however, leave as the remaining four intervals the unison, tritone, semitone plus diapente, and ditone plus diapente within the octave, only the last two of which are composite.

For other descriptions of composite intervals, see Martianus Capella *De nuptiis philologiae et mercurii* 9 (Dick, pp. 506); Regino of Prüm *De harmonica institutione* 10 (LeRoux, pp. 51–52); Anon. 2 *Tractatus de musica* (CS, 2:484); Engelbert of Admont *De musica* 1.14, 2.3, 2.29 (GS, 2:296, 300, 318–19); Anon. 2 *Tractatus de discantu* (Seay, pp. 20–22); *Berkeley Ms 2.1* (Ellsworth, pp. 112–14); Bonaventura da Brescia *Venturina* 14.95–105 (Seay, pp. 23–24).

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<sup>5</sup>Nota quod tonus est ut re, re mi, fa sol, sol la et econverso. <sup>6</sup>Et dicitur a tono, tonas quia perfecte tonat seu totum intonat.

<sup>7</sup>Semitonus est fa mi et mi fa. <sup>8</sup>Et dicitur a semis quod est imperfectum, quia imperfectum tonum habet.

<sup>5</sup>Note that the whole tone is ut re, re mi, fa sol, sol la, and the converse. <sup>6</sup>It is named from *tono*, *tonas* [to sound] because it sounds perfectly or intones a whole [tone].

<sup>7</sup>The semitone is fa mi and mi fa. <sup>8</sup>It is named from *semis*, which is “incomplete,” because it has an imperfect tone.

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6 *tonas* R  
7 *et* R

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5. Cf. *Introductio musice* 7.14; *De plana musica* 16.6.

7. Cf. *Introductio musice* 7.20; *De plana musica* 16.69. The usual spelling is *semitonium*, as used in *De plana musica* and in *Introductio musice* 7. Interestingly, R (the only source for chapter 6) uses both forms.

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<sup>9</sup>Ditonus est ut mi et fa la et econverso. <sup>10</sup>Et dicitur a *dya* quod est duo et tonus, quia est species musice continens duos tonos.

<sup>9</sup>The ditone is ut mi and fa la, and the converse. <sup>10</sup>It is named from *dya*, which is “two,” and *tonus* [whole tone], because it is a species of music containing two whole tones.

<sup>11</sup>Semiditonus est re fa et mi sol et  
econverso. <sup>12</sup>Et dicitur a semis quod est  
imperfectum et ditonus quasi imperfectus  
ditonus.

<sup>13</sup>Diatessaron est ut fa, re sol et mi la  
et econverso. <sup>14</sup>Et dicitur a dya quod est de et  
tetras quod est quatuor, quasi de quatuor  
vocibus consonantia vel species.

<sup>15</sup>Diapente est ut sol et re la et  
econverso. <sup>16</sup>Et dicitur a dya quod est de et  
penthas quod est quinque, quasi de quinque  
vocibus consonantia.

<sup>17</sup>Exacordum est ut la et econverso.

<sup>18</sup>Eptacordum est de C gravi usque in  
b acutum.

<sup>11</sup>The semiditone is re fa and mi sol,  
and the converse. <sup>12</sup>It is named from *semis*,  
which is "incomplete," and *ditonus*, as it  
were an imperfect ditone.

<sup>13</sup>The diatessaron is ut fa, re sol, and  
mi la, and the converse. <sup>14</sup>It is named from  
*dya*, which is "from," and *tetras*, which is  
"four," as it were a consonance or species from  
four syllables.

<sup>15</sup>The diapente is ut sol and re la,  
and the converse. <sup>16</sup>It is named from *dya*,  
which is "from," and *penthas*, which is  
"five," as it were a consonance from five  
syllables.

<sup>17</sup>The hexachord is ut la and the  
converse.

<sup>18</sup>The heptachord is from grave C to  
acute b.

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11 S.miditonus R

12 [[dya quod est duo]] ante semis R

18 thetracordum pro eptacordum R grave R

=====

9. Cf. *Introductio musice* 7.25; *De plana musica* 16.16.

11. Cf. *Introductio musice* 7.29; *De plana musica* 16.10.

13. Cf. *Introductio musice* 7.34; *De plana musica* 16.20.

15. Cf. *Introductio musice* 7.44; *De plana musica* 16.29.

17. Cf. *Introductio musice* 7.52; *De plana musica* 16.37.

18. Cf. *Introductio musice* 7.55; *De plana musica* 16.41.

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<sup>19</sup>Diapason est de C gravi usque in c  
acutum. <sup>20</sup>Et dicitur a dya quod est de et  
pensa quod est octava seu totum quasi de octo  
vocibus species sive consonantia se continens  
sub se omnes alias species cantus <sup>21</sup>et sic  
venerit de littera in litteram et econverso.

---

<sup>19</sup>The diapason is from grave C to  
acute c. <sup>20</sup>It is named from *dya*, which is  
"from," and *pensa*, which is "eighth" or  
"all," as it were a species or consonance from  
eight syllables, containing all the other  
species; and thus it goes from [one] letter to  
[a similar] letter, and the converse.

<sup>19</sup> grave R

<sup>20</sup> octavum *vel* totum R

<sup>21</sup> venerit R

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19. Cf. *Introductio musice* 7.49; *De plana musica* 16.52.

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7. <sup>1</sup>De speciebus

<sup>2</sup>Item ad evidentiam ergo totius  
cantus tam mensurabilis quam  
immensurabilis aut plane, primo videndum  
est quot sunt eius species que peramabiles  
sunt et necessarie sunt ad demonstrationem et  
intelligentiam omnis cantus.

---

7. <sup>1</sup>Concerning the [interval] species

<sup>2</sup>For a clear explanation of all song,  
both measured and unmeasured or plain, it  
must first be seen how many of its species  
there are that are rudimentary and  
necessary for the description and  
understanding of all song.

R 612r; B 73r; D 73ra; W 63r; CS, 1:162b.

7. post 5.61 B

1 om. B D R W

2 Item om. B D W ergo om. B D W totius musicae pro totius cantus B D totius musicae pro totius cantus W quam non mesurabilis vel plane W inmensurabilis B D vel etiam pro aut B vel au[t fort. m. sec.]em pro aut D primo videndum est . . . omnis cantus om. R quia preambule pro que peramabiles B sunt [et m. sec.] necessarie D necessarie ad demonstrandum et B

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1. *Ars contrapunctus secundum Philippum de Vitriaco* Prologus-1 (Appendix D) parallels this chapter closely. See also *Introductio musicae* 6, *De plana musica* 6.7, 16; Rossetti *Libellus* 10.1-5, 10.8.

3Tredecim sunt species, nec plures nec pauciores, quia modo debito rationem numeri tenent. 4Et iste tredecim species loquuntur de numero relato ad sonos proportionatos, 5prout dicit Guido sapientissimus musicae: 6ita de illis qui sine arte canunt sicut de hominibus illiteratis dixerunt.

3There are thirteen species, no more and no less, because they maintain the computation of number in a way that is apt. 4These thirteen species speak of number related to proportionate sounds, 5just as Guido, wisest in music, speaks 6about those who sing without training as well as about illiterate persons who spoke [without training].

3 Sunt autem tredecim species cantus pro Tredecim sunt species B D W non plures neque pauciores W ratione D  
4 proportionato relate ad sonos pro relato ad sonos proportionatos B  
5 quia sicut dixit pro prout dicit B quod dixit pro prout dicit D quod sicut dixit pro prout dicit W Guido R  
6 est post ita B et post ita D est post ita W que W ratione pro arte W cantantur W canunt quam de illis hominibus lictatis qui unquam litteram didicerunt B sicut de illis hominibus litterati dixerunt D sicut de illis homines litterati dixerunt W

=====

4. Cf. *De plana musica* 2.2.

5-6. Not found in Guido; Seay, in his edition of Johannes de Olomons's *Palma choralis* (p. 3, n. 7), claims a parallel with the opening of Guido's *Regulae musicae rhythmicae*, but this is not apparent. For other instances of this comment on those who "sing without training," see *Quatuor principalia* 1.9 (CS, 4:203); Johannes de Olomons *Palma*

*choralis* 1, 7 (Seay, pp. 3, 29); Bonaventura da Brescia *Venturina* 14.2–4 (Seay, p. 13). Later in his treatise (*Venturina* 26.2–3 [Seay, p. 82]) Bonaventura da Brescia restates the same ideas, this time citing the authority of Boethius. See also note to *Introductio musice* 7.7.

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<sup>7</sup> Item dicit Guido quod isti vulgares cantores	<sup>7</sup> He also says that these untutored singers
bene in vanum laborant qui unum tonum a	who cannot tell the difference between a
semitonio discernere nesciunt, <sup>8</sup> tantum ipsos	whole tone and a semitone truly labor in
in cantando negligentes et perdentes in	vain. <sup>8</sup> It would have been possible for them
quantum et divinam et secularem scripturam	to be recognized fully and perfectly as
plene et perfecte cognosci potuisset.	negligent in their singing, just as much as
	those who neglect and forget both divine
	writings and secular ones.

---

- 7 Ut *pro* Item R dixit D W [[v]]vulgares D cantores vulgares W vim toni et semitonii  
*pro* unum tonum a semitonio B unitoni et semitoni *pro* unum tonum a semitonio D R  
 non cognoscunt *pro* nesciunt W
- 8 tempus *pro* ipsos B ipsos cantando W negligentes . . . potuisset *om.* W negligenter *pro*  
 negligentes et B negligentes perdentes D quantum divinam B secula[[i]]rem D  
 scripluram R potuisssem plene et perfecte cognoscere *pro* plene . . . potuisset B  
 potuissent D potuiss... R

=====

7. Cf. Guido *Aliae regulae* (GS, 2:34–35), but see also *Dialogus* 6 (GS, 1:256), which may be a more likely source. Both Johannes de Olomons, *Palma choralis* 7 (Seay, p. 29) and Bonaventura da Brescia, *Venturina* 14.2–106 (Seay, pp. 13–24), as does *Introductio musice*, follow these statements with a systematic description of the thirteen intervals. See also Bonaventura da Brescia, *Venturina* 26.2–3 (Seay, p. 82), who at this point in his text proceeds to a discussion of *musica ficta*. See also note to 7.5.

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<sup>9</sup> Prima tredecim specierum vocatur	<sup>9</sup> The first of the thirteen species is
unisonus, secunda tonus, tertia semitonium,	called the unison; the second, the whole
quarta ditonus, quinta semiditonus, sexta	tone; the third, the semitone; the fourth,
diatessaron, septima diapente, octava	the ditone; the fifth, the semiditone; the

tritonus, nona diapason.

sixth, the diatessaron; the seventh, the diapente; the eighth, the tritone; the ninth, the diapason;

---

9 Sequitur videre de spetiebus. Prima *W* unisonus, tonus, semitonium, dictonus, dyatessaron, dyapente, dyapason *B* vocantur *D* semitonus *R* *W* ditonu. *R* nona semito[[i]]nium cum dyapente [[scilicet tonus cum dyapente]] dyapason *D* nona semitonus cum dyapente diapason *R* nona, semitritonium cum dyapente, diapason *W*

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9. Cf. *De plana musica* 6.7.

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<sup>10</sup>Alie quatuor sunt composite, scilicet tonus cum dyapente, semitonium cum dyapente, dictonus cum dyapente, semiditonus cum dyapente, <sup>11</sup>et sicut additio et compositio fit speciei dyapente, ita additio et compositio fit speciei diapason.

<sup>10</sup>the other four are composite, namely the whole tone plus diapente, the semitone plus diapente, the ditone plus diapente, and the semiditone plus diapente. <sup>11</sup>Just as addition and compounding occur with the diapente species, so similarly they occur with the diapason.

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10 tres *pro* quatuor *W* tritonus *pro* tonus *W* semiditonus cum dyapente, dictonus cum dyapente *pro* ditonus cum dyapente, semiditonus cum dyapente *B* semitonium cum dyapente *om. D R W*

11 et sicut . . . dyapente *om. B* et sic *pro* et sicut *D R W* conposicio fit speciei dyapente *D* dyapente . . . speciei *om. R* ita adicto *B* conposicio fit speciei diapason *D*

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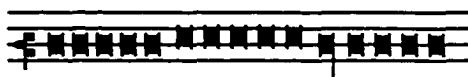
10. Cf. 6.3. In the present context the semitone plus diapente ought to be included among the so-called composite intervals. *B*, *L*, *S*<sub>1</sub>, and *S*<sub>2</sub> include the semitone plus diapente; *D* says there are four composite intervals but names only the same three that *R* does. Like *R*, *W* also names three composite intervals.

11. *Saut du même au même* in *R* on *speciei*.

For similar comments on the composite nature of both the diapason and diapente, see Anon. 2 *Tractatus de discantu* (Seay, p. 22), Johannes de Olomons *Palma choralis* 7 (Seay, pp. 29–30).

<sup>12</sup>Unisonus est quandocumque plures  
note vel neume in eadem linea vel in eodem  
spatio collocantur. <sup>13</sup>Dicitur autem unisonus  
ab unus, una, unum et sonus quasi unus equalis  
sonus sine alia variatione vocis, ut hic.

<sup>12</sup>The unison occurs whenever several  
notes or neumes are gathered on the same  
line or in the same space. <sup>13</sup>The unison is  
named from *unus, una, unum* [one] and *sonus*  
[sound] as it were one equal sound without  
any variation of pitch, as shown here.

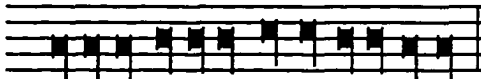


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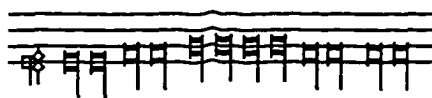


- 12 Quid sit unisonus *ante* Unisonus *W* quando *pro* quandocumque *B* plure *W* voces seu  
*ante* note *W* neupme *B* in eodem *om.* *W* collocatur *B*
- 13 Et dicitur *pro* Dicitur autem *B D W* unus [[ana]] una *D* ratione vocis *pro* et sonus . . .  
vocis *W* quia *pro* quasi *B* ulla *pro* alia *B D* sicut patet hic in exemplis *pro* ut hic  
*B* sicut hic patet *pro* ut hic *D* sicut patet in exemplo infra scripto *pro* ut hic *W*

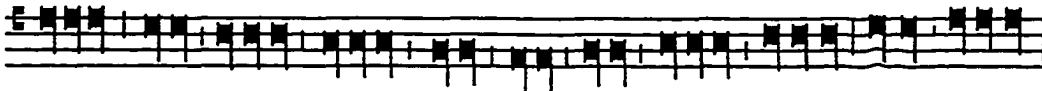
*B*



*D*



*W*



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12. Cf. *De plana musica* 16.4.

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<sup>14</sup>Tonus secundum Guidonem

diffinitur sic: tonus est spatii magnitudo  
plenum et perfectum sonum emittens.

<sup>15</sup>Secundum Boetium diffinitur sic: tonus est  
coherencia duarum vocum plenam et  
integram elevationem reddens sine  
intervallo aliquo.

<sup>14</sup>The whole tone, according to

Guido, is defined thus: the whole tone is the  
size of space emitting a full and perfect  
sound. <sup>15</sup>According to Boethius it is defined  
thus: the whole tone is the combination of  
two syllables giving a full and integral  
elevation without any other [intervening]  
interval.

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14 legitima *ante spatii B*

15 vel aliter *ante secundum B* reddens corr. *ab marg. B* aliquo intervallo *B D* alico  
intervallo *W*

=====  
14. Cf. *Introductio musice* 6.5; *De plana musica* 16.6. Not found in this form in Guido,  
but see Guido *Micrologus* 4.2–5 (Smits van Waesberghe, p. 103).

15. Not found in Boethius; but see Boethius *Musica* 3.6 (Friedlein, p. 277) for his  
definition of the whole tone.

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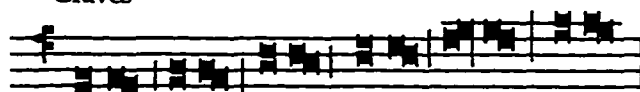
<sup>16</sup>Et dicitur tonus a tonando vel a sonando,  
quia plenarie tonat vel sonat <sup>17</sup>vel dicitur a  
tono seu a sono, quia integre sonat seu tonat  
vel integrum tonum facit seu sonum in animo  
audientis. <sup>18</sup>Et figuratur quatuor modis  
tantum, scilicet ut re, re mi, fa sol, sol la,  
ascendendo et descendendo. <sup>19</sup>Et invenitur  
inter G et A et inter A et B et inter C et D et

<sup>16</sup>The whole tone is named from *tonandum* [a  
toning] or *sonandum* [a sounding] because it  
tones or sounds fully. <sup>17</sup>Or it is named from  
*tonus* [tone] or *sonus* [sound] because it sounds  
or tones integrally, and creates an integral  
tone or sound in the mind of the hearer. <sup>18</sup>It  
is notated in only four ways, namely ut re, re  
mi, fa sol, and sol la, in ascending and in

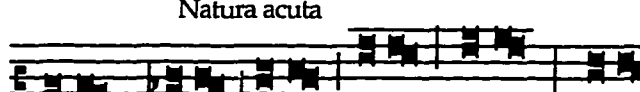
inter D et E et inter F et G, gravibus, acutis et  
superacutis litteris, sicut patet hic per  
exemplum.

descending. <sup>19</sup>It is found between G and A,  
between A and B, between C and D, between  
D and E, and between F and G, on the grave,  
acute, and superacute letters, as shown here  
by the example.

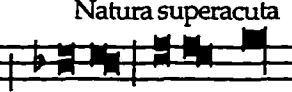
Graves



Natura acuta



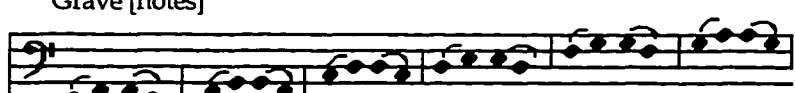
Natura superacuta



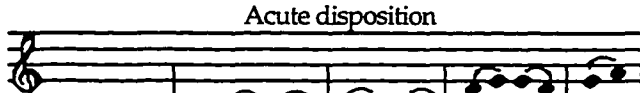
Tonus

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Grave [notes]



Acute disposition



Superacute disposition

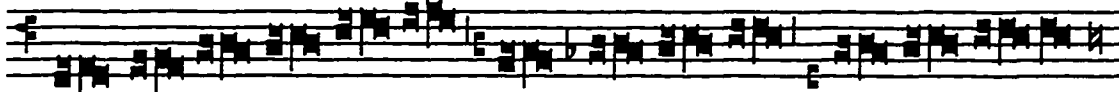


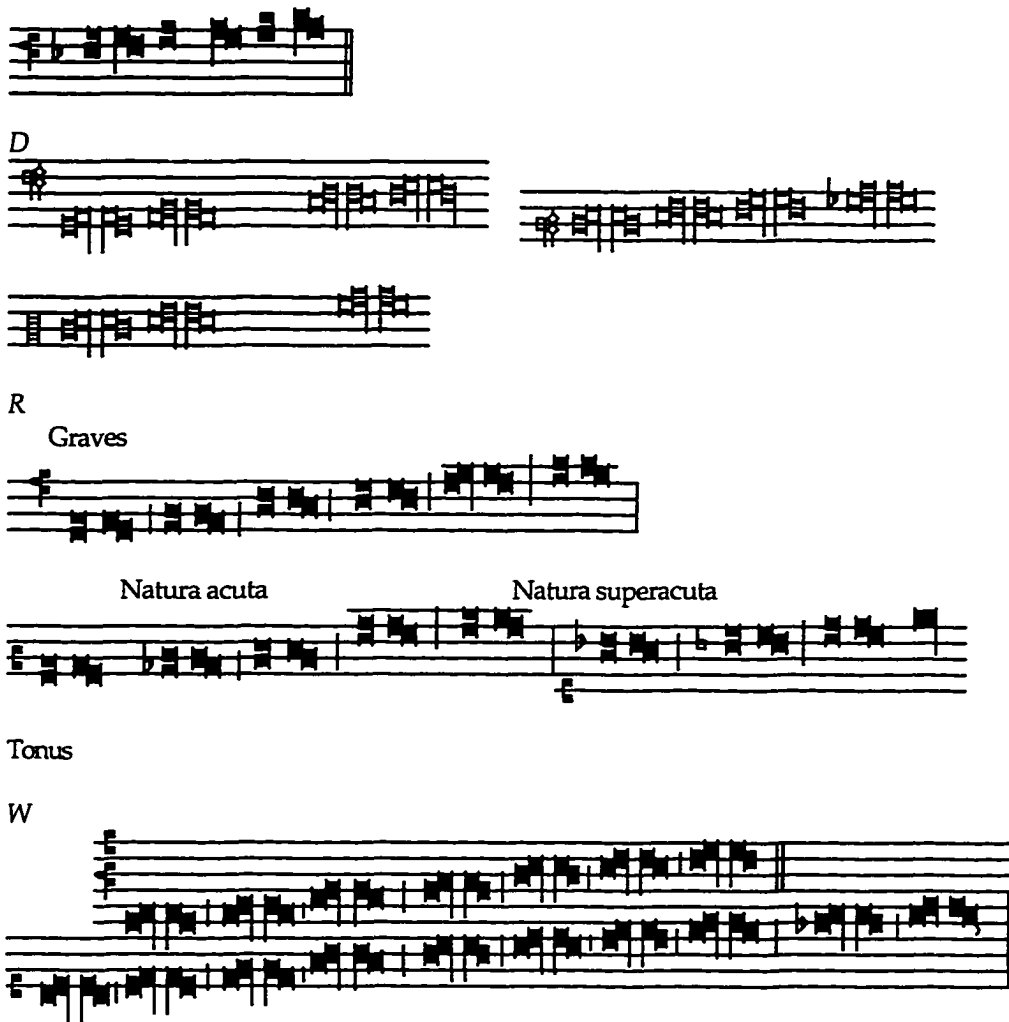
Whole tone

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- 17 tono seu sono B tono vel a W sonat seu om. B D W sonum pro tonum B R facit vel  
sonum W tonum pro sonum B
- 18 signatur pro figuratur D tantum om. B W ut re mi fa sol la pro ut . . . la B mi pro re mi  
D
- 19 Invenitur pro Et invenitur B C et D . . . inter F om. B b ante et G B hic patet D per  
exemplum om. B D W semitonus est in marg. W

B

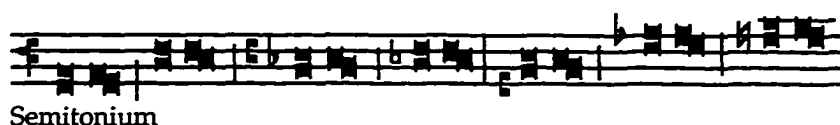




<sup>20</sup>Semitonium est coniunctio duarum  
vocum semiplenam elevationem reddens  
atque depositionem. <sup>21</sup>Et dicitur semitonium  
non a semis quod est dimidium sed a semis  
quod est imperfectum, <sup>22</sup>unde ait Boetius  
quod due voces non plenum sonum facientes.  
<sup>23</sup>Figuratur uno modo tantum, scilicet mi fa  
ascendendo et descendendo. <sup>24</sup>Et invenitur

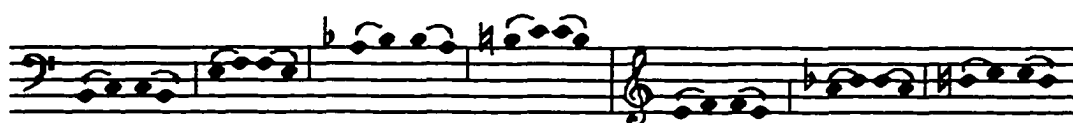
<sup>20</sup>The semitone is the conjunction of  
two syllables giving an imperfect elevation  
and deposition. <sup>21</sup>The semitone is named not  
from *semis* which is "half," but from *semis*  
which is "incomplete," <sup>22</sup>as Boethius said of  
the two syllables not making a full sound.  
<sup>23</sup>It is notated in only one way, that is mi fa  
in ascending and in descending. <sup>24</sup>It is found

inter B et C et inter E et F et inter a et b,      between B and C, between E and F, and  
 gravibus, acutis et superacutis litteris, sicut      between a and b, on the grave, acute, and  
 patet hic.      superacute letters, as shown here.



Semitonium

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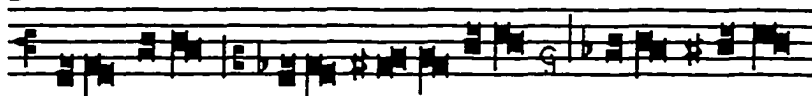


Semitone

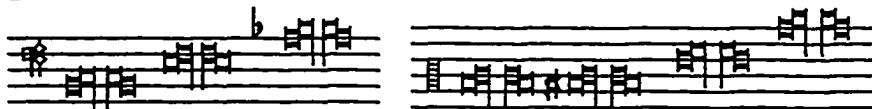
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- 20 Semitonum B R    emitonium D    Semitonus W    sine aliquo intervallo *post* redens B  
 adque deponicionem D  
 21 dicitur *om.* W    semitonum R    imperfectum D  
 22 ut dixit *pro* unde ait B    quia *pro* quod B D    semitonum sunt *post* quod W  
 23 Et *ante* Figuratur B W    Figurantur D R    ascendendo et descendendo, scilicet mi fa et fa  
 mi *pro* scilicet . . . descendendo W    scilicet mi fa *om.* B    scilicet *om.* D  
 24 ♮ *pro* B B    E *pro* C B    C *pro* E R    in exemplo sequenti *pro* hic W

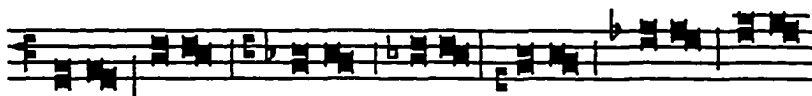
B



D



R



W



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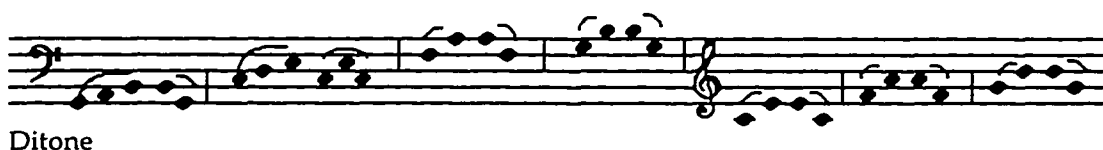
20. Cf. *Introductio musice* 6.7; *De plana musica* 16.69.

22. Not found in this form in Boethius, but see Boethius *Musica* 1.16, 19 (Friedlein, pp. 203, 205) for his discussions on the semitone. An emendation of *tonum* in place of *sonum* is thus suggested.

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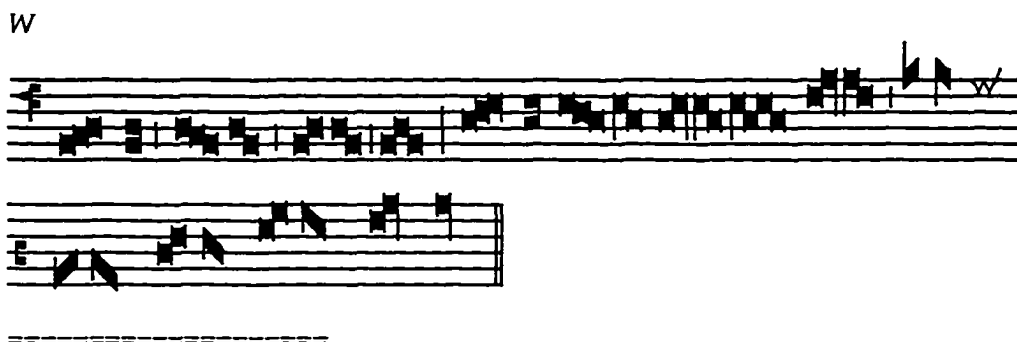
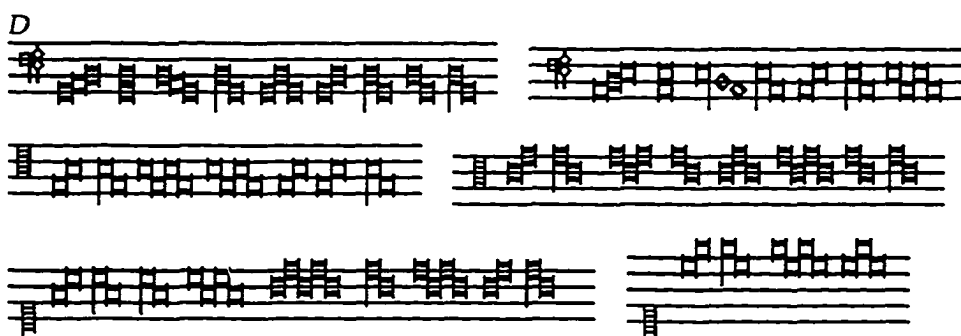
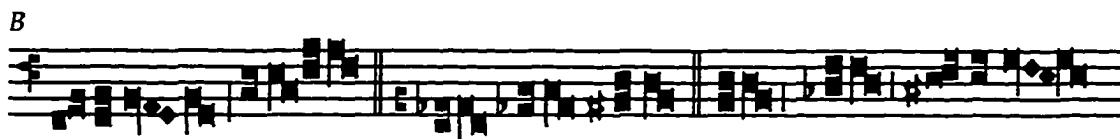
<sup>25</sup>Ditonus est coniunctio trium vocum  
et dispositio duorum tonorum sine aliquo  
semitonio. <sup>26</sup>Et dicitur a dya quod est duo et  
tonus quasi duo toni et integri. <sup>27</sup>Et figuratur  
duobus modis, scilicet ut mi et fa la,  
ascendendo et descendendo, operabiliter et  
probabiliter. <sup>28</sup>Et invenitur inter G et B et  
inter C et E et inter F et a, gravibus, acutis et  
superacutis, sicut hic patet in exemplo.

<sup>25</sup>The ditone is the conjunction of  
three syllables and the disposition of two  
whole tones without any semitone. <sup>26</sup>It is  
named from *dya*, which is "two," and *tonus*  
[tone], as it were having two integral tones.  
<sup>27</sup>It is notated in two ways, namely ut mi and  
fa la in ascending and in descending, by step  
and by leap. <sup>28</sup>It is found between G and B,  
between C and E, and between F and a, on the  
grave, acute, and superacute [letters], as  
shown here in the example.



25 post 7.33 B    alico W    semitono R

- 26 ditonus *pro* dicitur *D* dictonus *post* dicitur *B* ditonus *post* dicitur *W* est de et tonus *B*  
*W* est de [et *sup. lin.*] tonus *D* quia *pro* quasi *B* toni integri *B W*
- 27 figurantur *R* modis, ut etiam semidictonus scilicet *B W* modis, ut etiam ditonus scilicet  
*D* ut *mi, fa la B W*
- 28 *G* et [[*b*]]  $\perp$  *D* et inter  $\perp$  et *D* *post* *G* et *B B* *F* *pro* *E R* litteris *post* superacutis *B W* ut  
sicut patet hic *pro* sicut . . . exemplo *B* sic patet hic per exemplis *pro* sicut . . .  
exemplo *D* ut hic infra patet *pro* sicut . . . exemplo *W*



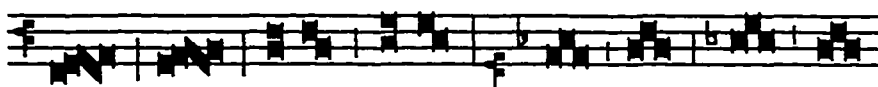
25. Cf. *Introductio musice* 6.9; *De plana musica* 16.16.

27. For a definition of the term *probatio* see note to *De plana musica* 16.66. Johannes de Olomons, *Palma choralis* 7 (Seay, p. 37), defines the term *operatio* as follows: "Operatio fit quando capitur ascensus vel descensus de una distantia ad aliam seu ab uno limite ad alium"; for a similar definition see *Fl*, fol. 113r (Appendix C). The adverbial forms *operabiliter* and *probabiliter* are here accordingly translated as "by leap" and "by step," respectively.

The adjective *levissima* is translated as "mildest," i.e., the "most consonant" of all the intervals.

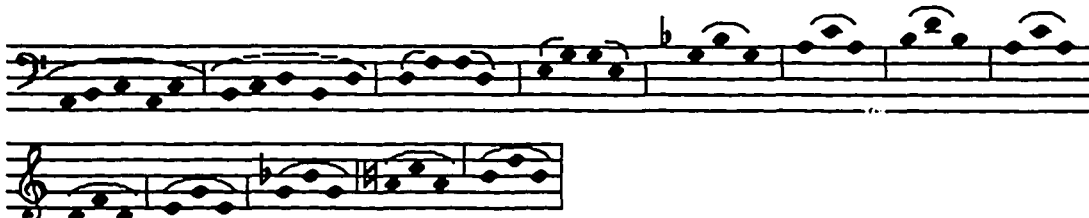
<sup>29</sup>Semiditonus est coniunctio trium vocum et dispositio toni cum semitonio <sup>30</sup>et sic in principio vel in fine semitonium cum tono apponitur. <sup>31</sup>Et ideo duobus modis figuratur, scilicet re fa et mi sol in ascendendo et descendendo, seriatim et prolatim, probabiliter et operabiliter. <sup>32</sup>Et dicitur semiditonus non a semis quod est dimidium, sed a semis quod est imperfectum, quasi ditonus imperfectus. <sup>33</sup>Et invenitur inter A et C et inter B et D et inter D et F et inter E et G et inter G et b molle, gravibus, acutis et superacutis litteris, sicut patet hic in exemplis.

<sup>29</sup>The semiditone is the conjunction of three syllables and the disposition of a whole tone plus a semitone. The semitone is placed next to the whole tone either at the beginning or at the end. <sup>31</sup>For this reason the semiditone is notated in two ways, namely re fa and mi sol in ascending and in descending, conjunctly and disjunctly, by step and by skip. <sup>32</sup>It is named not from *semis* which is "half," but from *semis* which is "incomplete," as it were an incomplete ditone. <sup>33</sup>It is found between A and C, between B and D, between D and F, between E and G, and between G and b, on the grave, acute, and superacute letters, as shown here in the examples.



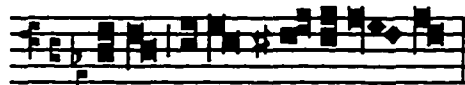
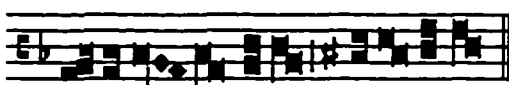
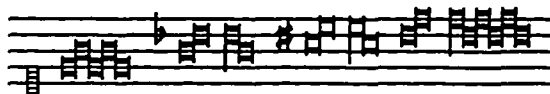
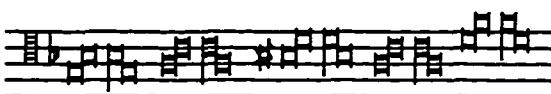
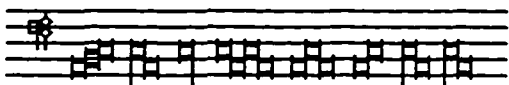
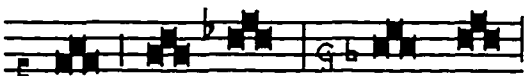
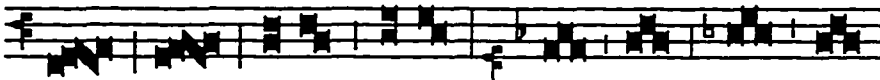
Semiditonus

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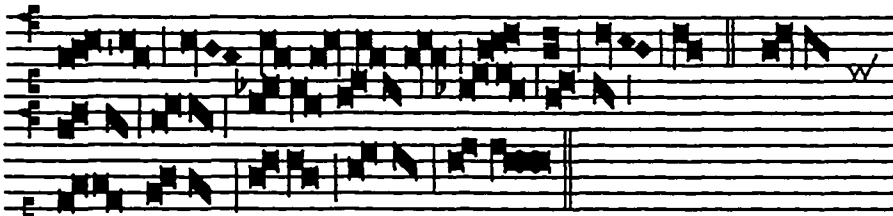


## Semiditone

- 29 *post 7.24 B unius ante toni W semitono R*  
 30 *sic om. W primo pro principio B semitonium D*  
 31 *re fa, mi sol B D W in om. W ascendendo vel descendendo B D W probabliter D*  
     *probabiliter vel operabiliter B*  
 32 *semitonus pro semiditonus R set D imperfectum D quia pro quasi B dictonus quod est*  
     *imperfectus W imperfectus D*  
 33 *Invenitur pro Et invenitur B inter A et C, inter  $\text{♮}$  et D, inter D et F W F pro E et G R et*  
     *[[b]] inter G D et G pro et inter G R molle om. B h[i corr. sup. u]c D in exemplis*  
     *om. B pe[[r exem]]plis et cetra pro in exemplis D infra pro in exemplis W*

*B**D**R*

Semiditonus

*W*

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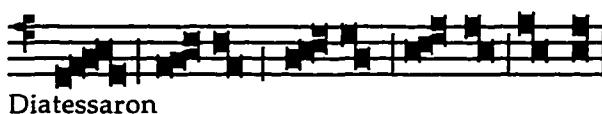
29. Cf. *Introductio musice* 6.11; *De plana musica* 16.10.

30. I.e., the semitone is either below the whole tone or above it.

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<sup>34</sup>Diatessaron est coniunctio quatuor  
vocum et dispositio duorum tonorum cum  
adiunctione unius semitonii <sup>35</sup>et sic in  
principio vel in medio vel in fine. <sup>36</sup>Et ideo  
diatessaron tribus modis figuratur, scilicet ut  
fa, re sol et mi la, ascendendo vel  
descendendo, probabiliter et operabiliter.  
<sup>37</sup>Et dicitur a dya quod est de et tesseron quod  
est quatuor, quasi species de quatuor vocibus  
constans. <sup>38</sup>Et invenitur inter G et C et inter  
A et D et inter B et E et inter C et F et inter D  
et G et inter F et b, gravibus, acutis et  
superacutis, ut patet in exemplo sequenti.

<sup>34</sup>The diatessaron is the conjunction of  
four syllables and the disposition of two  
whole tones with the addition of one  
semitone, <sup>35</sup>at the beginning, middle, or end.  
<sup>36</sup>For this reason the diatessaron is notated  
in three ways, namely ut fa, re sol, and mi la  
in ascending or in descending, by step and by  
skip. <sup>37</sup>It is named from *dya*, which is  
“from,” and *tesseron*, which is “four,” as it  
were a species consisting of four syllables.  
<sup>38</sup>It is found between G and C, between A and  
D, between B and E, between C and F,  
between D and G, and between F and b, on the  
grave, acute, and superacute letters, as is  
shown here in the following example.



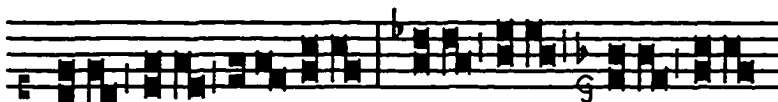
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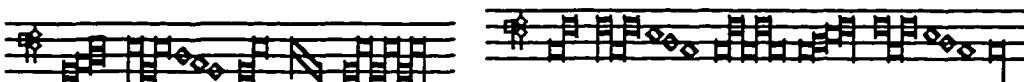
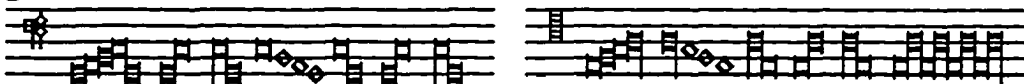

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- 34 *post* 7.28 B Dyate[[s]]xeron D disposito W tonorum *om.* B tenorum *pro* tonorum R  
adictione B adiccione D addictione W semitoni D R W  
35 sicut *pro* sic D R fit *pro* sic W primo *pro* principio B D  
36 sic *pro* ideo B vicibus *pro* modis D R re sol, mi la B D W ascendendo *pro* descendendo  
B probabiliter vel operabiliter D W  
37 d *pro* de R terra *pro* tesseron B quia *pro* quasi B species *om.* W  
38 G et E *pro* G et C B in- et C *pro* inter B et E B E et F *pro* C et F B et inter E et A *post* D  
et G B litteris *post* superacutis B D W ut sicut patet *pro* ut . . . sequenti B sicut  
hic patet *pro* ut . . . sequenti D ut hic patet *pro* ut . . . sequenti W

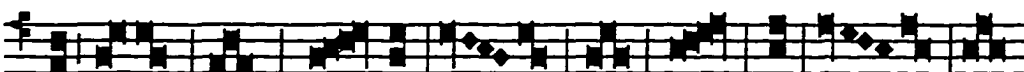
B



D



W



=====

34. Cf. *Introductio musice* 6.13; *De plana musica* 16.20.

35. I.e., the interval can be any of the following combinations: semitone - whole tone - whole tone, whole tone - semitone - whole tone, whole tone - whole tone - semitone.

