

REGULA CANTUS FIRMI:

AN EDITION, TRANSLATION, AND COMMENTARY

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ABSTRACT

This thesis presents an edition and translation of *Regula cantus firmi*, a short (about 1,900 words) anonymous music theory text from the later Middle Ages, dedicated to the practice of plainchant. The specific information concerns the following topics: the Guidonian hand; the “musical” letters A–G; clefs; the low, high, and very high registers; the various hexachords, their properties, solmization, and mutation from one hexachord to another; and sixteen intervals from the semitone to the double octave. Considerable attention is given to the eight plainchant modes, with their finals and ranges; their classification as perfect, imperfect, pluperfect, mixed, and intermixed; the species of diapente and diatessaron of which they are composed; whether they employ B-natural, B-flat, or both; and how to distinguish plagal modes from authentic modes in ambiguous cases.

Though the topics covered are those commonly found in medieval theory treatises, the value of *Regula cantus firmi* rests in its claim to present and describe those elements masters should teach “to all those who want to have instruction in the art of music”; thus it provides valuable information on the oral teaching of music theory during the Middle Ages.

The edition and translation follow the principles of Mathiesen and Solomon, *Greek and Latin Music Theory: A Style Guide for Text Criticism, Translation, and the Preparation of Camera-ready Typescript*. The four manuscript sources used in this edition are D-Sl, Donaueschingen 250; I-Fl, Ashburnham 1119; I-FZc, 117; and I-Rv, C.105.

Key words: Medieval music theory; oral teaching; solmization.

LIST OF ABBREVIATIONS AND SYMBOLS

<i>ad</i>	in reference to
<i>ante</i>	before
<i>bis</i>	twice
<i>corr.</i>	corrected
<i>cum</i>	with
<i>ex</i>	from
<i>fort.</i>	perhaps/possibly
<i>in</i>	to
<i>lin.</i>	between lines
<i>m. sec.</i>	by a second hand
<i>marg.</i>	in the margin
<i>n.h.</i>	do(es) not have
<i>post</i>	after
<i>pr.</i>	first
<i>ras.</i>	over an erasure
<i>rub.</i>	in red
<i>sec.</i>	second
<i>sub</i>	below the line
<i>sup.</i>	above the line
<i>ter.</i>	third

<i>tit.</i>	caption
<i>verb. illeg.</i>	illegible words
< >	enclosed text added by conjecture
[[]]	indicate deletion by the scribe
+	medieval “square” b (muscal note)

MANUSCRIPT SIGLA

I-FL	Florence, Biblioteca Medicea Laurenziana
I-FZc	Faenza, Biblioteca Comunale Manfrediana
I-Rv	Rome, Biblioteca Vallicelliana
D-Sl	Stuttgart, Württembergische Landesbibliothek

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THE TREATISE

This thesis presents an edition and translation of a short text from the later Middle Ages on the practice of plainchant. Though it has now been identified among the contents of five manuscripts, *Regula cantus firmi* (as it is identified in one of its sources) has received little scholarly attention since 1864, when La Fage published excerpts from it on the basis of Rome, Biblioteca Vallicelliana, C. 105, which was the only source he knew.¹

It is not difficult to account for this relative neglect. As Thomas Christensen argues, the scholarly study of early music theory has suffered from three prejudices. Scholars have preferred to edit and study treatises produced in elite locations, that is, in university or ecclesiastical institutions or in major cities; he calls this a “prejudice of ‘geographical’ or ‘institutional’ monumentality.”² The study of the theory of polyphony, involving counterpoint and mensural theory, has been favored over that of plainchant; he calls this the “prejudice of ‘style’ or ‘genre’ monumentality.”³ Lastly, because scholarship often focuses on longer works (by authors like Guido of Arezzo or Johannes de Muris), short texts are often neglected, forgotten, or lost; he calls this the “prejudice . . . of ‘discursive’ monumentality.”⁴ Additionally, oral teaching tradition was widespread and common alongside the elite theory teaching; thus by the very nature of oral teaching, written records are scarce anomalies. Christensen argues elsewhere that more modest texts can give us glimpses of this oral teaching tradition intended for masters of instruction to

¹ La Fage, *Essais de diphthérogaphie musicale*, 423–25.

² Christensen, Review of *Traditio Iohannis Hollandrini*, 379.

³ Christensen, Review of *Traditio Iohannis Hollandrini*, 379.

⁴ Christensen, Review of *Traditio Iohannis Hollandrini*, 380.

pass on to choirboys and illiterate musicians who lacked access to manuscripts or printed texts.⁵

As it is today, during the Middle Ages most instruction of music was oral rather than written, and therefore we have very little evidence that shows what much of music teaching may have been like during that time.

The text edited and translated here, which begins, “Masters ought to teach the rule written below to all those who want to have instruction in the art of music,” promises to be just such a text.⁶ Though a person could not learn to sing plainchant from this text because many topics are not sufficiently explained, a knowledgeable teacher could use it as a way to remember what ought to be explained to those needing to learn. Everything presented in this text presupposes the *musica recta* system, which supports the idea that it was used as a guide to remind masters what ought to be taught.

Plainchant employs an array of pitches called the *musica recta* system, whose basic scale extends from G to e’; see Table 1. Its twenty positions are divided into “low,” “high,” and “very high” registers. Superimposed on these twenty positions (twenty-two if B♭ and B♮ are counted separately in the high and very high registers) are seven overlapping “hexachords,” or arrays of six pitches that articulate the five intervals whole tone, whole tone, semitone, whole tone, whole tone. The positions are identified by a letter from A through G plus whatever syllables are designated for that position; thus the positions in the low register are Γ-ut, A-re, B-mi, C-faut, D-solre, etc.; those in the high register a-lamire, b-fa-+-mi, c-solfaut, d-lasolre, etc; and in the very high register aa-lamire, bb-fa-++-mi, cc-solfa, dd-lasol, and ee-la.⁷ A singer singing within a hexachord built on G or Γ is said to be singing “through square +”; one singing within a

⁵ Christensen, “Fragile Texts, Hidden Theory,” 188.

⁶ *Regula* 1.1

⁷ In medieval terminology, b♮ was called “square” or “hard” b, and b♭ “round” or “soft” b; they were drawn square or round accordingly. As I have not found a Mac-compatible font that includes a “square b,” “+” is employed to represent it in this thesis.

hexachord built on F is said to be singing “through soft b”; one singing within a hexachord built on C is said to be singing “through nature.” Square +, nature, and soft b are said to be the “properties” of the types of hexachords. Wherever two or three syllables are joined to a letter, the singer may “mutate,” that is, change from one hexachord to another.

TABLE 1. The Medieval “Musica Recta” System

Columns:

1. registers (medieval terminology)
2. pitches (“Helmholtz” terminology)
3. pitches (medieval terminology)
- 4.–10. hexachords (medieval terminology)

(+ = square b)

1	2	3	4	5	6	7	8	9	10
very high	e''	ee							la
	d''	dd						la	sol
	c''	cc						sol	fa
	b‡'	++							mi
	b‡'	bb							fa
	a'	aa						la	mi re
high	g'	g						sol	re ut
	f'	f						fa	ut
	e'	e					la	mi	
	d'	d			la	sol	re		
	c'	c			sol	fa	ut		
	b‡	+					mi		
	b‡	b			fa				
	a	a		la	mi	re			
low	g	G			sol	re	ut		
	f	F			fa	ut			
	e	E	la	mi					
	d	D	sol	re					
	c	C	fa	ut					
	B	B	mi						
	A	A	re						
G	Γ	ut							

The melodies of plainchant are classified as belonging to one of eight paired modes that, during the Middle Ages, were commonly numbered 1 through 8. Modes 1 and 2 served melodies that end on D; modes 3 and 4, on E; modes 5 and 6, on F; and modes 7 and 8, on G (all “final” letters are in the low register). Mode pairs 1 and 2, 3 and 4, and 5 and 6 are sometimes given “affinals”—high a, b, and c respectively—on which melodies can end if they cannot end on their final. Within each of the four pairs, melodies in the odd-numbered modes had ranges higher than those of their even-numbered partners; those with odd numbers were said to be “authentic,” and those with even numbers “plagal.” Though the composed melodies of plainchant were relatively stable, each mode had its unique melodic formula for more extemporaneous singing (in intoning psalm verses, for instance), so it was crucial for singers to know in which mode they were singing, and to be able to choose the correct melodic formula for that mode.⁸

The organization and presentation of the *musica recta* and modal systems in *Regula cantus firmi* are anything but straightforward. Seldom does any topic receive a systematic treatment (the section devoted to intervals is an exception); and the two systems are not treated separately, but the compiler jumped repeatedly from one to the other, often with no announcement. See Table 2.⁹

⁸ For a more detailed account of the *musica recta* and modal systems of the later Middle Ages, see Herlinger, “Music Theory of the Fourteenth and Early Fifteenth Centuries,” 244–66.

⁹ The text of *Regula cantus firmi* is presented continuously in all four manuscripts, without any division into sections and subsections. For convenience, I have divided the text into five sections.

TABLE 2. Topics Covered in *Regula cantus firmi*

1.1–2	Introduction
1.3–7	Notes represented by letters and syllables (only <i>Γ-ut</i> , <i>A-re</i> , <i>B-mi</i> , <i>C-faut</i> given); the properties, with their principal letters (those on which hexachords are built)
1.8–9	Low, high, very high registers
1.10	Principal letters (again)
1.11	Mutation
2.1–2	Reciting tones of the eight modes
2.3	The twenty positions and their registers
2.4	The eight modes, with their four finals and three affinals; authentics and plagals
2.5	Finals (again), now represented with solmization syllables
2.6–9	Ranges of authentics and plagals with respect to their finals
2.10–15	The fivefold classification of modes (perfect, imperfect, pluperfect, mixed, intermixed)
3.1–10	Modes as constructed from species of diatessaron and diapente
3.11–18	Choice of b-flat or b-natural (first mode)
4.1–17	Sixteen intervals (M2, m2, M3, m3, P4, A4, P5, d5, M6, m6, M7, m7, P8, P11, P12, P15)
5.1	Clef
5.2	Mutation
5.3–6	Three reasons for the discovery of B-flat
5.7–12	“Cords” (<i>corde</i>) of the modes.

