THE CAMBRIDGE HISTORY OF

MEDIEVAL MUSIC

EDITED BY
MARK EVERIST AND
THOMAS FORREST KELLY

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MEDIEVAL MUSIC

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MARK EVERIST is Professor of Music at the University of Southampton. His previous publications include *Mozart's Ghosts: Haunting the Halls of Musical Culture* (2013), *The Cambridge Companion to Medieval Music* (Cambridge, 2011), and *French Motets in the Thirteenth Century* (Cambridge, 1994).

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THE CAMBRIDGE HISTORY OF MEDIEVAL MUSIC

VOLUME I AND II

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EDITED BY
MARK EVERIST
AND
THOMAS FORREST KELLY

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Attempting to acknowledge the debt that we owe to previous scholarship is futile and perhaps dangerous. And while it would be an attractive self-reflective exercise to trace the complex network of scholarly and musical genealogies at play in this volume, we seek here to recognize the debts we owe to those who were directly involved in the creation of the volume. The project really began in Century City, Los Angeles, over a decade ago in November 2006, when the editors floated the idea with Victoria Cooper of Cambridge University Press. Vicky was a patient and helpful interlocutor throughout almost the entire project, and we are grateful to her, and her successor Kate Brett, who kept flagging authors – to say nothing of editors – motivated and enthusiastic about a project that is as extensive in scope as it was long in arrival. We also acknowledge the rest of the Cambridge editorial team: our Content Manager, Victoria Parrin, and our copy-editor, Martin Thacker.

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Arezzo, Biblioteca della città di Arezzo 363
I-AT Framm. 17
Atri, Museo della Basilica Cattedrale, Biblioteca capitolare, Frammento 17 [*olim:* Sala Innocenzo IV, Cartella A, frammento n. 5]

I-Bc Q11
Bologna, Civico Museo Bibliografico Musicale, Q 11
I-Bc Q15
Bologna, Civico Museo Bibliografico Musicale, Q 15
I-BRq Inc. C.VI.5
Brescia, Biblioteca Civica Queriniana, Incunaboli C.VI. 5
I-Bu 221
Bologna, Biblioteca Universitaria 221
I-Bu 596 busta HH2[1]
Bologna, Biblioteca Universitaria, 596, busta HH 2 [1]
I-Bu 2216
Bologna, Biblioteca Universitaria 2216
I-BV 21 *("Antiphoner of S. Lupo of Benevento")*
Benevento, Biblioteca capitolare 21
I-BV 33
Benevento, Biblioteca capitolare 33
I-BV 34
Benevento, Biblioteca capitolare 34
I-BV 39
Benevento, Biblioteca capitolare 39
I-CFm 63 *[Cividale A]*
Cividale del Friuli, Museo Archeologico Nazionale, biblioteca 63
I-CFm 98 *[Cividale A]*
Cividale del Friuli, Museo Archeologico Nazionale, biblioteca 98
I-CT 91
Cortona, Biblioteca comunale e dell'Accademia Etrusca 91
I-CTas sen. Sig. (1)
Cortona, Archivio storico del Comune, senza signatura (1)
I-Fc Cassa forte 74
Florence, Biblioteca del Conservatorio di Musica, "Luigi Cherubini," Cassa forte 74 [*olim*: D 1175]
I-Fl Ash. 999
Florence, Biblioteca Medicea Laurenziana, Ashburnham 999
I-Fl Pal. 87 ("Squarcialupi Codex")
Florence, Biblioteca Medicea Laurenziana, Palatino 87
I-Fl plut. 29.1 [F] ("Florence Manuscript")
Florence, Biblioteca Medicea Laurenziana, Pluteo 29.1
I-Fn Banco Rari 20 ("Cantigas de Santa Maria" [F])
Florence, Biblioteca Nazionale Centrale, Banco Rari 20
I-Fn II.1.122
Florence, Biblioteca Nazionale Centrale, II.1.122 [*olim*: Banco Rari 18]
I-Fn Inc. F.5.5
Florence, Biblioteca Nazionale Centrale, Incunaboli F. 5.5
I-Fn Maglia. BR 18
Florence, Biblioteca Nazionale Centrale, Magliabechiano, BR 18
I-Fn Pancia. 26
Florence, Biblioteca Nazionale Centrale, Panciatichiano 26
I-Fsl 2211
Florence, Archivio capitolare di San Lorenzo 2211
I-FZc 117 ("Faenza Codex")
Faenza, Biblioteca comunale 117
I-GDlcc Codex 1, volumes 2 and 3 (stolen) ("Choirbooks of Guardiagrele")
Guardiagrele, Archivio di Santa Maria Maggiore, Codex 1, volumes 2 and 3 (stolen)
I-GR [Crypt.] Lat. 219
Grottaferrata, Biblioteca Statale del Monumento Nazionale, [Crypt.] Lat. 219 [*olim:* E.β.XVI]
I-GR lat. 224 ("Grottaferrata fragments")
Grottaferrata, Biblioteca Statale del Monumento Nazionale, lat. 224 [*olim*: Collocazione provvisoria 197]
I-IV 60
Ivrea, Biblioteca capitolare 60
I-IV 115 ("Ivrea Codex")
Ivrea, Biblioteca capitolare 115
I-IV CV (104)
Ivrea, Biblioteca capitolare, CV (104)
I-Las 184 ("Mancini Codex")
Lucca, Biblioteca-Archivio storico comunale 184
I-Las 187
Lucca, Biblioteca-Archivio storico comunale 187
I-Lc 490
Lucca, Biblioteca capitolare Feliniana e Biblioteca Arcivescovile 490
I-Lc 601 ("Antiphoner of Lucca")
Lucca, Biblioteca capitolare Feliniana e Biblioteca Arcivescovile 601
I-Ma B 48 sup.
Milan, Biblioteca Ambrosiana, B 48 supra
I-MACa 488
Macerata, Archivio di Stato, Notarile di Recanati 488