<sup>39</sup>Tritonus est coniunctio quatuor

vocum et dispositio trium tonorum sine aliquo  
semitonio. <sup>40</sup>Et dicitur a tris quod est tres et  
tonus, quasi tribus tonis constans. <sup>41</sup>Et

<sup>39</sup>The tritone is the conjunction of

four syllables and the disposition of three  
whole tones without any semitone. <sup>40</sup>It is  
named from *tris*, which is "three," and *tonus*

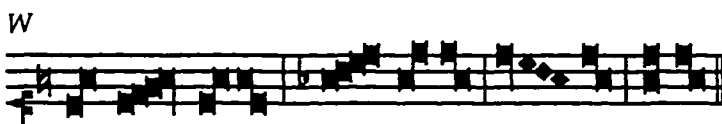
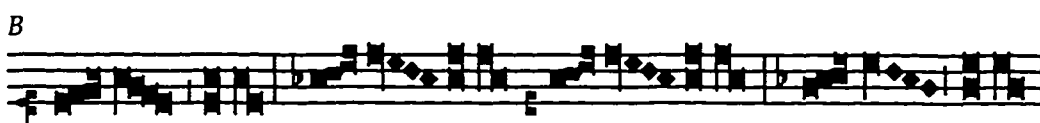
invenitur inter F et  $\flat$  et inter b et e, gravibus,  
acutis et superacutis.

[whole tone], as it were consisting of three  
whole tones. <sup>41</sup>It is found between F and  $\flat$   
and between b and e on the grave, acute, and  
superacute [letters].

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39 alico W

40 [a tris *ab marg.*] [[artis]] quot est D tri pro tris B quia pro quasi B de ante tribus B W  
41 b pro  $\flat$  R W c pro e B litteris, sicut patet hic post acutis B [[litteris]] post acutis D  
et superacutis om. B lictis, sicut patet hic post superacutis D litteris, ut hic  
patet post superacutis W




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39–41. Cf. F, fol. 67v (Appendix C).

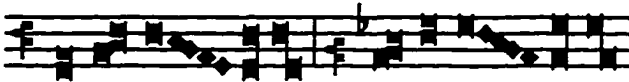
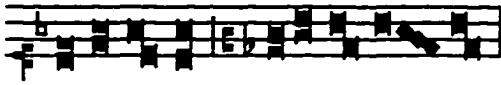
39. Cf. *De plana musica* 16.24, 16.65, 16.67.

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<sup>42</sup>Item tritonus aliter potest figurari,  
scilicet per quinque voces pro tono duo  
semitonia computando et tunc quinque voces  
quatuor equipollent. <sup>43</sup>Et invenitur inter B et  
F et inter E et b, gravibus, acutis et  
superacutis litteris, ut hic patet.

<sup>42</sup>The tritone can also be notated in  
another way, namely by five syllables,  
reckoning two semitones in place of one  
whole tone, and so five syllables are  
equivalent to four. <sup>43</sup>This arrangement of  
the tritone is found between B and F and

between E and b on the grave, acute, and  
superacute letters, as shown here.



Tritonus

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Tritone

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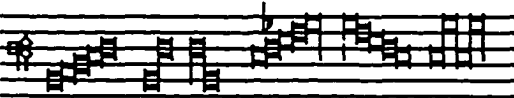
42 et *post* duo *D* semitono *R* computando *D*

43 et *post* invenitur *D* sicut patet hic *pro* ut hic patet *B* sicut patet hic per exemplis *pro* ut  
hic patet *D*

*B*



*D*



*W*



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42. Cf. *De plana musica* 16.63, 16.67.

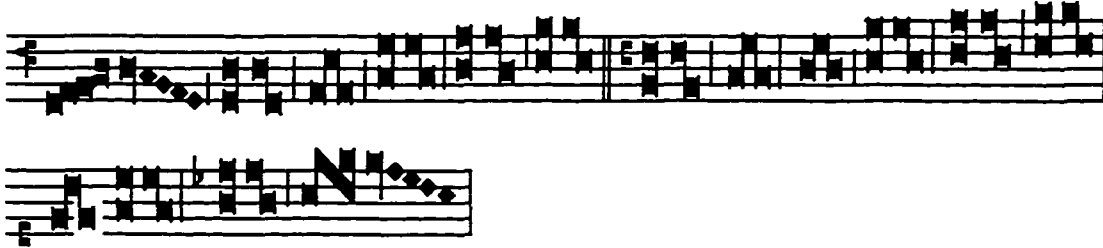
Diapente

Diapente

46 mi mi, fa fa, probabiliter vel operabiliter B

47 dyapente *post* dicitur B D diapente *post* dicitur W penta B penthe R quia *pro*  
 quasi B  
 48 et inter b et f om. B a *pro* aa B D R W inter f *pro* inter e R ♭ *pro* ♭ B b *pro* ♭ D R W  
 c *pro* cc B D R W inferius patet hic et cetera *pro* ut hic patet D infra *post* hic W  
 patet om. B

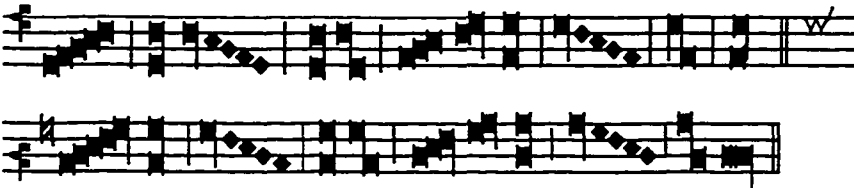
B



D



W



=====

44. Cf. *Introductio musice* 6.15; *De plana musica* 16.29.

<sup>49</sup>Diapason est coniunctio octo vocum  
 et dispositio quinque tonorum cum duobus  
 semitoniis que equivalent uno tono  
 infallibiliter. <sup>50</sup>Et dicitur a dya quod est de  
 et pason quod est totum, quia in se continet

<sup>49</sup>The diapason is the conjunction of  
 eight syllables and the disposition of five  
 whole tones plus two semitones that are  
 equivalent to a whole tone infallibly. <sup>50</sup>It is  
 named from *dya*, which is "from," and

totas alias species infrascriptas <sup>51</sup>et fit de  
quacumque littera simili ad aliam litteram  
similem in figura, sicut in sequentibus  
demonstratur.

*pason*, which is "entire," because it contains  
all the other species of lower pitch. <sup>51</sup>It is  
made from any letter with another identical  
letter in a figure, as demonstrated in the  
following.



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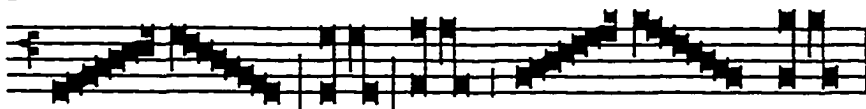
Diapason

49 disposito *W* et duo[rum *corr. sup. bus*] semitonorum *pro* cum duobus semitoniis *D* et *pro*  
cum *R* qui *B* tonum tonum *pro* uno tono *B D W* uni *R* infabilliter *B R*  
infallabiliter *D*

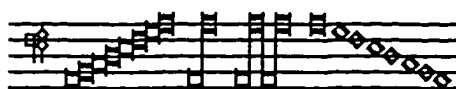
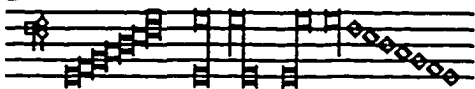
50 de et et *pason R* tonum *pro* est totum *W*

51 simili et aliam *D R* simillēm *B* ut hic *pro* in figura . . . demonstratur *B* exemplis *post*  
demonstratur *W*

*B*



*D*





W



=====

49. Cf. *Introductio musice* 6.19; *De plana musica* 16.53. Here, as in *De plana musica* 16.53, the diapason is defined to contain six whole tones. Rossettus, *Libellus* 10.75 (Seay, p. 34), in an otherwise parallel passage, states the very opposite: "Diapason est coniunctio octo vocum, sane vel gradatim formata, et dispositio quinque tonorum cum duobus semitoniis minoribus, teste Boetio, qui non aequivalent tono."

50. The words *infra scripte* refers to notes written below the diapason, possibly in analogy with the written representation of pitch; thus *supervenientes* would refer to notes higher in pitch (see, e.g., *Introductio musice* 3.21).

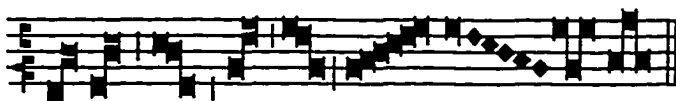
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<sup>52</sup>Tonus cum diapente est species

coniuncta de sex vocibus cum quatuor tonis et  
uno semitonio, ut patet.

<sup>52</sup>The whole tone plus diapente is

the species conjoined of six syllables with  
four whole tones plus one semitone, as shown.



Tonus cum diapente

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Whole tone plus diapente

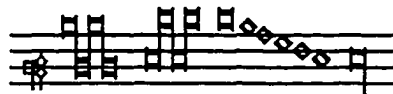
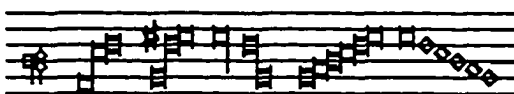


52 et tribus *pro* cum quatuor *B* quator *W* unum semitonium *D R* sicut hic apparet *pro* ut  
patet *D* ut hic infra patet *W* hic *post* patet *B*

*B*



*D*



*W*



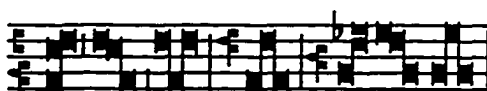
52. Cf. *Introductio musice* 6.17; *De plana musica* 16.37.

53 Semitonium cum diapente est

species coniuncta de sex vocibus et de tribus  
tonis cum duobus semitoniis, sicut patet in  
figura.

53 The semitone plus diapente is the

species conjoined of six syllables, and of  
three whole tones plus two semitones, as  
shown in the figure.



Semitonium cum diapente

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Semitone plus diapente

53 *om. B*

53 Semitonus *W* tonis et duobus *W* duo semitonio *D* plenius hic elucessit *pro* patet in figura *D W*



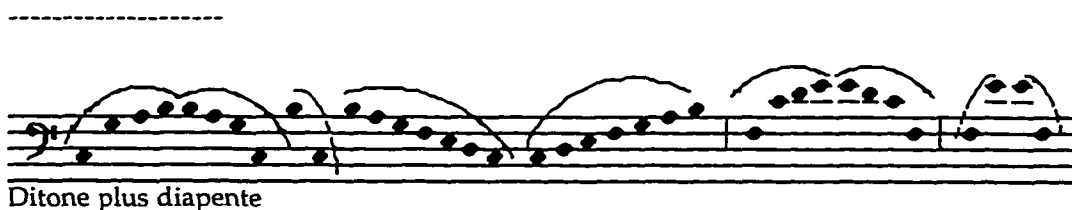
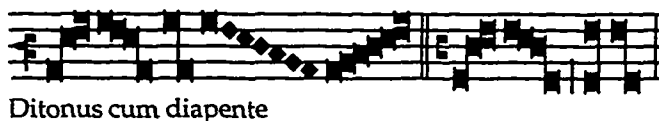
53. Cf. *De plana musica* 16.33.

54 Ditonus cum diapente est species

coniuncta de septem vocibus et quinque tonis  
cum uno semitonio, sicut patet in figura.

54 The ditone plus diapente is the

species conjoined of seven syllables, and of  
five whole tones plus one semitone, as shown  
in the figure.



54 et 55 *inversa B W*

54 Ditonus . . . figura *om. B* ytonus *D* de ante quinque *W* ut hic infra aparet *pro* sicut  
patet in figura *W* inferius denotatur *pro* patet in figura *D*

***B***



Tonus cum dyapente [sic]



Semitonium cum dyapason [sic]

*D*



W



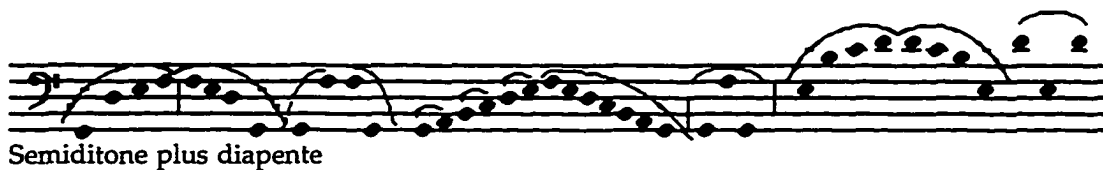
54. Cf. *De plana musica* 16.46.

55Semiditonus cum diapente est  
species coniuncta de septem vocibus et de  
quatuor tonis cum duobus semitoniis, sicut  
patet in figura.

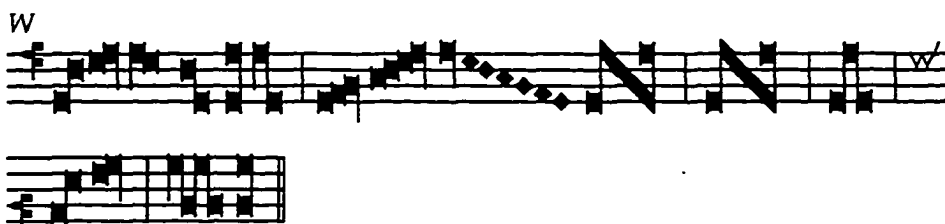
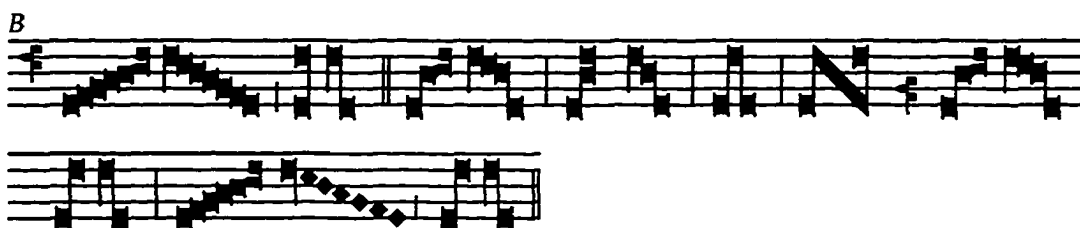
55The semiditone plus diapente is the species conjoined of seven syllables, and of four whole tones plus two semitones, as shown in the figure.



### Semiditonus cum diapente



55 coniuncta *D* tribus *pro* de quatuor *B* tonis et duobus *B* duo semitonio *D* ut patet hic  
*pro* sicut patet in figura *B* inferius denotatur ut hic *pro* patet in figura *D*



55. Cf. *Introductio musice* 6.18; *De plana musica* 16.41.

<sup>56</sup>Tonus cum diapason. <sup>57</sup>Semitonium  
 cum diapason <sup>58</sup>et semiditonus cum diapason.  
<sup>59</sup>Ditonus cum diapason.

<sup>56</sup>The whole tone plus diapason.  
<sup>57</sup>The semitone plus diapason. <sup>58</sup>The  
 semiditone plus diapason. <sup>59</sup>The ditone plus  
 diapason.



Tonus cum Semitonium diapason   Semiditonum cum diapason   Semiditonum cum diapason



Ditonus cum diapason

-----



Whole tone plus diapason   Semitone plus diapason   Semiditone plus diapason



Ditone plus diapason

-----

56 Tonus cum diapason *om. B* dyap[[ente]]ason *D* est speties coniuncta de novem vocibus et de sex tonis et duobus semitoniis, ut hic infra patet *post* diapason *W*

57 *om. W* Semitonium cum diapason *om. B* diap.son *R*

58 *om. B*

58 et *om. D W* est species coniuncta de decem vocibus et de sex tonis et tribus semitoniis, sicut hic inferius patebit *post* diapason *W*

59 Ditonus cum diapason *om. B* Dytoctrus *W* est speties coniuncta de decem vocibus et de septem tonis et duobus semitoniis, ut hic infra patet *post* diapason *W*

*B*

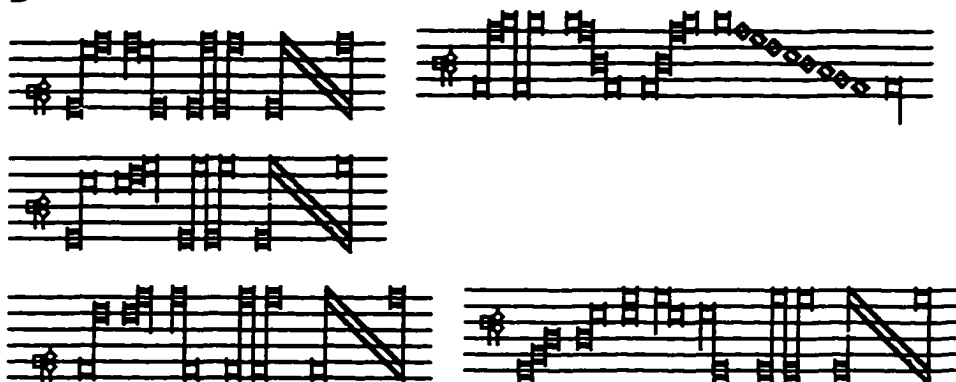


Semiditonus cum dyapason [sic]



Dictonus cum dyapason [sic]

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*D**W*


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60EXPLICIUNT OMNES SPECIES  
NECESSARIE CANTUS ET UTILES  
OMNIBUS MUSICIS  
INTRODUCENDIS

60HERE END ALL THE SPECIES OF SONG  
NECESSARY AND USEFUL FOR ALL  
MUSICIANS REQUIRING AN  
INTRODUCTION

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60 cantus necessarie *B* et *[[ut]]* utiles *D* illis musicam *pro* musicis *B* introducen~~[[es]]~~dis *D*

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APPENDIX A  
TREATISES PERIPHERAL TO *INTRODUCTIO MUSICE*

This appendix presents the complete texts of five treatises that share material with *Introductio musice* (transmitted in *S*<sub>1</sub>, *S*<sub>2</sub>, *L*, *F*, and *Pe*) and an additional treatise best seen as an abridgement of it (transmitted in *Vc*). Text in bold is shared with *Introductio musice*, that in normal type is peculiar to the treatise in question; superscript numbers indicate corresponding passages in the *Introductio musice* text; “=” followed by a superscript number indicates a passage with conceptual but not textual similarity with a corresponding passage in the *Introductio musice* text.

*INTRODUCENDIS IN ARTE MUSCICE* (*S*<sub>1</sub>, fols. 50r–53r)

1. <sup>1</sup>*Introducendis in arte [[muscis]] muscice [sic]*. <sup>2</sup>*Primo videndum est quid sit introductio, unde dicatur*; <sup>3</sup>*secundo quid modis dividitur*; <sup>4</sup>*tercio quid sit musica et unde dicatur et de quo loquitur*; <sup>5</sup>*quarto quot modis dividitur*; <sup>6</sup>*quinto quid sit subiectum et predicatum in musica*; <sup>7</sup>*sexto quot sunt littere graves, acute et superacute, et quot sunt voces universales ad totius musice distinctionem*; <sup>8</sup>*septimo quot sunt eius species et eciam vocum mutationes et omnis cantus proprietates* <sup>7.5</sup>*quia sicut dixit boecius, <sup>7.6</sup>ita est de illis qui sine arte canunt quam de illis hominibus litteratis qui numquam litteram didicerunt. <sup>7.7</sup>Iterum dicit Guido sapientissimus musice quod isti vulgares cantores tantum in vanum laborant qui unitoni et semitoni discernere nesciunt.*

<sup>9</sup>*Ad primum: Introductio est aliquorum compendiosa tradiccio que ad totius artis intelligenciam est necessaria <sup>10</sup>vel sic: introductio est brevis et aperta rei demonstracio <sup>11</sup>et dicitur ab intro quod est intus et duco quod ducis quia ducit nos intus artem ab ignoran[[i]]cia ad scienciam.*

<sup>12</sup>*Musica in Boecio diffinitur sic: musica est sciencia recte canendi seu veraciter modulandi ad omnem perfeccionem cantus via recta facilis et aperta. <sup>13</sup>Dicitur autem musica a mois quod est aqua et dicos quod est sciencia iuxta aquas inventa est <sup>14</sup>et loquitur de minimo relato ad sonos.*

<sup>15</sup>*Musica in tria genera dividitur, scilicet musicam planam, mensurabilem et instrumentalem. <sup>16</sup>Musica plana ecclesiastica est illa que per beatum Gregorium Papam ad honorem dei nec non et gloriosissime virginis dei genitricis Marie et omnium sanctorum exercetur <sup>18</sup>sic in psalmo continetur. <sup>19</sup>laudate dominum in sono tube et cetera.*

2. *Hiis igitur obmissis videamus de suis gravibus, acutis et superacutis. <sup>13</sup>Si queratur quid sit vox in musica respondendum est sic: <sup>14</sup>vox est aer sonans [[ab]] ab ore prolatus naturalibus istrumentis [sic] formati[[s]]s. <sup>16</sup>Natura instrumenta quibus vox formantur sunt hec: scilicet os, lingua, dentes, palatum et similia. <sup>17</sup>Unde verso: Istrumenta sunt pulmo, ligua [sic], guttur, palatum, quatuor dentes et duo labia simul.*

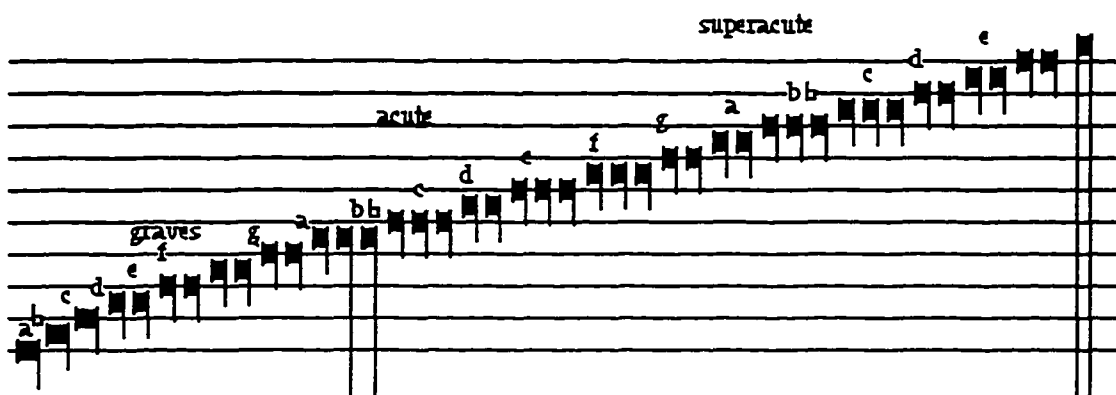
<sup>7</sup>*Sciendum est quod omnis vox humana hominis se habent in triplica diversa, aut ex pectoris aut ex gutteris aut ex capitis. <sup>8</sup>Voces pecctoris [sic] se habent in gravibus et in*

fundamento cantus debent ordinari. <sup>9</sup>Voces guttoris mediocriter se habent et graves et non altas et superacutas proporcionabiliter medium vocum optinent. <sup>10</sup>Voces capitis tamen se habent tantum modo in acutis et superacutis vocibus et non graves quia sicut se habent voces pectoris tantum in gravibus, ita se habent voces capitis tantum in acutis et superacutis. <sup>12</sup>Voces gutturis mediocriter se habent ad utrasque idest a graves et acutas.

<sup>2</sup>Notandum est quod sicut sunt septem dies in ebdomada, ita sunt septem littere in musica, scilicet a b c d e f g. Octo prime dicuntur graves, alie acute et alie superacute. <sup>3</sup>Graves dicuntur a gravitudine quia gravem[[s]] sonum [[habens]] et grossum habent reddere.

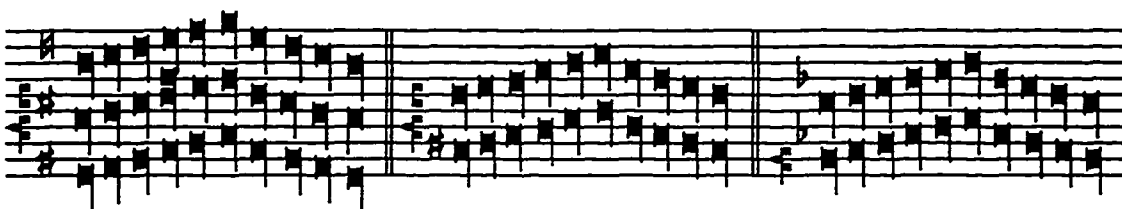
<sup>4</sup>Acute[[m]] vero acutum sonum et altum habent. <sup>5</sup>Superacute [sic] autem superacutum sonum et alcioem habent reddere. <sup>6</sup>Idem sicut se habent acute super graves, ita se habent acute super acutas simili modo etiam ratione. Eccepto quod in principio huius dictis manus sinistre quod dicitur prime alphabetum et musica quia secundum rectam viam [-50v-]

Introducendibus doctrine. Introductio debemus que doctrine viam procedere dum ex magnis notis ad minus notam. Nota quod prout dixit philosophus in principio prophetorum istam litteram ut quod gravia graviam significat et grava gamma grece idem est similiter latine quia sicut verbo a cranacione [sic] hominis creavit mulierem, ita musica ad sollacium hominis atque procreationem [[ho]] omnium creaturarum ad sanctis instruccionibus fuit ordinata ad propositum. Reddeamus et ideo prima littera g que huius dictis ponitur octo compugnantur <sup>21</sup>et octo in acutis propter duo b b in [[be fa]] b fa b mi appropriantur et tantum in eodem spacio vel in eadem linea collocantur. Et propter hoc quod diversi modi in figuras protrahuntur et inter se diversa[[s]] habent significare, ideo in numero aliarum clavium ut tantum que computando nominamus. Primum dicitur b mole secundo vero ..... Primum figuramus rotundum alium vero quadrum. <sup>25</sup>Similiter sex litteras in superacutis ponimus propter b quod in b fa b mi superacute[[um]] bis ponuntur ut in acuto et similiter istam litteram. Et ponimus ultimam in super acutis, scilicet E. Quamvis dicti qui cantores ipsam non posuissent in scriptis tantum propter pulchritudinem perfectionis cantus illam predictam litteram in ordine aliarum in scripto ponimus. Littere graves octo sunt hec: G A b C D E F G; acute sunt octo, scilicet a b b c d e f g; superacute vero sex: a b b c d e <sup>19</sup>et iste littere possunt nominari claves <sup>20</sup>quia sicut mediante clavi intramus ostium et per ostium domi, ita mediante clavi id est prima littera dictionis habemus noticiam tonorum ac semitonorum. Et est sciendum quod unaquaque istarum litterarum preclararum in gravibus et in acutis et superacutis in linea ponitur, [[alea]] alia in spacio secundum [[coniunctorum]] coniuncturas digitorum [sinistra in marg.] manus primo in pollice dicitur Gamma ut in corda seu in linea, a re in spacio, b mi in linea, C fa ut in spacio, d sol re in linea, e la mi in spacio et sic deinceps [sic]. Eccepto quod illas duas litteras diversi modi figuratas, scilicet b fa b mi acutum in spacio ponitur, superacutum vero in linea et illam ultimam litteram superacutum Sexta manus digiti longiori ponitur propter perfectionem cantus leniorem, ut apparet hic.



<sup>28</sup>Sciendum est quod in gravibus quatuordecim voces sub ilis octo clavibus et sub aliis octo acutis clavibus figurantur, videlicet octodecim voces et sub ultimis clavibus superacutis subponuntur decem voces sic totaliter computando omnia per sinistram manum artem situantur viginti due claves et quadraginta due voces <sup>29</sup>omnia recte et aperte cuilibet intuenti.

3. <sup>1</sup>Sequitur autem de proprietatibus cantus. <sup>2</sup>Sunt autem [-51r-] tres proprietates cantus, scilicet ♭ quadrum, naturam et b mol <sup>3</sup>et dicuntur proprietates quia primam viam rectam canendi [[es]] seu veraciter tonos et semitonia proferendi nobis [[signandi]] signatores. <sup>6</sup>♭ quadrum cognossimus quia semper incipit in g, scilicet in gamaut et in g sol re ut grau[i sup. e] et acuto et terminatur in e gravi, acuto et superacuto: <sup>7</sup>naturam autem cognossimus quia habet semper stare in medio ♭ quatum [sic] et b mole et incipit in c grave et acuto et terminatur in [a sup. lin.] acuto et superacuto sicut patebit hic: hinc apparent exempla de proprietatibus cantus, videlicet ♭ quadrum, natura et b mole. Modo videndum est de significationibus ipsarum hoc modo, ut apparebunt scripte et figurare.



<sup>11</sup><N>otandum est igitur quod in ordinatione istius artis comprehendimus ordinate illas proprietates infra scriptas hoc modo. <sup>12</sup>Gammaut habet unam clavem et una [sic] vocem g est glavis [sic], ut est vox, <sup>13</sup>ut cantatur per ♭ quadrum a semet ipsa descendit.

<sup>14</sup>A re habet unam clavem et unam vocem. A est glavis, re est vox. <sup>15</sup>Re cantatur per ♭ quadrum aut de Gamaut.

<sup>16</sup>♭ mi habet unam clavem et unam vocem. ♭ est glavis, mi est vox. <sup>17</sup>Mi cantatur per ♭ quadrum aut de gamaut.

<sup>18</sup>C fa ut habet unam clavem et duas voces. C est clavis, fa ut sunt voces. <sup>19</sup>Fa cantatur per ♭ quadrum aut de gamaut. Ut cantatur per naturam a se ipsa descendit.

<sup>20</sup>[[d]] D sol re habet unam clavem et duas voces. D est clavis, sol re sunt voces. <sup>21</sup>Sol cantatur per ♭ quadrum aut de gammaut. Re cantatur per naturam aut de c fa ut.

E la mi habet unam clavem et [[unam]] [duas in marg.] voces. E est clavis, la mi sunt voces. La cantatur per ♭ quadrum aut de gamma. Mi cantatur per naturam aut de c fa ut.

F fa ut habet unam clavem et duas voces. F est littera, fa ut sunt voces. Fa cantatur per naturam aut de c fa ut. Ut cantatur per b mole a semet ipso descendit et sic de singulis sequentibus.

Quo[t *sup.* d] ubicumque tres voces vel due inde duo toni et [[non plures utraque vox suam proprietatem habet dissimilem]] invenitur non tantum per unam solam proprietatem cantatur quia sicut tres proprietates cantus, ita sunt tres voces inde duo toni et non plures utramque [*sic*] vox suam proprietatem habet dissimilem <sup>22</sup>quia oportet quod omnes voces seu omnis cantus secundum tres proprietates infra scriptas cantetur. Et est ratio quare dicitur quod a semet ipso descendit et non ad alias, quia prima vox ut est initium et principium et firmamentum sex vocum, scilicet ut, re, mi, fa, sol, la et cum istis sex vocibus accipiuntur omne alie, sicut in alfabeto computantur omnes littere universales ad omnem scripturam ita iste sex voces predictae sunt universales ad evidenciam omnium vocum musice pertinencium. Et quia prima vox ut dignior est aliis vocibus, scilicet re mi fa sol la, ideo alie [-51v-] vocce rediguntur ad ipsam causam sive auctoritatis non ipsam [*sic*] ad alias reduci quia a dignior inquoandum est et propter hoc dicitur a semet ipso descendit.

4. Sciendum est quod protrahimus et figuramus duo principalia vel duas claves per quas noticiam habemus tonorum ac semitonorum, scilicet F grave et c acutum <sup>3</sup>F grave ubique in gravibus respicit idem suum respectum habet usque ad acutas <sup>4</sup>c acutum respicit, videlicet in acutis et superacutis <sup>7</sup>quia in cantu plano vel ecclesiastico quatuor lineas protrahimus <sup>8</sup>et in mensurabili cantu quinque, ita quod quodcumque cantus ascendit usque ad c et d et e et g acutum facimus hoc modo.

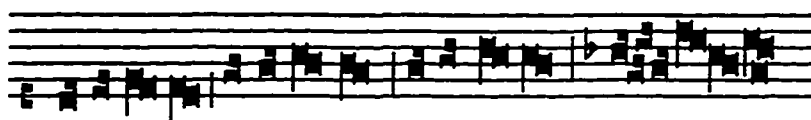
7. <sup>3</sup>Sunt autem tredecim species cantus nec plus nec minus que rationem numeri tenent, <sup>9</sup>scilicet unisonus, tonus, [[semitonus]] semitonium, dictonus, semidictonus, diathesaron, tritonus, dypente, dyapaxon. <sup>10</sup>Alie quatuor sunt composite, scilicet thonus cum dyapente, semitonium cum diapente, semidictonus cum dyapente, dictonus cum dyapente. <sup>11</sup>Et sicut addictio et compositio fit specie diapente, ita addictio et compositio sit specie diapason, dicendo tonus cum diapaxon, semitonium cum diapaxon, dictonus cum dyapason, semidictonus cum dyapaxon.

<sup>12</sup>Unisonus quando plures note vel neme [*sic*] in eadem linea vel in eodem spacio collocantur. <sup>13</sup>Et dicitur ab unus, -a, -um quia unus sonus sine ulla variacione vocum, ut patet hic.



<sup>14</sup>Tonus secundum Guidonem diffinitur sic: tonus legitima spacii magnitudo plenum perfectum sonum emitens <sup>15</sup>vel aliter secundum Boecium tonus diffinitur in hunc modum: <t>onus est coherencia duarum vocum plenam et integram elevationem [[*in*]] redens sine aliquo intervallo. <sup>16</sup>Et dicitur a tonando quia plene tonat <sup>18</sup>et figuratur quatuor modis, scilicet ut re, re mi, mi re, re ut, fa sol, sol la, la sol, sol fa. <sup>19</sup>Et inveniuntur inter G et a, inter a et b quadrum, et inter ce et d, et inter d et e, inter f et G, inter b mole et c, gravibus, acutis ac superacutis, ut apparet hic.

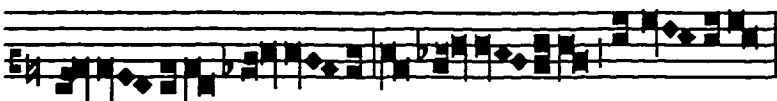
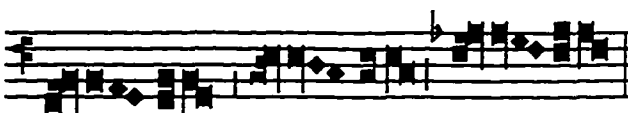




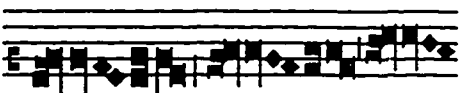
<sup>21</sup>Semitonium sic dicit Boecius non a semis quod est dimidium sed a semis quod est imperfectum quia false putat quasi duas voces non plenum sonum facientes. <sup>23</sup>Et figuratur uno modo tantum sic, scilicet mi fa, fa mi. <sup>24</sup>Et invenitur inter  $\text{L}$  quadrum [et *sup. lin.*] c, inter e et f, inter a et b mole gravibus, acutis et superacutis litteris, ut apparent hic sequens vel semitonium [est *sup. lin.*] imperfectum spacium duarum vocum proximo super iuctarum [sic] ut a, b in c et cetera.



[52r.] <sup>25</sup>Dictonus est coniunctio trium vocum et dispositio duorum tonorum sine aliquo semitonio. <sup>26</sup>Et dicitur a dia quod est duo et tonus quia constat ex duobus tonis integris <sup>27</sup>et tunc efficitur duobus modis, scilicet ut re mi, mi re ut, ut mi, mi ut, sol la, la sol, fa, fa la, la fa. <sup>28</sup>Et invenitur inter G et  $\text{L}$  quadrum, inter C et D, inter f et a, inter b mol et d gravibus, acutis et superacutis litteris, ut melius apparet hic.

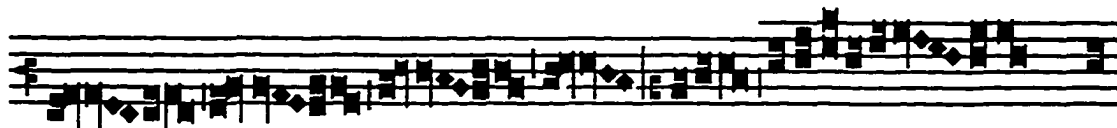


<sup>29</sup>Semidictonus est coniunctio trium vocum et dispositio unius toni cum uno semitonio. <sup>32</sup>Et dicitur semidictonus quia dictonus imperfectus est <sup>31</sup>et formatur duobus modis, scilicet re mi fa, fa mi re, re fa, fa re, sol fa mi, mi fa sol, mi sol, fa mi. <sup>33</sup>Et invenitur inter a et c, inter  $\text{L}$  quadrum et d, inter d et f, inter e et g, et g et b mole gravibus, acutis et superacutis litteris, ut apparet hic.

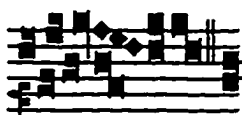


<sup>34</sup>Diatessaron est coniunctio quatuor vocum et dispositio duorum tonorum cum uno setono [sic] <sup>35</sup>aut in primo aut in medio aut in fine. <sup>37</sup>Et dicitur diatessaron quod est quatuor <sup>36</sup>et figuratur tribus modis: ut re mi fa, fa mi re ut, ut fa ut, re mi fa sol, sol fa mi re, re sol re, mi fa sol la, la sol, mi la, la mi. <sup>38</sup>Et invenitur inter G et c, inter a et D, inter  $\text{L}$  quadrum et e, inter c

et f, inter d et g, inter e et a, inter f et b mole gravibus, acutis, superacutis litteris, ut melius patet hic.



<sup>39</sup><T>ritonus est coniunctio quatuor vocum et eciam de quinque. Et quandoque de quatuor vocibus figuratur, tunc tres tonos sine aliquo semitono. Et figuratur uno modo fa sol la re mi mi re ut sol fa. <sup>41</sup>Et invenitur inter f et  $\flat$  quadrum, inter b molle et e [[graves]] per graves, acutas et superacutas litteras, ut est figuratur hic.



[-52v-] <sup>42</sup>Item tritonus quando de quinque vocibus figuratur, tunc duo semitonia equivalent tonum. Et figuratur uno modo, scilicet mi fa sol la mi fa fa mi re ut mi. <sup>43</sup>Et invenitur inter  $\flat$  quadrum et f, inter e et b molle per graves, acutas et superacutas litteras, ut melius patet hic. [vacua]

Differt autem tritonus quandoque computatur quatuor vocibus ad diatesaron continet duos tonos cum adicione semitonii, et tritonus tres tonos integros sine aliquo semitono. Ita quod tritonus forcior est diatesaron cum uno semitono et nichil plus.