In Section 1, information about basic theory is sketched rather than stated outright. The only positions actually named are those of *Γ-ut*, *A-re*, *B-mi*, and *C-faut* (*Regula* 1.3–4). The hexachords are reported only as beginning on Gs, Cs and Fs, and, depending on their beginning note, having the properties of “square +,” “nature,” and “soft b.” A poem (common in medieval theory treatises) is given to help fix these relationships in students’ minds: “C indicates nature; / F marks for you soft b; / and G, square +” (1.5–7). After reporting the three registers (1.8–9) the compiler reiterates the principal letters (1.10) and presents another widely disseminated

mnemonic poem: “*Ut, re, mi* ascend; / *Fa, sol, la* descend” (1.11). Though no explanation is given, the meaning is that if one, in solmizing, wishes to ascend beyond the limit of a hexachord, he must first mutate to *ut, re,* or *mi*; to descend beyond the limit of a hexachord, he must first mutate to *fa, sol,* or *la*.

Without announcing a change of topic, the compiler quotes an eight-line mnemonic poem that applies not to the theory of *musica recta*, but to that of mode:

Re la, first;

Re fa, second;

Mi fa, third;

Mi la, fourth;

Fa fa, fifth;

Fa la, sixth;

Ut sol, seventh;

Ut fa, eighth (*Regula* 2.1).

The solmization syllables represent intervals between the finals of the eight modes and their respective reciting tones. Reciting tones of the modes are crucial for singers to know, as they constitute an important feature in the modal recitation formulas. The poem is explained in the following sentence: “The first mode ascends to the fifth [above its final]; the second mode to the third [above its final]; the third mode to the sixth [above its final]; the fourth mode to the fourth [above its final]; the fifth mode to the fifth [above its final]; the sixth mode to the third [above its final]; the seventh mode to the fifth [above its final]; the eighth mode to the fourth [above its final]” (2.2).¹⁰ No further explanation or announcement of topic was given because none would

¹⁰ The finals and reciting tones of the eight modes: first mode, D and a; second mode, D and F; third mode, E and c (*mi* and *fa* are in different hexachords); fourth mode, E and a; fifth mode, F

have been necessary for the master, who would have known the poem (which appears in many treatises of the time) and what it meant.

After reporting for the first time that there are twenty letters in the “hand,” i.e., in the *musica recta* system, and reiterating the three registers (2.3), the compiler lists the eight modes, with their finals and affinals, and then again the finals, now with the solmization syllable most characteristic of it (2.4–5).¹¹ He rounds off the conventional treatment of the eight modes by dividing them into authentics and plagals and giving the normal ranges for both (2.6–9).

The compiler then turns to two systems of modal classification that are more refined, and useful for dealing with chants that do not correspond to the conventional standards of range or to intervallic makeup. The first system is a fivefold classification in which modes are said to be perfect, imperfect, pluperfect, mixed, or intermixed. If the range of a melody corresponds to the standard stated in *Regula* 2.6–9, its mode is said to be perfect (2.11); if the range of a melody is narrower than the standard, its mode is said to be imperfect (2.12). If the range of a melody in an authentic mode extends above its standard upper limit, or if the range of a melody in a plagal mode extends below its standard lower limit, its mode is said to be pluperfect (2.13); if the range of a melody in an authentic mode extends below its standard lower limit, or if the range of a melody in a plagal mode extends above its standard upper limit, its mode is said to be mixed (2.14). Finally, if a melody differs from the norm in being constructed of species of the diapente and diatessaron not characteristic of its mode, it is said to be intermixed.

These species of the diapente and diatessaron are taken up in *Regula* 3.1–18, in the discussion of the second of the more refined systems of modal classification. A mode can be

and c (the two *fas* are in different hexachords); sixth mode, F and a; seventh mode, G and d; eighth mode, G and c (capitals represent notes of the low register, lower case the high register). Note that the *mi-fa* interval for the third mode is not a semitone (as one might expect), but a minor sixth.

¹¹ The significance of the solmization syllables is discussed on pages 11–13.

considered to be constructed of a diapente (a scalewise segment of five notes) and a diatessaron (a scalewise segment of four notes). The diapente encloses a single semitone along with three whole tones, and the diatessaron a single semitone along with two whole tones. The species of diapente differ from one another in the position of the semitone among the whole tones, as is the case with the species of the diatessaron; each mode is normally constructed of a particular species of the diapente and a particular species of the diatessaron. See Table 3. When a melody in one of the modes uses a species not characteristic of that mode, the mode is said to be intermixed (*Regula* 2.15). The intermixture will most commonly occur if a melody is sung with $b\flat$ instead of $b\natural$. (If a melody of mode 1 were sung with $b\flat$ in its diatessaron, for instance, the diatessaron would not be of the first species, but of the second.)

Regula continues with a discussion of whether $b\natural$ or $b\flat$ is appropriate in a melody of mode 1. If the mode is perfect (i.e., corresponds to the range low C–high d), it should be sung with $b\natural$; if it is not perfect (that is, does not rise as far as high d), specific rules are given depending on details of the melodic contour (3.19–21).

The fivefold classification of mode and the discussion of construction of modes by diapente and diatessaron species, as well as the rules for use of $b\natural$ or $b\flat$ in mode 1, all derive from Marchetto's *Lucidarium*. The *Lucidarium* (dating from the early fourteenth century) had wide influence on later medieval music theory, especially in Italy. The fivefold classification of

TABLE 3.
Species of Diapente and Diatessaron
Characteristic of the Various Modes
As Defined in *Regula cantus firmi* 3.1–18

Capital letters: low register (A–G)
Lower case letters: high register (a–g, including “middle” c)

Mode 1:		D–a (diapente, 1st species: T S T T)	a–d (diatessaron, 1st species: T S T)
Mode 2:	A–D (diatessaron, 1st species: T S T)	D–a (diapente, 1st species: T S T T)	
Mode 3:		E–b (diapente, 2nd species: S T T T)	b–e (diatessaron, 2nd species: S T T)
Mode 4:	B–E (diatessaron, 2nd species: S T T)	E–b (diatessaron, 2nd species: S T T T)	
Mode 5:		F–c (diapente, 3rd species: T T T S)	c–f (diatessaron, 3rd species: T T S)
Mode 6:	C–F (diatessaron, 3rd species: T T S)	F–c (diapente, 3rd species: T T T S)	
Mode 7:		G–d (diapente, 4th species: T T S T)	d–g (diatessaron, 1st species: T S T)
Mode 8:	D–G (diatessaron, 1st species: T S T)	G–d (diapente, 4th species: T T S T)	

Syllables Associated with the Species of Diapente and Diatessaron

Diatessaron		Diapente	
1st species	T S T <i>re sol</i>	1st species	T S T T <i>re la</i>
2nd species	S T T <i>mi la</i>	2nd species	S T T T <i>mi mi</i>
3rd species	T T S <i>ut fa</i>	3rd species	T T T S <i>fa fa</i>
		4th species	T T S T <i>ut sol</i>

modes seems to have been disseminated only in Italy;¹² its appearance in *Regula cantus firmi*, then, makes it very likely that *Regula cantus firmi* originated there.

Regula 4, devoted to intervals, is surprising for the number of errors it includes. First, though three of the four manuscript sources considered here state that sixteen intervals will be discussed, all four list only fifteen intervals: the twelve from the minor second to the major seventh plus the perfect eleventh, twelfth, and fifteenth; the octave is notably missing. Only the scribe of manuscript L seems to have noticed the discrepancy; he obviated it not by adding the octave to the list, but by reducing the stated number of intervals to fifteen. As there seems to be no reason why the compiler would have omitted as important an interval as the octave, I have emended the text to include it (4.1, 14). In all four manuscripts, the figures given for the numbers of syllables, whole tones, and semitones in the minor seventh and the perfect eleventh and twelfth are off by one; for the double octave, the number of whole tones is off by one (4.13–17). Some of the letter names of notes given for the various intervals are also incorrect. These are also emended, as are several less serious errors. I will return to these discrepancies below.

For the scribes of *Regula cantus firmi*, solmization syllables seem to have been more successful in identifying intervals than were tallies of the whole tones and semitones comprised in them. For the larger intervals (as pointed out above), these tallies are often reported with all four scribes in erroneous agreement. Of course the errors must go back to a common faulty source, but it is striking that not one scribe of the four bothered to check and correct such basic errors. It is difficult to avoid the conclusion that counting whole tones and semitones did not seem important to those copying a text to aid masters of singing.

Regula 5 addresses four topics, two of which are dealt with in a single sentence each: the clef (5.1) and mutation (5.2). The compiler then returns to the matter of *b♭* (addressed earlier in

¹² Niemöller, “Zur Tonus-Lehre,” 25.

Regula 3.19–21), stating that the note was discovered for three reasons (5.3). First, it was discovered “by reason of the tritone,” that is, in order to have a means of avoiding the tritone between F and b \natural by flatting b. Second, it was discovered “by reason of necessity”; as the text explains it, “when the rising diapente is discovered between low F and high C, with a tone added or with mediation through high A”—though it is not at all clear what this might mean. Third, it was discovered “by reason of essence, and then it can be made more suitably in the fifth and sixth modes”: b \flat would be particularly welcome in these modes, as b \natural would create a tritone with their final, F (5.3–6). The first and third reasons for the discovery of b \flat seem very similar; the third may differ from the first only in its specific connection with modes 5 and 6 (a connection expressed through the word ‘essence’). The text closes with a treatment of the “cord” (*corda*)—the note a third above the final, which is useful for judging whether a mode is authentic or plagal if other considerations leave the question ambiguous: in such cases, count the number of notes in the chant above the cord and those below; if the greater number of notes fall above the cord, the chant is authentic; if the greater number fall below, the chant is plagal (5.7–12).

In its 1,900 words, *Regula cantus firmi* presents the theory of plainchant only piecemeal. It shows an array of topics a master might take up, leading pupils through a course of study aimed toward the correct performance of plainchant. Perhaps its most striking feature is the prominence it gives to solmization syllables. These are first combined with letters to name the positions of the *musica recta* system (Γ -*ut*, *A-re*, *B-mi*, *C-faut*, etc.; *Regula* 1.3–4, 6–7), next employed independently in rules for mutation (“*Ut, re, mi* ascend; / *Fa, sol, la* descend”; *Regula* 1.11). Later they are used to represent the intervals between modal finals and reciting tones (“*Re la*, first [mode], / *Re fa*, second [mode] . . . ,” etc., without further verbal explanation; *Regula* 2.1). It is particularly striking that the relationship of reciting tones to finals is the first aspect of modal theory to be presented—no doubt because of the importance of recitation formulas in the

repertoire of plainchant. In *Regula*, pairs of syllables also serve to represent the various species of diatessaron and diapente: “The first species of the diatessaron . . . is composed of a tone, a semitone, and a tone, saying *re sol*,” etc. (3.3–5, 7–10). Sometimes they serve to differentiate the various intervals themselves: “The ditone occurs whenever *ut mi* and *fa la* are said. . . . The semiditone occurs whenever *re fa* and *mi sol* are said” (*Regula* 4.4–5). Further, the syllables *re*, *mi*, *fa*, and *sol* would handily stand in for the modal finals (see *Regula* 2.5) for singers who, having learned their chants by rote without ever seeing them written down, would consequently not know whether a chant ended on a notated D, E, F, or G, but who would nonetheless recognize the differing arrays of whole tones and semitones surrounding *re*, *mi*, *fa*, and *sol*.