I-MC 542
Montecassino, Biblioteca dell'Abbazia 542
I-MC Q.318
Montecassino, Biblioteca dell'Abbazia, Q. 318
I-MEs O.4.16
Messina, Biblioteca Painiana (del Seminario Arcivescovile San Pio X), O. 4.16
I-MOe 5
Modena, Biblioteca Estense e Universitaria 5
I-MOe α.M.5.24 [ModA]
Modena, Biblioteca Estense e Universitaria, α.M. 5.24
I-MZ c. 13/76
Monza, Biblioteca capitolare e Tesoro della Basilica di S. Giovanni Battista, c. 13/ 76
I-MZ cod. CIX ("Monza Cantatorium")
Monza, Biblioteca capitolare e Tesoro della Basilica di S. Giovanni Battista, cod. CIX
I-PAas busta 75 n.26
Parma, Archivio di Stato, Raccolta Manoscritti, busta 75 n. 26
I-Pas busta 14
Padua, Archivio di Stato, Fondo Corporazioni soppresse, S. Giustina, busta 14
I-Pas busta 553 [PadC]
Padua, Archivio di Stato, Fondo Corporazioni soppresse, S. Giustina, busta 553
I-PCd 65
Piacenza, Biblioteca capitolare 65
I-PEc 3065 ("Mancini Codex")
Perugia, Biblioteca comunale "Augusta" 3065
I-PEc 3409/1
Perugia, Biblioteca comunale "Augusta", 3409/1 [*olim*: III-12–4]
I-PEdu Incunabolo inv. 15755 N.F. ("Cialini fragments")
Perugia, Biblioteca del Dottorato dell'Università degli Studi, Incunabolo inv. 15755 N.F.
I-Pu 658 [PadC]
Padua, Biblioteca Universitaria 658
I-Pu 684 [PadA]
Padua, Biblioteca Universitaria 684
I-Pu 1106 [PadD]
Padua, Biblioteca Universitaria 1106
I-Pu 1115 [PadB]
Padua, Biblioteca Universitaria 1115
I-Pu 1225
Padua, Biblioteca Universitaria 1225
I-Pu 1475 [PadA]
Padua, Biblioteca Universitaria 1475
I-Pu buste 2/1 [PadD]
Padua, Biblioteca Universitaria, buste 2/ 1
I-Pu buste 2/2 [PadD]
Padua, Biblioteca Universitaria, buste 2/ 2
I-Ra 123
Rome, Biblioteca Angelica 123
I-Rasv reg. sup. 93
Vatican, Archivio Segreto Vaticano, registrum supplicationum 93
I-Rasv reg. sup. 105
Vatican, Archivio Segreto Vaticano, registrum supplicationum 105
I-Rasv reg. sup. 109
Vatican, Archivio Segreto Vaticano, registrum supplicationum 109
I-REas App. Misc. framm. 16 ("Mischiati Fragment")
Reggio Emilia, Archivio di stato, Archivio Comune Re, Appendice, Miscellaneo storico-letteraria, Frammenti di codici musicali, no. 16
I-REm C. 408
Reggio Emilia, Biblioteca municipal, C. 408
I-Rss XIV L1
Rome, Curia Generalizia dei Domenicani (S. Sabina), XIV L 1
I-Rvat B.79
Rome, Biblioteca Apostolica-Vaticana, Archivio di S. Pietro, B. 79
I-Rvat Barb. lat. 171
Rome, Biblioteca Apostolica-Vaticana, Barbarini latini 171
I-Rvat F.22
Rome, Biblioteca Apostolica-Vaticana, Archivio di S.Pietro, F. 22
I-Rvat Ottob. 145
Rome, Biblioteca Apostolica-Vaticana, Ottoboni 145
I-Rvat Reg. lat. 71
Rome, Biblioteca Apostolica-Vaticana, Reginensi latini 71
I-Rvat Reg. lat. 222
Rome, Biblioteca Apostolica-Vaticana, Reginensi latini 222
I-Rvat Reg. lat. 318
Rome, Biblioteca Apostolica-Vaticana, Reginensi latini 318
I-Rvat Reg. lat. 586
Rome, Biblioteca Apostolica-Vaticana, Reginensi latini 586
I-Rvat Reg. lat. 1146
Rome, Biblioteca Apostolica-Vaticana, Reginensi latini 1146