<sup>44</sup>Diapente est coniunctio quinque vocum, et dispositio trium tonorum cum semitono. Et semper intelligitur seriatim vel prolatim. <sup>47</sup>Dicitur a dia quod est de et penta quod est quinque <sup>46</sup>et quatuor modis efficitur, scilicet ut re mi fa sol, sol fa fa mi re ut, ut sol, sol ut, re mi fa sol la, la sol fa mi re, re la, la re, mi fa sol la re mi, mi re ut fa mi, mi fa sol la re mi, fa fa mi re ut fa, fa fa. <sup>48</sup>Et invenitur inter G et D, inter a et e, inter C et G, inter d et a, inter e et  $\flat$  quadrum, inter f et c gravibus, acutis et superacutis litteris, ut patet hic. [vacua]

<sup>49</sup>Diapason est coniunctio octo vocum et dispositio quinque tonorum cum duobus semitoniis. <sup>50</sup>Et dicitur a dia quod est de et pan quod est totum [[quod]] quia sub se continet omnes alias species infra scriptas. Et figuratur quatuor modis, scilicet ut re mi fa sol la la sol fa mi re ut mi re ut re mi fa sol la fa sol la la sol fa mi re ut mi re mi fa sol la fa sol la mi ut re mi fa sol la mi fa fa mi re ut fa mi re ut fa mi re ut fa mi re ut fa mi re ut fa mi re ut mi. <sup>51</sup>Et invenitur in quacumque littera simili ad aliam similem, sicut patet hic. [vacua]

[-53r-] <sup>52</sup>Tonus cum diapente est coniunctio sex vocum [[et disposci]] et dispositio quatuor tonorum cum uno semitono. Et duobus modis efficitur, scilicet ut re mi fa sol la re mi fa sol la mi mi re ut fa mi re. Et invenitur inter g et e, inter c et a, inter d et  $\flat$  quadrum, inter f et d gravibus, acutis et superacutis litteris, ut apparet hic. [vacua]

<sup>53</sup>Semitonium cum diapente est coniunctio sex vocum et dispositio trium tonorum cum duobus semitoniis. Et figuratur uno modo, scilicet re mi fa sol la fa fa mi re ut mi re. Et invenitur inter a et f, inter d et b mole, inter e et c. Et figuratur hoc modo quod hic inferius continetur. [vacua]

<sup>54</sup>Dictonus cum diapente est coniunctio septem vocum et dispositio quinque tonorum cum uno semitono. Et invenitur inter c grave et  $\flat$  quadrum acutum, inter f grave et e acutum, inter b

molle acutum et a superacutum, inter c acutum et b quadrum superacutum, inter f acutum et e superacutum, ut patet hic. [vacua]

=<sup>29</sup>Semidictonus est coniunctio trium vocum et dispositio unius toni cum uno semitono. =<sup>32</sup>Et dicitur semidictonus quia dictonus imperfectus est. =<sup>31</sup>Et formatur duobus modis, scilicet re mi fa fa mi re re fa fa re sol fa mi mi fa sol mi sol sol sol mi. =<sup>33</sup>Et invenitur inter a et c, inter b quadrum et d, inter d et f, inter e et g, inter g et b mol gravibus, acutis et superacutis litteris, ut apparet hic. [vacua]

AD EVIDENCIAM CAM MENSURALIS QUAM IMMENSURABILIS MUSICE (S<sub>2</sub>, fols. 117v–119v)

1. <sup>1</sup>Ad evidenciam cam [sic] mensuralis quam immensurabilis musice, <sup>2</sup>primo videndum est quid sit [un] introductio et unde dicatur; <sup>3</sup>secundo quot modis dividitur; <sup>4</sup>tercio quid sit musica et unde dicatur; <sup>6</sup>quarto quid subiectum et predicatum in musica secundum quam dicamus de omnibus istis.

<sup>2</sup>Primo videndum est quid sit introductio ceteris pretermisissis. <sup>9</sup>Introductio est aliquorum compendiorum traditio que ad totius artis musice intelligencia [sic] est necessaria. <sup>11</sup>Et dicitur introductio ab intro quod est intus et duco, ducis, quare, quia ducit intus ad artem et ab ignorantiam ad scientiam, <sup>10</sup>vel sic introductio brevis et aperta demonstratio. <sup>4</sup>Hiis obmissis, videamus quid sit musica et unde dicatur et quot modis dividitur.

<sup>12</sup>Musica est [[scientiam]] scientia veracissima canendi et recte modulandy ad omnem perfectionem cantus via facilis et aperta et introducens et faciens facile quod in se apparet esse [[s]] difficile. <sup>13</sup>Dicitur autem musica a moys quod est aqua et yca quod est scientia quasi scientia iusta aqua [sic] fuit inventa.

Musica in tria genera diversarum specierum dividitur, scilicet in mundanam et humanam et instrumentalem. Mundanam idem est quod ubi [[volubienli]] volubitate et semper superioris collisione conficitur et hec armonia nuncupatur, id est celestis musica vel dulcis cantilena. Humana musica est que ex hominis capite canora voce profietur. Musica instrumentalis est que instrumentis est constituta, [[ut sup. s]] ut in originis [sic] et in ceteris et instrumentis musicalibus.

Musica autem humana dividitur in quinque genera diversarum specierum, scilicet metricus, prosaycus, differens et indifferens et comunis. Metricus qualiter dicitur mecron grece, latine scandor dicitur. Prosaycus qualiter dicitur eoquod non retinet regulam. Differens qualiter dicitur eoquod habet plena [sic] differenciam. Indifferens qualiter dicitur eoquod non habet plenam differenciam. Comunis qualiter dicitur eoquod habet auctoritatem, elevationem et deposicionem.

Constat in musica secundum antiquos ex septem simphoniis, scilicet tono, semitono, ditono, semiditono, diateseron, diapente et diapason. Quid est simphonia, id est distincia, sonat quam [[vos]] nos organum vocamus et [[propter]] naturalii eas concordias consonare sentimus. Sed ut plenior perfectionem cantus moderny cantores [[.....]] ..es dicimus inscriptis ponantur seriatim, sicut in sequenty [-118r-] capitulo diligenter apparebit per exempla. Cuylibet intuentii simphonia idem est quod actu [sic] vocum copulacio idem est quod vocy aperte coniungitur et ordinatur.

2. <sup>2</sup>Sicut enim septem sunt dies in edomada, ita sunt [[octo]] septem licere in musica quarum prime dicuntur graves <sup>3</sup>a gravitudine et profunde quia sonum grave [sic] et profundum habent redere. <sup>4</sup>Acute acutum sonum et alciorem gravibus <sup>6</sup>et sicut acute altiores gravibus sic [[super]] [[super acutis]] superant alciore acutis simili modo et eciam racionem.

<sup>1,23</sup>Subiectum in musica est aliquarum vocum seu pausacionum coniunctio <sup>1,24</sup>sive legitima proporcio in omnibus suis modis dilygenter observatis cui partem philosophie





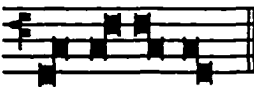
**durum sit tibi caniturum.** Et est sciendum quod iste tres proprietates cantus semper incipiunt in ut et terminatur in la, ut hic.



5. <sup>1</sup>Sequitur de mutacionibus vocum de quibus dicendum est <sup>2</sup>quod omnis mutacio desinens in [[ire]] [ut *sup. lin.*] re my talis vero fit assendendo, <sup>3</sup>similiter omnis mutacio [[in fa sol la]] in fa sol la talis vero fit dessendendo. <sup>4</sup>Unde versus: ut re my scandunt, fa sol la quoque dessendunt. <sup>9</sup>De hac causa dicit Boecius quod mutacio fuit inventa causa necessitatis. <sup>10</sup>Ad mutacionem faciendam est necesse quod sint due voces unusonus [sic] representantes, id est unisono permanentes. <sup>5</sup>Unde dicit Boecius quod <sup>6</sup>mutacio est divisio unius vocis propter aliam sub eodem signo et eadem voce ac eiam sono. <sup>7</sup>Et dicitur mutacio a muto, mutas, mutat quia unam proprietatem in aliam subsequentem sub uno signo ac eiam sono mutamus[[ur]] et sic mutacio fit de duabus vocibus integris. <sup>11</sup>Et propter hoc in gamaut, a re, in b mi et e la non fit mutacio <sup>12</sup>et ratio est ista quia sicut de uno solo homine non potest nassi [sic] populus, ita de una sola nota non potest fieri mutacio.

Differentia est inter mutacionem et permutacionem quia mutaci est variacio vocis nominis vel note in eodem spacio vel linea et eodem sono, sed permutacio est variacio vocis nominis vel note in eodem spacio vel linea et diverso sono. <sup>8</sup>Et est sciendum quod quandocumque possumus operari has voces, scilicet ut re my fa sol la ipsas operari debe[[i]]mus mutaciones evitando et eas precavendo non quia totaliter possunt evitari nec precaveri <sup>9</sup>sed dum evenerit necessitas mutacionem agendi tunc debet fieri et non aliter.

Item notandum est ubicunque inveniuntur due voces sub uno signo iby fiunt due mutaciones quia prima respicit ad secundam et secundam ad primam, verbi gracia in c fa ut est una lictera et due voces et fiunt due mutaciones, scilicet fa ut et ut fa. Fa ut assendendo de ♭ duro in [-119r-] naturam et ut fa dessendendo de natura in ♭ durum, ut hic.



Item sciendum est quod ubicunque inveniuntur tres voces iby fiunt sex mutaciones quia prima respicit ad secundam et secundam ad primam, prima respicit at terciam et terciam ad primam, secundam respicit ad terciam et terciam ad secunda [sic], et sic fiunt sex mutaciones. Verbi gratia in ge sol re ut est una lictera et tres voces: g est littera, sol re ut sunt voces, et fiunt sex mutaciones, scilicet sol re et re sol, sol ut et ut sol, re ut et ut re et cetera.

Item in b fa ♭ my [[i]] nulla fit mutacio, quare, quia sunt due lictere et due note et hostendunt duas figuras. Unde primum b est figura rotunda et secundum ♭ est figura quatrata. B enim rotundum est signum prime vocis, scilicet fa, ♭ enim durum est signum secunde vocis, scilicet my et sicut b rotundum differt a ♭ quatratum, ita fa differt a my. Et sic propter duo signa diversa et propter duas voces inequales non potest fieri mutacio nisy sub uno signo et eadem voce.


7. Visum est siperius [sic] de mutacionibus vocum. Nunc videndum est de speciebus cantus vel siphoniis [sic] quod idem est, scilicet de elevacione et deposicione omnium vocum secundum rectam proporcionem numerum diligenter ac proprie observatum sicut magister Guido asserit. Omissis igitur omnibus istis, videamus tantum de speciebus in mensurabilis musice.

Sed primo videndum est quod tredecim species habemus in musica. Quia est species. Species in musica secundum Boecium est quedam posicio que nuncupari potest diversitas vel varietas.


<sup>9</sup>Prima species est unisonus, secunda [[sol]] semitonus, tertia tonus, quarta semiditonus, quinta ditonus, sexta diateseron, septima tritonus, octava dyapente, nona semitonus cum dyapente, decima tonus cum dyapente, undecima semiditonus cum dyapente, duodecima ditonus cum dyapente, terciadecima dyapason. Quarum autem dictarum speciarum novem dicuntur simplices, scilicet unisonus, semitonus, tonus, semiditonus, ditonus, dyateseron, tritonus, dyapente et dyapason. <sup>10</sup>Sed alie alie [sic] quatuor dicuntur composite, scilicet semitonus cum dyapente, tonus cum dyapente, semiditonus cum dyapente et ditonus cum dyapente.

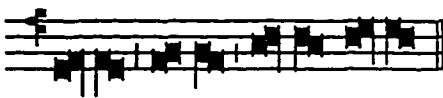
<sup>12</sup>Primo ergo videndum est quid sit unisonus. Unisonus est quandocumque plures voces vel figure simplices collocantur que nec assendunt nec dessendunt in eadem linea in eodem spacio, ut hic.




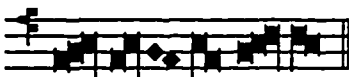
<sup>20</sup>Semitonus est coniunctio duarum vocum semiplenam ac imperfectam [[elevacionam]] elevacionem et deposicionem faciens <sup>21</sup>et dicitur semitonus a semus, a, mi quod est imperfectus sed non a semis us infra lin. indeclinabile quod est dimidium ponderis. Unde si aliquod vas plenum fuerit aliquo liquore et inde tertium fuerit modicum siye .... [-119v-] ... quod tres parates [sic] sicut in vase non pro illud sit scematum vel sit semy, id est, non plenum <sup>22</sup>sicut dicit Boecius sed a semis quod est imperfectum quia due enim voces semiplenum sonum facientes <sup>23</sup>et figuratur uno modo tantum scilicet mi fa tam assendendo quam dessendendo. <sup>24</sup>Et invenitur intus  et c, et inter [[c]] e et f gravibus, acutis et superacutis licteris, ut hic.



<sup>14</sup>Tonus est elegitimum spacium a sono in sono quia perfectum et plenum sonum emictens <sup>15</sup>vel tonus est spacium duarum vocum plenam ad integram elevacionem et deposicionem faciens sine aliquo intervallo. <sup>16</sup>Et dicitur tonus a tonando vel sonando quia plenum sonum facit. <sup>18</sup>Et figuratur quatuor modis, scilicet ut re, re mi, fa sol, sol la, tam assendendo quam dessendendo. <sup>19</sup>Et invenitur inter gamba et a, et inter a et  et inter c et d, inter d et e gravibus, acutis et superacutis licteris [sic], ut hic.

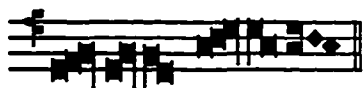


<sup>29</sup>Semiditonus est coniunctio [sic] trium vocum et dispositio unius toni cum uno semitonio. <sup>32</sup>Et dicitur semiditonus <sup>31</sup>et figuratur duobus modis, scilicet re fa et mi sol, tam assendendo quam dessendendo sane vel gradatim. <sup>33</sup>Et invenitur inter a et c, et inter  et d gravibus, acutis et superacutis licteris, ut hic.

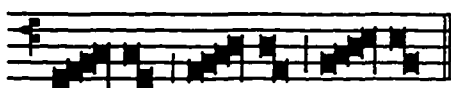


<sup>25</sup>Ditonus coniunctio trium vocum et dispositio duorum tonorum sine aliquo semitonio. <sup>26</sup>Et dicitur ditonus de duabus tonis perfectis et tribus vocibus. <sup>27</sup>Et figuratur duobus modis,

scilicet ut mi et fa la tam ascendendo quam descendendo sane vel gradatim. <sup>28</sup>Et invenitur inter gamma  $\text{L}$ , et c et e gravibus, acutis licteris superacutis, ut hic.



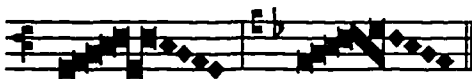
<sup>34</sup>Dyateseron est coniunctio quatuor vocum et dispositio duorum tonorum cum uno semitonio <sup>35</sup>et hoc in principio vel in medio vel in fine. Additur semitonium unum cum duobus tonis et in quatuor vocibus. <sup>36</sup>Et figuratur tribus modis, scilicet ut fa, re sol, mi la tam ascendendo quam descendendo sane vel gradatim. <sup>38</sup>Et invenitur inter gamma et c, et inter a et d, et inter  $\text{L}$  et e gravibus, acutis et superacutis licteris, ut hic.



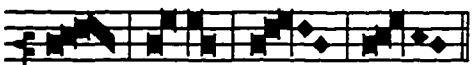
Tritonus aliquando figuratur de quatuor vocibus et aliquando de quinque. Cum de quatuor tunc continet tres tonos perfectos et figuratur uno tantum tam ascendendo quam descendendo sane vel gradatim, scilicet fa sol la re mi. <sup>41</sup>Et invenitur inter f et  $\text{L}$ , et inter b et e acutis et superacutis licteris, ut hic.



<sup>42</sup>Item quando tritonus habet quinque voces tunc continet in se duobus tonis perfectis [sic] cum duobus semitoniis et figuratur uno modo tantum, scilicet mi fa sol la mi fa tam ascendendo quam descendendo sane vel gradatim. <sup>43</sup>Et invenitur in [sic]  $\text{L}$  et f, et inter e et b gravibus, acutis et superacutis licteris, ut hic.



Sanctus Bernardus propter hoc invenit b molle tribus modis. Primo causa tritoni, secundo causa necessitatis, tercio causa essentie. Causa tritoni est vero quando cantus vel species assenderit vel descendit da f grave in  $\text{L}$  durum [[acu...]] acutum tunc cantatur per b molle quia tritonus evitandus est tam ascendendo quam descendendo sanum vel gradatim, ut hic.



#### ARS MUSICE PLANE OPTIMA ET PERFECTA (L, fols. 106r–110v)

1. Incipit ars musice plane optima et perfecta. <sup>1</sup>Ad evidentiam tam mensurabilis musice quam immensurabilis, <sup>2</sup>primo videndum est quid sit introductio et unde dicatur; <sup>4</sup>secundo quid sit musica, unde dicatur et de quo loquitur; <sup>5</sup>tertio quot modis dividitur musica; <sup>6</sup>quarto quid sit subiectum et predicatum in musica; <sup>7</sup>quinto quot sunt littere graves, acute et superacute, et quot sunt voces universales ad totius musice distinctionem; sexto quot sunt eius species <sup>8</sup>et vocum mutationes et omnis cantus proprietates.

<sup>9</sup>De Introductione. Introductio est aliquorum compendiosa traditio que ad totius artis intelligentiam est necessaria <sup>10</sup>vel sic: introductio est brevis et apta [sic] rei demonstratio. <sup>11</sup>Dicitur autem introductio ab intro quod est intus et duco, ducis quia ducit nos intus ad artem et ab ignorantia ad scientiam.

<sup>12</sup>Quid sit Musica. Musica secundum Boetium est scientia recte canendi sceu [sic] veraciter modulandi omnem perfectionem cantus. <sup>13</sup>Dicitur autem musica a moys quod est aqua et ycos quod est scientia quasi iuxta aquas inventa est. <sup>14</sup>Et de minimo relato ad sonos loquitur.








<sup>15</sup>Quot modis dividitur. Musica autem dividitur in quatuor species diversas, scilicet celestem, humanam, planam et instrumentalem. Celestis musica est que generatur ex volubilitate et collisione corporum superiorum et hec armonia dicitur. Humana musica est que ex hominis capite canora voce profertur. <sup>16</sup>Musica [-106rb-] plana est que per beatum Gregorium composita fuit et ordinata. <sup>18</sup>Musica instrumentalis est que instrumentis conficitur, ut cimbalis et organis.

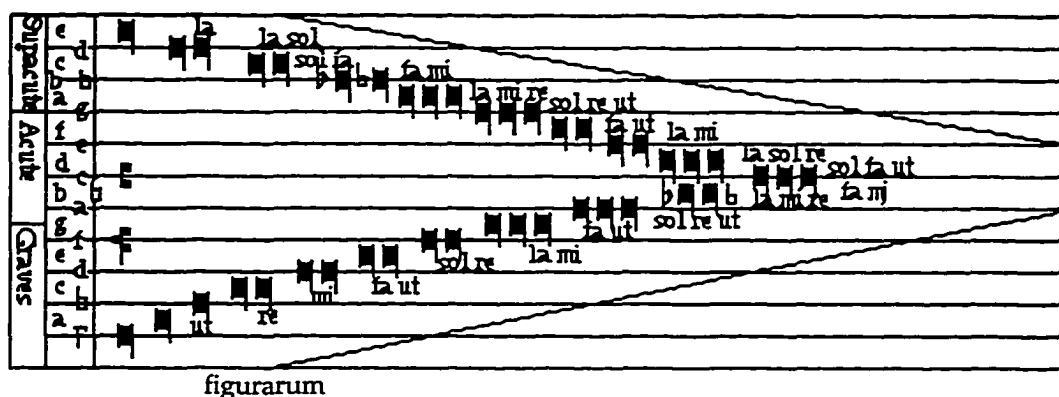
<sup>23</sup>De subiecto et predicato. Subiectum in musica est aliquarum pausionum sceu [sic] vocum coniunctarum debite ac proprie observatio. <sup>24</sup>Predicatum est legitima proportio suis modis in omnibus diligenter observatis. Et supponitur parti phylosophye et arismetrice. Item musica aliter diffinitur: musica est motus vocum diversimode se habentium, scilicet per arsym et thesym, id est per elevationem et depositionem.

2. <sup>14</sup>De vocibus. Vox est aer remissus intus numerabilibus instrumentis formatus.

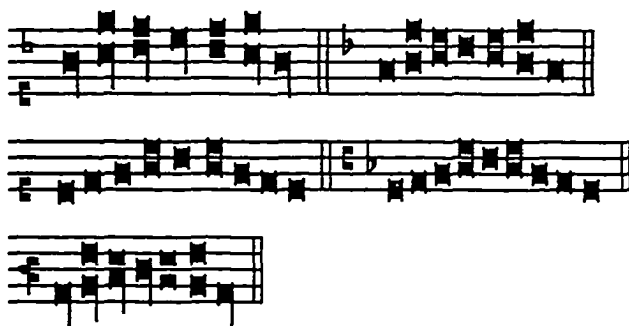
<sup>17</sup>Instrumenta sunt pulmo, lingua, palatum guttur et dentes cum his et labia similis et similia. <sup>7</sup>Vox humana se habet in triplici differentia aut est pectoris aut gutturis aut capitis. <sup>8</sup>Voces pectoris se habent in gravibus tantum in in [sic] fundamento cantus debent poni. <sup>9</sup>Voces gutturis tantum modo se habent in gravibus et acutis, <sup>10</sup>voces capitis tantum modo in acutis, superacutis et non ad graves descendunt.

<sup>1</sup>De litteris gravibus, acutis et superacutis. <sup>2</sup>Notandum quod sicut sunt septem dies in hedomada, ita sunt septem littere in musica, scilicet a, b, c, d, e, f, g, et octo prime dicuntur graves <sup>3a</sup> a gravedine quia gravem et profundum sonum reddunt. <sup>4</sup>Acute vero sunt octo et dicuntur [-106va-] acute quia sonum acutum reddunt. <sup>5</sup>Alie vero sex dicuntur superacute quia acutis altiore habent reddere sonum.

<sup>=18</sup>Nota etiam quod cum ista littera G que in principio artis ponitur, in gravibus octo littere computantur. <sup>21</sup>Et octo in acutis propter duo b- que in b fa- mi apropiantur. Et licet ponantur in eodem loco tamen quia diversa significant in numero aliarum clavium computantur. <sup>22</sup>Et primum dicitur b molle, <sup>23</sup>secundum vero  durum vel quadrum. <sup>25</sup>Similiter sex litteras ponimus in superacutis propter duo b- Et propter istam litteram e que pro cantus perfectione in superacutis ponitur quamvis antiqui cantores illam non posuissent. <sup>19</sup>Et omnes predictae littere dicuntur claves <sup>20</sup>quia sicut mediante clavi intramus domum, ita mediantibus his litteris intramus noticiam tonorum et semitonorum. Et est sciendum quod prima predictarum litterarum ponitur in linea, secunda in spatio, tertia in linea et sic de aliis secundum doctrinam sinistre manus. Primo in police dicitur Gama ut in linea, a re in spatio,  mi in linea, c fa ut in spatio et sic de ineps per totam manum, excepto b- ponimus in linea vel in spatio, b- acutum ponimus in spatio, superacutum in linea. Et illam ultimam litteram e superacutam extra digitum magiore ponimus propter cantus perfectionem. <sup>28</sup>Sciendum est quod sub octo litteris gravibus quatuordecim voces reperiuntur, sub octo acutis octodecim voces figurantur, sub [-106vb-] ultimis superacutis decem tantum sicut patet inferius.



3. <sup>1</sup>De proprietatibus cantus. <sup>2</sup>Proprietates cantus tres esse dicuntur, scilicet ♭ quadrum, natura, b mole. <sup>3</sup>Et dicuntur proprietates quia rectam viam proprie canendi et veraciter tonos et semitoniam proferendi nobis assignant. <sup>6</sup>♭ quadrum autem cognoscimus quia incipit in g, scilicet Gama ut et g sol re ut gravi et acuto, et terminatur in e gravi, acuto et superacuto. <sup>7</sup>Naturam autem cognoscimus quia semper habet stare in medio ♭ quadri et b molis et incipit in c gravi et acuto, et terminatur in a acuto et superacuto. <sup>4</sup>Et potest dici natura sive proprius cantus quia naturaliter et proprie <sup>5</sup>cantatur sine ulla variatione tonorum et semitoniorum. <sup>8</sup>B vero mole cognoscimus quia semper in f gravi et acuto incipit, et terminatur in d acuto et superacuto. Item alia regula: omnis cantus habens originem in g ascendens ultra tonum profertur per ♭ quadrum; et omnis qui oritur a quolibet c ascendens ultra dytonum profertur per naturam; et omnis qui oritur a quolibet f ascendens [-107ra-] ultra a la mi re profertur per b mole <sup>9</sup>unde versus: Naturam c vult, f b mole, G quoque quadrum.



<sup>11</sup>Notandum est autem pro predictis proprietatibus quod in ordinatione huius artis comprehendimus ordinate illas tres proprietates hoc modo.

<sup>12</sup>Gama ut in linea unam clavem habet et unam vocem. G est clavis, ut est vox <sup>13</sup>et per ♭ quadrum cantatur et a semet ipso descendit.

<sup>14</sup>A re in spatio et habet unam clavem et unam vocem. A est clavis, re est vox <sup>15</sup>et cantatur per ♭ quadrum ab ut de Gama ut et sic de singulis sequentibus.

Sed ubi sunt due vel tres voces non per unam solam proprietatem cantatur, sed si sunt tantum modo tres proprietates cantus nec plures quod sunt tantum modo tres voces in deductione et non plures et utramque suam habet proprietatem dissimilem. Et est ratio quare ut a semet ipso descendit et non ab alio et est initium [-107rb-] et fundamentum sex vocum ut, re, mi, fa, sol, la. Et in istis sex vocibus accipiuntur omnes alie quia sicut in alphabeto computantur omnes littere universales ad omnem scripturam, ita iste sex voces sunt universales ad evidentiam omnium vocum ad musicam pertinentium. <sup>25</sup>Et quia ista vox est ut, dignior est aliis

ideo alie voces reducuntur ad ipsam sicut ad causam non ipsa ad alias quia a digniori inchoandum est. <sup>28</sup>Et propter hoc dicitur quod a semet ipso descendit.

4. <sup>2</sup>Sciendum est quod protrahimus et figuramus duo principalia signa et duas claves per quas habemus noticiam tonorum et semitoniorum, scilicet f grave et c acutum. <sup>3</sup>F ubique in gravibus respicit, id est suum respectum habet usque ad acutas. <sup>4</sup>Et c acutum respicit usque ad superacutas. <sup>5</sup>Aliquando autem G acutum figuramus <sup>6</sup>propter defectum linearum et propter voces ascendentes in superacutis <sup>7</sup>quia in cantu plano vel ecclesiastico quatuor lineas tantum modo figuramus, <sup>8</sup>in mensurabili vero quinque, ita quod quodcumque cantus ascendit usque ad c et d et e superacutum tunc G acutum fit hoc modo, ut hic patet inferius.

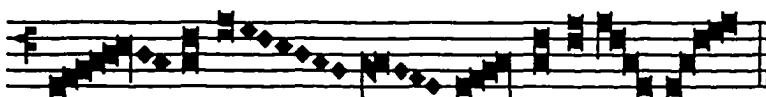


5. <sup>1</sup>De Mutatione. <sup>5</sup>Mutatio secundum Guidonem diffinitur sic: <sup>6</sup>mutatio est unius vocis divisio propter aliam ab eodem signo ac voce et sono. <sup>7</sup>Et dicitur mutatio a [-107v-] muto, mutas quia sub uno signo unam proprietatem in aliam transmutamus. <sup>9</sup>Ex causa necessitatis inventa est mutatio, <sup>8</sup>unde quantumcumque possumus opari [*sic*] has voces ut, re, mi, fa, sol, la opari [*sic*] debemus semper mutationes evitando non quia taliter possint evitari. <sup>9</sup>Sed dum evenierit necessitas mutatio debet fieri.

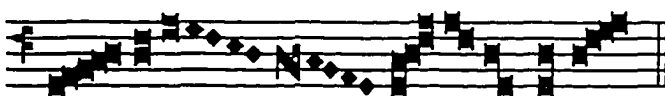


<sup>2</sup>Sed sciendum quod omnis mutatio desinens in ut vel in re vel in mi dicitur ascendendo. <sup>3</sup>Similiter mutatio desinens in fa vel in sol vel in la dicitur descendendo. Sed alii fit mutatio per causam signi, scilicet per b mole et  $\text{L}$  quadrum. Unde quantumcumque cantus cantatur per b mole et postea invenitur  $\text{L}$  quadrum, debet fieri mutatio per  $\text{L}$  quadrum. <sup>10</sup>Et notandum est quod ad mutationem est necesse quod sint due voces unisonum representantes, id est in uno sono permanentes <sup>11</sup>et sic in Gama ut, a re,  $\text{L}$  mi non potest fieri mutatio.

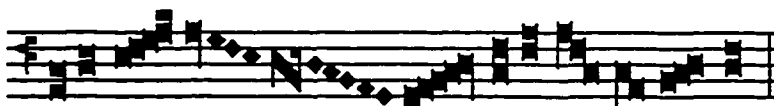
<sup>13</sup>In c fa ut fiunt due mutationes, scilicet fa ut, ut fa. Ascendendo, fa ut, descendendo, ut fa. <sup>14</sup>Ascendendo de  $\text{L}$  quadro in naturam de primo cursu ad f grave et de ultimo ad a acutum, <sup>15</sup>fa descendendo de natura in  $\text{L}$  grave et de ultimo in G gravi, scilicet Gama ut, sicut hic patet. [-107vb-]



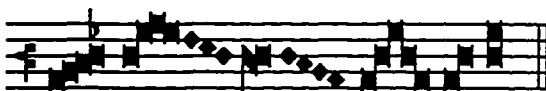
<sup>16</sup>In D sol re fiunt due mutationes, scilicet sol re, re sol. Sol re ascendendo et descendendo re sol <sup>17</sup>ascendendo de  $\text{L}$  quadro in naturam, descendendo de natura in  $\text{L}$  quadrum de primo cursu in f gravi et de ultimo in a acutum. <sup>18</sup>Re sol descendendo de natura in  $\text{L}$  quadrum de primo cursu in  $\text{L}$  gravi et de ultimo in G, scilicet in Gama ut, sicut patet inferius.



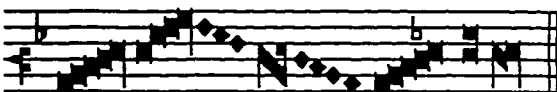
<sup>19</sup>In e la mi fiunt due mutationes, scilicet la mi, mi la. <sup>20</sup>Ascendendo la mi de  $\text{L}$  quadro in naturam et descendendo mi la de natura in  $\text{L}$  quadrum de primo cursu in f gravi et de ultimo in a acutum. <sup>21</sup>Mi la descendendo de natura in  $\text{L}$  quadro de primo cursu in  $\text{L}$  gravi et de ultimo in G, scilicet in Gama ut, ut patet in inferiori figura.



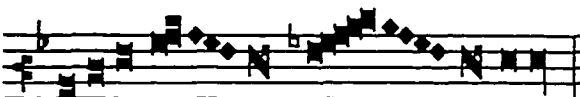
<sup>22</sup>In f fa ut fiunt due mutationes, scilicet fa ut, ut fa. <sup>23</sup>Ascendendo [-108ra-] fa ut de natura in b mole et descendendo ut fa de b mole in natura de primo cursu in b acutum et de ultimo in d acutum. <sup>24</sup>Ut fa descendendo de b mole in natura de primo cursu in  $\text{g}$  gravi et de ultimo in C gravi, ut hic patet inferius.



<sup>25</sup>In G sol re ut fiunt sex mutationes, scilicet sol re, re sol, sol ut, ut sol, re ut, ut re. Sol re ascendendo de natura in b mole, re sol descendendo de b mole in natura. Sol ut ascendendo de natura in  $\text{L}$  quadro et ut sol descendendo de  $\text{L}$  quadro in natura. Re ut ascendendo de b mole in  $\text{L}$  quadro et ut re descendendo de  $\text{L}$  quadro in b mole. <sup>26</sup>Sol re ascendendo de natura in b de primo cursu in b acutum et de ultimo in D acutum, <sup>27</sup>re sol descendendo de b moli in naturam de primo cursu in f gravi et de ultimo in C gravi. <sup>28</sup>Sol ut ascendendo de natura in  $\text{L}$  quadro de primo cursu in b acutum et de ultimo in e acutum, <sup>29</sup>ut sol descendendo de  $\text{L}$  quadro in naturam de primo cursu in f gravi et de ultimo in C gravi. <sup>30</sup>Re ut, ut re: iste due mutationes fiunt ascendendo tantum de b moli in  $\text{L}$  quadrum et de  $\text{L}$  quadro in b moli, ut hic patet.



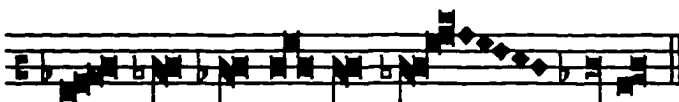
[-108rb-] <sup>31</sup>In a la mi re fiunt sex mutationes, scilicet la mi, mi la, la re, re la, mi re, re mi. <sup>32</sup>La mi ascendendo de natura in b moli de primo cursu in b acutum et de ultimo in D acutum, <sup>33</sup>mi la descendendo de b moli in natura de primo cursu in f gravi et de ultimo in c gravi. <sup>34</sup>La re ascendendo de natura in  $\text{L}$  quadro de primo cursu in  $\text{L}$  acutum et de ultimo in e acutum, <sup>35</sup>re la descendendo de  $\text{L}$  quadro in natura de primo cursu in f gravi et de ultimo in c gravi. <sup>36</sup>Mi re, re mi: iste due mutationes fiunt ascendendo tantum de  $\text{L}$  in b  $\text{et}$  de b in  $\text{L}$ , ut hic patet inferius.



<sup>37</sup>In b fa  $\text{L}$  mi nulla fit mutatio, <sup>38</sup>talis ratio breviter assignatur. <sup>39</sup>In b fa  $\text{L}$  mi sunt due voces que inter se diversos sonos habent reddere quia inter illas voces est discordantia unius semitonii et sunt inequales. Mutatio autem non potest fieri nisi sub uno signo et eadem voce equali et sono eodem secundum quod diffinitur, <sup>40</sup>ergo in b fa  $\text{L}$  mi non fit mutatio.



<sup>45</sup>In c sol fa ut fiunt sex mutationes, scilicet sol fa, fa sol, <sup>46</sup>iste due mutationes fiunt descendendo tantum de b in  $\text{L}$  et de  $\text{L}$  in b moli. <sup>49</sup>Sol ut ascendendo de b in natura de primo cursu in e acutum et de ultimo in a superacutum, <sup>50</sup>ut sol de natura in b moli et de primo cursu in [-108va-] b acutum et de ultimo in f gravi. <sup>51</sup>Fa ut ascendendo de  $\text{L}$  quadro in natura de primo cursu in f acutum et de ultimo in a superacutum, <sup>52</sup>ut fa descendendo de natura in  $\text{L}$  de primo cursu in  $\text{L}$  acutum et de ultimo in G gravi.

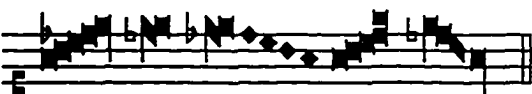


<sup>53</sup>In d la sol re fiunt sex mutationes, scilicet la sol, sol la, la re, re la, sol re, re sol. <sup>54</sup>Prime due mutationes fiunt descendendo tantum de b in  $\text{L}$  et de  $\text{L}$  in b. <sup>55</sup>La re ascendendo de b moli in natura de primo cursu in e acutum et de ultimo in a superacutum, <sup>56</sup>re la descendendo de natura in b moli de primo cursu in b mole acutum et de ultimo in f gravi. <sup>57</sup>Sol re ascendendo de  $\text{L}$  quadro in natura de primo cursu ad f acutum et de ultimo ad a superacutum, <sup>58</sup>re sol de natura in  $\text{L}$  de primo cursu in  $\text{L}$  de ultimo in G gravi.

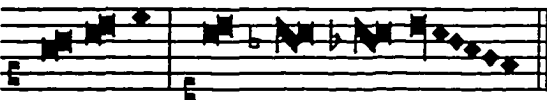


<sup>59</sup>In e la mi et f fa ut et g sol re ut et a la mi re superacutis fiunt mutationes sicut in gravibus ut supradictum est sine ulla variatione modorum. Similiter in b fa  $\text{L}$  mi superacutis nulla fit mutatio, sicut nec in acutis.

[-108vb-] <sup>60</sup>In c sol fa fiunt due mutationes tantum descendendo de b in  $\text{L}$  et econverso, ut hic.



<sup>61</sup>In d la sol fiunt due mutationes tantum descendendo, scilicet la sol, sol la de  $\text{b}$  in  $\text{L}$  et de  $\text{L}$  in b moli, ut hic inferius.

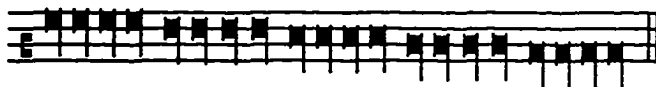


Ratio quare due ultime mutationes de g sol re ut gravi et acuto de a la mi re acutum et superacutum fiunt ascendendo tantum, et quare due mutationes prime de c sol fa ut et de d la sol re, et de c sol fa et de d la sol fiunt descendendo tantum, hec est quia sicut dictum est due voces de b fa  $\text{L}$  mi sunt inequales nec in eodem sono et propter earum inequalitatem fiunt predictae mutationes ascendend [sic] et descendendo tantum in b fa  $\text{L}$  ad noticiam b molis et  $\text{L}$  duri quomodo, scilicet se habeat b mole ad  $\text{L}$  durum et econverso quia in ascensu et descensu propter illas duas figuras fiunt diverse speties cantus propter molliciam b molis et propter duriciam  $\text{L}$  duri.

7. Speties in musica est arsis et thesis omnium vocum secundum rectam [-109ra-] proportionem omnibus diligenter ac proprie observatis. Arsis idem est quod elevatio, thesis

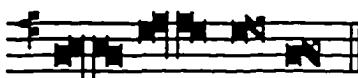
idem est quod depositio. <sup>3</sup>Sciendum quod in cantu sunt tredecim species, nec plures nec pauciores. Quarum specierum novem sunt simplices et quatuor composite. <sup>9</sup>Simplices sunt unisonus, semitonium, tonus, semidytonus, dytonus, diatessaron, tritonus, diapente, diapason. <sup>10</sup>Composite sunt semitonium cum diapente, tonus cum diapente, semidytonus cum diapente, dytonus cum diapente.

Unisonus est ordinatio plurium vocum in eadem linea vel in eodem spatio existentium, vel sic: <sup>12</sup>unisonus est quandocumque plures note figure simplices vel neume in eodem spatio vel linea collocantur, ut hic.

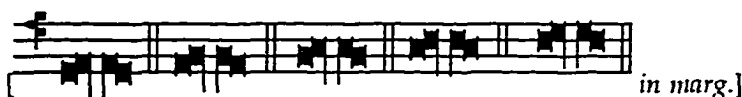


Neuma est quando plures note cuiuscunque speciei super unam syllabam collocantur.

<sup>20</sup>Semitonium est coniunctio duarum vocum semiplenam et imperfectam elevationem et depositionem faciens [secundum aliquo intervallo. *in marg.*] <sup>21</sup>Et dicitur semitonium non a semis quod est dimidium ut ait Boetius sed a semis quod est imperfectum <sup>22</sup>quasi due voces semiplenum sonum facientes. <sup>24</sup>Et invenitur inter  $\text{L}$  et c et inter e et f et inter a et b gravibus, acutis et superacutis, ut patet hic inferius.

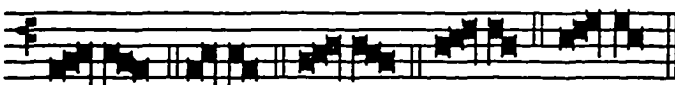


[ -109rb- ] <sup>14</sup>Tonus est legitima spatii magnitudo [diffinitio Guidonis *in marg.*] plenum et perfectum sonum emittens <sup>15</sup>vel sic: tonus est coherentia [diffinitio Boetii *in marg.*] duarum vocum plenam et integram



elevationem vel depositionem reddens sine aliquo intervallo. <sup>19</sup>Et invenitur [*sic*] inter G et a et inter a et  $\text{L}$  et C et D et E et F et G et b et c gravibus, acutis et superacutis.

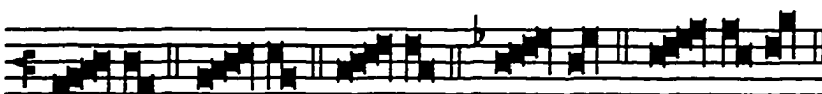
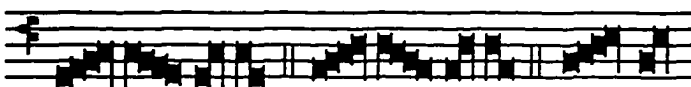
<sup>29</sup>Semidytonus est coniunctio trium [alio nomine vocatur tertia imperfecta *in marg.*] vocum seriatim vel prolatim et est dispositio toni cum additione semitonii <sup>30</sup>vel in principio vel in fine <sup>31</sup>et figuratur duobus modis tantum, scilicet Re mi fa vel re fa, mi fa sol vel mi sol ascendendo et descendendo. <sup>32</sup>Et dicitur semidytonus quia dytonus imperfectus est <sup>33</sup>et invenitur inter A et C et inter  $\text{L}$  et D et inter D et f et inter e et g et inter g et b gravibus, acutis et superacutis, ut hic.