It is noteworthy that in Marchetto’s *Lucidarium*, a comprehensive treatise on music theory that *Regula* owes much to, solmization syllables do not receive similar emphasis. They necessarily appear, of course, in discussions of mutation and of the properties of the hexachords (*Lucidarium* 8.2 and 8.3 respectively), but in the discussion of intervals (9.1) they are mentioned only insofar as it is necessary to explain why what are called the “first” species of the diapente and the diatessaron begin on *re* rather than *ut*, their “second” species on *mi* rather than *re*, and so forth. In a list of the notes spanning the *musica recta* scale (*Lucidarium* 14), the only note that receives a syllable is the highest (“*ee-la*”), and in a list of notes from low A to very high aa with their Greek equivalents (*Lucidarium* 15), in only one manuscript are syllables added to the Latin letters. Obviously, Marchetto did not consider them necessary in his detailed exposition.

The compiler of *Regula cantus firmi* may not have had access to one of the fifteen known manuscripts that present the *Lucidarium* complete or nearly so. But the doctrine of the *Lucidarium* is also known from two collections of extracts, one of which survives in three, the other in six manuscripts; bits and pieces of it, or ideas that derive from it, have been identified in others. In all, Marchetto’s ideas have been traced in twenty-seven manuscripts, dating from the

fourteenth through the early sixteenth centuries.¹³ Somewhere in the line of descent from the monumental treatise *Lucidarium* to the master's prompt book *Regula cantus firmi*, solmization syllables were added to aid singers who were actually being taught to sing plainchant.

Regula cantus firmi is a short text, but it begins to provide the insight into the oral teaching of medieval music theory that Christensen was so eager to find.

¹³ Herlinger, "Marchetto's Influence: The Manuscript Evidence," 256–58.

THE MANUSCRIPTS

Regula cantus firmi survives in five manuscript sources; four are considered in this edition.¹⁴

L Florence, Biblioteca Medicea-Laurenziana (I-Fl), Ashburnham 1119. Paper, 80 ff., 190–200 x 135 mm. 15th century, Italy. A miscellany of music theory texts most of which are datable to the fourteenth and early fifteenth centuries.¹⁵

ff. 27v–32v. “Incipit regula cantus firmi (*rub.*). Notandum est quod regula subscripta debet doceri per magistros omnibus illis qui musice artis volunt habere documentum. . . . Corda namque septimi et octavi toni est in b molle acuto.

Expliciunt regule cantus firmi deo infinitas gratias amen.”

The incipit provides a title for the text. Of the four manuscripts, this one seems to have the fewest mistakes. Italianisms in the text: *autenticus*, *choerentia*.

M Faenza, Biblioteca Comunale Manfrediana (I-FZc), 117. Parchment, 97 ff., 175 x 100 mm. A number of theory treatises were copied into the manuscript by Johannes Bonadies, 1473–74, Mantua and Reggio Emilia. These are written on pages left empty after the copying of (evidently instrumental) arrangements of vocal pieces from the 14th and early

¹⁴ A partial concordance in Venice, Biblioteca del Museo Correr, Correr 336, part 4, ff. 425r–426r is not included in this edition.

¹⁵ Fischer, *Theory of Music, Volume 2*, 47–49: “15th cent., first half.” Meyer, *Theory of Music, Volume 6*, 481: “XV^e s. . . . Italie.” Di Bacco, *De Muris e gli altri*, 122–52; Di Bacco gives the most detailed contents list.

15th centuries: ff. 13r–20r, 21v–26v, 31v–35v, 60v–62v, 98r.¹⁶

ff. 17(18)v–19(20)r. “Incipiunt regule artis cantus plani secundum magistrum Jo<hann>em de muris. Notandum quod regula subscripta debet doceri per magistros omnibus illis qui musice artis volunt habere artis documentum. . . .
Corda primi et secundi toni est in F, . . . septimi et octavi in + acuto. Et hic finis per me fratrem Io<hann>em de bonadies in conventu mantue 1473, 4 octubris, hora 15.”

The scribe, Johannes Bonadies, is known to have been a teacher of Franchinus Gaffurius, one of the leading Italian music theorists of the late fifteenth and early sixteenth centuries. He added a number of marginal comments (recorded here among variants to the Latin text), but left many errors of statement (particularly in calculations of the numbers of pitches, whole tones, and semitones in the larger intervals) uncorrected. The ascription to Johannes de Muris, a French polymath of the early fourteenth century, is not plausible. Italianisms in the text: *autenticus*, *choerentia*.

V Rome, Biblioteca Vallicelliana (I-Rv), C.105. Parchment, 217 ff., c. 95 x c. 67 mm.¹⁷

Folios 119r–157r contain a miscellany of music theory treatises, most of them characteristic of the 14th and 15th centuries. The catalog in Fischer, *Theory of Music*,

¹⁶ Fischer, *Theory of Music, Volume 2*, 22–25: “1473–74[,] written by Johannes Godendach (Bonadies), Carmelite at Mantova and Reggi [*sic*] . . . cod. pap.; c. 247 x c. 176 mm; 98 folios.” Meyer, *Theory of Music, Volume 6*, 474–75: “1473–74 (pour les traités de musique).” Di Bacco, *De Muris e gli altri*, 87–103: “98 cc. membranacee (175 x 100 mm).” The most detailed study of the manuscript is Memelsdorff, *Codex Faenza 117*; the inventory occupies pp. 183–235 of vol. 1. Though several references list 98 folios, the facsimile edition in volume 2 does not show a folio numbered 1.

¹⁷ Fischer, *Theory of Music, Volume 2*, 91–92: “cod. membr.; c. 95 x c. 67 mm; 217 folios.” Meyer, *Theory of Music, Volume 6*, 602: “XIV^e–XV^e s. Origine: Italie.” Fischer, *Theory of Music, Volume 2* includes a list of the contents of the part of the manuscript concerning music theory.

Volume 2, p. 92, reports that ff. 157v–166v are blank and that ff. 1–118 and 167–217 do not contain material on music theory.

ff. 119r–123v. “Notandum est quod regula subscripta debet doceri per magistros omnibus illis qui musice artis volunt habere documentum. . . . Corda septimi et octavi toni est in b molle acutum.”

Regula cantus firmi first came to light through excerpts from this manuscript published in La Fage’s *Essais de diphthérogaphie musicale* in 1864.¹⁸ Italianisms in the text: *autenticus*, *autoritas*, *choerentia*, *mistus*.

W Stuttgart, Württembergische Landesbibliothek (D-SI), Donaueschingen 250. Paper, 274 ff., 140 x 105 mm. Italy, 15th c. (the date 1476 is reported as appearing on f. 1).¹⁹ Several treatises on music theory occupy ff. 92r–119r in a manuscript otherwise devoted to theological and other religious writings.²⁰

ff. 96r–98v. “Notandum est quod regula subscripta debet doceri per magistros omnibus illis qui musice artis habere volunt documenta. . . . Corda nanque septimi et octavi toni est in b molle acuto.”²¹

W’s scribe appears the least reliable of the four, on account of frequent Latin grammar errors and textual mistakes that occasionally blend into incomprehensibility (as in part of an addendum to the text of *Regula 5.5*). Italianisms in the text: *autenticus*, *choerentia/coerentia*, *destera*, *otto*, and *a* for Latin *ad*.

¹⁸ La Fage, *Essais de diphthérogaphie musicale*, 423–25.

¹⁹ Huglo and Meyer, *Theory of Music, Volume 3*, 42–43; Meyer, *Theory of Music, Volume 6*, 362.

²⁰ Barack, *Handschriften*, 215–16.

²¹ The text continues: “Nota quod de omnibus vocibus sunt in manibus septem species enim est ibi ut & re & sic de aliis exceto la, quod non est ibi nisi seties. . . . Unde versus: Corda namque primi & secundi toni est in F gravi etc. ut supra require retro istos versus. Et hoc dicto sufficient de cantibus iudicandis” (98v–102v). The most complete catalog of the manuscript’s contents is found in Barack, *Handschriften*, 215–16; of the manuscript’s contents dealing with music theory, Huglo and Meyer, *Theory of Music, Volume 3*, 42–43.

EDITORIAL PROCEDURE

The present edition and translation are based on collation of four manuscript sources of *Regula cantus firmi*. The collated Latin text is placed at the top of verso pages, with a list of variant readings below; an annotated translation appears on the facing rectos.

The edition follows the principles of *Greek and Latin Music Theory: A Style Guide*.²² Medieval spellings are retained, following those that predominate in the four *Regula* manuscripts, except that here *i* is favored over *j* and *u* is used when the letter represents a vowel, *v* when a consonant. Letter names of notes of the musical scale are given as capitals throughout (as in the manuscripts), except where B-flat and B-natural of the “high” register (i.e., the B-flat and B-natural just below our “middle” C) are distinguished, B-flat (“round” or “soft” B) is represented by “b,” B-natural (“square” or “hard” B) is represented by “+” (as I have found no Mac-compatible font that includes a lower-case b with a square body).

In the variant readings, a lemma from the Latin text is given, followed by a square bracket and the variant readings that correspond to the lemma; where the lemma is included in the variant reading or is otherwise obvious, it is omitted. Lemmata are separated by single vertical lines, numbered sentences by double vertical lines. Variants that are merely orthographical are not recorded.²³

²² Mathiesen and Solomon, *Greek and Latin Music Theory*, 9.

²³ Mathiesen and Solomon, *Greek and Latin Music Theory*, 9–10.

As this is an edition of a technical document, errors of statement (chiefly concerning the numbers of pitches, whole tones, and semitones in the larger intervals) in the Latin text are emended, with manuscript readings recorded among the variants and explained, where necessary, in notes to the translation.