I-Rvat Reg. lat. 1462
Rome, Biblioteca Apostolica-Vaticana, Reginensi latini 1462
I-Rvat Reg. lat. 1490
Rome, Biblioteca Apostolica-Vaticana, Reginensi latini 1490
I-Rvat Reg. lat. 1529
Rome, Biblioteca Apostolica-Vaticana, Reginensi latini 1529
I-Rvat Reg. lat. 1709
Rome, Biblioteca Apostolica-Vaticana, Reginensi latini 1709
I-Rvat Reg. lat. 2854
Rome, Biblioteca Apostolica-Vaticana, Reginensi latini 2854
I-Rvat Reg. lat. 5319
Rome, Biblioteca Apostolica-Vaticana, Reginensi latini 5319
I-Rvat Reg. lat. 10673
Rome, Biblioteca Apostolica-Vaticana, Reginensi latini 10673
I-Rvat Rossi 215 ("Rossi Codex")
Rome, Biblioteca Apostolica-Vaticana, Rossi 215
I-Sas Framm. busta 1 insert 11
Siena, Archivio di Stato, Frammenti musicali, busta 1 insert 11 [*olim.:* 207]
I-Sas Ravi 3 (1568–9)
Siena, Archivio di Stato, Gavorrano, Ravi 3 (1568–9)
I-Sc C.V.8
Siena, Biblioteca comunale, C.v. 8
I-Sc H.I.10
Siena, Biblioteca comunale, H.I. 10
I-Sc L.V.36
Siena, Biblioteca comunale, L.v. 36
I-ST 14 [PadC]
Stresa, Biblioteca Rosminiana 14
I-Tn G.V.20
Turin, Biblioteca Nazionale Universitaria, G.V. 20
I-Tn J.II.9
Turin, Biblioteca Nazionale Universitaria, J.II. 9
I-Tr vari 42
Turin, Biblioteca reale, vari 42
I-TRc 1563
Trento, Biblioteca comunale 1563 (housed at the Museo provincial d'arte)
I-TRcap BL [Trent 93] ("Trent Codices")
Trento, Biblioteca capitolare, BL
I-TRmp 1374 [Trent 87] ("Trent Codices")
Trento, Museo Provinciale d'Arte, Castello del Buonconsiglio 1374
I-TRmp 1375 [Trent 88] ("Trent Codices")
Trento, Museo Provinciale d'Arte, Castello del Buonconsiglio 1375
I-TRmp 1376 [Trent 89] ("Trent Codices")
Trento, Museo Provinciale d'Arte, Castello del Buonconsiglio 1376
I-TRmp 1377 [Trent 90] ("Trent Codices")
Trento, Museo Provinciale d'Arte, Castello del Buonconsiglio 1377
I-TRmp 1378 [Trent 91] ("Trent Codices")
Trento, Museo Provinciale d'Arte, Castello del Buonconsiglio 1378
I-TRmp 1379 [Trent 92] ("Trent Codices")
Trento, Museo Provinciale d'Arte, Castello del Buonconsiglio 1379
I-UDa framm. 22 [Cividale A]
Udine, Archivio di Stato, frammenti 22
I-VCd 88
Vercelli, Biblioteca capitolare 88
I-VCd 161
Vercelli, Biblioteca capitolare 161
I-VEcap XC (85)
Verona, Biblioteca Capitolare, XC (85)
I-VEcap CVII (107)
Verona, Biblioteca Capitolare, CVII (107)
I-VO L.III. 39
Volterra, Biblioteca Guarnacci e Archivio storico comunale, L.III. 39
IRL-Duc Mícheál O'Cléirigh Institute for the Study of Irish History and Civilisation, B 29
Killiney, Dún Mhuire, Franciscan Library, B 29 (now in the Mícheál O'Cléirigh Institute for the Study of Irish History and Civilisation, University College, Dublin)