<sup>25</sup>Dytonus est coniunctio trium vocum seriatim vel prolatim [alio nomine dicitur tertia perfecta *in marg.*] et est dispositio duorum tonorum. <sup>26</sup>Et dicitur a dya quod est duo et tonus quia constat ex duobus tonis. <sup>27</sup>Et figuratur duobus modis tantum, scilicet ut re mi vel ut mi, fa sol la vel fa la <sup>28</sup>et invenitur inter G et  $\text{L}$ , et C et e, et f et a, et b et d [gravibus, acutis et superacutis, *in marg.*] ascendendo et descendendo, ut hic patet.



[-109va-] <sup>34</sup>Diatessaron est coniunctio quatuor vocum seriatim vel prolatim. Et est dispositio duorum tonorum cum additione semitonii <sup>35</sup>vel in principio vel in medio vel in fine. <sup>37</sup>Et dicitur diatessaron a dia quod est de et tessaron quod est quatuor. <sup>36</sup>Et figuratur tribus modis, scilicet ut re mi fa vel ut fa, re mi fa sol vel re sol, mi fa sol la vel mi la, ascendendo et descendendo. <sup>38</sup>Et invenitur inter G et C, et inter a et d, et inter  $\text{L}$  et e, et inter c et f, et inter d et g, et inter e et a, et inter f et b gravibus, acutis et superacutis, ut hic patet inferius.



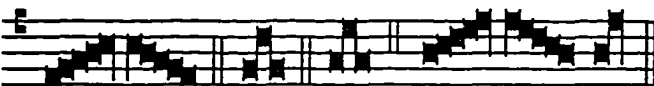
<sup>39</sup>Tritonus est coniunctio quatuor vocum et est dispositio trium tonorum semitono carens. <sup>40</sup>Et dicitur a tris quod est tres et tonus quia [-109vb-] tres tonos continet. <sup>41</sup>Et invenitur inter f et  $\text{L}$ , et inter b et e gravem, acutum et superacutum, ut patet hic inferius.



<sup>42</sup>Item tritonus potest fieri ex quinque vocibus, scilicet duobus tonis et duobus semitoniis pro uno tono et sic quinque voces equipolent predictis quatuor.



<sup>44</sup>Diapente est coniunctio quinque vocum seriatim vel prolatim ascendendo et descendendo. <sup>47</sup>Et dicitur a dia quod est de et pente quod est quinque quia quinque voces continet. <sup>45</sup>Et est dispositio trium tonorum cum additione unius semitonii aut in principio aut in fine aut in medio <sup>46</sup>et [modis in marg.] quatuor figuratur, scilicet ut re mi fa sol vel ut sol, re mi fa sol la vel re la, mi fa sol la mi vel mi mi, [fa sol la mi fa vel fa fa in marg.] <sup>48</sup>Et invenitur inter g et d, et inter a et e, et inter c et g, et inter d et a, et inter e et  $\text{L}$ , et inter f et c gravibus, acutis et superacutis, ut patet hic inferius.



[-110ra-]



[lineae vacuae]

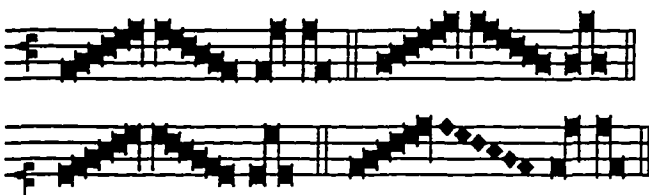
<sup>49</sup>Diapason est coniunctio octo vocum [alio nomine octava dicitur *in marg.*] et est dispositio quinque tonorum cum duobus semitoniis qui equivalent tonum perfectum. <sup>50</sup>Et dicitur diapason a dia quod est de et pason totum eo quod continet sub se omnes proprietates. <sup>51</sup>Et invenitur de quacumque littera simili ad similem ascendendo et descendendo, seriatim vel prolatim, ut hic patet inferius.



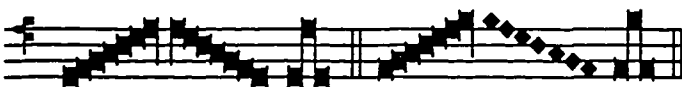
<sup>53</sup>Semitonium cum diapente, id est hexacordum [alio nomine vocatur se octava imperfecta *in marg.*] est coniunctio sex vocum. Et constat ex diapente et semitonio [-110rb-] ascendendo et descendendo seriatim vel prolatim, ut hic patet inferius.



<sup>52</sup>Tonus cum diapente est coniunctio [alio nomine sexta perfecta vocatur *in marg.*] sex vocum, scilicet toni cum diapente, ascendendo et descendendo, seriatim vel prolatim, ut hic inferius.



<sup>55</sup>Semidytonus cum diapente est coniunctio septem vocum et componitur ex diapente et semidytono seriatim vel prolatim, ut hic.



[-110va-]



Notandum quod secundum quosdam diapason componitur sicut diapente cum semitonio et tono et semidytono et dytono.

Item notandum est exacordum dicitur ab exa quod est sex et corda, corde eo quod constat ex sex vocibus Et epta cordum septima dicitur ab epta quod est septem et corda, corde. Et secundum quosdam in his duabus speciebus non fit divisio aliqua cum semitonium vel tonus componitur cum diapente, et similiter cum semidytonus vel dytonus componitur cum diapente. Et sic secundum illos non nisi undecim species cantus.

*QUOD MUSICA EST VERACITER CANENDI AD OMNEM PERFECTUM CANTUM VIA (F, fols. 56r–60v)*

1. <sup>12</sup>Quod musica est veraciter canendi ad omnem perfectum cantum via facilis et aperta. <sup>13</sup>Dicitur autem musica a mos quod est aqua et seycos quod est scientia iusta aquam inventam.

<sup>15</sup>Dividitur autem musica in tres partes, videlicet in musica plana et in musica mensurata et strumentali. <sup>16</sup>Musica vero plana dicitur quia ad honorem nec non gloriose virginis marie et omnium sanctorum in ecclesiis dei plane *[[tracta]]* tractum equaliter ex omnibus longe profertur. <sup>17</sup>Musica nec non mensurata dicitur que de numero proportionaliter relato ad sonos legitur. <sup>18</sup>Musica vero strumentalis dicitur que instrumentis concuritur debite. Stet finis et dicat scriptura. <sup>19</sup>Laudate dominum in sono et tube, laudate eum in psalterio et ch<sup>u</sup>itera. De duobus partibus predictis nichil ad presens dicamus sed solum de prima parte, id est de musica plana aliquid dicam quia omnibus ingredientibus ad artem musice sine istis regulis presumo remove istum errorem et dare illis declarationem ut inferius patebit.

2. <sup>2</sup>Et primo dicimus quia sicut sunt septem dies in ebdomoda ita sunt septem littere in musica, neque plures neque pauciores, videlicet a b c d e f g, <sup>3</sup>et iste littere predicte dicuntur graves quia omnes note que inveniuntur infra predictas litteras habent sonum gravem, et prima littera est a, posita in a re, quia ibi fuit principium musice quia gama ut [-56v-] appositum fuit postea. Et ideo incipimus in a re et finimus in g sol re ut, et iste dicuntur graves. Postea in mediate veniunt acute et dicimus quod ille sunt septem alie littere et incipiunt in a la mi re. Et terminantur usque ad g sol re ut et qualiter dicuntur acute quia omnes note que cantantur per ipsas sunt acute. Postea veniunt superacute et dicimus quod sunt quinque, scilicet a b c d e, et incipiunt in a la mi re et terminantur in e la. <sup>6</sup>Et qualiter dicitur superacute quia habent redere sonum superacutum et altiore super acutas sicut acutas super graves et cetera.

3. <sup>12</sup>Et primo dicimus gama ut in linea sive corda <sup>13</sup>et ibi est primum ♮ quadrum. Et dicimus quod sunt tres proprietates cantus, scilicet ♮ quadrum, naturam *[sic]*, b molle si vero tonum septem. Versus: G tibi sive quadrum, C naturam ostendit ab b molle protedit *[sic]*.

<sup>14</sup>Et postea dicimus a re in spatio et habet unam litteram et unam vocem. A est littera, re est vox, <sup>15</sup>et re cantatur per ♮ quadrum et descendit ab ut de gamaut et dicimus ut re.

<sup>16</sup>♮ mi in linea et habet unam litteram et unam vocem, b est littera, mi est vox <sup>17</sup>et descendit a gama ut et dicimus ut re mi.

<sup>18</sup>C fa ut in spatio et habet unam litteram et duas voces, c est littera, fa, ut sunt voces, <sup>19</sup>fa cantatur per ♮ quadrum et descendit ab ut de gama ut, et [-57r-] dicimus ut re mi, fa ut cantatur per naturam gravem et descendit a se ipso et ibi est principium nature gravis.

Unde versus: G tibi sive quadrum, C natura ostendit et ecce quod querimus.

20d sol re in linea et habet unam litteram et duas voces, d est littera, sol re sunt voces, 3.21sol cantatur per  $\text{b}$  quadrum et descendit ab ut de gama ut. Unde dicimus ut re mi fa sol, re cantatur per naturam et descendit ab ut de c fa ut et dicimus ut re.

E la mi in spatio habet unam litteram et duas voces, e est littera, la mi sunt voces, la cantatur per  $\text{b}$  quadrum et descendit a gama ut, unde dicimus ut re mi fa sol la, mi cantatur [[per]] per naturam et descendit ab ut de c fa ut et dicimus ut re mi.

f fa ut in linea habet unam litteram et duas voces, f est littera, fa ut sunt voces, fa cantatur per naturam et descendit ab ut de c fa ut, ut cantatur per b molle et descendit a se ipso et ibi est principium b molle.

Unde versus: G tibi sive quadrum, C naturam ostendit ab f, b molle descendit et ecce quod querimus.

G sol re ut in spatio et habet unam litteram et tres voces, G est littera, sol re ut sunt voces, sol cantatur per naturam et descendit ab ut de c fa ut, re cantatur per b molle et descendit ab ut de f fa ut, ut cantatur per  $\text{b}$  quadrum acutum [-57v-] et a se ipso descendit et ibi est principium  $\text{b}$  quad<r>i acuti.

Unde versus

A la mi re in linea habet unam litteram et tres voces, a est littera, la mi re sunt voces, la cantatur per naturam et descendit ab ut de c fa ut et hic est finis nature gravis, mi cantatur per b molle et descendit [sic] ab ut de f fa ut, re cantatur per  $\text{b}$  quadrum acutum et descendit ab ut de g sol re ut.

B fa  $\text{b}$  mi in spatio habet duas litteras et duas voces, b $\text{b}$  sunt littere, fa mi sunt voces, fa cantatur per b molle et descendit [sic] de f fa ut, mi cantatur per  $\text{b}$  acutum et descendit [sic] ab ut de g sol re ut.

C sol fa ut in linea habet unam litteram et tres voces, c est littera, sol fa ut sunt voces, sol cantatur per b molle et descendit a f fa ut, fa cantatur per  $\text{b}$  quadrum. acutum et descendit [sic] ab ut de g sol re ut, ut cantatur per naturam acutam et a se ipso descendit [sic] ibi est principium nature acute.

Unde versus: g tibi et cetera et et cetera [sic] quod querimus.

D la sol re in spatio habet unam litteram et tres voces, d est littera, la sol re sunt voces, la cantatur per b molle et descendit [sic] ab ut de f fa ut et hic finis b mollis gravis, sol cantatur per  $\text{b}$  quadrum acutum et descendit ab ut de g sol re ut, re cantatur per naturam acutam et descendit [sic] ab ut de c sol fa ut.

E la mi in linea habet unam litteram et duas voces, e est littera, la mi sunt voces, la cantatur per  $\text{b}$  quadrum acutum et descendit [sic] ab ut de [-58r-] g sol re ut et hic est finis $\text{b}$  quadri acuti, mi cantatur per naturam acutam et descendit [sic] ab ut de c sol fa ut.

f fa ut in spatio habet unam litteram et duas voces, fa cantatur per naturam acutam et descendit [sic] ab ut de c sol fa ut, ut cantatur per b molle acutam et a se ipso descendit [sic]. Et ibi est principium b mollis acuti.

Unde versus: G et cetera et et cetera [sic] quod querimus.

G sol re ut in linea habet unam litteram et tres voces, G est littera, sol re ut sunt voces, sol cantatur per naturam et descendit [sic] ab ut de c sol fa ut, re cantatur per b mol<l>le et descendit [sic] ab ut de f fa ut acuto, ut cantatur per  $\text{b}$  quadrum superacutum et a se ipso descendit [sic] et hic est principium  $\text{b}$  quadri superacuti:

A la mi re in spatio habet unam litteram [sic] et tres voces, a est littera, la mi re sunt voces, la cantatur per naturam acutam et descendit ab ut de c sol fa ut, mi cantatur per b mole acutum et descendit [sic] ab ut de f fa ut, re cantatur per  $\text{b}$  quadrum superacutum et descendit ab ut de g sol re ut.

b fa ♭ mi in linea habet duas litteras et duas voces, b ♭ sunt littere, fa mi sunt voces, fa cantatur per b molle et descendit [sic] ab ut de f fa ut, mi cantatur per ♭ quadrum et descendit [sic] ab ut de g sol re ut.

c sol fa in spatio habet unam litteram et duas voces, c est littera, sol fa sunt voces, sol cantatur per b molle acutum et descendit ab ut de f fa ut, fa cantatur per ♭ quadrum superacutum [-58v-] et descendit [sic] ab ut de g sol re ut.

d la sol in lineam [sic] habet unam litteram et duas voces, la cantatur per b molle ab ut de f fa ut, sol cantatur per ♭ quadrum superacutum et descendit [sic] ab ut de g sol re ut.

E la in spatio habet sola <m> littera <m> et sola <m> voce <m>, e est littera, la est vox, la cantatur per ♭ quadrum superacutum et descendit ab ut <de> g sol re ut.

Et est notandum quod omnes note que in gravibus manent in linea in acutis vero in spatio.

5. <sup>1</sup>De mutationibus. <sup>2</sup>Dico quod omnis mutatio in ut et in re et in mi desinens tales dicuntur ascendere. <sup>3</sup>Item omnis mutatio in fa in sol et in la dicuntur descendere. <sup>11</sup>Postea dicimus quod in gamma ut, in a re et b mi nulla potest fieri mutatio <sup>10</sup>quia ad mutationem fiendam [sic] necesse est quod sint due voces et ideo in una sola voce non potest fieri mutatio secundum artem modernam. Sed ex parte antiquorum bene possumus quia Magister botius [sic] posuit ibi alias notas ad invicem coniunctas. <sup>9</sup>Mutatio fuit inventa causa necessitatis.

<sup>13</sup>Nota quod in c fa ut sunt due mutationes, scilicet fa ut et ut fa; <sup>14</sup>fa ut ascendendo de ♭ quadro in natura [sic], <sup>15</sup>ut fa descendendo de natura in ♭ quadro.

<sup>16</sup>In d sol re fiunt due mutationes, scilicet sol re, re sol; <sup>17</sup>sol re fit ascendendo [sic] de ♭ quadro in naturam, <sup>18</sup>re sol fit descendendo [sic] econverso.

<sup>19</sup>In e la mi fiunt due mutationes, scilicet la mi, mi la; <sup>20</sup>la mi fit ad ascendendo [sic] de ♭ quadro in naturam et hic est finis ♭ quadri gravis, <sup>21</sup>mi la fit descendendo [sic] econverso.

[-59r-] <sup>22</sup>In f fa ut fiunt dues mutationes, scilicet fa ut, ut fa; <sup>23</sup>fa ut fit ascendendo [sic] de natura in b molle, <sup>24</sup>ut fa econverso [sic] et hic principium b mollis.

<sup>25</sup>In g sol re ut fiunt sex mutationes, scilicet [sic] sol re, re sol, sol ut, ut sol, re ut, ut re, et est notandum quod ubi sunt due voces ibi sunt due mutationes, ubi tres voces ibi sex mutationes, <sup>26</sup>sol re fit ascendendo [sic] de natura in b molle, <sup>27</sup>re sol fit descendendo [sic] econverso, <sup>28</sup>sol ut fit ascendendo de natura in ♭ quadro [sic] <sup>29</sup>ut sol fit descendendo econverso, <sup>30</sup>re ut, ut re, Iste due mutationes fiunt tantummodo de b molle grave in ♭ quadro acutum et de ♭ quadro in b molle et hic est principium ♭ quadri acuti g sol re ut.

<sup>31</sup>In a la mi re fiunt sex mutationes, scilicet la mi, mi la, la re, re la, mi re, re mi; <sup>32</sup>la mi fit ascendendo [sic] de natura in b molle, <sup>33</sup>mi la fit ascendendo [sic] econverso, <sup>34</sup>la re fit ascendendo [sic] de natura in ♭ quadro, <sup>35</sup>re la fit descendendo [sic] de ♭ quadro in naturam; <sup>36</sup>mi re, re mi iste due mutationes tantummodo fiunt descendendo de b molle in ♭ quadro et econverso de ♭ quadro in b molle.

<sup>37</sup>In b fa ♭ mi non potest fieri mutatio <sup>38</sup>quia de de [sic] sola voce mutatio fieri non potest ut dictum est superius.

Interrogatio discipuli ad Magistrum. Quare Magister non potest fieri mutatio. Responsio Magistri: dico quod ubi sunt due voces eundem sonum facientes. Dico quod ibi sunt due in uno spatio. Quia fa est perfectus tonus et perfectus [-59v-] ori pleno. Mi est tonus imperfectus et profertur valde levis. Ideo fa cum mi bene sonant ad invicem coniuncte, alia ratio est ...quia ibi sunt due voces et sunt ibi due claves et ideo unaquaque istarum habet suam vocem.

Nota quod cantus ascendit [sic] in b fa ♭ mi et primo ascendit [sic] in f a <n>e quam ascendit in c debemus cantare per b molle causa tritonum evitandi, quia tritonus non facit





Century): *Quaestiones et Solutiones*, Colorado College Music Press Critical Texts, no. 2

(Colorado Springs: Colorado College Music Press, 1977).

IHESVS. 1. Incipiunt questiones et solutiones. <sup>1</sup><A>d videndum tam mensurabilis cantus quam inmensurabilis musica, <sup>2</sup>primo videndum est quid sit introductio et unde dicatur; <sup>3</sup>secundo quot modis dividitur; <sup>4</sup>tertio quid sit musica et unde dicitur; <sup>6</sup>quarto quid subiectum et predicatum. Sed antequam dicamus de omnibus istis.

<sup>9</sup>Primo videndum est quid sit introductio. Introductio est aliquorum compendiorum [quid est introductio et unde *in marg.*] traditio que ad totius artis musices intelligenda est necessaria. <sup>11</sup>Et dicitur introductio ab intro quod est intus et duco, ducis quia ducit intus artem et ab ignorantia ad scientiam. <sup>10</sup>Vel sic: introductio est brevis et aperta demonstratio.

<sup>12</sup>Tertio quid sit musica et unde dicitur et quot modis dividitur. Musica est scientia recte canendi et magistra [quid est musica et unde *in marg.*] modulandi ad omnem perfectionem cantus. Et est etiam via facilis et aperta atque introducens et faciens facile quod in se apparet esse difficile. Bernardus refert. Musica est ars humana spectabilis ac suavis cuius sonus in celo et in terra modulatur. <sup>13</sup>Dicitur autem musica a moys quod est aqua et yquos quod est scientia: quia ista scientia iuxta aquas inventa fuit.

In tria genera diversarum specierum dividitur musica, scilicet mundanam, humanam et instrumentalem. Mundanam idem est quod celi volubilitate et semper super oris collisione conficitur. Et hec armonia muncupatur celestis musica, vel dulcis cantilena dicitur. Humana musica est que ex hominis capite canora voce profertur. [-47v-] Musica instrumentalis est que instrumentis est constituta, ut in organis et aliis instrumentalibus.

[in tria genera dividitur musica *in marg.*] Et dividitur in tria genera, scilicet intactus, inflatus et pulsus. Intactus in sol fa mi; inflatus ut in tubicinis, scilicet trobeci et fistule et his similia; impulsus ut in citharis et libutis [in quinque spetiei genera *in marg.*] et cetera.

Musica autem humana dividitur in quinque genera spetierum, scilicet in metricus, prosaycus, different [sic], indifferens et communis. Metricus dicitur a meteon grece latine scandens. Ut antiphona "facti sumus sicut consolati." Prosaycus quidem dicitur eo quod non retinet regulam sequens, ut sunt Alleluya. Indifferens quidem dicitur eo quod non habet plenam differentiam. Differentis quidem dicitur eo quod habet plenam differentiam. Communis dicitur eo quod habet autenticam elevationem et placalem dispositionem.

Constat etiam musica secundum antiquos ex septem symphonis, scilicet unisono, tono, semitono, ditono, semiditono, diatesseron et diapente. Quid est diaphonia? Id est distinctio sonat quam nos organum vocamus et invicem disiuncti et naturali eas concordas consonantes sentimus. Symphonia idem est quod aperta vorum copulatio, id est quod vox voci aperta coniungitur et ordinatur.

Notandum est quod dicta scientia composita fuit et figurata in sinistra manu in qua sunt viginti duo signa b numero duplicata. Et septem sunt lictere latine videlicet a b c d e f g. Et una est littera greca que ponitur et figuratur in princio [sic] manus. et ista littera vovocatur [sic] [-48r-] Γ gamma et apposita est ad perpetuam memoriam philosophorum.

2. <sup>2</sup>Ratio quia sicut sunt septem dies in ebdomata, ita sunt septem littere in musica. Quarum prime dicuntur graves, secunde acute, tertie superacute. <sup>3</sup>Et distribuitur hoc modo: a principio manus usque ad g secundum dicitur gravis quia voces graves sunt et gravem cantum reddunt. <sup>4</sup>Et a secundo g usque ad tertium g dicitur acutis quia voces acute sunt et acutum cantum reddunt. <sup>5</sup>Et a tertio g usque ad finem dicitur superacutum quia voces superacute sunt, scilicet in supranis vocibus et in capite et cantum superacutum reddunt.

Unde versus: Octo prime sunt graves, scribunturque capitales. Septem diminuas. quas hinc vocabis acutas. Relique sunt quinque et nomina sunt supraacute.

<sup>123</sup>Subiectum in musica est aliquarum vocum seu pausationum coniunctio <sup>124</sup>sive legitima proportio in omnibus suis modis diligenter observatis. Cui parte philosophie supponitur. Respondetur Ars metricæ.

<sup>13</sup>Si queratur que sit vox requiritur in Marchecto in capitulo nono et decimo unde dicta est et ibi declarat.

Quomodo ordinatur voces in manu, scilicet Gamma ut ponitur in linea. A re in spatio ponitur. ♪ mi in linea. C fa ut in spatio. Et sic sequuntur alie per ordinem. Vide quia littere que in gravibus in linea notantur, in acutis in spatio demonstrantur et que in acutis in spatio sunt notate, in superacutis [-48v-] in linea sunt scripte. Preterea sciendum est quod b rotundum in dispositione litterarum non debet proprie lineam aut spatium occupare nec locum naturaliter habere quia non est de computo septem litterarum musicalium. Si enim esset aliqua de septem per duplarem consonantiam alicui gravium vel superacutarum responderet. Gravibus quippe per duplarem respondere non potest consonantiam quia minus esset semitonium. Superacutis vero per diapason nequaquam consonat quia semitonium superhabundat. Vocatur enim apud Grecos b rotundum sive menon [sic] hoc est accidens vel accidentale quod enim est accidentale non est proprium et quod non est proprium non est naturale. Inventum est autem b rotundum ad temperandum tritonum quia super scilicet naturaliter invenitur ubi enim cantus asperius sonat b rotundum loco ♪ quadri ad temperandam [sic] tritoni duritiam furtim interponitur. Sed ubi cantus ad suam naturam recurrerit statim debet auferri. Igitur quia b rotundum est accidens vel accidentale et accidens potest adesse vel abesse sine corruptione subiecti ubi necessarium fuerit apponatur. Nec id te lateat quod predictis septem litteris voce et forma differentibus: associate sunt notule seu voces sex, scilicet ut re mi fa sol la que ex duabus primis proprietatibus, scilicet ♪ quadri et nature quinquies repetite ponuntur et ex tertia, scilicet b rotundi proprietate bis interponi noscuntur. Sunt ergo note omnes in manu numero quadraginta due numerate, videlicet a Gamma ad [-49r-] e la ultimum vincti sedibus collocate.

Et nota quod sillaba ut semper est caput et principium aliarum sibi succedentium sillabarum, [quid est ut *in marg.*] scilicet re mi fa sol la auctoritate Guidonis, quod Santa ecclesia quas supra hymnum sancti Johannis baptiste ponit hoc modo: Ut: "Ut queant la[x *sup.* p]lis [sic]." Re: "Resonare fibris." Mi: "Mira gestorum." Fa: "Famuli tuorum." Sol. "Solve poluti." La. "Labii reatum sancte Iohannes." Harum enim omnium sillabarum sex aggregatio dicitur in cantu deductio: quia deducit modulantium voces ex gravitate in acumen et ex acumine in gravitatem. Et quia illa nota sive sillaba ut septies in manu reperitur, ideo dicimus quod septem [formationes *in marg.*] sunt ductiones manus seu palme. Unde Prima deductio seu [1 *in marg.*] formatio habet principium in G sub gravi et finem in e gravi et cantatur per ♪ quadrum grave. Secunda habet principium [sic] in C [2 *in marg.*] gravi et finem in a acuto et cantatur per naturam gravem. Tertia [3 *in marg.*] habet principium in f gravi finem vero in d acuto et cantatur per b molle grave. Quarta habet principium in g acuto [4 *in marg.*] et finem in e acuto et cantatur per ♪ quadrum acutum. Quinta [5 *in marg.*] habet principium in c acuto finem vero in a superacuto et cantatur per naturam acutam. Sexta habet principium in f acuto [6 *in marg.*] et finem in d superacutum et cantatur per b molle acutum. Septima [7 *in marg.*] et ultima habet principium in g superacutum finem vero [-49v-] in e superacuto et cantatur per ♪ quadrum superacutum.

Nota quod ut formatur a pulmone, re a gucture, mi a palato, fa a dentibus, sol a [quid est nota *in marg.*] labiis, la a lingua et cetera. Nota est quedam figura que representat voces musicales et sub duabus clavibus et tribus proprietatibus est tecta. Nota quod in cantu mensuratio, si enim queratur: quid est essenziale in musica mensurata, respondetur quod est nota quadra et distincta ab omni accidente, ut exemplum: ■■■■. Sciendum est quod istius essentialis, scilicet note quadre in mensurata musica, quatuor accidentia, scilicet cauda vel

proprietas pausa pontellus et illud signum quod a vulgo falsa musica dicitur a musicis vero colorata muncupatur.

Sequitur ergo quod est differentia inter caudam et proprietatem, quia cauda nominatur solum illa linea que est coniuncta notis a parte dextra vel sinistra inferius protracta, et etiam hec cuda [sic] dicitur proprietas. Sed alie linee notis coniuncte quecumque sint a quacumque parte posite vel protracte superius. Ita supra proprietates quod nullo modo dicuntur caude. Ideo omnis cauda proprietas et non coniunctio hoc est in notis ligatis. Si queratur quare fuit diversitas notarum tanta in talibus proprietatibus coniuncte, dic quod oportuit sic esse distintas et per diversas lineas et spatia situatas, ut cantus alie et submisse a cantoribus cantaretur quia si omnes in uno spatio vel linea ponerentur non esset cantare sed ululare. Si queratur quare nota cui additur linea a parte dextra [sic] est perfectior [-50r-] et longior aliis notis, respondetur quod latus dextrum est perfectior sinistro.

3. Proprietas in musica est derivatio plurium vocum ab uno eodemque principio. [quid est proprietas *in marg.*] Existentibus igitur modis sive proprietatibus tribus totius cantus pro ipsarum habenda notitia, cuilibet unica est lictera assignata. Nam proprietati nature [nota quod sunt tres *in marg.*] data est lictera c, b molli, f et  $\text{b}$ quadro [sic], G quibus vocum principium proprietatum conceditur, scilicet ut vox: quam ceteri sibi ordinate voces, videlicet re mi fa sol la per eandem proprietatem sequuntur. Ut enim vox in c locata cum suis ordinatis vocibus. Sed re mi fa sol la per proprietatem nature in gravi vel acuto cantatur, in f per b molle, in g per  $\text{b}$ quadrum. Unde versus: Nature modum per c cantare solemus; f b mollo [sic] notat; sed g  $\text{b}$ quadrum ostendit, et aliud.

Sciendum est quod proprietates cantus sunt tres, scilicet  $\text{b}$ quadrum, natura et b molle et omnes incipiunt in ut et terminant in la cum suis aliis omnibus notis. Unde versus: C naturam dat; f b molle tibi signat; G queque  $\text{b}$  durum te cognoscas canitur.

[Tit.: De questionibus et solutionibus.] Oritur questio. Primo queritur: Quare sunt septem littere [1 *in marg.*] musicales et non plures neque pauciores. Secundo: Quare [2 *in marg.*] sunt iste lictere, scilicet a, b, c, d et cetera musicales et non alie alphabeti. Tertio: Quare potius iste littere sunt musicales et non alie [3 *in marg.*] [-50v-] cum sint decem et octo littere alphabeti. Quarto: Quare potius iste littere, videlicet d, e, f, g grave finitio tonorum et non alie. Quinto: Quare non sunt corde cum octo sint toni.

[1 *in marg.*] Solutio primo. Tres sunt dispositiones vocis vel tribus modis disponuntur voces. Prima dispositio habetur in insummitate, secunda inequalitate, tertia infinitate. Vel sic disponuntur per graves et iste sunt infinitate. Et una quelibet istarum recipit in se octo cordas, scilicet de littera ad litteram et licet sint octo voces tamen sunt septem littere et ideo non possunt esse plures neque pauciores.

[2 et 3 *in marg.*] Solutio secundo et tertio. Respondetur. Primo: Iste lictere, scilicet a, b, c, d, e, f, g sunt principales in scriptura et in litteratura, ideo debent esse in musica principales sicut sunt principales in aliis scientiis. Secundo: iste lictere supernominate sunt consonantiores aliis licteris, ideo in musica coniunguntur que portare debent musicale pondus, scilicet consonantie quia in musica consonantia consonantie applicantur et predictae littere ratione earum consonantiarum in musica coniunguntur.

[4 *in marg.*] Solutio quarto. Dicit quia si finirentur in a gravi et cetera, autentici non haberent descensum et ascensum, nec etiam placale, ut dicit Marchectus. Preterea dicit Boetius quod ubicumque finis ibi utilitas et musica semper considerat suum finem. Unde si finis poneretur in G, scilicet  $\Gamma$  vel in a gravi, dicit etiam Boetius quod gravis raucatio [et ubi *infra lin.*] [-51r-] et ubi raucacio ibi nulla utilitas, ergo finis cantus non esset inutilitate. Et si finis cantus esset in acutis vel in superacutis quia ibi alteratio nulla utilitas ratione sumitatis ergo finis non debet esse neque in gravibus supradictis neque in acutis sed in mediis, scilicet D E F G graves ubi est utilitas quia dicit Boetius ubicumque medium ibi utilitas. Reperitur ergo de iure

dicuntur esse corde finales supradicte littere. Sed notandum est quod invenitur alia littera finalis scilicet c gravis, ut est illa antiphona "Assumpta est Maria in celum" et cetera, in a acuto ubi finitur "Hec dies," "Requiem eternam" et cetera. Sed cantus qui finitur in a acuto et simililibus [sic] sunt placales et cantus qui finitur in c gravi sunt septimi toni.

Solutio quinto. Toni autentici sunt quatuor, scilicet primus, tertius, quintus et septimus. Alii quatuor vocantur annexi cantus vel minores secundum quosdam, scilicet secundus, quartus, sextus et octavus. Isti cantus videlicet minores seu annexi formantur a predictis maioribus seu autentici [sic] et ubicunque maiores habent finem ibi et minores. Ratio quia quecumque formatur ab aliquo sapit naturam ipsius a quo formatur et quolibet formatum recipit naturam sue forme, ergo de iure ubicunque desinunt principales ibi et secundarii finem habere debent. Igitur ubicunque primus ibi et secundus ubi tertius ibi et quartus et sic de aliis et quia non sunt plures cantus principales a quibus formantur nisi quatuor [sic]. Ideo sunt corde finales et non octo cum sint octo toni.





[51v-] Queritur quomodo sunt sex note, scilicet ut re mi fa sol la per quas omnis cantus regulatur et cantatur. Questio oritur de numero notarum primo videtur quod hec regula sit falsa, scilicet quod sex sunt note et cetera. Respondetur: Musica inventa fuit ad consonantiam dyapason et dyapason est speties consonantia continens quia continet se octo notas vel componitur ex octo vocibus et ars est collectio preceptorum ad eum finem tendentium. Ergo si sunt octo voces in dyapason ergo debent esse tot note et non sex.

Solutio verum est quod musica fuit inventa ad consonantiam, id est ad consonantiam perfectam. Sed diapente est speties perfecta consonans et non dyapason ratio quia dyapason non potest haberi nisi in divisione cantus ratio quod inter unum sonum ex parte inferiori. Et unisonus est ex parte superiori debet esse longa pausatio sex temporum id est pausatio bene longa unde dyapason non potest bene cantari neque inveniri nisi inter duas partes et est speties que non potest cantari vel coniungi. Ergo non est speties perfecta consonans vel non gerit perfectam consonantiam. Sed dyapente potest cantari et haberi coniunctim, ergo est species perfecta consonans. Ideo in dyapente quod est speties perfecta consonans inventa fuit musica. Et dyapente habetur de ut in sol quod continet in se quinque notas et postea additur et ut ibi fiat exacorde de ut in la et hoc ad cognoscendum dyapente consonantiam perfectam et ratio est quia secundum dictum philosophorum. Contraria contrarietas conprobatur et alibi opposita iuxta se opposita magis elucescunt. Unde [52r-] habendo dyapente spetiem perfectam habetur exacordum que est species imperfecta de ut in la et continet in se sex notas, scilicet ut, re, mi, fa, sol, la. Ergo sunt sex note in musica et non octo ut tu dicis.

Oritur questio quomodo sunt sex note in musica et non plures neque pauciores. Solutio hec est quia tres sunt numero notarum, videlicet imperfecta, perfecta et perfectissima. Imperfecta continet in se mi fa, perfecta continet in se ut re et fa sol, perfectissima continet in se re mi et sol la. Et quia non plures neque pauciores sunt numero notarum nec indigent alia vel aliqua perfectione et ideo non sunt plures neque pauciores nisi sex. Et quare sunt tres numero notarum et non plus quam minus. Quia ut concludunt doctores musices, musica immitatur grammatica in quantum potest. Et in grammatica invenitur tres esse gradus comparisonis, scilicet positivus, comparativus et superlativus, sic suo modo in musica ad positivum. Ymitatur natura imperfecta et sic habetur fa mi, ad comparativum ymitatur natura perfecta et sic habetur ut re fa sol ad superlativum ymitatur natura perfectissima et sic habetur re mi et sol la.


Oritur questio quare iste note, scilicet ut, re, mi, fa, sol, la, istis nominibus muncupantur. Solutio quia auctor cum ista scientia habuisse a Grecis iuxta illud quicquid habemus a fonte Grecorum derivatum est voluit imitari Grecos ad idem tali modo sit prolixitatem in ipsis, scilicet principium secutio meditatio clavis sup[52v-]positio et alteratio. Tantum valet ergo ut quantum principium, re quantum secutio, mi quantum mediatio, fa quantum clavis, sol quantum suppositio, la quantum alteratio et ideo vocatur et cetera.

[Tit.: De clavibus.] [quot sunt *in marg.*] Sciendum est quod in manu quatuor species clavium habemus, scilicet clavis universalis, regularis, principalis et capitalis. Claves universales sunt viginti, scilicet omnes littere manus quia sicut mediante clave intramus in domum et videmus illud quod intus est, sic mediante littera habemus noticiam nominis notarum que in hac littera supposite sunt et cetera. Item claves regulares sunt septem, scilicet in omnibus locis ubi est fa iste sunt dicte regulares quia habent omnes viginti supradictas litteras regulariter et ut dix [sic] *supra* mediante clave et cetera. Et sic habemus mediante clave noticiam acuitatis et depressionis cantus. Et nota quod iste tales claves semper ponuntur imedeo [sic] melodie. Ac etiam nota quod ubi invenitur clavis ibi iudicatur sua proprietas hoc modo: si clavis est in litteris gravibus: illa proprietas est gravis; si clavis est in litteris acutis illa proprietas est acuta, et sic de singulis et cetera.

4. Nota quod claves principales sunt tres, scilicet f fa ut gravis b fa acutus et c sol fa ut et iste semper ponuntur in libris. Alie vero non mittuntur nisi per figuram. Prima clavis vocatur natura gravis et figuratur vel signatur hoc modo: . Secunda vero vocatur b mollis acutus et signatur hoc modo: . Tercia vocatur  quadrum [-53r-] et figuratur hoc modo .

Nota quod signa sive claves: ut vulgo dicitur [quid est clavis *in marg.*] demonstrantes sedem totius cantus. Universaliter usitate sunt due capitales, videlicet f grave loco cuius littere talis figura ponitur ut *supra*. Et c acutum pro quo fit tale signum ut *supra*, nam secunda clavis, scilicet b mollis non mittitur in cantu nisi per accidens. Per ipsarum autem discretam repositionem per lineas: potest omnis cantus cuiuscumque fit toni rationabiliter collocari. Distant enim ab invicem per dyapente nam f in gravibus, c in acutis constituta sunt.

5. <sup>1</sup>De mutationibus. <S>equitur de mutationibus vocum de quibus dicendum est <sup>2</sup>quod omnis mutatio desinens in ut re mi talis vero fit ascendendo. <sup>3</sup>Similiter desinens in fa sol la talis fit descendendo. <sup>4</sup>Unde versus: ut re mi scandunt, fa sol la quoque descendunt. De hoc enim dicit Boetius quod mutatio fuit inventa causa necessitatis. <sup>10</sup>Ad imitationem faciendam necesse est quod sint due voces unisone representantes, id est in uno sono permanentes. <sup>5</sup>Unde dicit Boetius quot [sic] <sup>6</sup>mutatio est divisio unius vocis propter aliam sub eodem signo, [quid est mutatio et unde *in marg.*] voce et sono. <sup>7</sup>Et dicitur mutatio a muto, mutas quia unam proprietatem in aliam subsequentem sub uno signo, voce et sono mutamus.

Et sic mutatio fit de duabus vocibus integris. <sup>11</sup>Et sic in gamma ut, in a re, in  mi et in e la non fit mutatio <sup>12</sup>quia de una sola voce non potest fieri mutatio. Exemplum: sicut de uno solo homine non potest fieri populus, ita de una sola voce non potest fieri mutatio. <sup>8</sup>Et quod quandocumque possumus evitare mutationes evitare debemus. Non [-53v-] quia totaliter possunt evitare nec precaveri <sup>9</sup>sed dum venerit necessitas mutationem agendi, tunc debet fieri et non aliter.

Insuper nota quod ubi sunt due note et una littera fieri possunt due mutationes et ubi sunt tres note sub uno signo fieri possunt sex mutationes. Ratio requiritur in Marchecto primo libro, in regulis ibi positus et ibi declarandum est omnes mutationes manus particulatim.

[questio in gamma *in marg.*] Oritur questio quomodo gamma ut ponitur im [sic] principio manus cum debet poni a cum sit ipsa prima littera alphabeti. Solutio Gamma de iure ponitur in principio musices quia tamen sonat gamma quantum principium ut. Gamma ut, id est principium et ubicumque g ratio sue consonantie, ibi ut et non ubicumque a, ibi ut quia ubicumque a in re vel in mi vel in la, et ut est in principio musices quia in principio notarum. Ideo debet esse G in principio musices et non a. Ergo de iure ponitur gamma in principio. Alia solutio potest assignari cum auctor hanc scientiam habuisse a Grecis picta a pitagoga grece voluit imitari ipsos Grecos quia Γ gamma nomem [sic] Grecum est et ideo ut *supra* dictum est.