The following abbreviations are employed:

<i>ad</i>	in reference to
<i>ante</i>	before
<i>bis</i>	twice
<i>corr.</i>	corrected
<i>cum</i>	with
<i>ex</i>	from
<i>fort.</i>	perhaps/possibly
<i>in</i>	to
<i>lin.</i>	between lines
<i>m. sec.</i>	by a second hand
<i>marg.</i>	in the margin
<i>n.h.</i>	do(es) not have
<i>post</i>	after
<i>pr.</i>	first
<i>ras.</i>	over an erasure
<i>rub.</i>	in red
<i>sec.</i>	second
<i>sub</i>	below the line
<i>sup.</i>	above the line
<i>ter.</i>	third
<i>tit.</i>	caption
<i>verb. illeg.</i>	illegible words

< > enclose letters or words added by conjecture
[[]] indicate deletion by the scribe

The text is translated into idiomatic English, but with attempts made to translate technical terms as consistently as possible and to retain “formulaic patterns of definition in which specific syntactic arrangements are repeated.”²⁴

²⁴ Mathiesen and Solomon, *Greek and Latin Music Theory*, 13–14.

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REGULA CANTUS FIRMI

<1>

<1.> Notandum est quod regula subscripta debet doceri per magistros omnibus illis qui musice artis volunt habere documentum, in manu sinistra et non in dextra. <2.> Et quelibet pars habet suam determinationem in capitulo de constructione, ubi dicitur gamaut.

<3.> Gamaut est nomen grecum, unde gamaut est Gut: gama grece latine dicitur G, et est litera; ut est nota; ut profertur per + quadrum, et habet originem in gamaut. <4.> Sequitur postea Are, +mi, Cfaut; et omnes iste note debent cantari et pronuntiari per + quadrum. <5.> Et nota quod tres sunt modi cantandi, scilicet + quadrum, natura, et b molle.

tit.: Incipit regula cantus firmi *rub.* L Incipiunt regule artis cantus plani secundum magistrum Joem de muris M *tit. n.h.* VW || <1.> est *n.h.* M | habere volunt W | documentum]documenta W | *sec. in n.h.* L || <2.> quilibet W | de constructione *n.h.* V | ubi]ut W || <3.> Gamaut]Et L | unde]ut W | gamaut est Gut *n.h.* L | dicitur *n.h.* LW | *pr. et n.h.* W | per]primo W || <4.> +mi]bmi LW | Cfaut *n.h.* V | et sic omnes V || <5.> modi *n.h.* W | scilicet per W | natura]naturam LW naturale M | *sec. et n.h.* L ||

*A RULE OF PLAINCHANT*²⁵

<1>

<1.> Note that masters ought to teach the rule written below to all those who want to have instruction in the art of music—on the left hand, and not on the right.²⁶ <2.> And each part has its specification (within the organization of the manuscript) in a text where "Gamma-*ut*" is said.²⁷

<3.> Gamma-*ut* is a Greek term,²⁸ whence gamma-*ut* is G-*ut*: gamma in Greek is called G in Latin, and it is a letter; *ut* is a syllable;²⁹ *ut* is sung through square +, and has its origin in gamma-*ut*. <4.> A-*re*, +-*mi*, and C-*faut* follow subsequently;³⁰ and all these syllables ought to be sung and pronounced through square +. <5.> And note that there are three manners of singing: square +, nature, and soft b.

²⁵ "Rule," i.e., a code of rules (like the Rule of St. Benedict). Title borrowed from the caption of MS L. Johannes de Muris, to whom the treatise is ascribed in M, was a 14th-century French polymath who wrote sophisticated treatises on arithmetic, astronomy, and music. Of the many treatises on music that have been ascribed to him, only five justify serious consideration as works of his, and of these two are highly questionable. *Regula cantus firmi* is not among the five. See Gushee, Balensuela, and Dean, "Muris, Johannes de."

²⁶ The twenty letters representing notes of the *musica recta* system, with their solmization syllables, were traditionally depicted on the fingers of the left hand.

²⁷ That is, each part of the theory of plainchant is explained in a text—within a section of the manuscript devoted to music theory—where the term "gamma-*ut*" will be found.

²⁸ Gamma is a Greek letter, but *ut* is a Latin solmization syllable.

²⁹ *Nota* is sometimes used to mean 'syllable' (*Lexicon musicum latinum medii aevi*, s.v. "Nota," III. Henceforward, this source is abbreviated *LmL*).

³⁰ As its name implies, C-*faut* can be sung either through square + or through nature (i.e., either in the hexachord built on Γ or that built on low C; perhaps this is the reason why V's scribe omitted C-*faut*).

<6.> Et semper nota quod in omni loco ubi invenitur G, ibi est principium + quadri, scilicet ut; et ubi invenitur C, ibi est principium nature, scilicet ut; et ubi invenitur F, ibi est principium b molle, scilicet ut; <7.> unde regula:

Versus.

C naturam dat,

F b molle tibi signat,

G quoque + quadrum.

<6.> in *n.h.* W | *ter.* et]item in omni loco W | F in F M | molle]mollis MW | *post ter.* ut: et ubi invenitur F est principium b molle, scilicet ut M || <7.> *ad* Unde regula . . . : Nota *margin.* M | regula *n.h.* M | versus *n.h.* LW | dat naturam M | tibi signat *n.h.* V | G]C M | + *n.h.* VW | *post* quadrum: tibi dat cantare securum *margin.* M si vis cantare per + quadrum W ||

<6.> And always note that in every place where G is found, there is the beginning of square +, that is, *ut*; and where C is found, there is the beginning of nature, that is, *ut*; and where F is found, there is the beginning of soft b, that is, *ut*; <7.> whence the rule:

Verses:

C indicates nature;

F marks for you soft b;

and G, square +.³¹

³¹ This poem, frequently quoted in medieval music theory treatises, coordinates the three properties (*proprietates*)—nature, soft b, and square +—with the notes on which their respective hexachords are founded. It is often given in truncated form, as here, without a last line, as for instance in Prosdocimo, *Plana musica* 1.9, pp. 58–59. A rhyming fourth line appears in Philippe de Vitry, *Ars nova* 9.6, p. 19: *te semper habes caniturum*. MS M provides a different fourth line (*tibi dat cantare securum*) which also rhymes. The fourth line provided in MS W (*si vis cantare per + quadrum*) achieves the rhyme, poorly, by repeating the word *quadrum*.

<8.> Nota quod tres sunt nature cantus, videlicet graves, acute, et superacute. <9.>
Graves sunt octo, et dicuntur graves quia graviter, sub guture, sonant respectu acutarum; acute
sunt septem, et dicuntur acute quia cantum acutiorem efficiunt respectu inferiorum; superacute
sunt quinque, et dicuntur superacute quia in ipsis pre nimia altitudine, vox subtiliter, et
quodammodo, super acuitur.

<8.> *ad* Nota quod tres . . . : Nota *marginis*. M | quod [[con]] W | tres sunt nature cantus . . . et
superacute]nature cantus, videlicet graves, acutas, et superacutas *corr. lin. in note* aut nature
cantus dividuntur in graves, acutas, et superacutas M | videlicet]scilicet V | <9.> *post* octo: sed
sunt septem incipiendo ab Are, secundum Marchetum V | guture]guter W | acutiorem ceteris L
acutorem ceteris W | efficiunt *ex* efficit *corr. marginis*. M faciunt LW ||

<8.> There are three registers³² of pitch—low, high, and very high.³³ <9.> There are eight low positions,³⁴ and they are called low because they sound low, below the throat, in comparison with the higher positions; there are seven high positions, and they are called high because they produce a higher pitch in comparison to the low positions; there are five very high positions, and they are called very high because in them, to achieve extreme highness, the voice is raised subtly, and in a certain way, yet higher.

³² *Nature* is not a common term for the registers of pitch (it is not so documented in *LmL*), but that is clearly what is meant here.

³³ From *Regula* 1.8 to the end, most sentences are introduced with the words “Nota quod . . .”; these words are not represented in the translation.

³⁴ Here, V includes words that translate as “but there are seven, beginning from *A-re*, according to Marchetto.” Although most treatises count eight letters among the low positions (Γ A B C D E F G), Marchetto is exceptional in not including Γ among the low positions, thus listing only seven. Marchetto, *Lucidarium* 14.1.13, pp. 540–41.

<10.> Nota quod litere principales manus in quibus omnis ut ponitur sunt tres, scilicet C, F, G. <11.> Quando ut ponitur in C, tunc cum suis determinatis vocibus cantatur per naturam; si vero ponatur in F, tunc cantari debet per b molle; si vero in G ponatur, tunc cantari debet per + quadrum:

Ut, re, mi scandit;

Fa, sol, la descendit.

<10.> *ad* Nota quod litere . . . : Nota regulam *margin.* M | principales *n.h.* M | manus *n.h.* W | omnis *n.h.* W omne LM | ponitur *bis* M | scilicet in M || <11.> Quando]Quandoque V | tunc *n.h.* M | cantatur]cantantur W | *sec. si vero*]Sed si LM Si W | ponatur, tunc cantari debet]tunc ponatur potest cantari M | *ante* ut: unde versus M; *ad* Unde versus: Nota hic *margin.* M | Ut, re, mi, fa W | scandit]scandunt M ascendit V | la *n.h.* V | descendit]descendunt. Et hoc intellige quantum ad mutationes in G, A, et C, D; ergo, non erit in proposito auctoris. M ||

<10.> There are three principal letters of the hand on which every *ut* is placed: C, F, G.
<11.> When *ut* is placed on C, with its own determined syllables, it is sung through nature; but if it were placed on F, then it ought to be sung through round b; but if it were placed on G, then it ought to be sung through square +:

Ut, re, mi ascend;

Fa, sol, la descend.³⁵

³⁵ This poem briefly explains mutation in that a mutation ending on *ut, re, or mi* will be used to continue higher, but a mutation ending on *fa, sol, or la* will be used to continue lower. It is unclear why M's additional text ("and understand this in so far as it relates to mutations on G, A, and C, D; it will not, then, be in the author's design") pertains only to the four letters named but not to B, E, and F.

<2>

<1.> Re la, primus	re fa, secundus
mi fa, tertius	mi la, quartus
fa fa, quintus	fa la, sextus
ut sol, septimus	ut fa, octavus

<2.> Primus tonus ascendit quintam; <secundus, tertiam>; tertius, sextam; quartus, quartam; quintus, quintam; sextus, tertiam; septimus, quintam; octavus, quartam.

<3.> Nota quod litere manus sunt viginti, quarum octo sunt graves, septem sunt acute, et quinque superacute.