NL-G Inc. 70
Groningen, Universiteitsbibliotheek, Incunabulum 70
PL-Kj Berol. Theol. Lat. Qu. 11
Krakow, Biblioteka Jagiellońska, Berol. Theol. Lat. Qu. 11
PL-Kj mus. 40592
Krakow, Biblioteka Jagiellońska, mus. 40592
PL-Pa 174a
Poznań, Archiwum archidiecezjalne 174a
PL-Wn Lat. F. I. 378 (destroyed)
Warsaw, Biblioteka Narodowa, Lat. F. I. 378 (destroyed)
PL-WRu Ak1955 / KN195 (k. 1 & 2)
Wrocław, Biblioteka Uniwersytecka, Ak1955 / KN195 (k. 1 & 2)
PL-WRu rkp/ IV Q 16
Wrocław, Biblioteka Uniwersytecka, rękopisy/ IV Q 16

SI-Lna Rkp 13
Ljubljana, Nadškofijski arhiv, Rokopisi 13

US-BEm 744 ("Berkeley Manuscript")
Berkeley (CA), University of California, Music Library 744
US-CAh lat. 420
Cambridge (MA), Harvard University, Houghton Library, lat. 420
US-CAh Typ 122
Cambridge (MA), Harvard University, Houghton Library, Typ 122
US-CLwr Spec. Coll. 3 Lge/ML431.D 24
Cleveland (OH), Case Western Reserve University, Kelvin Smith Library, Spec. Coll. 3 Lge/ML431.D 24

US-Cn Case 54.1
Chicago (IL), Newberry Library, Case 54.1
US-Cn Case MLo 96.P 36 ("Lowinsky fragment")
Chicago (IL), Newberry Library, Case MLo 96.P 36
US-HA 002387 ("Dartmouth Fragments")
Hanover (N.H.), Dartmouth College, Baker Library 002387
US-NYpm M 34
New York, Pierpont Morgan Library M 34
US-NYpm M 36
New York, Pierpont Morgan Library M 36
US-NYpm M 978