Oritur questio quod ubicunque est g ibi dicitur ut et clarum est quod videtur esse falsum Triplici ratione quod deberet ut in a et non in g. Cum a sit principium litterarum musices et ut est principium musices, ergo ut debet iungi cum a et non cum g. Secunda ratio ubicunque a ibi prolatio consonantie quia in a ipsa consonantia formatur et principii musices est consonantia ergo ut [-54r-] debet iungi cum a et non cum g. Solutio verum est quod a est principium scripture et ut est principium notarum tamen ut cum a iungi non debet quia tunc non applicatur consonantia consonantie. Cum musica omnem consonantiam consequatur et ut cum principium in musica habeatur, debet consonantie applicari. Sed a ametrico vocatur littera vocalis et non consonans et g vocatur et est littera consonans immo consonantiores omnibus aliis, ergo ut in musica aplicatur consonantia consonantie. Ergo debet iungi ut cum g et non cum a ut tu dicis.

Notandum est quod in b fa- $\text{b}$  mi non est mutatio quia mutatio fit ubi sunt due note sub uno signo et ibi sint duo signa contraria. Ergo non potest fieri mutatio et ratio in Marchecto. Idem in b fa- $\text{b}$  mi non potest fieri mutatio quia est semitonus et sunt due littere contrarie: ibi non est mutatio sed permutatio. Permutatio est mutua [quid est permutatio *[sic] in marg.*] qualitatis et quantitatis ad invicem variatio.

Oritur questio. Quomodo in b fa- $\text{b}$  mi ubi sunt due note ibi fiunt due mutationes, sed in b fa- $\text{b}$  mi sunt due note, ergo sunt due mutationes in b fa- $\text{b}$  mi. Dico quod maior propositio est falsum ubi sunt due note et quia oportet quod sint due note sub una littera sed ibi sunt due littere contrarie, ergo non est mutatio quod sint due littere probatur quia differunt in tribus et cetera.

Preterea mutatio est dimissio unius vocis ad aliam sub uno signo, sub uno loco et sono, sed in b fa mi nec signa nec note non sint in eodem loco quia [-54v-] mi est alcior fa, ergo mutatio deficit. Preterea da *[sic]* fa in mi est semitonium nulla est mutatio et mutatio fit per tonum, ergo et cetera.

Videtur quod auctor maledixit b fa- $\text{b}$  mi. Ratio dicit philosophus frustra fiunt per plura que potest fieri per pauciora. Et alibi quod semel ponitur non debet iterum replicari su in b fa- $\text{b}$  mi bis replicatur b quod semel sufficeret secundum dicta philosophi. Ergo debet dicere b fa mi et non b fa- $\text{b}$  mi. Solutio quod dicta philosophi sunt vera quando partes stant pro uno significato et ponuntur uniformiter. Sed ille due b non sunt uniformiter nec significant idem, sed diversa, quia unam b rotundum et significat b molle et aliud  $\text{b}$  quadrum significat  $\text{b}$  durum. Ergo benedicatur b fa- $\text{b}$  mi et non b fa mi ut tu dicis. Tua opinio est falsa.

Nota derivatione nature sive cantus. Natura in cantu tripliciter variatur, scilicet in generatione, in litteris et in essentie. In generatione et tunc sunt tres generationes cantus, scilicet graves, acute et excellentes. In litteris et tunc sunt tres littere conclusive, scilicet  $\text{b}$  quadrum, b naturale et b molle. Sed b molle tribus de causis vel tribus modis cognoscitur: primo causa tritoni, secundo causa essentie, tertio causa necessitatis, ut ait Boetius. Exemplum.



#### INTRODUCCIONES IN ARTE MUSICA PLANE (Vc, fols. 39v-40v)

1. <sup>1</sup>Introducciones in arte musica *[sic]* plane. <sup>2</sup>Primo videndum est quid sit introductio ceteris pretermis; <sup>3</sup>secundo: quot modis dividatur; <sup>4</sup>tertio: quid sit musica et unde dicatur, et de quo loquitur, et quid sit ars musice et unde dicatur, et similiter quid sit cantus et a quo derivatur; <sup>5</sup>quarto: quot modis ipsa musica dividatur; <sup>6</sup>quinto: quid sit subiectum in musica et predicatum; <sup>7</sup>sexto: quot littere graves, acute et superacute et quot voces universaliter ad

omnem musicam et quot eius species; <sup>8</sup>septimo: quot sunt proprietates cantus et quot sunt [[voces]] mutationes vocum et quomodo.

<sup>9</sup>Primo dicendum est aliquorum compendiosa tradiccio que ad totam art[i *sup.* a]s musice intelligentiam necessariam <sup>10</sup>vel sic: introduccio est brevis et aperta rey demonstraccio [sic]. <sup>11</sup>Dicitur enim intro[[duccio]] quod est intus et duco, ducis quia ducit intus artem et ab ignorancia ad scientiam.

<sup>12</sup>Musica secundum Guidonem sic diffinitur: musica est ars veraciter canendi et recte modulandi ad omnem perfeccionem cantus via recta facilis et aperta. <sup>13</sup>Dicitur est musica a moys quod est aqua et yca quod est scientia iuxta aquam inventa. <sup>14</sup>Et loquitur de innumero relatio ad sonos.

<sup>15</sup>Musica in tres partes dividitur, scilicet musicam planam versibilem et strumentalem. <sup>16</sup>Musica plana est ad honorem dei nec non ad et gloriosime dei genitricis Marie et omnium sanctorum a beato Gregorio primo fuit correcta, composita et ordinata. <sup>17</sup>Musica mensurabilis est illa que proportionabiliter secundum rectam mensuram mensuratur et modo debito ac proprio observato efficitur. <sup>18</sup>Musica instrumentalis est illa que instrumentis musicalibus exercetur, sicut in psalmista david continetur: <sup>19</sup>laudate eum in sono tube, in tympano et choro in cordis et organo [-40r-] et sic de aliis artibus.

<sup>20</sup>Cuiuslibet scientie et collectio multorum preceptorum et cetera. <sup>21</sup>Dicitur enim ars ab hoc verbo: arto, -tas quod idem est quod stringo quia artat nos et stringit ne aliter faciamus quam ipsa docet.

<sup>22</sup>Cantus est dulcis consonancia vocum qui per proporcionem armonicas; dulciter secundum rectum numerum mensuratum ad sonos relatum componitur et ordinatur.

<sup>23</sup>Subiectum in musica est aliquorum vocum seu pausacionum coniunctio modo debito ac proprio observato. <sup>24</sup>Predicatum ipsius est ars legitime proporcionata omnibus ss [sic] modis diligenter observatis cui parte philosophye subponitur arismetrice.

2. <sup>2</sup>Item sicut sunt septem dies in ebdomada sic septem sunt littere in musica, scilicet a, b, c, d, e, f, g. Quarum prime dicuntur graves, medie acute, tertie superacute. <sup>3</sup>Graves dicuntur inferiores a gravitudine quia primo inferius profundato ponuntur et ideo grossum sonum gravem et profundum habent. <sup>4</sup>Acute altum sonum et acutum super graves obtinent. <sup>5</sup>Superaacute alciolem sonum et superacutum reddum.

<sup>7</sup>Item omnis vox humana se habet in triplici differencia videlicet aut est pectoris aut gucturis aut capitis. <sup>8</sup>Si sit pectoris tunc se habet in gravibus et in fundamento cantus debet ordinari; <sup>9</sup>si sit gucturis mediocriter se habet ad utrasque, scilicet ad graves et superaacute. <sup>10</sup>Et sicut vox pectoris tantum modo se habet in gravibus, ita vox capitis se habet tantum in superaacute. <sup>11</sup>Et sic in omni cantu voces pectoris debent ordinari cum suo proprio, scilicet fundamento. <sup>12</sup>Et voces gucturis semper cum acutis medium locum debet obtinere.

<sup>13</sup>Si queratur quid sit vox aut unde dicatur, sic respondendum est: <sup>14</sup>vox est aer remissus in ore verberatus, intus naturalibus instrumentis formatus <sup>15</sup>et dicitur a verbo voco, -cas quia in ascensu et descensu plene et semiplene intemerate sonum agendo vocamus. [-40v-]

<sup>16</sup>Instrumenta autem naturalia sunt hec, videlicet pulmo, guctur, lingua, palatum, os, <sup>17</sup>dentes et duo labia simul.

7. <sup>9</sup>Nota quod tredecim sunt species tocius cantus. Prima species vocatur unisonus, secunda tonus, tertia semitonus, quarta dyctonus, quinta semidictonus, sexta dyatessaron, septima tritonus, octava dyapente, nona dyapason. <sup>10</sup>Alie quatuor sunt composite, scilicet tonus cum dyapente, semitonus cum dyapente, dyctonus cum dyapente, semidictonus cum dyapente.

<sup>12</sup>Unisonus est quando plures note vel neume in eadem linea et spacio collocantur.

Tonus est regula id est qualitas vel figura qui secundum principium, medium et finem dividit. Non enim potest aliquis recte iudicare de cantu cui tono subiateat nisi primo audierit seu viderit principium medium et finem eiusdem cantus.



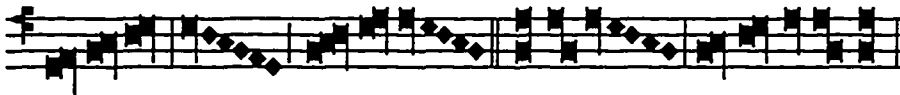
APPENDIX B  
ADJUNCT TREATISES FORMERLY CONSIDERED PART OF  
*INTRODUCTIO MUSICE*

Since Coussemaker first published his edition of *Introductio musice* (CS, 1:157–75) it has hitherto been assumed that the treatises here designated with the letters A, B, C, and D are part of *Introductio musice*, an assumption that this dissertation has shown to be unfounded. Additionally, since Stevenson’s work with the Rio de Janeiro source, two further texts (designated E and F) have been assumed also to belong to *Introductio musice*. This appendix presents the texts of these treatises in the order in which they appear in sources W, D, and R respectively. It also presents texts from L that share material with treatises A and C. The treatises are as follows:

- A. *De falsa musica* (W, fols. 67v–68v; D, fols. 76rv [fragment]; L, fols. 110rv [treatise sharing material with A])
- B. *Sed quoniam cantor diu sine intermissione continuare non potest* (W, fols. 68v–69r; D, fol. 77r [fragment]; R, fol. 613v)
- C. *De litteris finalibus* (W, fols. 69r–70r; D, fols. 77r–79v; R, fols. 613v–617r; L, fols. 110v, 119r [treatise sharing material with C])
- D. *Nota quod primus tonus finitur in D gravi* (D, fols. 79v–83r; R, fols. 614v–615v)
- E. *Nota generalem regulam quare inventum fuit b molle* (R, fols. 615v–616v)
- F. *Item notandum quod quatuor littere sunt regulares* (R, fols. 616v–617r).

W, fols. 67v–70r

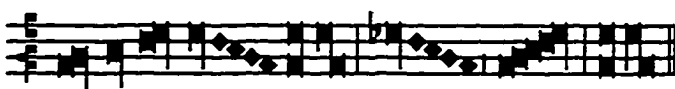
A. <sup>1</sup>Nunc videndum est de falsa musica <sup>2</sup>que in instrumentis musicalibus multum est necessaria, spetialiter in organis. <sup>3</sup>Falsa musica est quando de tono facimus semitonium et econverso. <sup>4</sup>Omnis tonus est divisibilis in duo semitonium <sup>5</sup>et per consequens signa semitonium designantia in omnibus tonis possunt ampliari [sic], ut hic patet.



<sup>6</sup>Signum enim ut dicitur, sapiens signum cor.



7Ubicumque invenimus  $\flat$  quadrum dicimus istam vocem [mi *in marg.*];



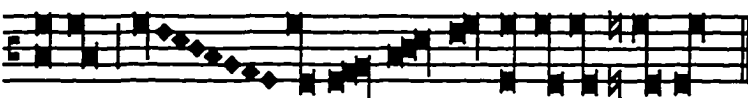
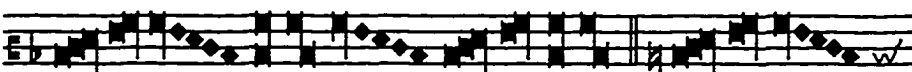
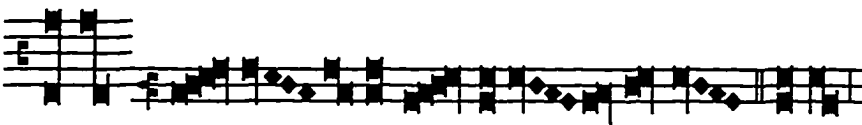
[68r-] 8ubicumque igitur invenimus  $\flat$  rotundum dicimus istam vocem fa;



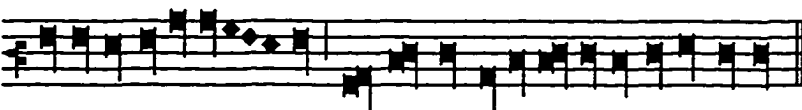
9ubicumque invenimus  $\flat$  rotundum dicimus istam vocem fa;



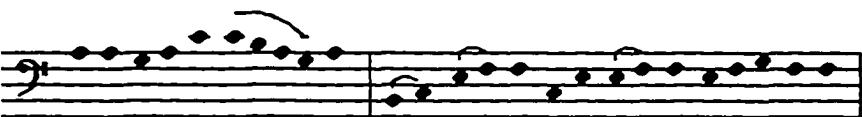
et sic tonos et semitonia deducendo.



<sup>10</sup>Et econtrario de necessitate propter discordantiam tritoni et duritiam convertamus tonos in [sic] semitonia et econverso per falsam musicam quia <sup>11</sup>quando tritonus figuratur [-68v-] de quatuor vocibus, tunc oportet ut nos faciamus diateseron. <sup>12</sup>Similiter quando tritonus figuratur de quinque vocibus, tunc oportet quod nos faciamus diapente et non econtrario et cetera.



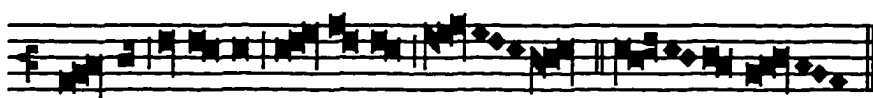
Kirie leyson



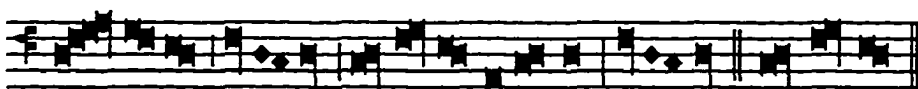
Kirie leyson

B. <sup>1</sup>Sed quoniam diu sine intermissione continuare non potest ymo aliquotiens inter duos cantus ipsum pausare cogat natura hominis debilis et infirma.

<sup>2</sup>Nunc de pausa cantus plani in puncti sub brevi compendio vel eloquio aliqua utilia videamus. <sup>3</sup>Sciendum est istud quod omnis cantus aut est cum littera aut sine littera. <sup>4</sup>Si sit cum littera debet notari per simplices figuras. <sup>5</sup>Et si cantus procedit ex neumis, tunc debent ligari note ad se invicem tamen sine amissione modi. <sup>6</sup>Et notandum est quod docens non debet disilbare nec inter duas silabas pausa fieri debet. <sup>7</sup>Ymo si pluras notas super unam silabam inveniamus ad hoc quod non sit ultima silaba dictionis <sup>8</sup>ymo sit prima vel secunda vel tertia vel quarta secundum quod in dictione constituuntur silabe, tunc debet fieri in congrua distractio silabarum, sed in penultima nota vel in precedente penultima debet addi subsequens silaba, sicut patet hic.



[ -69r- ] <sup>9</sup>Sciendum est quod omnis cantus aut ascendit aut descendit aut cum neuma aut sine neuma aut coniunctum aut divisum aut simpliciter aut composite figuratur. <sup>10</sup>Si cantus acenderit vel descenderit simpliciter sine neuma debent ordinari figure secundum silabas dictionis, <sup>11</sup>et si cantus ascendit vel descendit sine littera et cum neumis, tunc oportet nos facere pausas secundum complectionem vocis humane. <sup>12</sup>Ideoque in cantu descenssivo ad ultimam descendentem, debemus facere pausam, sicut patet in kirieleyson de Sancta Maria et in similibus aliis locis, ut patet hic.



<sup>13</sup>Similiter in cantu ascenssivo ad ultimam descendentem, solam superius remanentem debemus facere pausam per tonum, vel per semitonium, vel per semidictionum, vel per dictionum, sicut patet hic.



C. <sup>1</sup>Visum est de pausationibus cantus plani. <sup>2</sup>Nunc videndum est de litteris finalibus in quibus omnis cantus regularis iubetur finiri, <sup>3</sup>secundum quod moderni cantores magistri firmiter [ -69v- ] dicunt et asserunt quamvis antiqui diversos usus et diversas combinationes et finales in acutis habuissent.

<sup>4</sup>Quatuor finales littere sunt hec, scilicet D, E, F, G graves in gravibus constitute <sup>5</sup>et est ratio talis: quia in gravibus potius ordinantur quam in acutis quia si fuissent in acutis non habent tantum plenum ascenssum supra finales nec humiliassent super finalibus tam naturalem depositionem, <sup>6</sup>quia omne simile requirit suum simile, id est originale fundamentum, vult habere suum fundamentum naturale, <sup>7</sup>et propter hoc moderni et correctores musice rationabilis quatuor finales litteras in gravibus ordinaverunt. <sup>8</sup>Et est notandum quod sunt octo toni vel modi qui in illis litteris quatuor finalibus predictis terminantur. <sup>9</sup>Unde istorum octo tonorum quatuor dicuntur autentici et quatuor plagales.

<sup>10</sup>Plagales sunt illi qui in numero pari situantur ut secundus, quartus, sextus et octavus. <sup>11</sup>Autentici dicuntur illi qui primo ab antiquis fuerunt inventi et ordinati, <sup>12</sup>et propter maiorem dignitatem atque dominationem dicuntur autentici quia autenticum nomen habent ab antiquis. <sup>13</sup>Et propter istam auctoritatem potest primus qui est autenticus ascendere

circumspicere, regnare locareque totam artem manus <sup>14</sup>et alii autentici non sed possunt ascendere supra finale [*sic*] regulariter dyapason vel semitonum cum dyapason licentialiter. <sup>15</sup>Plagales sunt illi qui in numero situantur, sicut dictum est. <sup>16</sup>Et dicuntur plagales grece, quasi sub iugales latine, quia id est plagales illi quatuor precedentibus autenticis fuerunt additi, <sup>17</sup>et propter hoc non habent tantam magnam auctoritatem vel dignitatem ut autentici. <sup>18</sup>Non possunt tamen ascendere supra finem sed quod amittunt superius, recuperant inferius <sup>19</sup>id est quod sub finali possunt descendere [-70r-] diateseron regulariter ad dyapente licentialiter.

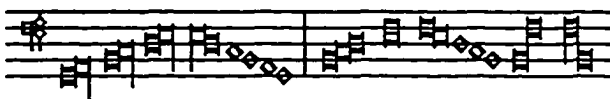
<sup>20</sup>Et est sciendum quod semper autenticus et plagalis sub una littera terminantur, <sup>21</sup>scilicet primus et secundus finitur in D grave, tercius et quartus in E, quintus et sextus in F, septimus et octavus in G. <sup>22</sup>Autentici possunt dici magistri vel patres et plagales discipuli vel filii, <sup>23</sup>quia sicut se habet discipulus [*sic*] ad magistrum, ita se habent plagales ad autenticum <sup>24</sup>vel aliter, sicut se habet filius ad patrem, ita se habent plagales ad autenticum.

<sup>25</sup>Plures sunt alii cantus quod proprie non dicuntur regulares nec irregulares quamvis regulariter terminentur, quia dicuntur ipsi mixti eo quod cum plagali et autentico de utraque partem recipiunt. <sup>26</sup>Sed sciendum est cui maior pars concordatur illius iudicatur quia, si partes cantus per modum plagalis vel autentici procedunt, tunc debent illius iudicari <sup>27</sup>et si cantus medietatem utriusque incipiat, tunc proprie dicitur esse mixtus et non aliter.

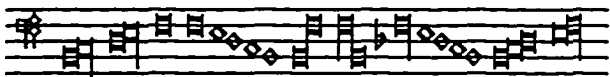
Explicit ars cantus plani Magistri Iohannis de Galadia quam scripsit Domnus Iohanes Franciscus de papia monachus monastiri Sancti Georgii de veneciis 1465 die Sancti Syri.

D, fols. 76v-83r

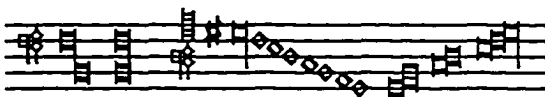
A. <sup>1</sup>Videndum est de falsa musyca <sup>2</sup>que instrumentis musicalibus multum est necessaria, specialiter in organis. <sup>3</sup>Falsa musyca est quando de tono facimus semitonium et econverso. <sup>4</sup>Omnis tonus divisibilis est in duo semitonia <sup>5</sup>et per consequens signa semitonia [-76vb-] designancia in omnibus tonis possunt ampliacari.



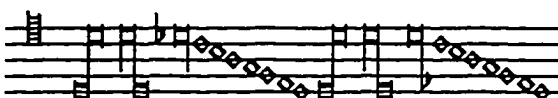
<sup>6</sup>Signum enim, ut dicit



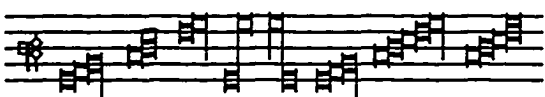
sapiens, signato cor



hominis respondet.



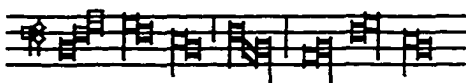
<sup>7</sup>Ubi cumque invenibus  $\text{L}$  quadrum dicimus



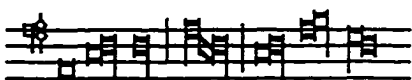
istam vocem mi, <sup>8</sup>ubi cumque igitur invenimus

[lacuna]

[-77ra-] B. <sup>11</sup>secundum condiccion[e *sup.* i *fort. m. sec.*]s vocis humane. <sup>12</sup>Ideoque in cantu descensivo ad ultimam descendentem debemus facere pausam, sicut patet in kyrie leyson de sancta Maria et in similibus autenticis locis, ut patet hic.



Kyrie leyson



Kyrie leyson

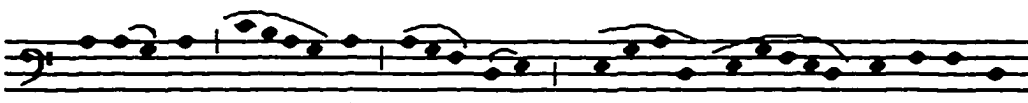
<sup>13</sup>Similiter in cantu ascensivo ad ultimam descendentem, solam superius remanentem debemus facere pausam per tonum vel semitonium, semidictonus vel semidictonus, ut hic patet.



Kyrie

leyson

[-77rb-]



Kyrie

leyson

C. <sup>1</sup>Visum est igitur de pausacionibus cantus plani. <sup>2</sup>Nunc [u *m. sec.*]idendum est de lictis finalibus in quibus omnis cantus regularis iubetur finire, <sup>3</sup>secundum quod moderni cantores magistri firmiter dicunt et asserunt quamvis antiqui diversos usus et diversas combinaciones et finales in acutis habuissent.

<sup>4</sup>Quatuor lictere finales [[in acutis]] sunt [hec *sup. lin.*], scilicet D, E, F, G graves in gravibus constitute <sup>5</sup>et est ratio talis: quia in gravibus potius ordinantur quam in acutis quia si fuissent in acutis non tantum plenum [haberent *in marg. m. sec.*] ascensum supra finales nec humiliassent super finalis naturalem deposicionem, <sup>6</sup>quia omne simile requirit suum similem, id est originale [[...]] fundamentum, vult habere suum fundamentum naturale, <sup>7</sup>et propter hoc moderni et correctores musyce rationalis quatuor [-77va-] finales litteras in gravibus ordinaverunt. <sup>8</sup>Et est notandum quod sunt octo toni vel modi qui in illis lictis quatuor finalibus predictis terminantur. <sup>9</sup>Unde istorum octo tonorum quatuor dicuntur autentici et quatuor plagales [[...]]les. <sup>10</sup>Plagales sunt illi qui in numero pari situantur, ut secundus, quartus, sextus et octavus. <sup>11</sup>Autentici dicuntur illi qui primi ab antiquis fuerunt inventi et ordinati, <sup>12</sup>et propter maiorem dignitatem atque dominacionem dicuntur autentici quia autenticum nomen habent ab antiquis. <sup>13</sup>Et propter istam autoritatem [[...]] potest primus qui est autenticus ascendere, circumspicere regnareque, locare totam artem manus <sup>14</sup>et alii autentici non set possunt ascendere supra finalem regulariter dyapason vel semidictonium cum dyapason licencialiter.

<sup>15</sup>Plagales sunt illi qui in numero pari situantur, sicut dictum est. <sup>16</sup>Et dicitur plagalis grece, quasi sub iugalis latine, quia plagales illi [-77vb-] quatuor aliis precedentibus

autenticis fuerunt add[e *m. sec.*?]ndi, <sup>17</sup>et propter hoc quod non habent tantam magnam auctoritatem nec dignitatem ut autentici. <sup>18</sup>Non possunt tamen ascendere supra finem, immo tantum ascendunt semidictum cum dyapente regulariter et licencialiter dyapason, secundum [quod *in marg.*] ammittunt superius, recuperant inferius <sup>19</sup>id est sub finali possunt descendere dyatexeron regulariter a [sic] dyapente licencialiter.

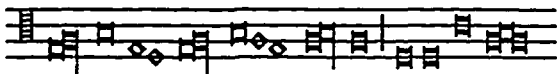
<sup>20</sup>Et est sciendum quod semper autenticus [sic] et plagalis sub una littera terminantur, <sup>21</sup>scilicet primus et secundus finitur in D grave, tercius et quartus in E, quintus et sextus [[autentici possunt dici magistri]] in F, septimus et octavus in G grave. <sup>22</sup>Autentici possunt dici magistri vel patres et plagales discipuli vel fi[[l]]ii, <sup>23</sup>quia sicut se habet discipulum a magistro, ita se habet plagalis ad autenticum <sup>24</sup>vel aliter, sicut se habet filium a patre, ita plagalis ad autenticum, [amen *in marg.*] et cetra. Sta pint waste fo biden dek de fra' wen to gaste.

[-78ra-] <sup>25</sup>Plures sunt alii cantus qui proprie non dicuntur regulares nec irregulares quamvis regulariter terminentur, quia dicuntur misti eo quot cum plagali et autentico de utroque partem accipiunt. <sup>26</sup>Set sciendum est cui maior pars concordatur illius iudicatur, quia si de parte cantus per modum plagalis vel autentici procedunt [sic], tunc debet illius iudicari, <sup>27</sup>et si cantus medietatem utriusque accipiat, tunc proprie dicitur esse mixtus et aliter non.

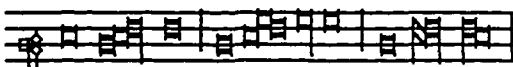
Sequitur de figuris et ligaturis cantus plani. <O>mnis cantus fit duobus modis, aut cum littera [^ *ms.*] si cum lictera aut sine lictera [^ *ms.*] tunc oportet quod [[vo]] note[[...]]tur per ligaturas. Simplex figura est quando una sola nota super unam solam sillabam ponitur, sicut patet hic figurari.

Tunc debent fieri omnes quadre et habere unum tractum descendente a dextris, sicut patet: Domine [-78rb-] Deus noster [[qua]] in superius in exemplis. Et iste tales note in mensurabili cantu dicuntur longe. Longe quedam sunt perfecte [et quedam imperfecte *in marg.*]. Imperfecta efficitur perfecta quatuor modis: primo, quando simul inveniuntur plures longe [tunc *in marg.*] dicuntur esse perfecte; secundo, quando due breves inter duas longas inveniuntur; tercio, quando quidam parvulus punctus ponitur, qui dicitur divisio modi; quarto, quando pausa longa trium temporum post longam invenitur, tunc illa longa precedens dicitur esse perfecta. Et sicut [sic] quatuor modis efficitur longa perfecta trium temporum, ut hic.

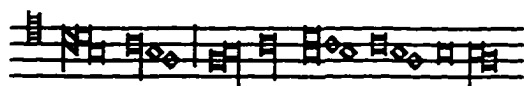
<sup>28</sup><L>icet dictum sit in precedentibus, quod primus tonus potest ascendere usque ad f acutum et descendere tonum sub sua fine, <sup>29</sup>teneas tamen [quod *m. sec.*] sui prioritatem et auctoritatem per totam manum potest ascendere et descendere, sicut dominus et magister. <sup>30</sup>Et quamvis idem primus tonus per b molle secundum Guidonem, naturaliter sit [-78va-] cantandus, est tamen ratio quedam infallibilis et precelsa cui non potest ab aliquo contradici, <sup>31</sup>scilicet dyatexeron que ostendit quod ibi est b molle, hec in omni tono, sicut inferius continetur, que constat ex duobus tonis et semitono, et fit coniuncta et divisa. <sup>32</sup>Quando ergo incipit in f coniuncta vel divisa, de propinquo vel remoto nisi unius, ibi est b molle sine signo similiter a superiori. <sup>33</sup>Cuius causa exempla ponantur ne valeas ab errare, et non solum unius toni set per ordinem singulorum.



Exempla primi toni qualiter b

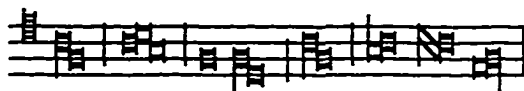


molle sine signo veraciter cognoscitur

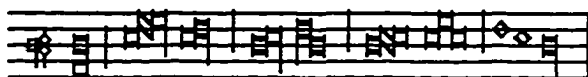


Exempla primi toni

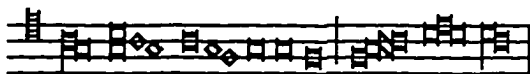
[-78vb-]



Primi exempla



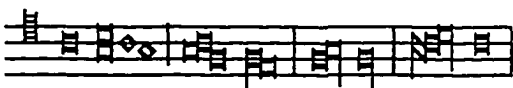
Iterum primi toni exempla



Iterum primi toni exempla

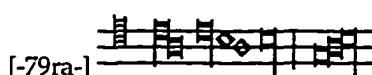


Secundi toni      Secundi toni



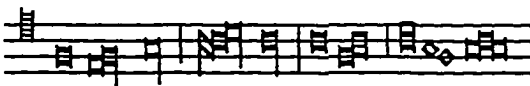
Tercii toni

pre

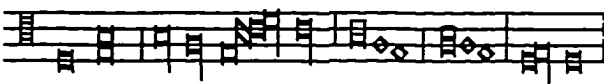
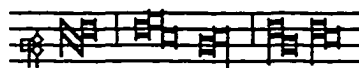


[-79ra-]

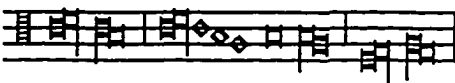
posita



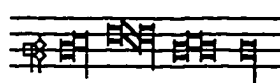
Quarti toni



Quinti toni

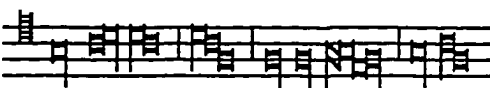


Iterum quinti toni



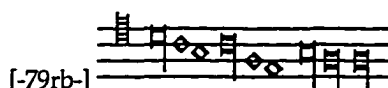
Quinti

toni



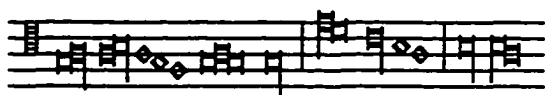
Sexti exempla

laudabiliter

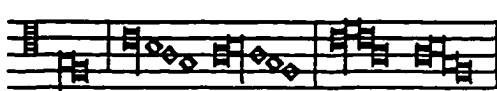


[-79rb-]

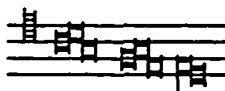
ampexenda



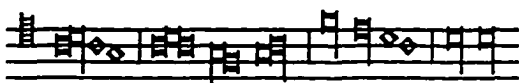
Septimi



toni Ad huc septimi



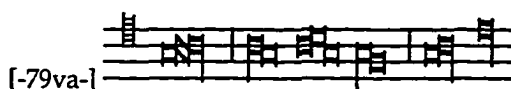
toni



Octavi exempla toni per



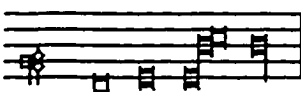
neumen



[-79va-]

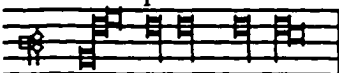
inprobanda

D. <sup>1</sup>Nota quod primus tonus finitur in D [[.]] gravi, <sup>2</sup>as *in marg.*[[[de]]]scendit usque ad d acutum, et eciam ad e acutum et deponitur usque vero ad C grave. <sup>3</sup>Formula primi toni: [[f]] C, D, E, F, G, a, b, c, d, e. <sup>4</sup>Primus tonus habet principia quinque, scilicet C, D, F, G grave et a acutum. In C ut. Gaudeamus



Gaudeamus

In D ut hic patet.



Statuit ei

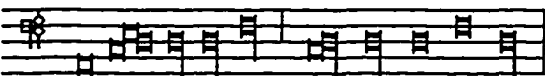
In E gravi. *[vacua]*

[-79vb-] In F gravi ut hic patet. Ego autem. *[vacua]*

In a acuto, ut hic patet. Sapiencia sanctorum. *[vacua]*

<sup>5</sup>Secundus tonus similiter finitur in D grave <sup>6</sup>et ascendit usque ad ♯ acutum et eciam ad c. Deponitur vero usque ad gamma. <sup>7</sup>Formula secundi toni: A, B, C, D, E, F, G, a, ♯, c.

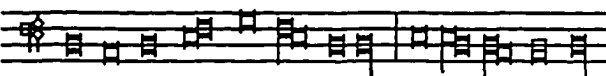
<sup>8</sup>Principia[[...]] autem secundi toni vel modi sunt hec. Secundus tonus quinque habet principia: incipit in A gravi, in C gravi, in D gravi, in E gravi, in F gravi et cetera.



Arnavit eum

Nonne cor nestrum *[sic]*

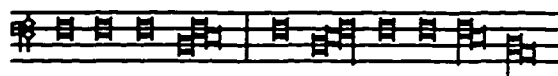
[-80ra-]



Ecce in nubibus celi

Domine Deus



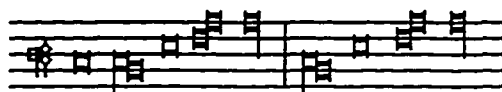


Quem vidistis Fili hominum

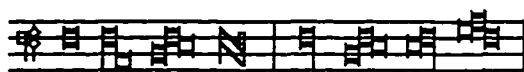
<sup>9</sup>Sunt aucthorum quam plurimi cantus qui ad gamma primi in a et secundi in b vero ponuntur et ad decem vel undecim non elevant, de quibus dubium est an primi an secundi toni sint. <sup>10</sup>Quorum ista discrepcio est: ad octo et novem si non ascendunt certissime de secundo tono sunt. <sup>11</sup>Erunt itaque octo et novem utrisque comunes, ad quas dum cantus ascendit, si diu in eis permanserit, sive tercio et quarto eeas [sic] repercusserit aut in octava inciperit, toni erit primi. <sup>12</sup>Sin autem inferioribus incipiat et secundum quantitatem autem rarissime ad illas ascendat, secundi erit modi. <sup>13</sup>Alioquin iuxta formulam varietates differentia discernetur.

[-80rb-] <sup>14</sup><T>ercius tonus finitur in E [...] grave <sup>15</sup>proceditque usque ad e acutum, raro autem ad f acutum. Deponitur vero a fine tono uno, id est [...] usque ad D grave [sic].

<sup>16</sup>Formula tercii toni: D, E, F, G, a, b, c, d, e, f. <sup>17</sup>Principia tercii toni sunt hec, et sunt quatuor: in E gravi, in F gravi, in G grave [sic], in c acuto.



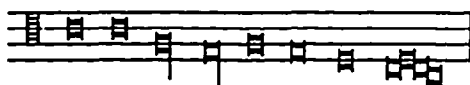
Quando natus es Beatus vir



Iuravit Dominus Sacerdotes



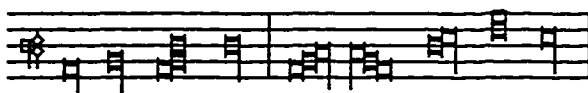
Qui sequitur me Vivo ego



Conterit miraculis

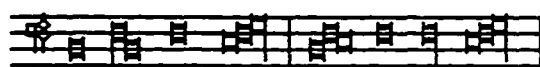
[-80va-] <sup>18</sup><Q>uartus tonus, quia planus est, non fecit prope finem tres tonos. <sup>19</sup>Ideoque nonam primam assumpsit ascenditque ad decem, habens post finem semitonium et duos tonos, deinde semitonium et tonum. <sup>20</sup>Deponitur vero a fine duobus tonis et [sic] terciam, plerumque autem ad secundam, ad primam <sup>21</sup>quia ad suum finem secunda dyatexeron et prima dyapente consonanciam reddit fiuntque voces decem per tonos et semitonios in ordentes hoc modo.

<sup>22</sup>Formula quarti toni: A, B, C, D, E, F, G, a, b, c. <sup>23</sup>Principia quarti toni hec sunt, et sunt sex: C gravi, D gravi, in E gravi, in F gravi, in G gravi, in a acuto et cetera.



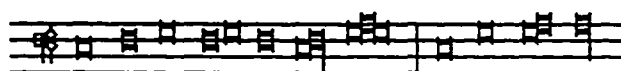
Tulit ergo Quam pulcra es  
et cetera. Divinum auxilium  
maneat semper vobiscum

[-80vb-]



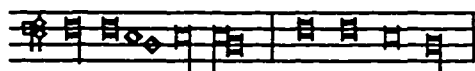
Offerentur

Prope esto



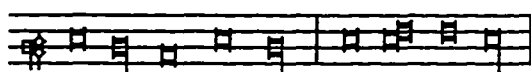
Vigilate animo

Fidelia



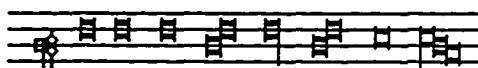
Ite missa

Tres ordines



Semel iuravi

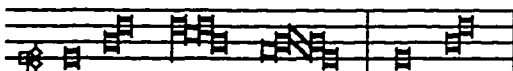
In mandatis



Benedicamus domino

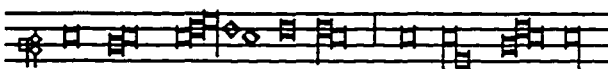
<sup>24</sup>Discernitur autem quartus a tercio, quia quartus habet primam, secundam et terciam, quas non habet tercius. <sup>25</sup>Et tercius habet undecimam vel duodecimam quas non habet quartus. <sup>26</sup>Quod si aliqua anthifona nec has tercii nec illas habet quarti, si in decima incipiat [-81ra-] vel secundam nonam amplius diligat, tercii erit. <sup>27</sup>Aliquas [*sic*] in quarto ponetur, si eius formule differentias inmitetur [*sic*]. <sup>28</sup>Volunt autem quidam quarto modo similitudinem tercii secundam nonam tribuere, <sup>29</sup>eo quod si dyapente ad finem eius primam nonam ad eius finem, nullam consonanciam sit. Nos magis comunem usum secuti sumus. <sup>30</sup>Invenimus pre tria [*sic*] in difficilibus cantibus iungi tercio modo et tercia voce, ut sit tetacordium [*sic*] qui tamen cum rarissime fiat, ab usu esse non dubito. <sup>31</sup>Neque enim a tercia in duodecima, tercia dyatexeron secundum predictum tetacordi [*sic*] regula invenitur.

<sup>32</sup>Quintus modus in F gravi terminatur et acutissima eius tercia decima eadem littera figuratur f. <sup>33</sup>Aliquando ad c sed raro consurgit. <sup>34</sup>Deponitur sub semitonium cum sexta, ad primam nonam dyatexeron, et prima nona ad terciam [-81rb-] decimam dyapente reddat. <sup>35</sup>In quinto vel in sexto, prima nona valebit. <sup>36</sup>Habebit ergo per ordinem tonos duos et [[i]] semitonium, et fiunt decem vocibus. <sup>37</sup>Formula quinti toni: E, F, G, a, b, c, d, e, f, g. <sup>38</sup>Usitatus [*sic*] autem eius principia sunt hec, et sunt quatuor: in F gravi, in G gravi, in a acuto in c acuto.