<1.> primus, re la; secundus, re fa; tertius, mi fa; quartus, mi la; quintus, fa fa; sextus, fa la; W | ut sol, septimus]sol sol, septimus V septimus, sol sol W | ut fa, octavus]sol fa, octavus V | octavus]optavus W || <2.> tonus *n.h.* M | tonus ascendit *n.h.* V | ascendit ad quintam M | secundus, tertiam *scripsi*; secundus, tertiam vel equalis vel inferius unam LW secundus ad tertiam vel equalis vel inferius ad unam M secundus tertiam vel equalem vel inferius unam V | octavus]optavus W || <3.> *ad* Nota quod litere . . . : Nota *margin.* M | manus *n.h.* M | quorum W | graves, et V | septem]septe W | *ter.* sunt *n.h.* M ||

<2>

<1.>	<i>Re la</i> , first	<i>re fa</i> , second
	<i>mi fa</i> , third	<i>mi la</i> , fourth
	<i>fa fa</i> , fifth	<i>fa la</i> , sixth
	<i>ut sol</i> , seventh	<i>ut fa</i> , eighth ³⁶

<2.> The first mode ascends to the fifth; the second mode to the third;³⁷ the third mode to the sixth; the fourth mode to the fourth; the fifth mode to the fifth; the sixth mode to the third; the seventh mode to the fifth; the eighth mode to the fourth.

<3.> There are twenty letters in the hand, of which eight are low, seven are high, and five are very high.

³⁶ In *Regula* 2.1 the compiler turned, abruptly and without announcement, to the theory of mode. The syllables indicate the intervals between the respective modes' finals and reciting tones. These verses appear often in texts on plainchant and sometimes include an explanation, as follows in *Regula* 2.2; see Berger, *Medieval Music*, 85.

³⁷ The verse concerning second mode is corrupt in all four manuscripts and seems to have been transposed from another poem that indicates intervals between the finals of responsories and the notes on which their verses begin. The two poems often appear in proximity, as in the *Compendium musicale* of Nicolaus de Capua (La Fage, *Essais de diphthérogaphie musicale*, 313), where they are adjacent.

<4.> Nota quod toni sunt octo, scilicet primus, secundus, tertius, quartus, quintus, sextus, septimus, et octavus. Nota quod litere finales sunt quatuor, scilicet D, E, F, G graves. Nota quod litere confinales sunt tres, scilicet A, B, C acute. <5.> Nota quod primus et secundus tonus ascendens finitur in D gravi, id est, in re; tertius et quartus finitur in E gravi, id est, in mi; quintus et sextus finitur in F gravi, id est, in fa; septimus et octavus finitur in G gravi, id est, in sol.

<4.> *pr.* scilicet]videlicet MV *n.h.* W | primus . . . et octavus]primus et secundus etc. M primus, secundus, tertius, etc. V | graves *n.h.* M || <5.> quod *marg.* V | id est, in re]et in re V scilicet in re W | *sec.* finitur *n.h.* W | id est, in mi]et in mi V | id est, in fa]et in fa V scilicet in fa W | id est, in sol]et in sol V scilicet in sol W ||

<4.> There are eight modes: the first, second, third, fourth, fifth, sixth, seventh, and eighth.

There are four final letters: low D, E, F, G; there are three affinal letters: high A, B, C.³⁸ <5.>

The first and second modes, ascending,³⁹ are ended on low D, that is, on *re*; the third and fourth are ended on low E, that is, on *mi*; the fifth and sixth are ended on low F, that is, on *fa*; the seventh and eighth are ended on low G, that is, on *sol*.

³⁸ “Final letters” represent the notes on which chants typically end; “affinal letters” represent notes on which they typically end if they cannot be ended on the final letters.

³⁹ Although all four manuscripts include *ascendens* here, it is not clear why that word is appropriate.

<6.> Nota quod toni sunt octo, quorum quatuor sunt autentici et quatuor plagales.
 <7.> Autentici dicuntur qui habent auctoritatem ascendendi; plagales dicuntur qui habent auctoritatem descendendi. <8.> Autentici sunt isti, scilicet primus, tertius, quintus, et septimus; plagales sunt isti, scilicet secundus, quartus, sextus, et octavus. <9.> Nota quod tonus authenticus habet auctoritatem ascendendi usque ad dyapason, hoc est, usque ad octavam vocem, et descendendi sub suo fine unam vocem; nota quod tonus plagalis est ille qui ascendit supra suum finem sextam vocem et descendit quartam vocem.

<6.> *sec. sunt n.h. M | sec. quatuor ex quatuorum corr. W ||* <7.> *pr. qui]quia W | sec. dicuntur qui]vero W | post descendendi: et sunt isti plagales quatuor scilicet secundus, quartus, sextus, et octavus W ||* <8.> *pr. isti, scilicet n.h. W plagales . . . octavus n.h. W ||* <9.> *ad dyapason]adyapason W | sec. usque n.h. LM | descendendi]descendit LM descendendo W | fine]finem W | plagalis n.h. V | supra suum finem sextam vocem]a suo fine sextam vocem M super suo finem sex voces W | quartam]quintam L | quart. vocem n.h. M ||*

<6.> There are eight modes, of which four are authentic and four are plagal. <7.> Those are called authentics which have the power of ascending; those are called plagals which have the power of descending. <8.> The authentics are these: the first, third, fifth, and seventh; the plagals are these: the second, fourth, sixth, and eighth. <9.> The authentic mode has the power of ascending to the diapason, that is, to the eighth pitch, and of descending below its final one pitch; the plagal mode is that which ascends above its final to the sixth pitch and descends to the fourth pitch.

<10.> Nota quod tonorum alius perfectus, alius imperfectus, alius plusquamperfectus, alius mixtus, alius commixtus dicitur. <11.> Nota quod tonus perfectus est ille qui implet modum suum supra et infra, sive sit authenticus sive plagalis. <12.> Nota quod tonus imperfectus est ille qui non implet modum suum nec supra nec infra, sive sit authenticus sive plagalis. <13.> Nota quod tonus plusquamperfectus authenticus est ille qui ascendit ultra octavam vocem, id est, ad nonam vel decimam; nota quod tonus plusquamperfectus plagalis est ille qui descendit ultra quartam vocem; unde nota quod omnis authenticus dicitur plusquamperfectus a parte supra, plagalis vero a parte infra.

<10.> *n.h.* W | <11.> *ad* Nota quod tonus perfectus . . . : Nota *marg.* M | sive plagalis]sive sit plagalis MW | <12.> imperfectus authenticus W | nec supra nec infra]supra nec infra LW supra et infra M | sive plagalis]sive sit plagalis MW | <13.> plusquamperfectus authenticus]autenticus plusquamperfectus V | authenticus *marg.* L | *pr. qui]*fort. qa M | *sec. ultra]*fort. ultram W | quartam]ad quartam W | *sec. a parte n.h.* V | *infra ex supra corr.* M ||

<10.> Of the modes, one is called perfect, another imperfect, another pluperfect, another mixed, another intermixed.⁴⁰ <11.> The perfect mode is that which fills its measure above and below, whether it is authentic or plagal. <12.> The imperfect mode is that which does not fill its measure either above or below, whether it is authentic or plagal. <13.> The pluperfect authentic mode is that which ascends beyond the eighth pitch, that is, to the ninth or tenth; the pluperfect plagal mode is that which descends beyond the fourth pitch; whence, every authentic is called pluperfect with regard to the upper part; but the plagal [is called pluperfect] with regard to the lower part.

⁴⁰ This fivefold classification of modes into perfect, imperfect, pluperfect, mixed, and intermixed goes back to Marchetto, *Lucidarium* 11.2, pp. 378–91.

<14.> Nota quod tonus mixtus authenticus est ille qui descendit ultra unam vocem, tangens sui plagalis descensionem; nota quod tonus mixtus plagalis est ille qui ascendit ultra sextam vocem, tangens sui autentici ascensionem; unde nota quod omnis authenticus dicitur mixtus a parte infra, plagalis vero a parte supra. <15.> Nota quod tonus commixtus est ille, sive authenticus sive plagalis sit, qui cum aliis speciebus quam cum suis propriis misceri videtur.

<14.> *pr.* tonus *n.h.* W | *pr.* ultra *n.h.* LV | descensionem sui plagalis MV | *sec.* nota quod *n.h.* V | sui autentici *n.h.* V | dicitur mixtus]mixtus dicitur V dicitur W | infra]supra W | supra]infra W ||

<15.> commixtus]mixtus V | est ille, sive authenticus sive plagalis sit]sive sit authenticus sive plagalis, est ille V | propriis]*fort.* propriis M | propriis misceri *ex* misceri propriis *corr.* W ||

<14.> The mixed authentic mode is that which descends beyond one pitch, touching its plagal's descent; the mixed plagal mode is that which ascends beyond the sixth pitch, touching its authentic's ascent; whence every authentic is called mixed with regard to the lower part, but the plagal [is called mixed] with regard to the upper part. <15.> The intermixed mode is that—whether it is authentic or plagal—which seems to be mixed with species other than its own.

<3>

<1.> Nota quod consonantie musice sunt due principales, scilicet dyatessaron et dyapente, que quidem consonantie, si componantur, <dyapason> efficitur symphonia. <2.> Nota quod dyatessaron tres habet species et quatuor voces. <3.> Prima species dyatessaron est que incipit in D gravi et finitur in G gravi, et componitur ex tono, semitonio, et tono, dicendo re sol. <4.> Secunda species est que incipit in E gravi, et finitur in A acuto, et componitur ex semitonio et duobus tonis, dicendo mi la. <5.> Tertia species est que componitur ex duobus tonis et uno semitonio, sicut est ab F gravi ad b molle acutum, dicendo ut fa, et in omni loco ubi tales coniunctiones fierent.

<1.> *ad* Nota quod . . . : Nota hic bii [?]. M | Nota]Notandum est MW | musice *n.h.* M | scilicet]id est W | dyapente et dyatessaron W | dyapason *scripsi*; cum dyapason LMV con dyapason W | efficitur]efficiuntur W | symphonia]sophonia, id est, meliora consonantia L symphoniam M synphoniam, id est, meliorem consonantiam W || <2.> habet]sunt VW || <3.> finiuntur W | *sec.* gravi]gravem V | tono et semitonio et tono L tono ex semitonio et tono W || <4.> est *n.h.* W | acutum LMV || <5.> componitur . . . dicendo]incipit ab F gravi ad b molle acutum et componitur ex duobus tonis et uno semitonio dicendo L | ad *ex* ab *corr.* M ab V | et in]et ita in M et V et sic in W | coniunctones L ||

<3>

<1.> There are two principal intervals⁴¹ in music, the diatessaron and the diapente; indeed, if these intervals are combined, the concord of the diapason is effected. <2.> The diatessaron has three species and four pitches. <3.> The first species of the diatessaron is that which begins on low D and is ended on low G, and is composed of a tone, a semitone, and a tone, saying *re sol*. <4.> The second species is that which begins on low E and is ended on high A, and is composed of a semitone and two tones, saying *mi la*. <5.> The third species is that which is composed of two tones and one semitone, as from low F to high soft b, saying *ut fa*, and in every place where such configurations might occur.⁴²

⁴¹ In *Regula*, *consonantia* is used to mean interval, as in some other medieval music theory treatises, e.g., Bonaventura da Brescia, *Brevis collectio artis musicae (Venturina)* 14, pp. 13–25. The definitions of the species of diatessaron and diapente presented here reflect those of Marchetto, *Lucidarium* 9.1.38–41 and 78–80, pp. 328–33 and 342–45.