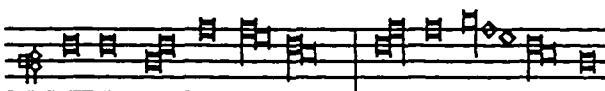
Amicum

Ductus



Domus mea

Circuibo



Hic creaturis

Celi terre ma-

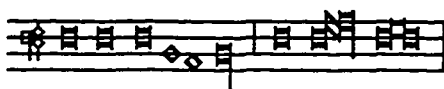


rium Ecce Dominus veniet

[81va-] <sup>39</sup>Nam quia tonum ante finem non habuerit, nec in principio nec in cesso post se respexit.

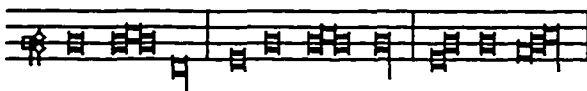
<sup>40</sup>De sexto tono formula sexti toni. Sextus autem modus graditur cum eo et undecimam. Sed deponitur a comuni fine semitonio et duobus tonis ad terciam hoc modo: <sup>41</sup>C, D, E, F, G, a, b, c, d. <sup>42</sup>Et sic quintus tonus habet duodecimam et terciam decimam [[hi]] quas non habet sextus. <sup>43</sup>Ita sextus habet terciam et quartam quas non habet quintus. <sup>44</sup>Nec quod [sic] aliquando quintus miscetur sexto declinans in quartam fitque tetacordum [sic], sed hoc inveniri maxime in auris [sic] raro contingat [sic]. <sup>45</sup>Horum autem erit discrepcio ista, cum nec d[e sup. lin.] posicio sexti nec tota elevacio fuerit quinti. Si incipiat et ea [[ul]] vel.

<sup>46</sup>Vis enim sextus nisi in suo fine incipitur. <sup>47</sup>Usitata tamen eius principia ista sunt, et sunt quatuor: in F gravi, in D gravi, in [[e]] C gravi, in a acuto.

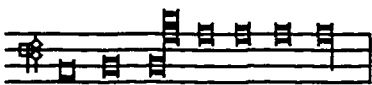


Omnes

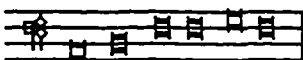
[81vb-]



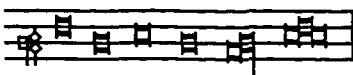
Os iusti Responsum Canite



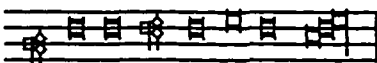
Quasi modo geniti



in virtute tua



Modo veniet

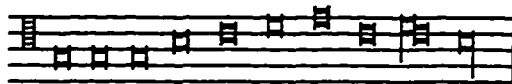


Vidi dominum

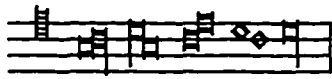
<sup>48</sup>Septimus in voce septima terminatur <sup>49</sup>cuius acutissima est quartadecima, que cum fine eodem tractare denotatur G. <sup>50</sup>Hic assumit nonam secundam  $\frac{1}{2}$  ut hanc [sic] duos tonos post finem, post quos semitonium et duos tonos [82ra-] et iterum semitonium et duos tonos. <sup>51</sup>Et aliq[uando m. sec.] semitonium, licet raro, deponitur a fine tono uno, et fit undecim vocibus ita. <sup>52</sup>Formula septimi toni: F, G, a, b, c, d, e, f, g, a, b.

<sup>53</sup><N>otandum autem quod si ei prima nona concedatur, nichil re [sic] restat ut duocim [sic] ad eam dyatexeron fiat. <sup>54</sup>Hac [sic] semitonio contra habetur <sup>55</sup>eritque per omnia primus qui habebit tonum et semitonium, ac deinde duos tonos et semitonium, et duos iterum tonos, <sup>56</sup>et deponitur a fine tono uno, sicut iam dictum est. <sup>57</sup>Et erit septimus sed primus.

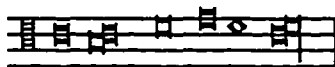
<sup>58</sup>Non enim ut stultissimi cantores putant, gravitatem [sic] vel acumine uno modum [sic] ab alio discrepat. <sup>59</sup>Nichil enim impetit quodcumque [sic] volueris modum, si acute vel graviter decantaveris, id est primus in A, tercius in  $\flat$ , quintus in C. <sup>60</sup>Quomodo pauciores habent voces, sed tonorum ac semitonorum quibus et alie consonantie fiunt. <sup>61</sup>Diversa posicio diversos ab invicem ac differentes modos constituit. [-82rb-] <sup>62</sup>Principia eius sunt hec, in f vix exempla reperies, et sunt sex.



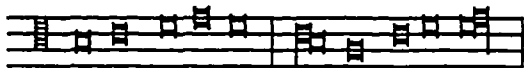
Assumpta est Maria in celum



Gaude

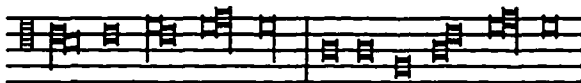


Dixit Dominus



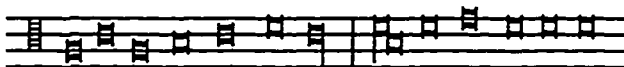
Misit Dominus

Loquebantur vari...



Benedicta

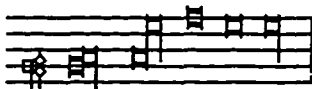
Adoraverunt



Venite benedicti

Sit nomen domini

[-82va-]



Non est inventus

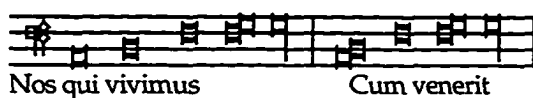
<sup>63</sup>Octavus modus procedit cum septimo G usque ad duodecimam, per raro quousque ad terciam decimam. <sup>64</sup>Deponitur autem ad terciam tono, semitonio et duobus tonis fitque tetracordum, hoc modo. <sup>65</sup>Formula octavi toni in a acuto, in b acuto, in F gravi, in c acuto, in d acuto: C, D, E, F, G, a, b, c, d, e et cetera.

<sup>66</sup>Omm[n sup. lin.]es [sic] itaque autentici modi ad octavam a vel b a suo finali regulariter ascendunt, ad decem vero c traditus [sic], propter tetracordum Davitici psalteri.

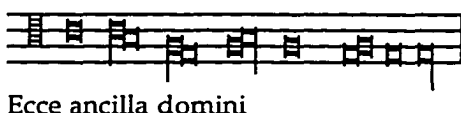
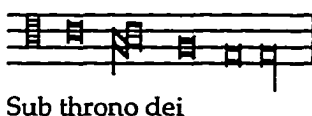
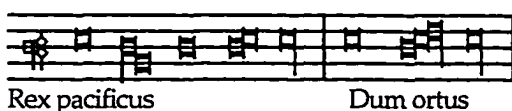
<sup>67</sup>Plagales denique ad quintam regulariter ascendunt, ad quintam remittuntur, ad sextam autem intenderunt [sic] videntur, licet non auctoritate. <sup>68</sup>Et autentici remittuntur tono

uno tantum, nisi quando rarissime autenticam elevacionem et plagalem deponicionem possidere noscuntur. <sup>69</sup>Quod quociens fit considerari oportet, nisi quisque modus vocem [-82vb-] aliquam repetit, in eo poni necesse est. <sup>70</sup>Invenit preterea cum octavus ad quartam descendens, terciam decimam que iure [e *sup. lin.*]st, septimi appetat; <sup>71</sup>ac si regulare [[ac si regularem]] decacordum tenet, presumpcione, licet raro, restituat.

<sup>72</sup>Usitata octavi toni prima [*sic*] sunt hec, et sunt sex: in C gravi, in D gravi, in F gravi, in G gravi, in a acuto, c acuto et cetera.



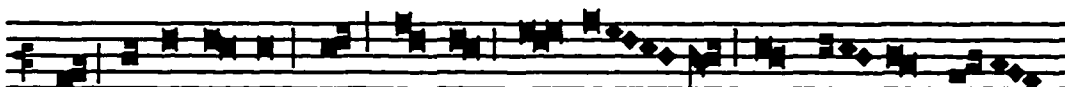
[-83ra-]



<sup>73</sup>Differtur vero octavus [a septimo *in marg.*] quod octavus habet terciam et quartam ad quintam, quas non habet septimus, <sup>74</sup>et septimus habet terciamdecimam quas [*sic*] iure non habet octavus. <sup>75</sup>Sane et hiis cantibus qui inter octo deposicionem et septem elevacionem medii sunt ut in reliquis medis dictum est, secundum formularum [*sic*] varietates in quo tono maneant [-83rb-] discernetur, <sup>76</sup>per ipsas enim varietates unius cuiusque modi principia liquida per videbis. <sup>77</sup>Illud eciam nota quot octavus tonus b molle interdum recipit, sepius autem reiecit.

R, fols. 613v–617r

B. <sup>1</sup>Sed quoniam cantor diu sine intermissione continuare non potest ymmo aliquociens inter duos cantus ipsum [*sic*] pausare cogat natura hominis debilis et infirma. <sup>2</sup>Nunc de pausa cantus plani vel ecclesiastici in puncti sub breviluquo aliqua utilia videamus. <sup>3</sup>Sciendum est igitur quod omnis cantus aut est cum littera aut sine littera. <sup>4</sup>Si sit cum littera debet notari per simplices figuras. <sup>5</sup>Et si cantus procedit ex neumis tunc debent ligari note ad se invicem tamen sine amissione modi. <sup>6</sup>Et notandum est quod cantus non debet dissilabari nec inter duas sillabas in medio pausa fieri. <sup>7</sup>Ymmo si plures notas super unam sillabam inveniamus ad hoc ut non sit ultima sillaba dictionis, <sup>8</sup>ymmo sit prima vel secunda vel tertia vel quarta secundum quod in dictione constituuntur sillabe, tunc non debet fieri incongrua distractio sillabarum sed in penultima nota vel precedente penultima debet addi subsequens sillaba, ut patet hic.



<sup>9</sup>Sciendum est quod omnis cantus aut ascendit aut descendit aut cum neuma aut sine neuma aut coniunctim aut divisim aut simpliciter aut composite figuratur. <sup>10</sup>Si cantus ascenderit vel descenderit simpliciter sine neuma, debet ordinari figura secundum sillabas dictionis. <sup>11</sup>Et si cantus ascendat vel descendat sine littera et cum neumis, tunc oportet nos facere pausas secundum condiciones vocis humane. <sup>12</sup>Ideoque in cantu descendivo, ad ultimam descendentem debemus facere pausam, sicut patet in "Kyrie de Sancta Maria" et in similibus autenticis locis, ut patet hic.



<sup>13</sup>Similiter in cantu ascensivo, ad ultimam descendentem solam superius remanentem debemus facere pausam per tonum et semitonum, ditonum vel semiditonum, sicut hic patet.



C. <sup>1</sup>Visum est igitur de pausacionibus cantus plani. <sup>2</sup>Nunc videndum est de litteris finalibus in quibus omnis cantus regularis iubetur finire <sup>3</sup>secundum quod moderni cantores magistri firmiter dicunt et asserunt quamvis antiqui diversos usus et diversas combinaciones et finales in acutis habuissent.

<sup>4</sup>Quatuor littere finales sunt hec: D, E, F, G graves, id est, in gravibus constitute. <sup>5</sup>Et ratio quare in gravibus pocius ordinantur quam in acutis est quia si fuissent in acutis, non habuissent tantum plenum assensum supra finales, nec habuissent super finales naturalis depositio [*sic*] <sup>6</sup>est quia omne simile requirit simile, id est, originale fundamentum, vult habere suum fundamentum naturale. <sup>7</sup>Et propter hoc moderni et correctores musice rationalis quatuor finales litteras in gravibus ordinauerunt. <sup>8</sup>Et est notandum quod sunt octo toni vel modi qui in illis litteris quatuor finalibus predictis terminantur. <sup>9</sup>Unde istorum octo tonorum quatuor dicuntur autentici quia autenticum nomen habent ab antiquis, et quatuor plagales. <sup>10</sup>Plagales sunt illi qui in numero pari situantur, ut secundus, quartus, sextus et octavus. <sup>11</sup>Autentici dicuntur illi qui primo ab antiquis fuerunt inventi et ordinati. <sup>12</sup>Et propter

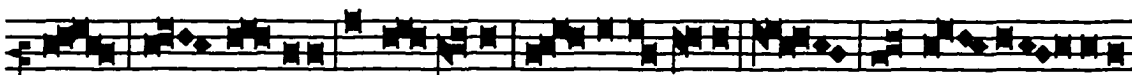
maiolem dignitatem atque dominationem dicuntur autentici quia autenticum nomen habent ab antiquis. <sup>13</sup>Et propter istam auctoritatem potest primus qui est autenticus ascendere, circumspicere, regnare atque locare totam artem manus. <sup>14</sup>Et alii autentici non [-614r-] sed possunt ascendere supra finalem regulariter dyapason vel semi[di sup. lin.]tonum cum dyapason licentialiter.

<sup>15</sup>Et alii dicuntur plagales quasi subiugales quia <sup>16</sup>dicuntur plagales grece quasi subiugales latine quia illi quatuor plagales aliis precedentibus fuerunt additi. <sup>17</sup>Et propter hoc non habent tantam auctoritatem nec dignitatem ut autentici. <sup>18</sup>Non possunt tamen ascendere supra finem ymmo ascendunt tantum semiditonum cum dyapente regulariter et licentialiter dyapason secundum quod amittunt superius recuperant inferius, <sup>19</sup>id est, sub finali possunt descendere dyatesseron regulariter et ad dyapente licentialiter.

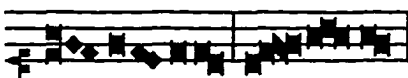
<sup>20</sup>Et est sciendum quod semper autenticus et plagalis sub una littera terminantur, <sup>21</sup>scilicet primus et secundus finitur in D gravi, tertius et quartus in E, quintus et sextus in F, septimus et octavus in G.

<sup>22</sup>Autentici possunt dici magistri vel patres, et plagales discipuli vel filii <sup>23</sup>quia sicut se habet discipulus ad magistrum, ita se habet plagalis ad autenticum <sup>24</sup>vel aliter sicut se habet filius ad patrem, ita se habet plagalis ad autenticum. <sup>25</sup>Plures sunt alii cantus qui proprie non dicuntur regulares nec irregulares quamvis regulariter terminentur, sed dicuntur mixti eo quod cum plagali et autentico de utroque partem accipiunt. <sup>26</sup>Sed sciendum est cui maior pars concordatur illius iudicatur, quia si de parte cantus per modum plagalis vel autentici procedunt, tunc debent illius iudicari. <sup>27</sup>Et si cantus medietatem utriusque accipiat, tunc proprie dicitur esse mixtus, et non aliter.

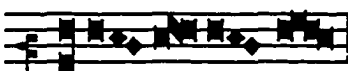
<sup>28</sup>Licet dictum sit supra quod primus tonus potest ascendere usque ad f acutum et descendere tonum sub suo fine, <sup>29</sup>teneas tamen quod sui prioritatem et auctoritatem per totam manum potest ascendere et descendere sicut dominus et magister. <sup>30</sup>Et quamvis idem primus tonus per b mol secundum Guidonem naturaliter sit cantandus est tamen ratio quedam infalibilis et precelsa cui non potest ab aliquo contradici, <sup>31</sup>scilicet dyatesseron que ostendit quod ibi est b mol et hoc in omni tono sicut inferius continetur que constat ex duobus tonis et semitonio et fit coniuncta et divisa. <sup>32</sup>Quando ergo incipit in f, coniuncta vel divisa, de propinquo vel remoto, unius ibi est b mol sine signo, similiter a superiori <sup>33</sup>cuius causa exempla ponantur ne valeas oberrare et non solum unius toni sed per ordinem [sic] singulorum.



Exempla primi toni qualiter b molle sine signo veraciter cognoscitur.



Iterum primi



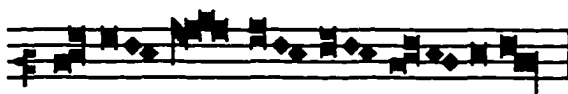
Exempla secundi toni



Exempla tertii toni



Exempla quarti toni



Exempla quinti toni



Iterum quinti

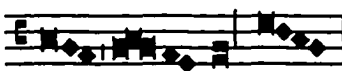


Exempla sextii toni

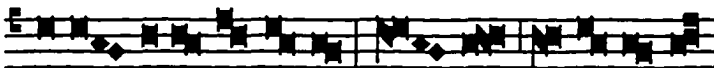


Exempla septimi toni qualiter b mol sine signo

[-614v-]

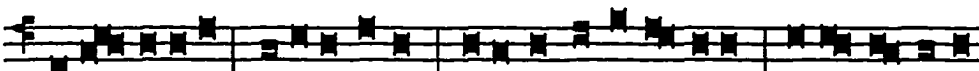


Exempla octavi toni



Exempla octavi toni

D. <sup>5</sup>Secundus tonus similiter finitur in D grave <sup>6</sup>et ascendit usque ad b acutum et eciam a c. Deponitur vero usque ad Gamaut. <sup>7</sup>Formula secundi toni, scilicet A, B, C, D, E, F, G, a, b, c. <sup>8</sup>Principia autem secundi toni sunt hec, et habent quinque principia incipit in A grave et in C gravi, in D gravi, in E gravi et in F gravi, ut hic patet inferius.

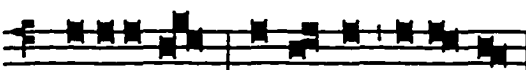


Amavit eum

Nonne cor nostrum

Ecce in nubibus celi

Domine Deus



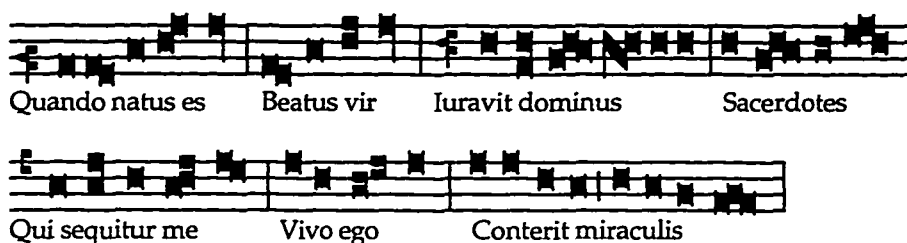
Quem vidistis

Filii hominum

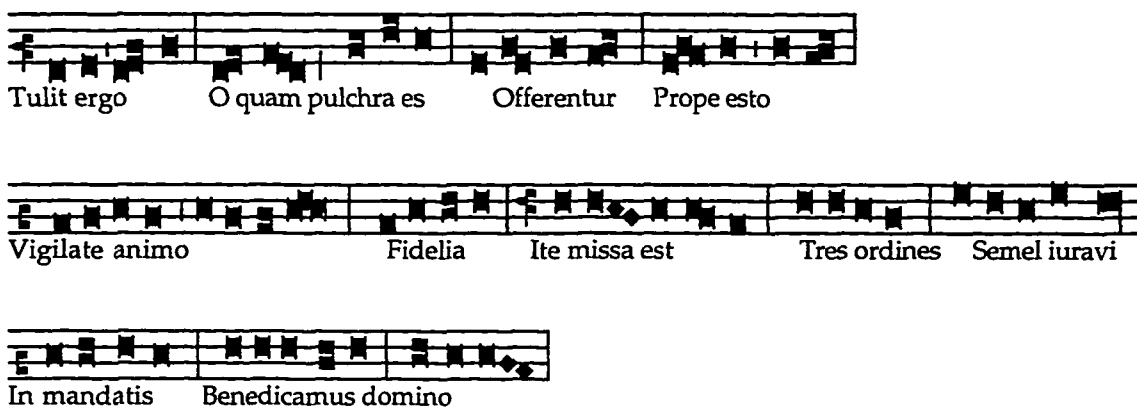


<sup>9</sup>Sunt autenticorum quamplurimi cantus qui ad Gamaut, primus in A, secundus in B vero deponuntur et ad decem vel undecim eleuantur de quibus dubium est an primi an secundi toni sint <sup>10</sup>quorum ista discrecio est: ad octo et novem si non ascendunt, certum est quod de secundo tono sunt. <sup>11</sup>Erunt itaque octo et novem utriusque communes ad quas dum cantus ascendit si diu in eis permanserit sive ter et quater eas repercusserit aut in octava inceperit toni erit primi. <sup>12</sup>Si autem in inferioribus incipiat et secundum quantitatem autem rarissime ad illas ascendat, secundi erit toni. <sup>13</sup>Alioquin iuxta formulam varietas et differencia discernetur [sic].

<sup>14</sup>Tercius tonus finitur in E grave <sup>15</sup>proceditque usque ad e acutum, raro autem ad f acutum. Deponitur vero a fine uno, id est usque ad D grave. <sup>16</sup>Formula tercii toni: D, E, F, G, a, b, c, d, e, f. <sup>17</sup>Principia tercii toni sunt hec, et sunt quatuor: in F gravi, in G gravi, in c acuto, ut patet hic per exemplum.



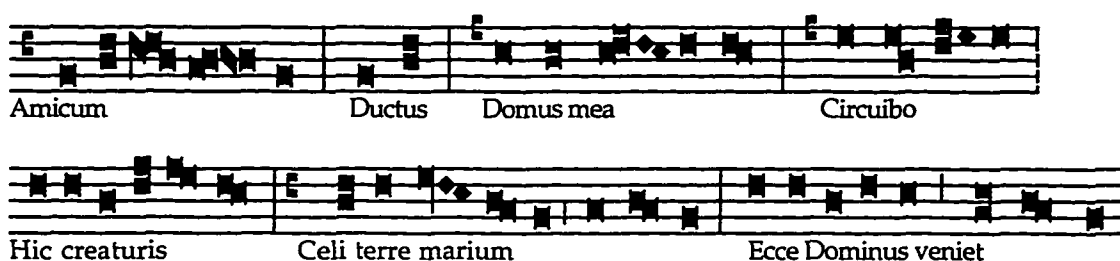
<sup>18</sup>Quartus tonus, quia planus est, fert prope finem tres tonos. <sup>19</sup>Ideoque nonam primam assumpsit. Ascenditque ad decem habens post se finem semitonium et duos tonos, et inde semitonium et tonum. <sup>20</sup>Deponitur vero a fine duobus tonis et terciam autem ad secundam et primam, <sup>21</sup>quia ad suum finem secunda dyatesseron et prima dyapente consonancia reddit fiuntque voces decem per tonos et semitonos. <sup>22</sup>Formula quarti toni: A, B, C, D, E, F, G, a, b, c. <sup>23</sup>Principia quarti toni hec sunt, et sunt sex: in C gravi, in D gravi, in E gravi, in G gravi, in a acuto, ut hic patet.



<sup>24</sup>Discernitur autem quartus a tertio quia quartus habet primam, secundam et tertiam, quas non habet tertius. <sup>25</sup>Et tertius habet undecimam vel duodecimam, quas non habet quartus. [-615r-] <sup>26</sup>Quod si aliqua antiphona nec habet tercii nec illas habeat quarti, si in decima incipiat vel secundam nonam amplius diligit, tercii erit. <sup>27</sup>Aliquando in quarto ponetur si eius formule differencias imitetur. <sup>28</sup>Volunt autem quidam quarto modo similitudinem tercii secundam nonam tribuere, <sup>29</sup>eo quod si dyapente ad finem eius: prima nona ad eius finem nulla consonancia sit. Nos magis communem usum secuti sumus. <sup>30</sup>Invenimus per tria in difficilibus cantibus iungi tertio modo tertiam vocem, ut tetracordum, qui [sic] tamen cum rarissime fiat

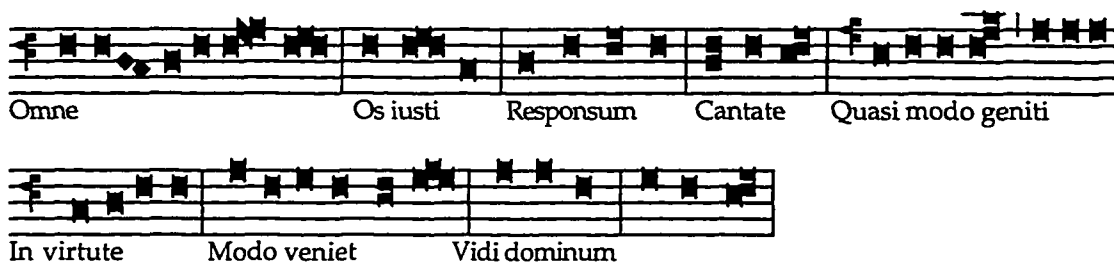
abusu esse non dubito, <sup>31</sup>neque enim a tertia in duodecimam, tertia dyatesseron secundum predictum decachordum regula invenitur.

<sup>32</sup>Quintus tonus in F gravi terminatur et acutissima eius tertia decima eadem figuratur scilicet f. <sup>33</sup>Aliquando ad c sed raro consurgit. <sup>34</sup>Deponitur sub semitonium [*sic*]. <sup>35</sup>Cum sexta ad primam nonam dyatesseron et prima nona ad tertiam decimam dyapente reddat, in quinto vel in sexto prima nona valebit. <sup>36</sup>Habebit ergo per ordinem tonos duos et semitonium et fiunt decem vocibus. <sup>37</sup>Formula quinti toni: E, F, G, a, b, c, d, e, f, g. <sup>38</sup>Usitatus [*sic*] autem eius principia sunt hec, et sunt quatuor: in F grave, in G grave, in a acuto et in c acuto, ut hic patet.



<sup>39</sup>Nam quia tonum ante finem non habuerit nec in principio nec incesso post se respexit.

<sup>40</sup>Sextus autem modus graditur cum eo ad undecimam sed deponitur a communi fine semitono et duobus tonis ad tertiam hoc modo. <sup>41</sup>Formula sexti toni: C, D, E, F, G, a, b, c, d. <sup>42</sup>Et sic quintus tonus habet duodecimam et tertiam decimam, quas non habet sextus. <sup>43</sup>Ita sextus habet tertiam et quartam. <sup>44</sup>fitque tetracordum, sed hoc inveniri maxime in antiphonis raro contingit. <sup>45</sup>Horum autem erit discretio ista, cum nec depositio sexti nec tota elevatio fuerit quinti. <sup>46</sup>Vix enim sextus nisi in suo fine incipitur. <sup>47</sup>Usitata tamen eius principia ista sunt, et sunt quatuor: in F gravi, in D gravi, in C gravi, in a acuto, ut hic.



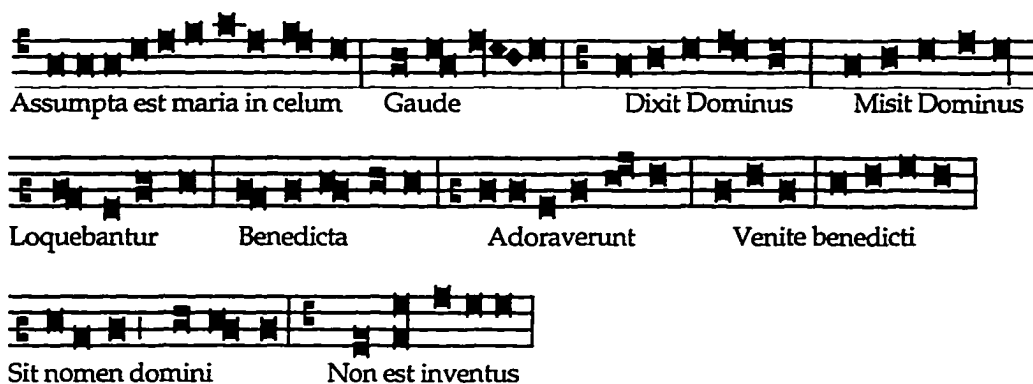
<sup>48</sup>Septimus in voce septima terminatur <sup>49</sup>cuius acutissima est quarta decima, que cum fine eodem tractare [*sic*] denotatur g. <sup>50</sup>Hic assumit notam secundam b et habet duos tonos post finem post quos semitonum et duos tonos et iterum semitonum et duos tonos et aliquando semitonum, licet raro. <sup>51</sup>Deponitur a fine tono uno et fit undecim vocibus ita. <sup>52</sup>Formula septimi toni: F, G, a, b, c, d, e, f, g, a, b.

<sup>53</sup>Notandum autem quod si ei prima nona concedatur, nichil restat ut duodecima ad eam dyatesseron fiat <sup>54</sup>ac semitonium contra habeatur <sup>55</sup>eritque per omnia primus qui habebit tonum et semitonum ac deinde duos tonos. <sup>56</sup>Et deponitur a fine tono uno, sicut iam dictum est. <sup>57</sup>Et erit septimus sed non primus.

<sup>58</sup>Non enim, ut stulti cantores putant, gravitatem [*sic*] vel acumen [*sic*] uno modo ab alio discrepat. <sup>59</sup>Nichil enim impedit quodcumque volueris modum, si acute vel graviter decantaveris, id est, primus in A, secundus in B, quintus in C quomodo pauciores habent voces,

<sup>60</sup>sed tonorum ac semitonorum, quibus et alie consonantie fiunt, <sup>61</sup>diversa posicio diversos ab invicem ac differentes modos constituit.

<sup>62</sup>Principia eius sunt hec: in G grave, in c acuto, in b [[grave]], in a acuto, in d acuto; in F vix exempla reperies. Et sunt sex, ut patet in exemplo sequenti. Verte folium et vide. [- 615v-]

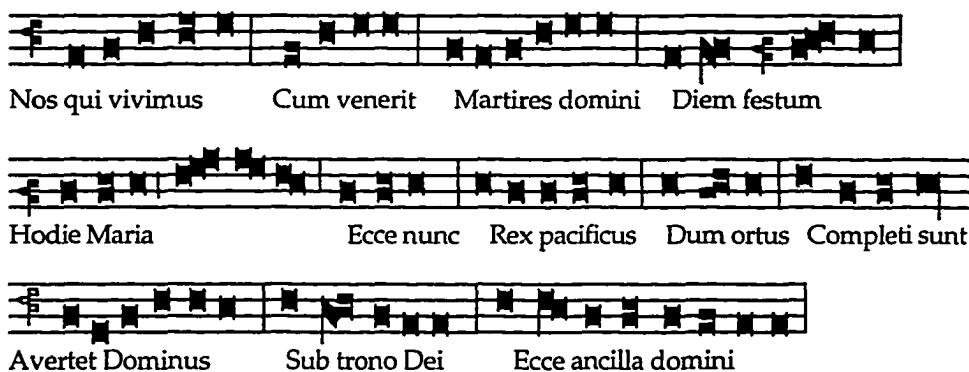


<sup>63</sup>Octavus tonus procedit cum septimo G usque ad duodecimam, per raro usque ad tertiam decimam. <sup>64</sup>Deponitur autem ad tertiam, tono et semitono et duobus tonis fitque tetracordum hoc modo. <sup>65</sup>Formula octavi toni: C, D, E, F, G, a, b, c, d, e. In a acuto, in b acuto, in f grave, in c acuto, in d acuto.

<sup>66</sup>Omnes itaque autentici toni ad octavam a vel nonam b a suo finali regulariter ascendunt ad decem vero c tardius propter tetracordum Davitici psalterii.

<sup>67</sup>Plagales denique ad quintam regulariter ascendunt, ad quintam remittuntur, ad sextam autem intendere videntur, licet non auctoritate. <sup>68</sup>Et autentici remittuntur uno tono tantum nisi quando rarissime autenticam elevacionem et plagalem deposicionem possidere noscuntur. <sup>69</sup>Quod quociens fit considerari oportet ubi quosque [sic] modus vocem aliquam repetit, in eo poni necesse est. <sup>70</sup>Invenit [sic] preterea cum octavus ad quartam descendens tertiam decimam que iure est septimi appetat <sup>71</sup>ac si regulare decacordum tenet presumptione, licet raro, restituat.

<sup>72</sup>Usitata octavi toni principia sunt hec, et sunt sex: in C gravi, in D gravi, in F gravi, in G gravi, in a acuto et in c acuto, ut patet.



<sup>73</sup>Differtur vero octavus a septimo quia octavus habet tertiam, quartam et quintam, quas non habet septimus, <sup>74</sup>habet tertiam decimam quam iure non habet octavus. <sup>75</sup>Sane et hii cantus [sic] qui inter octavam depressionem et septimam elevacionem medii sunt, ut in reliquis tonis dictum est, secundum formularum varietates in quo tono maneant discernetur <sup>76</sup>per ipsas

enim varietates unius cuiusque toni principia liquida providebis. <sup>77</sup>Illud eciam nota quod octavus tonus b mol interdum recipit, sepius autem reicit. Explicit.

E. <sup>1</sup>Nota generalem regulam quare inventum fuit b molle multum necessaria [sic] cantare volentibus. <sup>2</sup>Tres sunt littere conclusive, scilicet ♭ quadrum, b naturale et b molle. <sup>3</sup>Et nota quod b molle inventum fuit sive nascitur tribus modis: primo causa tritoni, secundo essencie, tertio causa necessitatis. <sup>4</sup>Causa tritoni tunc quando cantus ascendit ab f gravi in b acutum et non asscendit [sic] amplius nec descendit in F gravi et tali modo cognoscitur quando b mol habetur causa tritoni, <sup>5</sup>quia dicit Boetius quod quodcumque vel quocienscumque cantus non amplius quam de F gravi in b acutum ascendit, et sic postmodum descendit, non nisi per b molle debet cantari. <sup>6</sup>Alia causa si tritonus advenerit ubi non debet esse necessario fieret sicut hic clarius causa tritoni. <sup>7</sup>Alia regula: quocienscumque dicitur sol in G gravi ex parte ante ascendendo in b acutum et quando ex parte post descendit in F gravi, idem est iudicium, ut patet hic consequenter per exemplum. [-616r-]



<sup>8</sup>Si vero sit ita cantus quod de F gravi ascendat in c acutum et iterum gradatim descendat in parhypatemezōn ex parte ante primo cantatur per ♭ quadrum, si ex parte post per b molle, ut hic, <sup>9</sup>preterquam in autentico trito ac subiugali eius: in quibus videlicet ad trite dyezeumenon per b molle per omnia debet cantari et hoc quoque quando commode fieri potest et tunc fit causa essencie. <sup>10</sup>Si vero sit species dyatesseron vel dyapente integre ascendat vel descendat a paripatemezōn, videlicet ad trite dyezeumenon vel ad paranetis dyezeumenon et sic est causa necessitatis, ut patet hic.



<sup>11</sup>Habetur postmodum natura in litteris et sunt due naturaliter in musica. Nam alia conclusiva et alia exclusiva. <sup>12</sup>Inclusiva natura est et sunt tres littere conclusive, videlicet ♭, b naturale et b molle. <sup>13</sup>Et dicuntur predictae littere conclusive quia concludunt cantus, et concludunt in cantibus quia quilibet littera habet conclusionem in se quia faciunt condeclineum cantum. <sup>14</sup>Exclusive dicuntur quia per musicam excluduntur, quoniam quilibet nota suam litteram accipit divisive seu privative.

<sup>15</sup>Dictum est in predicta notacione quod quilibet predictarum litterarum conclusivarum facit suum condeclineum cantum. <sup>16</sup>Sed contra habetur b molle quod non perficit condeclineum cantum, ita quod non: solum in autentico trito ac in subiugali eius, <sup>17</sup>verum eciam in reliquis cantibus causa tritoni seu causa necessitatis b mol habetur, ergo talis regula falsa est.

<sup>18</sup>Responsio: verum est quod superius dicitur quilibet predictarum litterarum conclusivarum faciunt suum condeclineum cantum [[Sed contra habetur b mol]] et probatur per ♭ quadrum naturale, ♭ quadrum et b molle; habetur ut in autentico trito et subiugali eius essentialiter, sic in hiis cantibus b mol inest. Et sic predictae littere omnes suum perfectum faciunt condeclineum cantum.

<sup>19</sup>Nota quod b mol fuit inventum ad resonandam dissonantiam tritoni qui habetur ab F gravi usque ad b acutum. <sup>20</sup>Sed postquam dicta dissonancia tritoni est per b molle legitime refrenata, non est necesse quod habeatur in b mol causa tritoni nisi ut re mi fa et sic dicimus

quod fit in b mol causa necessitatis. <sup>21</sup>Postquam vero b mol necessitas suppletur non est necesse quod habeatur in b mol causa necessitatis nisi ut fa primo, secundo ut sol et econverso in descensu. <sup>22</sup>Item causa tritoni ad refrellendam [sic] dissonanciam tritoni ut non possint inveniri tres toni perfecti.

<sup>23</sup>Sed quocienscumque de b gravi ascendunt in c acutum ita quod de natura in b quadrum, vero descendimus de f acuto in b acutum et sic de natura in b molle, ibi reperiuntur tres toni perfecti et ibi tres tonos faciunt sine aliqua dissonancia. <sup>24</sup>Ergo est species tritoni, nam ubicumque tres toni perfecti, dicit Boecius, ibi tritonus reperitur. <sup>25</sup>Unde sunt ibi tres toni perfecti, scilicet de F gravi in b acutum que species tritoni refrenatur per b mol, ergo false dicit b mol inventum fuisse causa tritoni.

<sup>26</sup>Respondetur quod illa dicitur species in musica que integre ascendit vel descendit in sui statu et hoc probatur cum dicitur quando cantus ascendit de F gravi usque ad b acutum et non ascendit amplius et descendit in F gravi. <sup>27</sup>Sed si cantus ascendit de F gravi in c acutum non est ibi species tritoni sed potius dyapente. <sup>28</sup>Si ergo species tritoni haberetur de F gravi in b acutum tali modo de iure ipsam speciem non refrenat b mol. <sup>29</sup>Et nota quod in b mol causa tritoni non habemus sol neque la quia ex ascensu in fa ab ut refrenatur dissonantia tritoni et sic ex ascensu in b acutum de F gravi, iam est dicta, dissonancia refrenatur causa necessitatis, <sup>30</sup>et tunc non dicimus a paripathemeson usque ad trite diecumenon fa mi, a paripathemeson videlicet ad paramesse non dicimus fa fa, sed pro fa mi dicitur ut fa vel fa fa dicitur ut sol, sive in ascensu sive in descensu, et in hoc suppositum quod predictae species integre ascendat vel descendat. <sup>31</sup>Alioquin non cogimus inducere necessitatem in quolibet condeclineo cantu ordinato, ut est in libro nominare debemus sonos, scilicet se quo ipso cantu videlicet de la preterquam in locis superius annotatis.

<sup>32</sup>Et est sciendum quod b mol fuit inventum [-616v-] post invencionem artis et post invencionem b quadri, ut possit dissonancia tritoni refrenari que habetur si cantus non amplius quam de F gravi in b acutum ascendat et iterum redeat ad F gravi antequam cantus ascendat in c acutum. <sup>33</sup>Item inventum fuit b molle ut non possint dici tres toni in loco superius nominato ratione aliqua inventa et illa de causa inventum fuit b mol in prima materia sive secunda et tertia, sicut supra largius est dissertum. Amen.