⁴² The proviso “and in every place where such configurations might occur” would apply to all species of the diatessaron.

<6.> Nota quod dyapente habet quinque voces et quatuor species. <7.> Prima species dyapente est que componitur ex tono, semitonio, et duobus tonis, sicut est a D gravi ad A acutum, dicendo re la; et componitur ista species a prima specie dyatessaron. <8.> Secunda species dyapente est que componitur ex semitonio et tribus tonis, sicut est ab E gravi ad + quadrum acutum, dicendo mi mi; et componitur ista species a secunda specie dyatessaron. <9.> Tertia species dyapente est que componitur ex tribus tonis cum semitonio, sicut est ab F gravi ad C acutum cantando per + quadrum, dicendo fa fa; et ista species a nullo formatur, quia ex se ipsa fit. <10.> Quarta species dyapente est que componitur ex duobus tonis cum uno semitonio et uno tono, sicut est a G gravi ad D acutum, dicendo ut sol; et formatur ista species a tertia specie dyatessaron addito <tono>, ut supra.

<7.> species]specie W | dyapente est *n.h.* M | *pr.* a]ad W | ista *n.h.* W | *sec.* a]ad W | *sec.* prima *ras.* W || <8.> *ad* Secunda species dyapente . . . : Nota hic bonadies *marg.* M | dyapente est *n.h.* M | ab]a W | + quadrum]b molle LMW | specie]species M specie *ex* species *corr.* W || <9.> *ad* Tertia species dyapente . . . : Nota *marg.* M | *pr.* species [[s]] dyapente M | *pr.* ex]es V | ab]a W | ad]fort. a W | acutum]acutum W | et *n.h.* LMW | ipsa]ipso W || <10.> componitur *ras.* W | ex duobus]bis: *pr. marg., sec. marg. m sec.* W | tonis]notis W | *pr.* a]ab W | formatur [[i]] L | ista species formatur V | dyatessaron]dyapeseron W | addito]addite W | tono *scripsi; n.h.* LMVW ||

<6.> The diapente has five pitches and four species. <7.> The first species of the diapente is that which is composed of a tone, a semitone, and two tones, as from low D to high A, saying *re la*; and this species is composed from the first species of the diatessaron. <8.> The second species of the diapente is that which is composed of a semitone and three tones, as from low E to high square +, saying *mi mi*; and this species is composed from the second species of the diatessaron.⁴³ <9.> The third species of the diapente is that which is composed of three tones with a semitone, as from low F to high C, singing through square +, saying *fa fa*; and this species is formed from nothing, because it is made of itself. <10.> The fourth species of the diapente is that which is composed of two tones with one semitone and one tone, as from low G to high D, saying *ut sol*; and this species is formed from the third species of the diatessaron when a tone is added, as above.⁴⁴

⁴³ It is unclear why Bonadies supplied his name in this marginal note.

⁴⁴ Marchetto's *Lucidarium* states that the species of the diapente arise out of the species of the diatessaron. Adding a whole tone above the first species of the diatessaron results in the first species of the diapente; a whole tone added above the second species of the diatessaron creates the second species of the diapente; the third species of the diapente arises of itself; thus, it is adding a whole tone to the third species of the diatessaron that produces the fourth species of the diapente. This doctrine is expounded in Marchetto, *Lucidarium* 9.1, pp. 342–61.

<11.> Nota quod primus tonus formatur ex prima specie dyapente et ex prima specie dyatessaron superius. <12.> Nota quod secundus tonus formatur ex prima specie dyapente superius et ex prima dyatessaron inferius. <13.> Nota quod tertius tonus formatur ex secunda specie dyapente et ex secunda dyatessaron specie superius. <14.> Nota quod quartus tonus formatur ex secunda specie dyapente superius et ex secunda specie dyatessaron inferius. <15.> Nota quod quintus tonus formatur ex tertia specie dyapente et ex tertia specie dyatessaron superius. <16.> Nota quod sextus tonus formatur ex tertia specie dyapente superius et ex tertia specie dyatessaron inferius.

<11.> *ad* Nota quod primus tonus . . . : De formatione tonorum *marg.* M | *pr.* ex]a W | dyapente [[superius]] L dyapente *n.h.* M | *sec.* ex *n.h.* M | *sec.* specie *n.h.* LM | dyatessaron]dyapeseron W || <12.> Nota quod *n.h.* V | *pr.* ex]a W | specie *n.h.* M | superius *n.h.* M | *sec.* ex *n.h.* M || <13.> Nota quod *n.h.* V | *pr.* ex]a W | *pr.* specie ex spencie *corr.* L | *sec.* ex *n.h.* M | dyatessaron specie superius]dyatessaron superius L dyatessaron superius M specie dyatessaron W || <14.> Nota quod *n.h.* MV | tonus formatur]vero M tonus formatur [[et]] W | secunda specie dyapente superius et ex secunda specie dyatessaron inferius]eadem dyapente et dyatessaron secunda inferius M | *sec.* specie *n.h.* W || <15.> Nota quod *n.h.* V | tonus *n.h.* M | *pr.* specie *n.h.* M | *sec.* ex tertia specie]dyatessaron tertia M || <16.> Nota quod]et M *n.h.* V | tonus *n.h.* M | tertia specie dyapente superius et ex tertia specie dyatessaron inferius]tertia dyapente et dyatessaron tertia inferius M | *sec.* ex *n.h.* W ||

<11.> The first mode is formed from the first species of the diapente and from the first species of the diatessaron above.⁴⁵ <12.> The second mode is formed from the first species of the diapente above and from the first of the diatessaron below. <13.> The third mode is formed from the second species of the diapente and from the second species of the diatessaron above. <14.> The fourth mode is formed from the second species of the diapente above and from the second species of the diatessaron below. <15.> The fifth mode is formed from the third species of the diapente and from the third species of the diatessaron above. <16.> The sixth mode is formed from the third species of the diapente above and from the third species of the diatessaron below.

⁴⁵ Differentiation of the eight modes presented in *Regula* 3.11–18 on the basis of their species of the diapente and diatessaron reflects that of Marchetto, *Lucidarium* 11.4.1–211, 394–489.

<17.> Nota quod septimus tonus formatur ex quarta specie dyapente et ex prima specie dyatessaron superius. <18.> Nota quod octavus tonus formatur ex quarta specie dyapente superius et ex <prima> specie dyatessaron inferius.

<19.> Nota quod si primus tonus est perfectus, cantari debet per + quadrum, ut inveniatur prima species dyatessaron posita supra dyapente, que quidem species non inveniretur si per b molle cantaretur. <20.> Si vero primus tonus non est perfectus et hoc dupliciter, quia aut ascendit ad C acutum et immediate post hec, antequam descendat ad F grave, ascendit ad C acutum, tunc cantari debet per + quadrum. <21.> Si vero primus tonus descendit ad F grave, tunc cantari debet per b molle, et ratio est quia si per + quadrum cantaretur, tunc in eo reperiretur illa species tritoni que omnino in omni cantu vitanda est.

<17.> *ad* Nota quod septimus tonus . . . : Nota hoc non est verum *marg.* M | Nota quod *n.h.* V | *sec.* ex *n.h.* M | prima specie dyatessaron]tertia dyatessaron LW dyatessaron tertia M prima dyatessaron specie V || <18.> Nota quod]Et M *n.h.* V | tonus *n.h.* M | quarta specie dyapente superius et ex tertia specie dyatessaron inferius]eadem dyapente et tertia dyatessaron inferius M | | prima *scripsi;* tertia LMVW | *sec.* specie *n.h.* VW || <19.> si *n.h.* L | cantari debet]debet cantari LM | *pr.* species]specie W | *sec.* species]specie W | inveniretur]invenitur W | cantaretur *ex non inveniretur corr. lin.* || <20.> est]esset L | *pr.* et]in W | *pr.* ascendit *ras.* W | hec] *fort.* hoc M | *ter.* ad]a W | tunc *n.h.* LM || <21.> cantari]canta L | ratio]hec causa W | omnino]omni modo W | cantu]canto W | *sec.* est *n.h.* M ||

<17.> The seventh mode is formed from the fourth species of the diapente and from the first species of the diatessaron above.⁴⁶ <18.> The eighth mode is formed from the fourth species of the diapente above and from the first species of the diatessaron below.⁴⁷

<19.> If the first mode is perfect, it ought to be sung through square +, so that the first species of the diatessaron is found placed above the diapente—which species, indeed, would not have been found if it had been sung through soft b. <20.> But if the first mode is not perfect, there are two alternatives, because either it ascends to high C and immediately after this—before it descends to low F—ascends to high C [again]; then it ought to be sung through square +.⁴⁸

<21.> But if the first mode descends to low F,⁴⁹ then it ought to be sung through soft b, and the reason is because if it were sung through square +, then in it would be found that species of the tritone which in every chant is to be avoided altogether.

⁴⁶ Here, manuscripts LMW state that it is the third species of the diatessaron that is placed above the fourth species of the diapente. This is incorrect, as the scribe of M indicates in the margin, because it is the first species of the diatessaron that should be placed above the fourth species of the diapente to form the seventh mode, as stated in manuscript V.

⁴⁷ In *Regula* 3.18, all manuscripts state, erroneously, that it is the third species of the diatessaron that is placed below the diapente to form the eighth mode.

⁴⁸ The discussion of B \natural and B \flat in first mode reflects that of Marchetto, *Lucidarium* 11.4.5–16, pp. 396–401.

⁴⁹ I.e., before it ascends again to high C.

<4>

<1.> Nota quod species in musica sunt sexdecim, scilicet tonus, semitonium, dictonus, semidictonus, dyatessaron, tritonus, dyapente perfectum, dyapente imperfectum, exadem maius, exadem minus, eptadem maius, eptadem minus, <dyapason,> dyapason cum dyatessaron, dyapason cum dyapente, et bisdyapason. <2.> Nota quod tonus est legitimum spatium de sono in sonum; unde tonus est dispositio duarum vocum <perfecta>, et dicitur tonus ab intonando, id est, quia perfecte sonat. <3.> Nota quod semitonium est dispositio duarum vocum <imperfecta>; est enim semitonium quocienscumque dicitur mi fa, fa mi; et vocatur semitonium a semis, quod est imperfectio; vel quasi imperfectus tonus; unde semitonium, quasi pars toni.