F. <sup>1</sup>Item notandum quod quatuor littere sunt regulares ubi formantur seu sumuntur toni videlicet D, E, F, G grave que sunt D sol re, E la mi, F fa ut, G sol re ut. <sup>2</sup>Et quatuor sunt irregulares videlicet a, b, c, d acute que sunt a la mi re, b fa b mi, c sol fa ut, d la sol re. <sup>3</sup>Nota quod octo sunt toni videlicet primus, secundus, tertius, quartus, quintus, sextus, septimus, octavus. <sup>4</sup>Primus et secundus finiuntur in D grave, tertius et quartus finiuntur in E grave, quintus et sextus finiuntur in F grave, septimus et octavus in G grave. <sup>5</sup>Nota quod in a acuta possunt finiri quatuor toni videlicet primus, secundus, tertius et quartus. <sup>6</sup>Si cantus terminatur in a acuta, in voce la vel re, tunc reducitur ad D grave et tunc erit primus vel secundus. <sup>7</sup>Et si cantus terminatur in mi, tunc reducitur ad E grave et erit tertius vel quartus. <sup>8</sup>Item in b acuta possunt finiri quatuor toni videlicet quintus et sextus, quartus et tertius. <sup>9</sup>Si cantus finitur in voce fa reducitur in F gravem et erit quintus vel sextus. <sup>10</sup>Et si cantus terminatur in voce mi tunc reducitur ad E grave et erit tertius vel quartus. <sup>11</sup>Item in c acuta possunt finiri quatuor toni videlicet quintus, sextus, septimus et octavus. <sup>12</sup>Si cantus terminatur in c acuta in voce fa vel ut reducitur ad F grave, et sic erit quintus vel sextus. <sup>13</sup>Et si cantus terminatur in voce sol reducitur in G grave et erit septimus vel octavus. <sup>14</sup>Item in d acuta possunt finiri quatuor toni videlicet primus, secundus, septimus et octavus. <sup>15</sup>Si cantus terminatur in voce re reducitur in D grave et tunc erit [[septimus vel octavus]] primus vel secundus. <sup>16</sup>Si cantus finitur in voce sol tunc reducitur in G grave et erit septimus vel octavus. <sup>17</sup>Nota quod quatuor sunt autentici et quatuor plagales. <sup>18</sup>Autentici sunt primus, tertius, quintus, septimus que scilicet sumuntur per numerum imparem. <sup>19</sup>Plagales sunt secundus, quartus, sextus et octavus, que scilicet sumuntur

per numerum parem. <sup>20</sup>Nota quod autentici possunt ascendere supra suum finalem regulariter, id est, a fine suo usque ad octavam vocem et de licentia nonam. <sup>21</sup>Et unam tantum possunt descendere sub suo finali unum tantummodo excepto privilegio quod potest descendere tonum cum semitonio. <sup>22</sup>Nota quod omnes plagales possunt ascendere supra suum finalem, id est, a fine suo usque ad quintam vel sextam vocem. <sup>23</sup>Et a fine suo totidem possunt descendere sub suo finali tertiam, quartam et quintam. <sup>24</sup>Versus: Tertius et primus hii quintus, septimus octo vocibus ascendit solam descendere possunt. Sextus et octavus, quartus pariterque secundus vocibus ascendit quinque totidemque subibunt. <sup>25</sup>Primus quinta re la secundus, tertia re fa. Tertius sexta mi fa. Quartus quarta mi la. Quintus quinta fa re la. Sextus tertia fa la. Septimus quinta ut sol. Octavus quarta ut fa.

<sup>26</sup>De antiphonis: talis est regula quod primus ad quintam, secundus ad tertiam, tertius ad sextam, quartus ad quartam, quintus ad quintam, sextus ad tertiam, septimus ad quintam, octavus ad quartam intelligentur. <sup>27</sup>Nota quod primus et secundus tonus possunt dici prothus pro quolibet ipsorum separatim vel coniunctim, tertius et quartus vero duecerus, quintus et sextus tritus, septimus et octavus tetrardus. <sup>28</sup>Et sic fuerunt nomina clavium posita prima a Grecis. Sed postea quatuor toni superaddiderunt quedam quibus. <sup>29</sup>Sciendum est quod pro primo vel pro imparibus tono debet autencius [sic] cum nomine clavis, et pro secundo vel pro paribus debet poni plagalis. <sup>30</sup>Quando cantus finitur in C fa ut est quinti vel sexti toni quia scilicet g sola tetradicam est carens afinitate per illam regulam.

<sup>31</sup>Primus cum sexto fa sol la semper habeto. Tertius octavus ut re fa datque secundus (Principia tonorum) la sol la quartus, ut mi sol sit tibi quintus. Septimus fa mi fa sol sic omnes esse recorder. <sup>32</sup>Septimus et sextus dant fa mi re mi quoque primus. Quintus et octavus fa sol fa fitque secundus. Sol fa mi fa Tertius. Re ut re mi re que quartus (Media tonorum).

<sup>33</sup>Item notandum est quod sunt viginti littere cantus, scilicet octo graves, septem acute et quinque superacute. <sup>34</sup>Octo graves sunt iste: g, a, b, c, d, e, f, g. Septem acute: a, b, c, d, e, f, g. Quinque superacute: a, b, c, d, e. <sup>35</sup>Nota consequenter versus omnium tonorum. Versus: Octo toni tales sunt quibus omnibus omnia fiunt. [-617r-]

<sup>36</sup>Ad cognoscendum tonos et fines tonorum tam de ascensu quam descensu. Versus: Sex paritas scandit, descendit quatuor ymmis. Imparitasque novem scandit bassatur ad unum. <sup>37</sup>Versus: Pri re la, se re fa, ter mi fa, quar quoque mi la, quin fa fa, sex fa la, sep ut sol, oc tenet ut fa. <sup>38</sup>Fines tonorum cunctorum cantor dicit esse tonorum. <sup>39</sup>Nam finem primi D continet atque secundi. Tertius E regitur et quarti finis habet. Quintus in F finem et sextus tibi ponit eandem. Septimus et octavus finali G requiescunt.

<sup>40</sup>De cursu sive stacione tonorum. Sunt in D vel in a primus tonus atque secundus. Tertius et quartus in E vel in b reloquantur. Et quandoque per a quartam fieri videmus. Quintum in F vel in c nec sextus ab removetur. Septimus et octavus in G vel in d requiescunt.

<sup>41</sup>Versus de coniunctis. Dic: coniunctarum quadrum genus atque rotundum [...]; a servabit et e iuncta signatque rotunde, in c discurrit in f progressio quadre. De tono facto. Omnis coniuncta vocatur.

Explicit musica plana magistri Johannis de Galandia.

L, fols. 110v, 119rv

The following two treatises share material with A and C respectively (text in bold is shared with the two adjunct treatises).

A. <sup>3</sup>**De ficta musica. Falsa musica dicitur quando de tono fit semitonium vel econverso vel quandocumque per veram musicam non potest fieri consonantia speties diapente concordabilis perfectio vel diatessaron vel diapason. Et tunc per falsam musicam debemus cantare mutando tonum pro semitono vel econverso. <sup>5</sup>Unde in omnibus tonis possunt applicari signa designantia semitonia ut sunt hec, scilicet b  $\flat$ .**

<sup>7-9</sup>**Ita quod quandocumque b rotundum invenimus dicimus hanc vocem esse fa, ubi vero  $\flat$  dicimus esse mi. Et sic tonus in semitonia deducendo habet in pluribus vocis fit ad evitandum tritonum quod <sup>11</sup>quando de quatuor vocibus figuratur tunc diatessaron discordat. <sup>12</sup>Et [-110vb-] quando de quinque vocibus figuratur tunc diapente discordat et sic tritonus omnibus suis modis discordabilis.**

Notandum est quandocumque duo voces de una distantia ad aliam, id est de linea ad spatium descendendo vel ascendendo, invenimus sub litteris in quibus tonus assignatur quod tunc debemus facere semitonium. Ex tali enim divisione fit cantus dulcis, placabilis et decorus et si fas est dicere angeli per diesim et thesim dulciter canunt de istis consonantiis coram benignissima et gloriosa maiestate dei. Et hoc patet in hac sequentia "victime pascali" et in ceteris locis similibus.

C. <sup>21</sup>**De tonis. Primus et secundus tonus finitur in D gravi. Sed differunt seculorum primi toni incipit a accuto [sic] et seculorum secundi toni in f grave; tertius et quartus finitur in e grave sed differunt quia seculorum tercii toni incipit in c acutum et seculorum quarti toni incipit in a acutum; quintus et sextus finitur in f gravi sed differunt quia seculorum quinti toni incipit in c acutum et seculorum sexti toni in a acutum; septimus et octavus finitur in G gravi sed differunt quia seculorum septimi toni incipit in d acutum et seculorum octavi toni in c acutum. Unde versus: Est in d vel in a primus tonus ... que secundus; tertius et quartus vel in  $\flat$  vel in e que locantur Cum quinto sextus vel in c vel in f requiescunt; septimus octavus g ... sumunt sibi finem.**

De inceptioe tonorum. Primus cum sexto fa sol la ...  $\underline{\quad}$  to Tercius octavus ut re fa sic g la sol la quartus fa la fa sit ter quintus [fols. 111-118 desunt -119ra-] ordinatum. <sup>11</sup>Sciendum est quod antiqui quatuor tantum toni terminationes in quatuor finalibus litteris gravibus, scilicet D E F G habebant. <sup>7</sup>Sed musice correptores quatuor alios addiderunt. <sup>12</sup>Primi quatuor dicuntur autentici propter maiorem auctoritatem atque dominantionem. <sup>15</sup>Alii quatuor dicuntur plagales sive collatorales quia alios quatuor sociantur. <sup>10</sup>Differentia inter autenticos et plagales talis est: autentici in impari numero situantur, plagales vero in numero pari; autentici sunt primus, tertius, quintus, septimus; plagales vero secundus, quartus, sextus, octavus. <sup>21</sup>Primus et secundus terminantur in D sol re; tertius et quartus in E la mi; quintus et sextus in f fa ut; septimus et octavus in G sol re ut gravibus. <sup>14</sup>Autentici autem possunt ascendere regulariter supra finem diapason et licentialiter semidytonum vel dytonum cum diapente. <sup>18</sup>Plagales vero ascendere possunt supra finem diapentes regulariter et semidytonum vel dytonum licentialiter. Autentici autem possunt licentialiter descendere unam vocem et semitonium vel dytonum licentialiter sub fine et non ultra. <sup>19</sup>Plagales vero descendere possunt finali littera regulariter diatesseron et licentialiter diapente et non ultra. <sup>13-14,29</sup>Sciendum est tamen quod primus tonus potest ascendere totam manum [-119rb-] et reddere ad suam propriam finalem litteram et hoc propter maiorem auctoritatem atque dominationem. Alii vero toni nequeunt ascendere vel descendere nisi ad terminum supra dictum. Et si aliter

preter supradictum modum inveniatur irregulares dicuntur. <sup>25</sup>Sunt qui dicuntur mixti eo quod cantus mixtus sit quia partem recipit de plagali et partem de autentico, id est elevationem cantus autentici et dispositionem plagalis habet et tales dicuntur mixti. Multos autem cantus invenimus qui sub finalibus non descendunt et supra fines raro ascendunt diatessaron vel diapente et tales dicuntur plagales.



APPENDIX C  
TEXTS RELATED TO *DE PLANA MUSICA* AND *INTRODUCTIO MUSICE*

The following unpublished texts related to portions of *De plana musica* and *Introductio musice* are here transcribed. They are referred to in the commentaries to passages from the two treatises.

*B*, fols. 66r-68r

De plana musica 12.2 Sciendum est quod quatuor sunt partes principales ipsius palme sive gamatis. 12.3 Unde prima pars est de signis et nominibus vocum; 12.5 secunda est de lineis et spatijs; 12.4 tertia est de proprietatibus; 12.6 quarta est de mutationibus.

=De plana musica 11.2 Signa ergo dicuntur littere que ponuntur loco clavium vel prima linea sequentis figure scilicet a b c d e f g quia regunt omnen [sic] cantum. =11.3 Nomina vocum dicuntur ut re mi fa sol la ut patet in secunda linea predictae figure. Et sic in infinitum reduntur singula singulis signis.

De plana musica 14.2 Sequitur de lineis et spatijs. Unde linea et spatium ut hic sumuntur nichil aliud dicuntur quam paritas vel imparitas. 14.3 Unde illud quod est in linea dicitur imparitas sive inequalitas et illud quod est in spatio dicitur paritas sive equalitas. 14.5 Unde sumitur per numeram naturalem quod si primum in linea reliquum erit in spatio. 14.6 Et insuper omnem quartum oppositum et omne octavum. 14.7 Sed in uno loco sumitur signum simile. 14.8 Ergo si primum fit in linea reliquum semper erit in spacio et econverso. 14.9 Et hoc secundum [space] vel rectas lineas ipsius manus. Secunda et prima tenerit.

De plana musica 13.3 Sequitur de proprietate. 13.4 Unde proprietas nichil aliud est quam differentia 13.5 et sunt tres species ipsarum differentiarum scilicet  $\sqsubset$  quadratum sive durum et b rotundum sive molle et natura. 13.6 Unde  $\sqsubset$  quadratum sive durum dicitur esse tonus ante tonum, 13.7 b rotundum sive molle dicitur esse semitonium ante b molle, 13.8 natura dicitur can[-66v-]tus sumptus sine differentia, id est, sine utroque  $\sqsubset$  et b. 13.9 Unde regula generalis est quod in omni g, c et f sumitur ut et omne ut in g cantat per  $\sqsubset$  quadratum et omnes voces sequentes secundum suum ordinem rectum 13.10 et omne ut in c cantat per naturam et cetera; 13.11 et omne ut in f cantat per b rotundum et cetera.

De plana musica 10.19 Istorum autem signorum precedentium octo dicuntur graves quia gravem vocem sive cantum redunt, id est, depressum cantum. 10.20 Septem dicuntur acute quia acutum cantum redunt. 10.21 Quinque vero dicuntur superacute quia superacutum, id est, valde acutum cantum redunt.

De plana musica 11.4 Et ita fit tota compositio Gamatis. 11.5 Unde nichil aliud est compositio quam signorum monocordium cum vocibus. Unde sciendum est quod sex sunt nomina vocum scilicet ut re mi fa sol la sicut predictum est. Item qualiter formantur sex motus istarum sex vocum declaratur plane per hos versus sequentes: Hijs sex formantur motus et variantur. Ut cum re plene modulatur mi quoque cum re voce sonat plena fa cum sol sol quoque cum la dantque semi mi fa nec sit plenus to: us infra.

[space]

G  $\sqsubset$  quadratum significat; C naturam f quoque b molle.

[-67r-]

E la

**Voice 1 (Leftmost):**

- b
- ut
- b
- A re
- b
- mi

**Voice 2:**

- b n
- E la mi
- la mi mi la
- n b
- F fa ut
- fa ut ut fa
- n b b
- G sol re ut
- sol re re sol
- sol ut ut sol
- re ut ut re
- b n
- C fa ut
- fa ut ut fa

**Voice 3 (Center):**

- b b n
- D la sol re
- la sol sol la
- la re re la
- sol re re sol
- b b
- D la sol
- la sol sol la
- n b b
- A la mi re
- la mi mi la
- la re re la
- mi re re mi
- b n
- D sol re
- sol re re sol

**Voice 4:**

- b b n
- C sol fa ut
- sol fa fa sol
- sol ut ut sol
- fa ut ut fa
- C sol fa
- sol fa
- fa sol
- b b
- B fa b mi
- b n
- E la mi
- la mi mi la

**Voice 5 (Rightmost):**

- b b
- b fa b mi
- n b b
- A la mi re
- la mi mi la
- la re re la
- mi re re mi
- n b b
- G sol re ut
- sol re re sol
- sol ut ut sol
- re ut ut re
- n b
- F fa ut
- fa ut ut fa

[-67v-]

e						la	la		la					
dd						la	sol		sol	la				
c						sol	fa		fa	sol				
bb						fa	mi		mi	fa				
a						la	mi	re		re	mi	la		
g						sol	re	ut		ut	re	sol		
f						fa	ut			ut	fa			
e				la	mi						mi	la		
d			la	sol	re						re	sol	la	
c			sol	fa	ut						ut	fa	sol	
b			fa	mi								mi	fa	
a		la	mi	re							re	mi	la	
G		sol	re	ut								ut	re	sol
F		fa	ut									ut	fa	
E	la	mi											mi	la
D	sol	re											re	sol
C	fa	ut											ut	fa
b	mi													mi
A	re													re
Γ	ut													ut
	b	n	b	b	n	b	b		b	b	n	b	b	n
	q̃d	nā	ro	q̃d	nā	ro	q̃d		q̃d	ro	nā	q̃d	ro	nā

[-68r-] De plana musica <sup>15.2</sup>Sequitur de mutationibus. <sup>15.3</sup>Unde mutatio nichil aliud est quam dimissio vocis unius propter aliam vocem sub eodem sono et in eodem signo. <sup>15.4</sup>Unde sciendum est quod ubicumque fit mutatio oportet de necessitate quod ibi sint due voces ad minus. <sup>15.5</sup>Sed in Gamma ut, in A re, in b mi et in e la non est nisi una vox, ergo non fit ibi aliqua mutatio. <sup>15.6</sup>Et similiter in b fa b mi licet ibi sunt due voces cum ibi nulla fit mutatio quoniam ibi sunt diversa signa et diverse voces. Unum enim signum sic scribitur b fa et cantat per b rotundum. Aliud vero sic scribitur b mi et cantat per b quadratum et quia non ponuntur sub eisdem vocibus neque se habent sub uno et eodem sono. <sup>15.8</sup>Ideo non potest ibi fieri mutatio quoniam tunc esset hec differentia contra functionem sui nominis. <sup>15.9</sup>Si enim esset in uno et eodem sono deberet dici b fa mi et cetera.

<sup>15.10</sup>Item sciendum est quod ubicumque due voces sunt ibi sunt due mutationes ut in c fa ut ubi dicitur fa ut, ut fa. <sup>15.11</sup>Et similiter ubicumque sunt tres voces ibi habentur sex mutationes ut in g sol re ut ubi dicitur sic: sol re, re sol, sol ut, ut sol, re ut, ut re et sic de alijs huiusmodi. Et sciendum quod ubi sunt due voces tantum ibi mutatur prima in secundam et econverso; <sup>15.12</sup>et ubi

sunt tres voces ibi mutatur prima in secundam et econverso et prima in ultima et econverso et secunda in ultima et econverso, ut patet in palma et *hoc* ascendendo et descendendo <sup>15.13</sup>et ratione istius ubi sunt due voces tantum per quatuor sicut tres per sex. <sup>15.14</sup>Unde regula generalis est quod omnis mutatio desinens in istis tribus vocibus ut re mi quia *plus* habet ascendere quam descendere; <sup>15.15</sup>et omnis mutatio desinens in fa sol la dicitur descendendo quia *plus* habet descendere quam ascendere. <sup>15.16</sup>Causa vero mutationis sumitur dupliciter scilicet aut causa ascensionis aut causa descensionis, <sup>15.17</sup>ut patet in c fa ut quoniam si in illo sumeret aliquis fa ut posset ascendere ad tertiam vocem. Si vero velle sumere quartam vocem necesse esset in proprie sumere c fa ut quoniam fit ibi mutatio ascendendo de fa in ut et similiter descendendo de ut in fa suo modo. Et hec de mutationibus ad presens sufficit. Mutationes que pertotam manum possunt fieri sunt iste. Et notandum quod disiunctio vocat<ur> quando aliquis saltat altius quam la vel inferius quam ut sine recta mutatione.

Vc, fol. 21r

Coniuncta est alicuius proprietatis seu deducciones de loco proprio ad alienum locum secundum sub vel supra . . .

Si queratur quid sit vox et unde dicatur breviter respondendum est vox est aer remissus intus naturalibus instrumentis formata. Naturalia instrumenta sunt hec scilicet pulmo, guttur, lingua, palatum [*space*] os, dentes, et duo labia simul.

Vc, fols. 22rv

Introductio musice <sup>5.1</sup>Sequitur de mutationibus vorum de quibus dicendum est <sup>5.2</sup>quod omnis mutatio desinens in ut re mi talis autem fit ascendendo. <sup>5.3</sup>Similiter omnis mutatio desinens in fa sol la talis vero fit descendendo. <sup>5.4</sup>Unde versus: ut re mi scandunt, fa sol la quoque descendunt.

Introductio musice <sup>5.9</sup>De hac causa dicit Boetius quod mutatio fuit inventa causa necessitatis. <sup>5.10</sup>Ad mutacionem faciendam est neccese quod sint due voces unisonum representantes id est in unisono permanentes.

Introductio musice <sup>5.5</sup>Unde dicit Boetius quod <sup>5.6</sup>mutatio est dimisio unius vocis propter aliam sub eodem signo et eadem voce ac etiam sono. <sup>5.7</sup>Et dicitur mutatio a muto mutas mutat quia unam proprietatem in aliam subsequentem sub uno signo ac etiam sono mutamus.

Introductio musice <sup>5.11</sup>Et sic mutatio fit de duabus vocibus integris. Et propter hoc in gamma ut a re- $\text{L}$  mi et e la non fit mutatio. <sup>15.12</sup>Ratio est quia sicut de solo homine non potest fieri populusita de sola nota non potest fieri mutacio.

Introductio musice <sup>5.8</sup>Et ideo est sciendum quod quandocumque possumus operari has vo[[x]]ces scilicet ut re mi fa sol la debemus mutationes evitari, non [fol. 22v] quia totaliter possunt evitari vel precavere <sup>5.9</sup>sed dum evenerit neccesitas mutacionem faciendi tunc debet fieri et non aliter.

Nota quod est diferencia inter mutacionem et permutacionem quia mutacio est variacio vocis nominis vel note in eodem spatio vel linea et eodem sono, sed permutacio est variacio vocis nominis vel note in eodem spacio vel linea et diverso sono.

Vc, fols. 31v–32r

Nota quod septem sunt littere in manu, videlicet a b c d e f g. Et sex sunt nomina vorum, scilicet ut re mi fa sol la. Nota quod tres sunt modi cantandi, videlicet  $\text{L}$  quadrum, natura et b molle. Et in tribus litteris invenitur, scilicet c f g. Nota quod omne ut in c cantatur per

naturam, omne ut in f cantatur per b molle, omne ut in g cantatur per  $\text{b}$  quadrum. Unde: c naturam dat, f b molle tibi signat,  $\text{b}$  quoque durum dat tibi cantare securum. . . .

Incipit manus secundum magistrum Guidonem qui fuit grecus et propter hoc incipit manum et dicit gama quod latine dicitur g et misit primam litteram g quia g est prima littera nomen eius. Et ideo non incipit ab a que est prima littera gamma, sic figuratur  $\Gamma$  scilicet ut grece.

$\Gamma$  ut est una littera et una nota et cantatur per  $\text{b}$  quadrum et regitur a se ipso tamquam origo et fundamentum omnium aliarum vocum sive notarum et stat in virgulo et nulla fit mutacio quia de sola nota non potest fieri mutatio.

A re est una littera et una nota, a est littera et re est nota et cantatur per  $\text{b}$  quadrum et regitur ab ut de gamma et stat in spacio et nulla fit mutatio ut supra.

b mi est una littera et una nota, b est littera et mi est nota et cantatur per  $\text{b}$  quadrum et regitur ab ut de gamma et stat in virgulo et nulla fit [sic]

C fa ut est una littera et due note, c est littera, fa ut sunt note, fa cantatur per  $\text{b}$  quadrum et regitur ab ut de gamma et ut cantatur [-32r-] per naturam et regitur a se ipso et stat in spacio. Et sunt ibi due mutationes tam ascendendo quam descendendo, scilicet fa ut ascendendo a  $\text{b}$  quadru in naturam et ut fa descendendo a natura in  $\text{b}$  quadrum . . .

Vc, fol. 41r

Introductio musice <sup>5.9</sup>Dicit enim Boetius quod mutatio fuit inventa causa necessitatis ad variacionem genus faciendam. <sup>5.10</sup>Necesse est quod sint due voces unisonum representantes in unisono permanentes. <sup>5.5</sup>Unde Boetius ait quod <sup>6</sup>mutatio est dimissio unius vocis propter aliam sub eodem signo et eadem voce et eciam sono. <sup>5.7</sup>Et dicitur mutatio a muto, -as quia una proprietas mutatur in alias sub uno signo ac sono. Et sic mutatio fit ex duabus vocibus integris ..... <sup>5.11</sup>Et propter hoc in  $\Gamma$  ut, a re, b mj et b fa  $\text{b}$  mi acuto et superacuto et e la non fit mutatio <sup>12</sup>quia de sola nota non potest et cetera, sicut de solo homine non potest fieri populus. <sup>5.8</sup>Et est sciendum quod quantum possumus cohoperari has uoces, scilicet ut re mi fa sol la ipsas operarij debemus mutationes evitando, non quia totaliter possint evitari nec precaveri, <sup>5.9</sup>sed dum evenerit necessitas faciendi mutationem, tunc debet fieri et non aliter.

Vv, fol. 46v

Visum est de mutationibus vocum. Nunc videndum est de vocibus. Primo igitur in gravibus <sup>14</sup>voces habemus, in acutis 18 et in superacutis 10.

Quot sunt vocabula notarum? Sex, scilicet ut, re, mi, fa, sol, la. Et nota quod quando possumus operari has voces, scilicet ut, re, mi, fa, sol, la, ipsas operari debemus mutationes evitando et eas precavendo, non quod totaliter possint evitari nec precaveri, sed cum evenit necessitas mutationem faciendi, tunc debet fieri et non aliter.

Vv, fols. 74rv

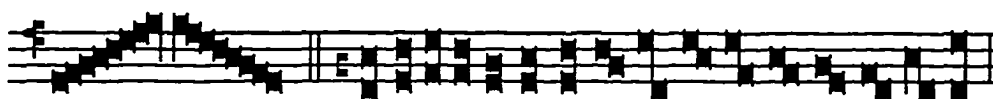
Sequitur de mutationibus. Unde mutatio nil aliud est quam dimissio unius vocis propter aliam vocem sub eodem sono in linea vel in spatio que non debet fieri nisi causa necessitatis. [-74v-] Nota quod una sola nota non claudit mutationem. Sed due duas et tribus sex oriuntur. Nota quod ubi est una sola nota non potest fieri mutatio quia de solo homine non potest nasci populus. Nota quod quare de duabus notis non resurgunt quatuor mutationes sicut ex tribus sex. Quod quilibet modus modus [sic] consignatur alteri modo sive ascendendo vel descendendo.

R, fol. 619v

De figuris et ligaturis cantus plani. Omnis cantus fit duobus modis aut cum littera aut sine littera. Si sine littera tunc oportet quod notetur per ligaturas in exemplis patet sed tamen sine amissione modi figurarum tam ascendencium quam descendencium. Due sunt figure scilicet cum proprietate et sine proprietate. Recta proprietas figure ascendentis vel descendentis est ut primus punctus habeat tractum descendentem in sinistra parte. Si sunt due prima dicitur esse brevis et ultima longa. Si sunt tres due prime sunt breves et ultima longa. Omnis autem figura sine propr<i>etate prima dicitur esse longa. Omnis figura aut est simplex aut ligata aut composita. Simplex figura est quando una sola nota super unam sillabam ponitur. Tunc debent fieri omnes quadre et habere unam tractum descendentem a dextris. Iste talis note in mensurabili cantu dicuntur longe. Longe quedam sunt perfecte quedam imperfecte. Imperfecta efficitur perfecta multis modis, scilicet quatuor. Primo quando simul inveniuntur plura longe tunc dicuntur esse perfecte. Secundo quando due breves inter duas longas inveniuntur. Tertio quando quedam parvulus punctus ponitur qui dicitur divisio modi. Quatuor quando pausa longa trium temporum post longam invenitur tunc illa longa precedens dicitur esse perfecta. Et sic quatuor modis efficitur longa perfecta trium temporum.

Fl, fol. 113r

Notandum est quod due sunt regule per quas omnis cantus ascendit et descendit [scilicet probacio et operacio: probacio est quandocumque cantus ascendit vel descendit *in marg.*] per ordinatas voces, ut hic patet. Operacio est quandocumque cantus ascendit vel descendit de una linea ad aliam vel de uno spacio ad aliud, ut hic:



F, fol. 67v

Tritonus est coniunctio quatuor vocum et dispositio trium tonorum sine aliquo semitonio; et dicitur a tris quod est tres et tonus quasi de tribus tonis constans; et invenitur inter f fa ut et l<sup>a</sup> quadrum et inter b molle et e la mj gravibus, acutis et superacutis, sicut patet. Finis.

APPENDIX D  
ARS CONTRAPUNCTUS SECUNDUM PHILIPPUM DE VITRIACO

The *Ars contrapunctus secundum Philippum de vitriaco* contains a description of the thirteen intervals similar to that of *Introductio musice* (note also the reference to Johannes de Garlandia in 1.1.2). It is critically edited here for the first time, on the basis of the following sources;

- Va*    Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 5321, ff. 23r–25v (Italy, late 14th to early 15th century)
- E*     Einsiedeln, Benediktinerkloster 689, ff. 46r–50r (Italy, early 15th century)
- Vv*    Rome, Biblioteca Vallicelliana, B 83, ff. 1r–8v (Italy, mid 15th century)
- Fl*    Florence, Biblioteca Medicea-Laurenziana, Plut. 29.48, ff. 86r–88v (late 15th century).
- E* serves as copy text, emended where necessary. An earlier edition is in CS, 3:23–27 (based on four sources: *E*, *Fl*, *Vv*, and Padre Martini's copy of *Fl*).

INCIPIT INTRODUCTIO CONTRAPUNCTUS  
PROLOGUS

<sup>1</sup>Volentibus introduci in artem contrapunctus, id est nota contra notam quamplurima prenotanda sunt. <sup>2</sup>Et primo et principaliter notandum est quod omnes note mundi vocantur aliquo istorum sex nominum, ut, re, mi, fa, sol, la. <sup>3</sup>Ad evidentiam totius musice tam cantus mensurabilis quam immensurabilis, primo videndum est quot sunt species eius, que sunt preambula et que sunt necessaria ad demonstrationem, dinumerationem et intelligentiam omnis cantus.

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*E* 46r; *Fl* 86r; *Va* 23ra; *Vv* 1r; CS, 3:23a.

Titulus. introducto *E om. Fl Va* Ihesus. Ars contrapuncti secundum magistrum Philippum de Vitriaco *Vv*

1. <V>olentibus in[[...]]troducti in artis duci in arte contrapuncti *Va* plura *E* contrapuncti *Fl*

2. est *om. Fl Va* sex modorum nominum *Va*

3. evidentiam ergo totius *Fl* mensuralis quam immensuralis *Fl* *que pro quot Vv*  
demonstrationem *om. Va* dinumerationem *om. Fl Vv*
- 

<sup>4</sup>Sunt autem tredecim species cantus sive discantus nec plures nec pauciores que debito modo rationem numeri tenent. <sup>5</sup>Et iste tredecim species locuntur de numero relato ad sonos proportionatos, <sup>6</sup>quia sicut dicit Guido sapientissimus musice magister, <sup>7</sup>ita est de illis qui sine arte canunt, sicut de illis hominibus litteratis qui nunquam litteras didicerunt. <sup>8</sup>Item dixit Guido: vulgares cantores in vanum laborant qui differentiam unius toni aut semitonij discernere nesciunt, <sup>9</sup>tamen ipsos in cantando negligentes perdentes in quantum et divinam et secularem scripturam plene et perfecte cognoscere potuissent.

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4. Tredecim igitur sunt species cantus *Fl* *sive Va* nec plures neque pauciores *Vv* *que debito Va numeri Va*  
5. tresdecim *E* dicuntur *pro* locuntur *E* *relato ad sonos proportionatos Va*  
6. dixit *Vv* *musice magister Va*  
7. ita est de aliis qui *Va* *litteras [... sup. lin.] didicerunt Va*  
8. dicit *E* vulgareis *Va* uni *Fl* vel *Fl Va Vv* semitoni *Vv*  
9. negligentes *Vv* quam *pro* quantum *E Va Vv* divinam secularem *Vv* potuissent et cetera *Vv*
- 

#### 1.1. <sup>1</sup>DE TREDECIM SPECIEBUS CAPITULUM PRIMUM

<sup>2</sup>Secundum sapientissimum Guidonem monachum predictum in arte musice excellentissimum et secundum magistrum Johannem de Garlandia quondam in studio parisino expertissimum atque probatissimum ac etiam secundum Boetium et secundum plures alios magistros, <sup>3</sup>tredecim sunt species quibus utimur in omni cantu tam mensurabili quam immensurabili et non plures neque pauciores, <sup>4</sup>scilicet unisonus, tonus, semitonium, ditonus, semiditonus, tritonus, diatessaron, diapente, tonus cum diapente, semitonium cum diapente, ditonus cum dyapente, semiditonus cum dyapete et diapason. <sup>5</sup>Et sicut additio et compositio fit speciei dyapente, ita additio et compositio fit speciei diapason.



*E 46r; Fl 86r; Va 23ra; Vv 1v; CS, 3:23b.*

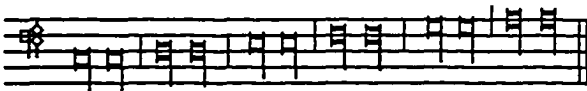
1. *om. Fl Va Vv*
2. Secundum etiam predictum Guidonem sapientissimum in arte musice hac excellentissimum  
*Fl Secundum Va musice ac excellentissimum Va Iohannem de galadia E*  
*gallandia Fl galandia Va Vv quondam in studio bis Fl parusino Fl*  
*probatissimum etiam Va*
3. *tresdicim Vv quibus Va mensurabili Va nec Fl*
4. *unisonus Va tonus Va semitonus E diptonus Fl Vv dictonus Va tremitorium pro*  
*semiditonus Fl semidictonus Va semidiptonus Vv dyathessaron tritonus Fl Vv*  
*diatesaron tritonus Va diatexeron E tonus cum diapente, semitonium cum diapente*  
*om. Va semitonus cum diapente E dyptonus cum dyapente Fl dictonus cum*  
*diapente Va diptonus cum diapente Vv semidiptonus cum dyapente Fl Vv*  
*semiditonus cum diapente om. Va et E et om. Vv*
5. *addictio et compositio fit speciei diapente, ita addictio et compositio Va*

<sup>6</sup>Prima species. <sup>7</sup>Prima species, scilicet unisonus, est quandocumque plures note vel voces invicem collocantur in eadem linea vel spatio secundum discantum. <sup>8</sup>Unisonus habet fieri quando discantus et cantus in eadem linea vel spatio conveniunt. <sup>9</sup>Et dicitur unisonus ab unus, una, unum et sonus quasi unus equalis sonus sine ulla variatione, ut hic per exempla patet.

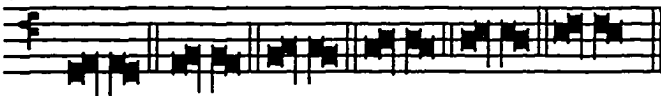


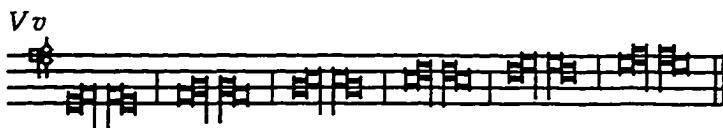
6. *om. Fl Va Vv*
7. *videlicet pro scilicet Fl Va Vv invicem in simul collocantur Va conlocantur Fl in*  
*eadem linea vel spatio om. Fl Vv*
8. *spatia Vv*
9. *unus, -a, -um Va unus, -a, -um Vv quasi unus et equalis Va quaxi E ulla Va*  
*varietate pro variatione Vv ut hic patet exemplum Fl ut per exemplum hic patet*  
*Va ut hic apparet Vv*

*F*



*Va*

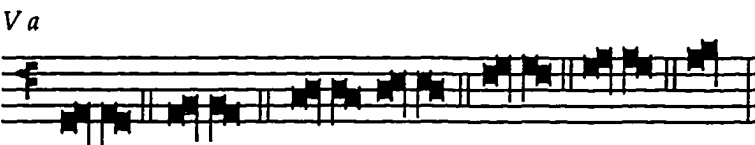
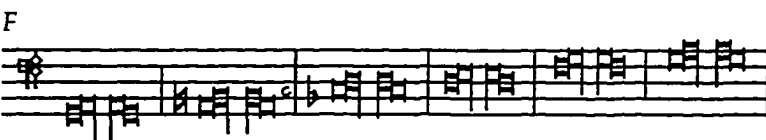


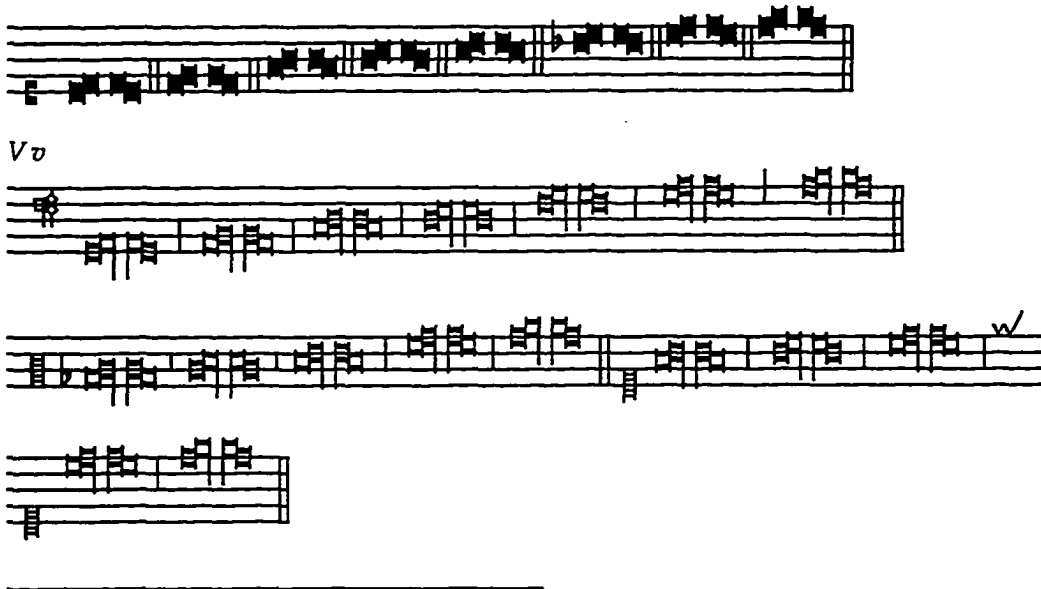


<sup>10</sup>De secunda specie. <sup>11</sup>Secunda species est tonus qui secundum Guidonem diffinitur sic: Tonus est spatii magnitudo plenum et perfectum sonum emittens. <sup>12</sup>Secundum Boetium diffinitur sic: Tonus est coherentia duarum vocum plenam et integram elevationem reddens seu depositionem sine aliquo intervallo. <sup>13</sup>Et dicitur tonus a tonando vel a sonando quia integre sonat vel tonat, idest integrum tonum seu sonum facit in animo audientis. <sup>14</sup>Et figuratur sic: ut re, re mi, fa sol, sol la ascendendo et econverso descendendo, ut hic per exempla patet in gravibus, acutis et superacutis litteris.

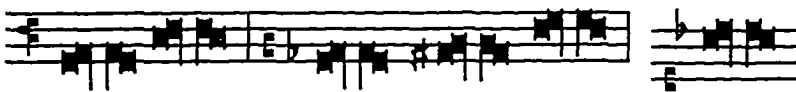


10. *om. Fl Va Vv*  
 11. tonus qui secundum Va Tonus est spaciū magnitudo plenum et perfectum sonum emittens  
*Va*  
 12. Secundum Boetium diffinitur Va choherentia *Vv* vocum in plenam *E* vocum in Va  
 ellevationem *E Vv* redens *Vv* alico *Va* integre tonits tonat vel sonat idest *Va*  
 13. tonat vel sonat *Vv* tonum vel sonum *Fl*  
 14. ut re mi fa sol la *Va* ut hic per exemplum in gravibus, acutis et superacutis patet *Fl* per  
*om. Va* exemplum *Vv*





<sup>15</sup>Tertia species. <sup>16</sup>Tertia species est semitonium et est coniunctio duarum vocum semiplenam elevationem reddens atque depositionem sine aliquo intervallo. <sup>17</sup>Et dicitur semitonium non a semis quod est dimidium sed a semis quod est imperfectum, <sup>18</sup>unde ait Boetius, quia sunt due voces non plenum sonum facientes. <sup>19</sup>Et figuratur uno modo tantum, scilicet mi fa ascendendo et econverso descendendo, ut hic inferius gravibus, acutis et superacutis patet.



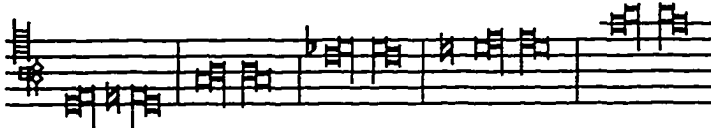
15. om. Fl Va Vv

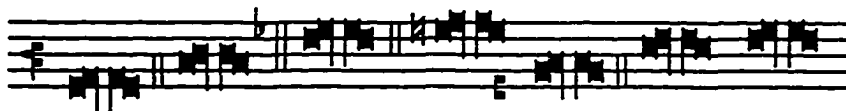
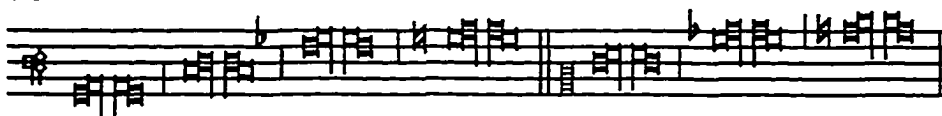
16. et coniunctio Va aliquo om. E allico Va

18. vel unde E quod pro quia Va due sunt Vv sunt om. Fl non in plenum Va sonum  
plenum Vv sonum om. Fl

19. ut hic patet in gravibus, acutis et superacutis Fl inferius in gravibus Va Vv superacutis  
Va patet et cetera Vv

F



*V a**V v*

<sup>20</sup>Quarta species . <sup>21</sup>Quarta species est ditonus et est coniunctio trium vocum et dispositio duorum tonorum sine aliquo semitonio. <sup>22</sup>Et dicitur ditonus a dia quod est duo et tonus quasi duo toni integri. <sup>23</sup>Et figuratur duobus modis ut et semiditonus ascendendo, scilicet ut mi, fa la et econverso descendendo, operabiliter et probabiliter. <sup>24</sup>Et alio nomine vocatur tertia perfecta, ut hic inferius invenitur in gravibus, acutis et superacutis.