<1.> *ad* Nota quod species in musica . . . : De speciebus musice non recte dicit *marg.* M | Nota quod species in musica]Nota species quod species musice V | sexdecim]quindecim V | perfectum]perfectus MV | imperfectum]imperfectus MV | eptadem maius, eptadem minus *n.h.* W | dyapason *scripsi*; *n.h.* LMVW | *pr. cum*]n.h. M et W | *sec. cum*]con V || <2.> legiptimum]legitimus W | unde]vel V | *ter. tonus n.h.* LW | *perfecta scripsi*; *perfectarum* LMVW | id est *n.h.* L | quia]qui M quod W || <3.> *ad* Nota quod semitonium est dispositio duarum vocum imperfecta . . . : Nota: implicat contradictionem *marg.* M | *imperfecta scripsi*; *imperfectarum* LMVW | *sec. semitonium*]semitonum MW | mi fa, fa mi]fa mi, mi fa L mi fa M mi fa, fa mi ubi cumque sit W | vocatur]dicitur LW | *ter. semitonium*]n.h. L semitonum MW | semis]semo semis W | imperfectio]imperfectum W | tonus *n.h.* W | *quart. semitonium*]semitonum M | *post toni: vel dimidium* [[choerentia]] W ||

<4>

<1.> There are sixteen species in music:⁵⁰ tone, semitone, ditone, semiditone, diatessaron, tritone, perfect diapente, imperfect diapente, major hexad, minor hexad, major heptad, minor heptad, diapason, diapason with diatessaron, diapason with diapente, and double diapason. <2.> The tone is the regular interval from one pitch to the next pitch; whence the tone is the complete arrangement of two syllables⁵¹ and it is called tone from intoning, that is, because it sounds completely. <3.> The semitone is the imperfect arrangement of two syllables, for there is a semitone whenever *mi fa, fa mi* is said, and it is called semitone from *semis*, which is imperfection; or, as it were, an imperfect tone; whence semitone, as it were, a part of the tone.

⁵⁰ Manuscripts LMW call for sixteen intervals (“species”), but only fifteen are listed in LMVW, with the diapason notably missing. Accordingly, I have emended the text to include it.

⁵¹ In *Regula* 4.2–3, the text differentiates the tone and the semitone, which are called *tonus perfectus* and *tonus imperfectus* in many medieval treatises. Here in all four manuscripts the scribes have incorrectly applied *perfecta* and *imperfecta* not to the arrangements (*dispositiones*) of tones and semitones, but to the syllables (*voces*; genitive, *vocum*) that form them. When transcribing the statement in M, Bonadies acknowledged this problem by adding a marginal note: *Nota. implicat contradictionem* (Note: he introduces a contradiction). In this section, *vox* is translated as “syllables,” (in the sense of scale degree).

<4.> Nota quod dictonus est dispositio trium vocum et choerentia duorum tonorum; est enim dictonus quocienscumque dicitur ut mi et fa la. <5.> Nota quod semidictonus est <dispositio> trium vocum et <choerentia> unius toni cum semitono; est enim semidictonus ubi invenitur re fa et mi sol, sicut est a D gravi ad F grave et ab E gravi ad G grave. <6.> Nota quod dyatessaron est dispositio quatuor vocum et choerentia duorum tonorum cum uno semitono, sicut est a C gravi ad F grave et a D gravi ad G grave dicendo ut fa et re sol, et in omni loco ubi tales coniunctiones fierent. <7.> Nota quod dyapente est <dispositio> quinque vocum et <choerentia> trium tonorum cum uno semitono; est enim dyapente quocienscumque dicitur ut sol et re la. <8.> Nota quod tritonus est dispositio quatuor vocum et choerentia trium tonorum; est enim tritonus ab F gravi ad + quadrum acutum et a b molle acutum ad E acutum.

<4.> enim *n.h.* W | *sec.* et *n.h.* M || <5.> *sec.* semidictonus]semidictonus V | dispositio *scripsi*; choerentia LMVW | choerentia *scripsi*; dispositio LMVW | a]ad W | *pr.* gravi]grave [[et]] W | ab E gravi ad G grave]ad + grave et ad E gravi W || <6.> *ad* Nota quod dyatessaron . . . : Nota hic *mag.* M | a C gravi ad F grave, et *n.h.* V | *sec.* et *n.h.* M | *sec.* a]ad W | ut fa et *n.h.* V | *ter.* et *n.h.* M | coniunctiones fierent]coniunctio fieret V | <7.> dispositio *scripsi*; choerentia LMVW | choerentia *scripsi*; dispositio LMVW | semitono]semitono W | *sec.* et *n.h.* M || <8.> quatuor [[i]] L | *pr.* ad]ab W | + quadrum]b molle LVW | *pr.* acutum *n.h.* M | a]ab W | *sec.* acutum]acuto L *n.h.* M | E]mi LV mi supra W ||

<4.> The ditone is the arrangement of three syllables and the combination of two tones, for the ditone occurs whenever *ut mi* and *fa la* are said. <5.> The semiditone is the arrangement of three syllables and the combination of one tone with a semitone, for the semiditone occurs whenever *re fa* and *mi sol* are found, as from low D to low F and from low E to low G. <6.> The diatessaron is the arrangement of four syllables and the combination of two tones with one semitone, as from low C to low F and from low D to low G, saying *ut fa* and *re sol*, and in every place where such intervals might occur. <7.> The diapente is the arrangement of five syllables and the combination of three tones with one semitone, for the diapente occurs whenever *ut sol* and *re la* are said. <8.> The tritone is the arrangement of four syllables and the combination of three tones, for the tritone occurs from low F to high square + and from high soft b to high E.

<9.> Nota quod dyapente imperfectum est dispositio quinque vocum et choerentia duorum tonorum cum duobus semitoniis; est enim dyapente imperfectum a + gravi ad F grave et ab E gravi ad b molle acutum, et in omni loco ubi talis coniunctio fiat. <10.> Nota quod exadem maius est dispositio sex vocum et choerentia quatuor tonorum cum uno semitonio, sicut est <a C> gravi ad A acutum, et a D gravi ad + quadrum acutum. <11.> Nota quod exadem minus est dispositio sex vocum et choerentia trium tonorum cum duobus semitoniis, sicut est a D gravi ad b molle acutum, et in omni loco ubi talis coniunctio fiat.

<9.> dispositio [[i]] L | a + gravi ad F grave, et ab E gravi ad b molle acutum]ab E gravi ad b molle et a + gravi ad F grave, secundum aliquos M | a + gravi]a b molle acuto L ab b grave [[acutum]] W a + mi grave usque V | ab E gravi]ab F grave L ad E gravi W | et in omni loco ubi talis coniunctio fiat *n.h.* M | fiat]fieret W || <10.> exadem]exeadem LW | sicut]ut M | ab C gravi ad A acutum, et *n.h.* MV | a C *scripsi*; ab E L ab C W | sicut est a D gravi ad [[b molle]] + quadrum M | + quadrum]b molle LVW | *sec.* acutum *n.h.* M || <11.> dispositio sex vocum et *n.h.* M | sex [[i]] L | sicut est a D]et est exeadem minus a D L et est a D M est enim exeadem minus ad D W | acutum, et in omni loco ubi talis coniunctio fiat *n.h.* M ||

<9.> The imperfect diapente is the arrangement of five syllables and the combination of two tones with two semitones, for the imperfect diapente occurs from low square + to low F and from low E to high soft b, and in every place where such an interval might occur. <10.> The major hexad is the arrangement of six syllables and the combination of four tones with one semitone, as from low C to high A and from low D to high square +. <11.> The minor hexad is the arrangement of six syllables and the combination of three tones with two semitones, as from low D to high soft b, and in every place where such an interval might occur.

<12.> Nota quod eptadem maius est dispositio septem vocum et choerentia quinque tonorum cum uno semitonio, sicut est a C gravi ad + <quadrum> acutum, et in omni loco ubi talis coniunctio fiat. <13.> Nota quod eptadem minus est <dispositio> septem vocum et <choerentia> <quatuor> tonorum cum duobus semitoniis, sicut est a C gravi ad b molle acutum, et in omni loco ubi talis coniunctio fiat. <14.> <Nota quod dyapason est dispositio octo vocum et choerentia quinque tonorum cum duobus semitoniis, sicut est a C gravi ad C acutum et a D gravi ad D acutum, et in omni loco ubi talis coniunctio fiat.>

<12.> *pr.* eptadem]eptadis M etandem W | quinque]trium L | uno semitonio]duobus semitoniis L | sicut est]et est M et est eptadem maius V est enim eptandem maius W | a C gravi ad + quadrum acutum *scripsi*; a D gravi ad b molle acutum et ab F acuto ad b molle superacuto L ab E gravi ad D acutum M a C gravi ad b molle acutum V ab E gravi ad C acutum et ad b molle acutum W | et in omni loco ubi talis coniunctio fiat *n.h.* LM | talis]tales W || <13.> *n.h.* L | Nota quod]Et M | eptadem]eptadis M eptandem W | dispositio *scripsi*; choerentia MVW (*n.h.* L) | choerentia *scripsi*; dispositio MVW (*n.h.* L) | quatuor *scripsi*; *n.h.* L trium MVW | sicut est]et est M | a C gravi ad b molle acutum]a D gravi ad C acutum M ad D gravi ad b molle acutum, et ab F acuto ab b molle sopra acuto W | et in omni loco ubi talis coniunctio fiat *n.h.* MW || <14.> Nota quod dyapason . . . ubi talis coniunctio fiat *scripsi*; *n.h.* LMVW ||

<12.> The major heptad is the arrangement of seven syllables and the combination of five tones with one semitone, as from low C to high square + and in every place where such an interval might occur. <13.> The minor heptad is the arrangement of seven syllables and the combination of four tones with two semitones, as from low C to high soft b, and in every place where such an interval might occur. <14.> The diapason is the arrangement of eight syllables and the combination of five tones with two semitones, as from low C to high C and from low D to high D, and in every place where such an interval might occur.

<15.> Nota quod dyapason cum dyatessaron est dispositio <undecim> vocum, et choerentia <septem> tonorum cum <tribus> semitoniis, sicut est a D gravi ad G <acutum>, et in omni loco ubi talis coniunctio fiat. <16.> Nota quod dyapason cum dyapente est dispositio <duodecim> vocum, et est choerentia <octo> tonorum cum tribus semitoniis, sicut est a D gravi ad <A> superacutum. <17.> Nota quod bisdyapason est dispositio quindecim vocum, et choerentia <decem> tonorum cum quatuor semitoniis, sicut est a D gravi ad D superacutum, et in omni loco ubi talis coniunctio fiat.