20. *om. Fl Va Vv*

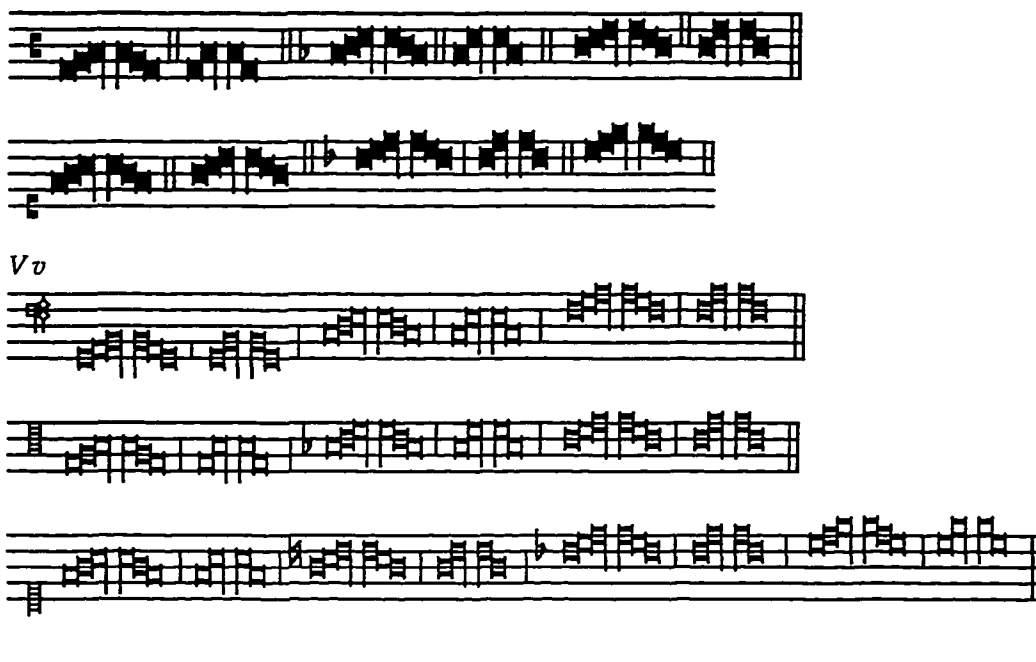
21. *Quarta species est diptonus Va diptonus E Fl Vv*

22. *diptonus E Fl Va Vv quaxi E idest pro quasi F*

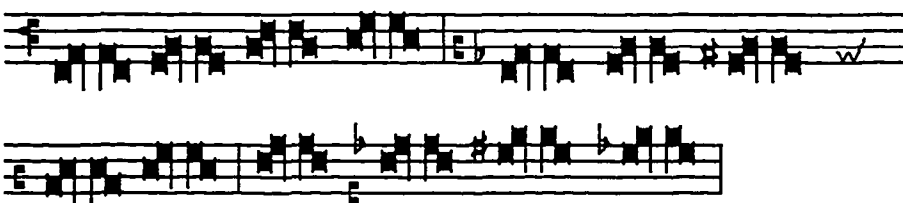
23. *ut et semiditonus ascendendo om. Fl ut et semiditonus Va semiditonus E Vv ut mi et fa la ascendendo et econverso descendendo Fl operabiliter et probabiliter om. Fl*

24. *inferius . . . superacutis om. Fl in om. Va Vv*

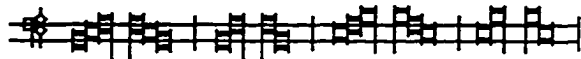
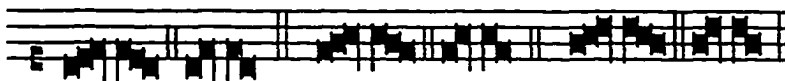
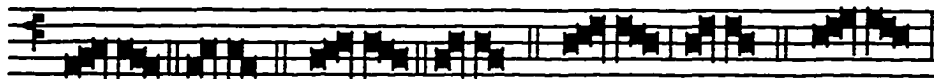
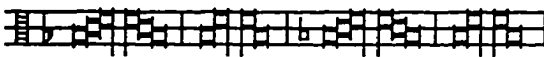
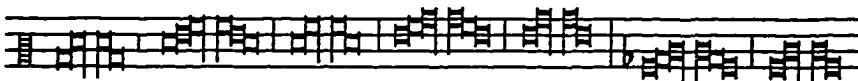
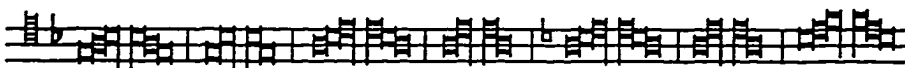
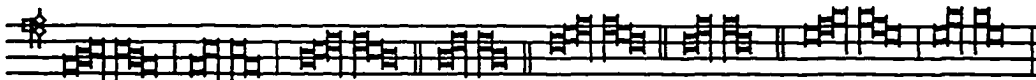
*F**V a*



<sup>25</sup>Quinta species. <sup>26</sup>Quinta species est semiditonus et est coniunctio trium vocum et dispositio toni cum semitonio et sic in principio vel in fine semitonium cum tono apponitur. <sup>27</sup>Et ideo duobus modis figuratur, scilicet re fa, mi sol ascendendo vel descendendo. <sup>28</sup>Et dicitur non a semis quod est dimidium ymo a semis quod est imperfectum quasi ditonus imperfectus. <sup>29</sup>Et alio nomine vocatur tertia imperfecta, ut hic inferius gravibus, acutis et superacutis litteris patet.



25. om. Fl Va Vv  
 26. semidiptonus E Fl Vv semiditonus Va semitonium cum tono acipitur [apponitur in marg.] E  
 27. Et cum duobus Va re fa et mi sol ascendendo et econverso descendendo Fl  
 28. sed pro ymo Fl imperfecta Va quaxi E idest pro quasi Fl diptonus E Fl Va Vv imperfectus Va  
 29. imperfecta Va ut in hoc exemplo Fl inferius in gravibus Va patet et cetera Vv

*F**Va**Vv*


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<sup>30</sup>Sexta species. <sup>31</sup>Sexta species est diatessaron et est coniunctio quatuor vocum et dispositio duorum tonorum cum additione unius semitonii in principio, in medio vel in fine. <sup>32</sup>Et idem diatessaron tribus modis figuratur, scilicet ut fa, re sol, mi la ascendendo et econverso descendendo, probabiliter vel operabiliter. <sup>33</sup>Et dicitur a dia quod est de et tetros quod est quatuor quasi species ex quatuor vocibus constans, ut inferius gravibus, acutis et superacutis litteris patet.



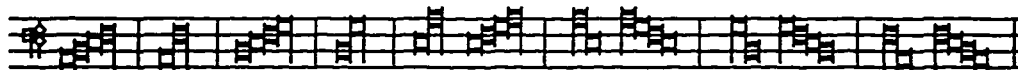
30. *om. Fl Va Vv*

31. *diatexeron E dyathesaron Fl diateserom Va et coniunctio Va addicio Fl*  
*addictione Va principio, medio Fl principio et in medio Vv*

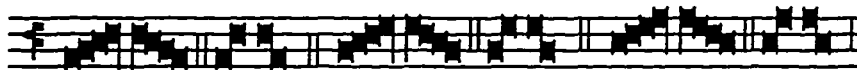
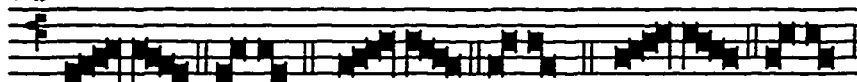
32. *Et figuratur tribus modis, idest, ut fa Fl idem Va dyatexeron E diatesaron Va*  
*scilicet Va probabiliter et operabiliter Vv operabiliter Va*

33. *did quod est de Va thetros Fl tretros Vv quaxi E idest pro quasi Fl species ex Va*  
*constans Va ut hic patet Fl patet et cetera Vv*

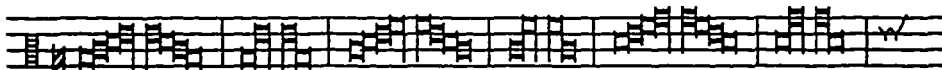
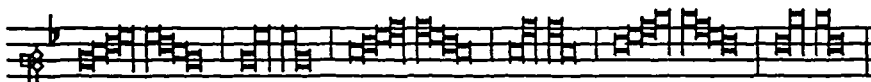
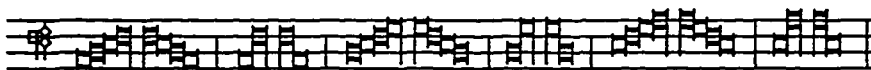
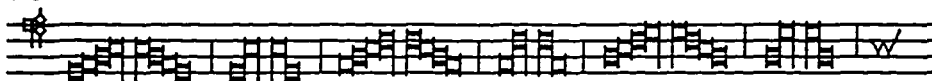
*F*



*Va*



*Vv*





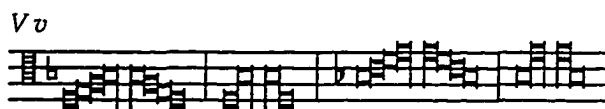
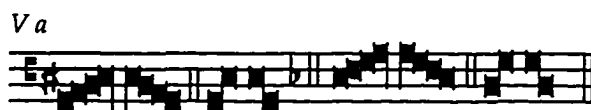
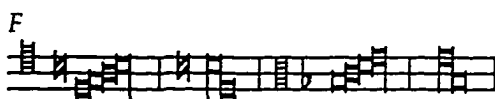
<sup>34</sup>Septima species. <sup>35</sup>Septima species est tritonus et est coniunctio quatuor vocum et dispositio trium tonorum sine aliquo semitonio. <sup>36</sup>Et dicitur tritonus a tris quod est tres et tonus quia de tribus tonis constans, ut hic inferius gravibus, acutis et superacutis patet.



34. *om. Fl Va Vv*

35. *alico Va*

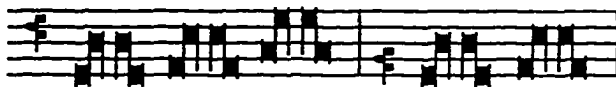
36. *dicitur Va tres Va idest pro quia Fl quasi pro quia Vv constans Va ut hic duobus modis figuratur Fl hic om. Va Vv inferius Va superacutis litteris patet Va superacutis litteris patet et cetera Vv*



<sup>37</sup>Octava species. <sup>38</sup>Octava species est diapente et est coniunctio quinque vocum et dispositio trium tonorum cum semitonio in principio aut in medio duobus modis aut in fine. <sup>39</sup>Et sic quatuor modis efficitur, scilicet ut sol, re la, mi mi, fa fa in ascendendo et econverso



descendendo. <sup>40</sup>Et dicitur diapente a dia quod est de et pente quod est quinque quasi de quinque vocibus constans. <sup>41</sup>Et alio modo vocatur quinta perfecta, ut hic in gravibus, acutis et superacutis litteris patet.



37. om. Fl Va Vv

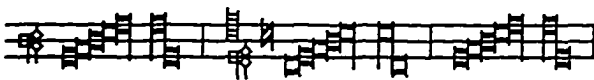
38. et coniunctio Vv dispositio trium tonorum cum semitonio in principio Va semitonio aut in principio Fl Vv

39. efficitur ut sol re la mi mi fa fa in ascendendo Va efficitur E afficitur Fl scilicet om. E mi mi et fa fa Fl

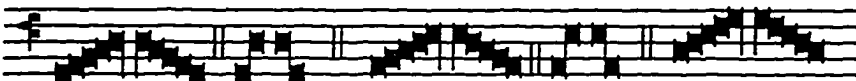
40. diapente ad dia E quaxi E idest pro quasi Fl

41. Et om. Fl perfecta om. E Va Vv perfecta maius, ut hic Fl hic om. Va Vv in gravibus ... patet om. Fl litteris inferius patet Vv

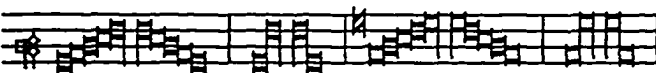
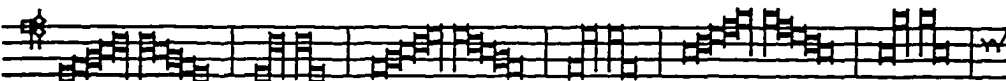
F



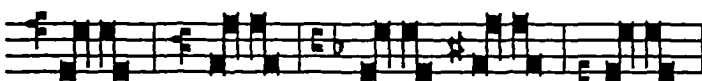
Va



Vv



<sup>42</sup>Nona species. <sup>43</sup>Nona species est tonus cum diapente et est coniunctio sex vocum et dispositio quatuor tonorum cum semitonio. <sup>44</sup>Et alio nomine vocatur sexta perfecta, ut hic inferius patet per exemplum.



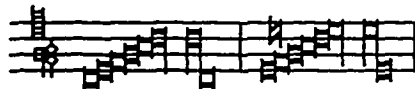
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42. *om. Fl Va Vv*

43. *coniunctio ex quatuor Va Vv coniuncta Vv sex vocum et dispositio om. Fl Vv tonis Fl*  
*Va Vv semitonis Va*

44. *allio Va patet per p [?] exemplum E inferius . . . exemplum om. Fl per exemplum om.*  
*Va*

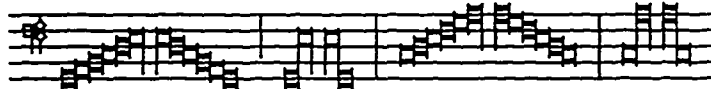
*F*



*Va*



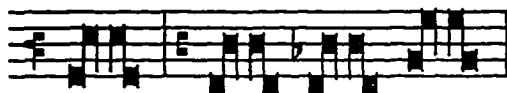
*Vv*



<sup>45</sup>Decima species. <sup>46</sup>Decima species est semitonium cum dyapente et est coniunctio sex

vocum et dispositio trium tonorum cum duobus semitoniis. <sup>47</sup>Et alio nomine vocatur sexta

imperfecta, ut hic patet.

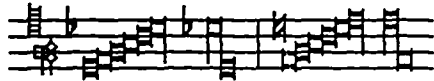


45. *om. Fl Va Vv*

46. *semitonis Vv*

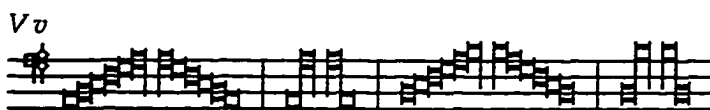
47. *allio Va patet om. Va*

*F*

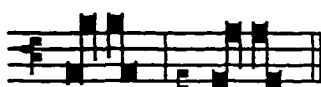


*Va*



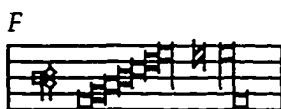


<sup>48</sup>Undecima species. <sup>49</sup>Undecima species est ditonus cum diapente et est species coniuncta ex septem vocibus et ex quinque tonis cum uno semitonio, ut hic patet.



48. om. *Fl Va Vv*

49. diptonus *E Fl Va Vv* coniuncta cum septem *Va* sectem *Vv* ut hic patet exemplum de undecima *Fl* ut hic inferius patet *Va* ut hic inferius patet per exemplum *Vv*

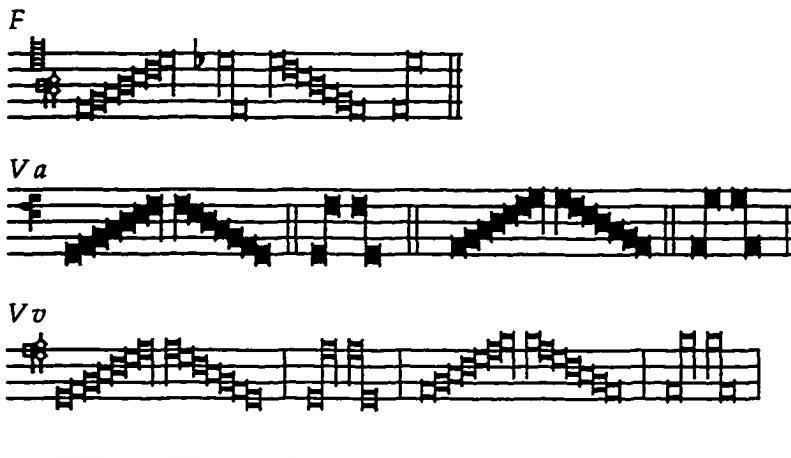


<sup>50</sup>Duodecima species. <sup>51</sup>Duodecima species est semiditonus cum diapente. Et est species coniuncta ex septem vocibus et ex quatuor tonis cum duobus semitoniis, ut hic inferius patet.



50. om. *Fl Va Vv*

51. est tremitonium vel semidiptonus cum dyapente *Fl* semidiptonus *E Va Vv* coniuncta *Va* sectem *Vv* semitonis *Vv* ut hic patet per exemplum *Vv* inferius om. *Fl*



52Tercia decima species. 53Tercia decima species et ultima est diapason et est coniunctio octo vocum et dispositio quinque tonorum cum duobus semitoniis que non equivalent unitono ineffabiliter. 54Et dicitur diapason a dia quod est de et pason quod est totum quia in se continet omnes alias suprascriptas species seu voces. 55Et sic est de quacumque littera simili manus que clavis est usque ad aliam litteram sibi similem in figura. 56Dicitur autem diapason vel octava quod idem est sicut consequenter per exemplum manifeste patet.



52. om. Fl Va Vv

53. Tercia E et ultima om. Va octo vocum et dispositio quinque tonorum Va que ... ineffabiliter om. Fl non Va non om. Vv tongo ineffabiliter Va ineffabiliter E

54. dia quod est de E pan[son in marg.] E pau pro pason Vv se om. Vv species suprascriptas Fl supradictas Vv

55. Et sic de Fl Vv Et sic est de Va que Va quod pro que Vv sibi om. Fl similem Va

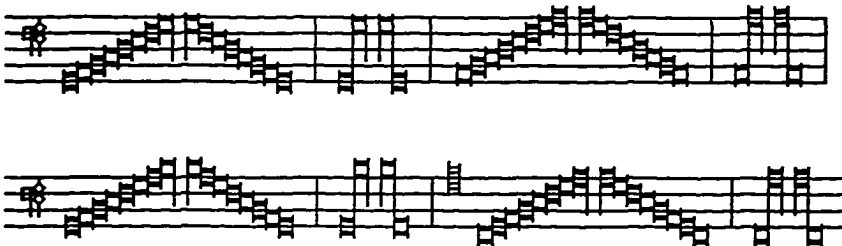
56. sicut hic patet per exemplum Fl consequenter om. Va sicut convenienter manifeste per exemplum patet Vv manifeste patet om. Fl



*Va*



*Vv*



<sup>57</sup>Expliciunt omnes species neccessarie cantus et utiles omnibus musicis introducendis.

<sup>58</sup>Nunc videndum est de ficta musica que in instrumentis musicalibus est neccessaria et specialiter in organis.

57. introducentibus *Fl*

58. Unde *pro* Nunc *E Vv* Unde [nunc *fort. m. sec. in marg.*] *Va* *victa pro ficta Fl* que instrumentis *Fl Va*

## 2.1. <sup>1</sup>TRACTATUS SECUNDUS CAPITULUM PRIMUM

<sup>2</sup>Unde ficta musica est quando de tono facimus semitonium et econverso de semitonio tonum. <sup>3</sup>Omnis enim tonus est divisibilis in duo semitonia <sup>4</sup>et per consequens signa semitonia designantia in omnibus tonis possunt applicari. <sup>5</sup>Signum enim ut dicit sapiens signator cor hominis letificat.

*E* 48v; *Fl* 87v; *Va* 24vb; *Vv* 6r; *CS*, 3:26a.

1. *om. Fl Va Vv*

2. est *om. Fl* quando facimus dd tono semitonium *Vv* facimus *Va*

3. conus *E*

4. et per consequens signa semitonia *om. Fl* ampliari *Fl*

5. signacio *Fl* signator [signat.. *fort. m. sec. in marg.*] *Va* letifica<sub>t</sub> *Va* letificant *Fl*

<sup>6</sup>Ubi<sub>que</sub> igitur invenimus *b* rotundum dicimus illam uocem *fa* <sup>7</sup>et ubi<sub>que</sub> invenimus *b*

quadrum dicimus istam vocem *mi*. <sup>8</sup>Et sic tonos in semitonia deducendo et econverso de

necessitate, ut hic rationabiliter et probabiliter per exemplum patet.



6. Ubi *pro* ubi<sub>que</sub> *Fl* istam *pro* illam *Fl Va Vv* quadratum *Va*

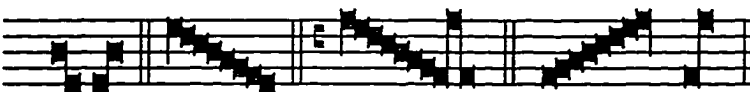
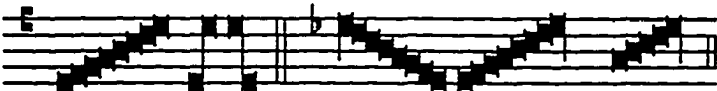
7. *om. Fl Vv*

8. rationabiliter et probabiliter per exemplum *om. Fl* hic *om. Va* ut hic realiter et  
probabiliter patet *Vv* exempla *Va*

*F*



*Va*





3.1. <sup>1</sup>REPPETICIO PREDICTORUM  
CAPITULUM PRIMUM  
TRACTATUS TERTIUS

<sup>2</sup>Modo dicendum est quomodo et qualiter iste species supradicte ordinari debeant in contrapuncto, idest nota contra notam. <sup>3</sup>Prenotandum quod quando cantus ascendit discantus debet econverso descendere; <sup>4</sup>quando vero descendit cantus discantus debet ascendere. <sup>5</sup>Et hec est regula generalis semper conservanda nisi per species imperfectas, sine aliis rationibus evitetur considerando, ut superius dictum est.

*E 49r; Fl 87v; Va 25rb; Vv 6v; CS, 3:26b.*

1. *om. Fl Va Vv*
2. Modo [dicendum *in marg.*] dictum est *E* diendum *Fl* dicendum *Va* istas *Vv* in [contrapuncto *in marg.*] contrapunctum *Va* contrapunctum *E* contrapunctu *Vv*
3. Prenotando *Fl Vv* Prenotandum *Va* debet et econverso *E Vv* econverso *om. Fl*
4. cantus descendit *Va Vv*

5. *hec Va est om. Vv senper E propter pro semper Va observanda pro conservanda Fl*  
*Va cantatur pro evitetur Fl*

---

<sup>6</sup>Quomodo et qualiter sunt tredecim species et non plures nec pauciores, secundum doctores prelibatos ac etiam secundum magistrum Octonem in hac scientia quondam expertissimum. <sup>7</sup>Tamen alii magistri adiungunt illas quatuor species, videlicet decimam, duodecimam, tertiamdecimam et quintamdecimam. <sup>8</sup>Sunt tamen ad bene esse et ad voluntatem quia considerare debemus quod <sup>9</sup>sicut unisonus tamquam primum fundamentum omnium tredecim specierum que habent fieri in octo vocibus per gradus ascendentibus vel descendentibus computando usque ad diapente et diapason, <sup>10</sup>simili modo sciendum est sicut se habet unisonus ad tertiam, sic se habet octava ad decimam <sup>11</sup>et sicut se habet unisonus ad quintam, sic se habet octava ad duodecimam <sup>12</sup>et sicut se habet unisonus ad sextam, ita se habet octava ad tertiamdecimam <sup>13</sup>et sicut se habet unisonus ad octavam, ita se habet octava ad duplicem octavam, id est ad quintam decimam et e converso.

---

6. Quomodo et qualiter *Va tresdecim Vv neque Va Vv plibatos E publicatos pro prelibatos Fl prolibatos ac Va prelibatos om. Vv et pro etiam Vv Ottonem Fl*  
*Ottonem Va expertissimum Vv*
7. *terciadecimam Fl Vv quintamdecimam Va*
8. *considerare E*
9. *per gradus asendentibus [vel in marg.] et descendentibus E ascendentes vel descendentis Fl*  
*diapente et ad diapason Vv*
10. *considerandum pro sciendum Fl Va Vv octavam Vv*
11. *sic pro sicut Vv octavam Vv*
12. *sic pro ita Fl Vv*
13. *sic pro ita Fl se habet unisonus ad quintam decimam vel ad duplicem octavam et e converso Fl et e converso, que omnia bene nota Vv*
- 

### 3.2. <sup>14</sup>DE DISTINCTIONE PREDICTARUM SPECIERUM CAPITULUM SECUNDUM LIBER TERTIUS

<sup>15</sup>Istarum autem specierum tres sunt perfecte, scilicet unisonus, diapente alio nomine quinta et diapason alio nomine octava. <sup>16</sup>Et dicuntur perfecte quia perfectum et integrum



sonum important auribus audientium <sup>17</sup>et cum ipsis omnis discantus debet incipere et finire <sup>18</sup>et nequaquam istarum due specierum perfectarum debent sequi una post aliam in discantu in diversis lineis vel spatiis, <sup>19</sup>idest quod duo unisoni, due quinte, due octave nec due alie species perfecte non debent sequi una post aliam, <sup>20</sup>sed bene in una linea vel spatio, ubi plures note reperiuntur, due autem diverse species imperfecte aut tres aut etiam quatuor sequuntur una post aliam, si necesse fuerit.

---

*E 49v; Fl 88r; Va 25rb; Vv 7r; CS, 3:27a.*

14. Capitulum secundum, tertius *E om. Fl Va Vv*
15. species *Vv* scilicet unisonus, quinta et octava vel dyapente et dyapason *Fl* unisonus, quinta alio nomine diapente et diapason *Vv*
16. perfecte *pro* perfectum *Vv* important in auribus *Va* important *Vv*
18. due istarum *Fl Va Vv* debeant *Vv* unam *Fl* alteram *pro* aliam *E* discantum *Vv*
19. unisoni vel due quinte vel due octave neque due alie specie perfecte sequi debent unam post aliam *Fl* neque *Va Vv*
20. in una [*linea in marg.*] littera vel spatio, ubi plures note reperiuntur, sed bene due diverse *E* note reperiuntur, sed bene due diverse *Va* reperiuntur, sed bene due diverse *Vv* perfecte *pro* imperfecte *E Va* imperfecte tres *Vv* tres ac etiam *Va* sequuntur *Va* unam *Fl* una post aliam *om. Va*

---

<sup>21</sup>Quatuor autem predictarum specierum sunt imperfecte, scilicet ditonus alio nomine tertia perfecta, tonus cum diapente alio nomine sexta perfecta, semiditonus alio nomine tertia imperfecta et semitonium cum diapente alio nomine sexta imperfecta. <sup>22</sup>Et dicuntur imperfecte quia non tam perfectum sonum reddunt vel important ut species perfecte quia interponuntur speciebus perfectis in compositione.

- 
21. autem [predictarum specierum *in marg.*] *Va* predictarum specierum *om. Fl Vv* diptonus *Fl Vv* dictonus *Va* semidiptonus *E Fl* semidictonus *Va Vv* tertia imperfecta *Va*
  22. reddunt vel *om. Fl Va Vv* perfecte [[quia non tam perfectum sonum important ...]] quia *Va*
-

<sup>23</sup>Alie vero sex species, videlicet tonus, semitonium, diatessaron, tritonus, ditonus cum diapente et semiditonus cum diapente sunt discordantes. <sup>24</sup>Et propter earum discordantiam ipsis non utimur in contrapuncto <sup>25</sup>sed bene eis utimur in cantu fractibili in minoribus notis ut semibrevis vel quando tempus in pluribus notis dividitur, idest in tribus partibus; tunc una illarum trium partium potest esse in specie discordanti.

- 
23. species sex *Va* diatessaron tritonus *Va* diateseron *E* triptonus *Vv* diptonus *E Vv*  
 dyptonus *Fl* dictonus *Va* semidiptonus *E Fl Vv* semidictonus *Va*  
 24. contrapunctu *E Vv*  
 25. minoribus notis dividitur *Vv* ubi *pro* ut *E Va* ut quando semibrevis vel tempus *F*  
 quando *om. E Va* istarum *pro* illarum *Va*
- 

<sup>26</sup>Uterius etiam notandum est quod nullo modo debemus ascendere nec descendere in discantu cum tenore cum speciebus perfectis dum modo cantus ascendat de gradu ad gradum vel descendat: <sup>27</sup>si quis fecerit falsum erit et contra artem, <sup>28</sup>sed bene cum speciebus imperfectis ascendere vel descendere poterimus, ut dictum est.

- 
26. etiam *om. Fl* neque *Fl Va Vv*  
 27. et si quis *Va*  
 28. potimus *Vv*
- 

<sup>29</sup>Uterius notandum est quod quando cantus ascendit vel descendit per quinque voces, et aliqui magistri dicunt per quatuor voces, et hoc necessitate cogente, tunc poterimus ascendere vel descendere cum tenore in discantu cum specie perfecta per unam illam vocem tantum et non per plures. <sup>30</sup>Si autem per sex aut per septem voces, tunc possumus ascendere vel descendere in discantu cum tenore in specie perfecta per duas voces tantum. <sup>31</sup>Si autem cantus ascendit vel descendit per octo voces, tunc possumus ascendere vel descendere in discantu cum tenore cum specie perfecta per duas voces aut tres et non plures.

---

29. est *om. Va* dicunt quod per *Va* ascendere simul cum tenore *Va* descendere *om. E Fl*  
illam *om. Va Vv*  
30. per sex voces aut per septem, tunc *Fl* per sex voces aut *Va Vv*
- 

<sup>32</sup>Prenotando generaliter quod unisonus requirit tertiam, tertia quintam, quinta sextam, sexta octavam <sup>33</sup>et ista regula non fallit quando post sextam debeat sequi octava <sup>34</sup>quia regula generalis est quod semper post sextam debeat sequi octava <sup>35</sup>et sic aliquando post unisonum sequitur quinta, sexta octava et econverso; post tertiam aliquando sequitur sexta vel octava et econverso. <sup>36</sup>Post quintam sequitur unaqueque species; post octavam unaqueque species, et hoc secundum diversos ascensus et descensus cantuum.

---

32. generaliter *om. Fl* unisonus *Va*  
33. fallit quoniam semper post *Fl* fallit an semper post *Vv* quando semper post sextam debeat sequi octava *Va* debet *Vv*  
34. est generalis *Fl* semper *E* sextam sequitur octavam *Fl* sextam sequitur octava *Va*  
sextam sequatur octava *Vv*  
35. Et quinque post unisonum sequitur quintam, sexta octava *Fl* Et sic *om. Vv* sic *om. Va*  
unisonum *E* post tertiam aliquando sequitur sexta vel octava et *Va* post tertiam  
... et econverso *om. Vv*  
36. quinta *Vv* post octavam unaqueque species *om. Fl* octava *Vv*
- 

<sup>37</sup>Prenotando quod cum speciebus imperfectis possumus ascendere et descendere ad libitum. <sup>38</sup>Et sicut species se habent ascendendo, sic se habent econverso descendendo, <sup>39</sup>et sicut se habet unisonus ad octavam, sic se habet octava ad duplicem octavam.

---

37. ascendere vel descendere *Fl* descendere et ascendere *Vv*  
38. sic se habent descendendo et econverso *E* sic se habent et econverso descendendo *Fl*  
39. sic *pro* sicut *Vv* octavam *pro* octava *Vv*
- 

<sup>40</sup>Prenotando quod quando due tertie vel tres ordinantur cantu ascendente, tunc sequitur in mediate unisonus. <sup>41</sup>Si autem ordinantur due tertie, tres, quatuor vel plures cantu

descendente sequitur in mediate quinta. <sup>42</sup>Et eadem regula sive modus observatur in speciebus venientibus ab octava usque ad duplicem octavam, ut superius dictum est. <sup>43</sup>Et hec dicta de contrapuncto sive nota contra notam ad presens sufficiant.

⁊EXPLICIT ARS CONTRAPUNCTUS  
SECUNDUM  
PHILIPUM DE VITRIACO  
DEO GRATIAS

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40. tunc *om. Fl Va Vv* medietate *Va*  
 41. ordinentur *Vv* medietate *Va*  
 42. venientibus ad octavam usque *Vv* *sepius pro superius Fl*  
 43. contrapunctu *E* contrapunctu *Vv* *sive nota contra notam om. Fl* sufficiant. Amen *Vv*  
 44. Contraputus *E* Contrapuncti *Fl* Deo gratias *om. Fl Vv* et cetera *pro* Deo gratias *Va*

APPENDIX E  
MUSICAL EXAMPLES IN *V*, FOL. 12R AND *B*, FOLS. 68V-69R

The two sets of musical examples from *V* and *B* are here transcribed in order to highlight their similarity. They are discussed in the respective manuscript descriptions.

*V*, fol. 12r



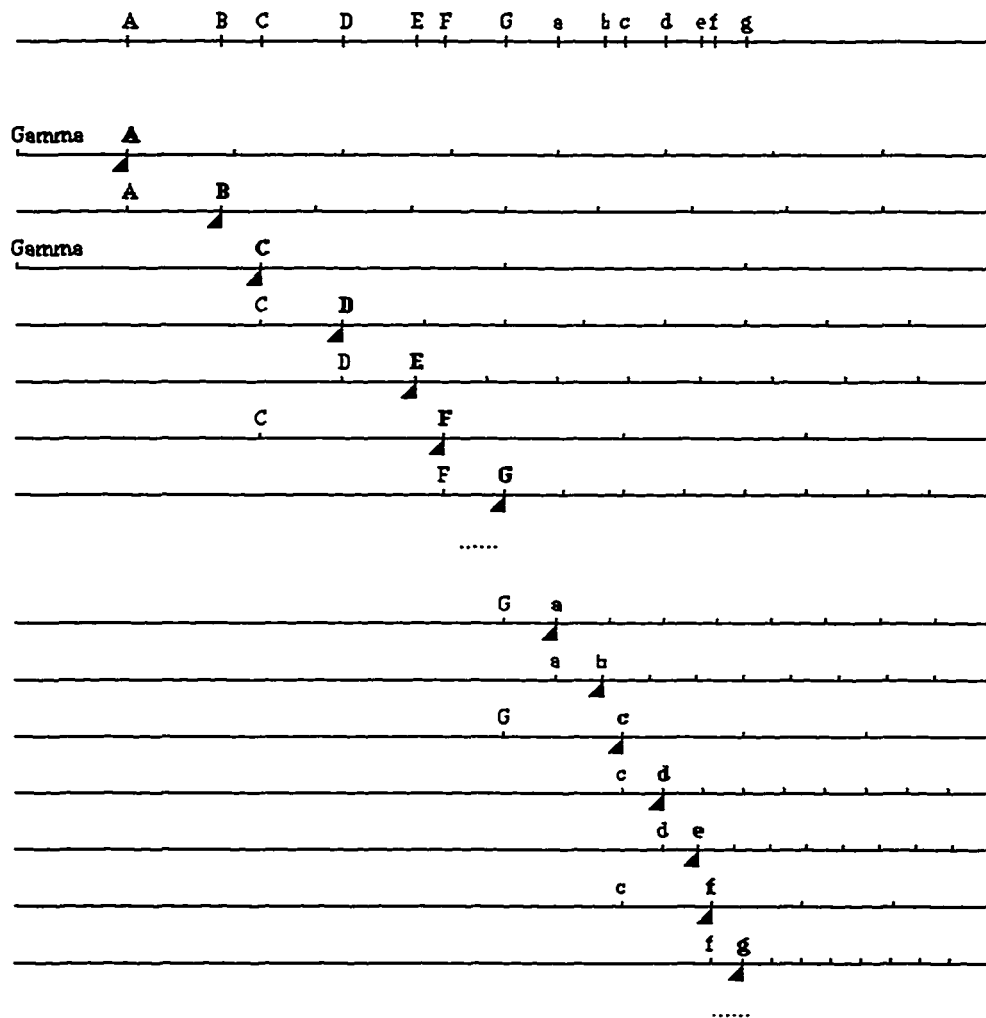
*B*, fols. 68v–69r

fa ut ut fa sol re re sol la mi mi la la mi fa ut ut fa  
 sol re re sol sol ut ut sol sol re re ut ut re re sol la mi  
 mi la la re re la la mi re mi mi re sol fa fa sol sol ut  
 ut fa fa ut ut sol sol ut ut sol la sol sol la la re re la  
 la re re sol sol re re sol la mi mi la la mi fa ut ut fa  
 sol re re sol sol ut ut sol sol re re ut ut re re scl la mi  
 mi la la re re la la mi mi re re mi sol fa fa sol la sol sol la

# APPENDIX F DIAGRAMS OF MONOCHORD DIVISIONS IN *DE PLANA MUSICA*

The following are diagrams of monochord divisions described in *De plana musica*, chapters 9 and 10. As explained in the commentary to *De plana musica* 9.1 these diagrams are based on conventions laid down by Cecil Adkins, in his dissertation "The Theory and Practice of the Monochord" (Ph.D. dissertation, State University of Iowa, 1963), pp. 32-34.

*DE PLANA MUSICA* 9.13-23



## DE PLANA MUSICA 9.24–32

A B C D E F G a b \* c d e f g abhc d e  
abhc d e

Gamma G G g

Gamma D d d d

Gamma C C c c cc

C F F f

D a a aa

A A E e ee

E h h hh

B F b b bb



Vb, fol. 17vb

A B fa B C D E F G a b h c d ef g abhc def  
abhc def

Gemma

G

G

G

Gemma

C

C

c

c

cc

C

F

F

f

f

ff

Gemma

D

d

d

dd

A

D

a

aa

A

E

e

e

ee

B

E

h

hh

B fa

F

B fa

b

b

bb

## DE PLANA MUSICA 10.5-13

Gamma\* B C\* Eb F\* G\* c\* eb f\* g\* c#eb  
c e

H F\* f\* c\* cc\* C\* c\* G\* g\*

Gamma\* B b Eb Eb eb eb eeb

## VITA

Nigel Gwee received his bachelor's degree from the University of Western Australia, majoring in piano. He came to the United States to pursue graduate studies, and received his master's degree from Drake University, Iowa, majoring in voice, and his doctorate from Louisiana State University.

He and his wife, Frances, live in Denham Springs. They enjoy Tai-chi and ballroom dancing, and can often be seen waltzing the evening away at the dance clubs of Baton Rouge.

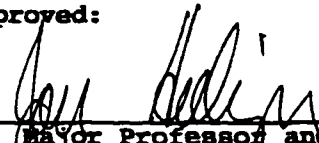
DOCTORAL EXAMINATION AND DISSERTATION REPORT

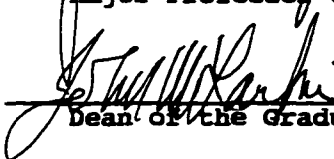
**Candidate:** Nigel Gwee

**Major Field:** Musicology


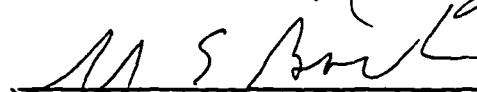
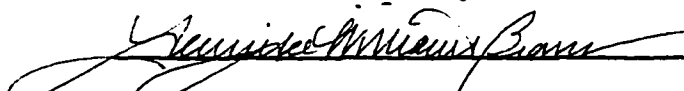
**Title of Dissertation:** De plana musica and Introductio musice:  
A Critical Edition and Translation, with Commentary, of  
Two Treatises Attributed to Johannes de Garlandia

**Approved:**

  
\_\_\_\_\_  
Major Professor and Chairman

  
\_\_\_\_\_  
Dean of the Graduate School

EXAMINING COMMITTEE:

  
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**Date of Examination:**

September 13, 1996