<15.> cum]con V | cum dyatessaron *lin.* W | undecim *scripsi*; duodecim LMVW | septem *scripsi*; octo LMV octorum W | tribus *scripsi*; duobus LMVW | a]ad W | G]A M | acutum]superacutum LMVW | et in omni loco ubi talis coniunctio fiat *n.h.* M | talis]tales W || <16.> cum]con V | dispositio]choerentia MVW | duodecim *scripsi*; tredecim LMVW | choerentia]dispositio MVW | octo *scripsi*; decem *ras.* L decem MV *fort.* decem W | sicut]et M | a]ad W | A *scripsi*; b molle LMVW || <17.> bisdyapason]bis [[da]] dyapason W | decem *scripsi*; undecim LMVW | a]ad W | omni loco ubi talis coniunctio fiat]omnibus locis in quibus talis coniunctio reperitur M | talis]tales W ||

<15.> The diapason with diatessaron is the arrangement of eleven syllables and the combination of seven tones with three semitones, as from low D to high G, and in every place where such an interval might occur. <16.> The diapason with diapente is the arrangement of twelve syllables and the combination of eight tones with three semitones, as from low D to very high A. <17.> The bisdiapason is the arrangement of fifteen syllables and the combination of ten tones with four semitones, as from low D to very high D, and in every place where such an interval might occur.

<1.> Nota quod clavis est reseratio omnium notarum in quolibet signo signatarum, et vocatur clavis quia, sicut per clavim clauduntur omnia que intra hostium sunt, ita per clavim cognoscitur melius omnis nota que in quolibet spatio vel linea est.

<2.> Nota quod mutatio est variatio vocis seu note in eodem spatio vel linea in eodem sono; et nota quod ut mutatio fiat, oportet quod voces sint equales.

<3.> Nota quod b molle inventum fuit tribus de causis; primo causa tritoni; secundo causa necessitatis; tertio causa essentie. <4.> Causa tritoni, hoc est ad evitandum tritonum.

<1.> *ad* Nota quod clavis . . . : de clavi *marg.* M | reseratio]reservatio W | signatarum]ponitarum M | *sec. clavis]*fort. ex claves *corr.* W | *pr. clavim]*clavium W | *sec. clavim]*clavium W | omnis]*n.h.* L | *sec. quolibet]**n.h.* M | spatio vel linea est]spatio vel in linea sit M linea vel spatio est W || <2.> *n.h.* W | *ad* Nota quod mutatio . . . : de mutatione *marg.* M | *pr. quod marg.* V | *pr. eodem]*eadem L | spatio vel linea in eodem sono]linea vel spatio vel in eodem sono L spatio vel linea eodem sono V | ut]si M | mutatio fiat]mutatio debeat fieri M | oportet]op oportet V | *sec. quod]*ut V | voces]note M || <3.> *ad* Nota quod b molle . . . : de b molli *marg.* M | fuit [[o]] W | primo]primus W | tritoni]tritonis W || <4.> tritoni hoc]tritonis hec W | ad evitandum tritonum]ad ipsum evitandum M ||

<5>

<1.> A clef is the disclosure of all the notes written down with any symbol, and it is called clef because, just as a key shuts away all that is behind a door, thus with a clef every note that is in any space or on any line is better recognized.⁵²

<2.> Mutation is a change of a syllable or note lying in the same space or [on the same] line with the same pitch; and in order to make the mutation it is necessary that the syllables be equal.⁵³

<3.> Soft b was discovered for three reasons; first, by reason of the tritone; second, by reason of necessity; third, by reason of essence. <4.> By reason of the tritone—that is, to avoid the tritone.

⁵² This statement plays on the word *clavis*, which can mean either *key* or *clef*. In Marchetto, *Lucidarium* 14.1.3–4, pp. 538–39, a similar passage has the key more appropriately *opening* the door: “. . . sicut per clavim reseratur ostium . . . ad conservanda que intra ostium sunt, sic per clavim in cantu ipse reseratur cantus et conserantur notarum nomina. . . . (. . . just as a key . . . opens a door to preserve what is behind the door, so in melody does [the clef itself] . . . disclose the melody and preserve the names of its notes. . . .)”

⁵³ This means that though the syllables will be different, they must represent the same pitch in order to mutate between hexachords.

<5.> Fuit etiam inventum b molle causa necessitatis, hoc est, quando invenitur dyapente intensum inter F grave et C acutum, adiunto tono vel mediante Alamire. <6.> Fuit etiam inventum b molle causa essentie, et tunc in quinto et sexto tono comodius fieri potest quia ibi non incipit nisi in F.

<5.> Fuit etiam inventum B molle *n.h.* M | etiam *n.h.* W | inventum per W | B molle *n.h.* V | grave *n.h.* M | acutum *n.h.* M | adiunto]aiunctio W | tono vel *arg.* W || <6.> Fuit etiam inventum B molle *n.h.* M | etiam *n.h.* W | inventum *ras.* L | inventum per W | B molle *n.h.* V | sexto tono quando V | comodius]comode L *fort.* cum modis M | ibi *n.h.* M | *post* incipit nisi in F: Notandum est quod idem est [[quod]] b molle + quadrum idem est quod semitonum b retundum [*sic*] dicitur quod habet hanc vocem fa, que profertur ore pleno et retundo [*sic*]. Et idem molle dicitur quia levis vox super ipsum [[fieri]] dictum fieri. Aliud + ideo dicitur quadratum quia profertur ore acuto faciendo ibi semitonum. Fuit autem quidam in quo non erat b molle sive rotundum, sed solum erat +mi, id est, + quadratum; sed b molle inventum est posterius a cantoribus causa meliorem [*sic*] sonoritatis, precipue propter quintum et sextum tonum, qui naturaliter cantari volunt per b molle, sed sextus maxime. Causa autem quia isti duo toni cantentur per b molle hec est, quia finiuntur in F grave ubi incipit solfatio vel filabatio [*sic*] per b molle. W ||

<5.> Soft b was also discovered by reason of necessity, that is, when the rising diapente is discovered between low F and high C, with a tone added or with mediation through high A.⁵⁴

<6.> Soft b was also discovered by reason of essence, and then it can be made more suitably in the fifth and sixth modes, because there it does not begin except on F.⁵⁵

⁵⁴ It is not clear what tone might be added, or why mediation through A would necessitate flatting B.

⁵⁵ “. . . it does not begin except on F”: here “it” seems to refer to the hexachord built on low F that includes b-flat—an interpretation supported by the end of the interpolation in manuscript W. The first words of this interpolation (“Notandum est quod idem est [[quod]] b molle + quadrum idem est quod semitonum”) do not appear to make sense, but the remainder can be translated: “Round b is [so] named because it has this syllable, *fa*, which is sung with the mouth full and round. And the same [b] is named soft because a smooth voice is said to be made on it. The other + is named square because it is sung with the mouth pursed, making a semitone there. There was once [a time] in which there was no soft or round b, but there was only +-*mi*, that is, square +; but later soft b was discovered by singers for the sake of a better sonority, especially on account of the fifth and sixth modes, which naturally wish to be sung through soft b—but principally the sixth. The reason why these two modes are sung through soft b is this: because they are ended on low F, where solmization or syllabication through soft b begins.” I read *retundum* as *rotundum* (twice) and *filabicio* as *silabicio*; I treat *causa meliorem sonoritatis* as *causa melioris sonoritatis*; and I ignore a square + following *que profertur* but placed in the margin.

<7.> Nota quod sunt aliqui cantus qui ultra dyapente non ascendunt et sub suo fine nihil descendunt, et ideo tales cantus iudicandi sunt secundum eorum cordam. <8.> Sed si note plures descendunt sub corda, tunc tales cantus iudicandi sunt plagales; et si note plures ascendunt ultra cordam, tunc tales cantus iudicandi sunt autentici. <9.> Corda namque primi et secundi toni est in F gravi. <10.> Corda namque tertii et quarti toni est in G gravi. <11.> Corda namque quinti et sexti toni est in A acuto. <12.> Corda namque septimi et octavi toni est in + acuto.

<7.> *ad* Nota quod sunt aliqui cantus . . . : de cordis tonorum *marg.* M | sunt *n.h.* LMW | aliqui]aliquid W | non *fort. ras.* M | nihil descendunt]non descendunt nihil V | et ideo tales cantus iudicandi sunt]et omnino L iudicari debent M et omnino talis cantus iudicandus est W | secundum *fort.* secundam V | secundum eorum cordam]*n.h.* L secundum cordam eorum W || <8.> Sed . . . tunc *n.h.* L | tunc tales cantus *n.h.* M | tales [[i]] L | *pr.* tales]talis W | *pr.* iudicandi sunt]iudica hos esse M iudicandus est W | plagales]plagalis W | et]sed LW | note plures ascendunt ultra cordam]ultra cordam plures note M | ascendunt *ras.* W | cordam]corda W | tunc tales cantus iudicandi sunt autentici]tunc iudicandi sunt autentici L autentici dicuntur M tunc iudicandus est authenticus W || <9.> *ante* Corda: Unde versus: W | namque *n.h.* M | toni *n.h.* V | gravi]grave L *n.h.* M || <10.> Corda namque *n.h.* M | tertii]tritonii L | et [[p]] W | toni est *n.h.* M | gravi]grave L *n.h.* M || <11.> Corda namque *n.h.* M | namque *n.h.* V | toni est *n.h.* M | A *n.h.* M | acutum V || <12.> Corda namque *n.h.* M | namque *n.h.* V | toni est *n.h.* M | + acutuo]b molle acuto LW b molle acutum V | *post* acutum: Expliciunt regule cantus firmi deo infinitas gratias amen L Et hic finis per me fratrem Jo<hann>em Bonadies in conventu mantue 1473, 4 octubris hora 15 M ||

<7.> There are some chants which do not ascend above the diapente and do not descend below their final at all, and for that reason such chants ought to be judged according to their cord.⁵⁶ <8.> If more notes descend below the cord, then such chants are to be judged plagal; and if more notes ascend above the cord, then such chants are to be judged authentic. <9.> The cord of the first and second modes is on low F. <10.> The cord of the third and fourth modes is on low G. <11.> The cord of the fifth and sixth modes is on high A. <12.> The cord of the seventh and eighth modes is on high square +.

⁵⁶ The cord is the note a third above the final; consideration of it allows for authentics and plagals to be distinguished in cases otherwise ambiguous. On the cord, see Marchetto, *Lucidarium* 12.1.14–27, pp. 522–27.

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