Abbreviations

CMM	Corpus Mensurabilis Musicae
CS	Scriptorum de Musica medii aevi Nova Series, ed. E. de Coussemaker (Paris: A. Durand, 1864–76)
CSM	Corpus Scriptorum de Musica
Grove Music Online	www.oxfordmusiconline.com/
GS	*Scriptores Ecclesiastici de Musica Sacra Potissimum*, ed. M. Gerbert (Saint-Blaise: n.p., 1784)
MGG	*Die Musik in Geschichte und Gegenwart*, ed. Friedrich Blume, 17 vols. (Kassel: Bärenreiter, 1949–86)
MGG2	*Die Musik in Geschichte und Gegenwart*, 2nd ed., ed. Ludwig Finscher, 29 vols. (Kassel and Stuttgart: Bärenreiter, 1994–2007)
MGH	Monumenta Germaniae Historica
New Grove	*The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie, 20 vols. (London: Macmillan, 1980)
NG2	*The New Grove Dictionary of Music and Musicians*, 2nd ed., ed. Stanley Sadie, 29 vols. (London: Macmillan, 2001)
PC	Alfred Pillet and Henry Carstens, *Bibliographie der Troubadours* (Halle: Max Niemeyer Verlag, 1933)
PL	*Patrologia cursus completus, series latina*, ed. J. P. Migne, 221 vols. (Paris: Garnier, 1844–1904)
PMFC	Polyphonic Music of the Fourteenth Century
RISM	Répertoire internationale des sources musicales
RS	Hans Spanke, *G. Raynauds Bibliographie des altfranzösischen Liedes, erster Teil, ergänzt mit einer Diskographie und einem Register der Lieder nach Anfangsbuchstaben hergestellt*, ed. A. Bahat (Leiden: Brill, 1980)

SR	Oliver Strunk, *Source Readings in Music History*, rev. ed. by Leo Treitler (New York: W. W. Norton, 1998)
vdB	Nico H. J. van den Boogaard, *Rondeaux et refrains. Du XII^e siècle au début du XIV^e* (Paris: Klincksieck, 1969)

Introduction and Context

The need for an account of the music of the Middle Ages is as great as for any title so far published or planned in this distinguished Cambridge series. A tradition of encompassing the music of the West from its origins up to ca. 1400 within the compass of a single work has a large number of distinguished predecessors. Gustave Reese's 1940 *Music in the Middle Ages* remained a classic until the appearance of its successor in the Norton Introduction to Music History series, Richard Hoppin's *Medieval Music* of 1978 (although many still make reference to Reese).[1] Alongside these two monumental enterprises stood a more concise work, Albert Seay's *Music in the Medieval World* in the Prentice Hall history of music series; this was published in 1965 with a second edition in 1975, and completely rewritten by Jeremy Yudkin in 1989.[2] Entirely coincidentally, in the same years as Hoppin's and Yudkin's volumes were respectively published, two freestanding histories of medieval music also appeared: John Caldwell's *Medieval Music* and Andrew Hughes' *Style and Symbol*.[3]

The number of multi-authored histories of medieval music is much smaller: the second volume of the New Oxford History of Music, *Early Medieval Music up to 1300*, was edited by Dom Anselm Hughes and dates from 1954;[4] it was re-edited – with perhaps less success than it deserved – in 1990 by Richard Crocker and David Hiley (although published in 1990, most of the chapters were written substantially earlier).[5] Between the two was one installment of

1 Gustave Reese, *Music in the Middle Ages with an Introduction on the Music of Ancient Times* (London: J. M. Dent, 1941); Richard Hoppin, *Medieval Music*, Norton Introduction to Music History (New York: W. W. Norton; Toronto: R. J. Mcleod, 1978). Hoppin's history was accompanied by an anthology: Hoppin, *Anthology of Medieval Music*, Norton Introduction to Music History (New York: W. W. Norton; Toronto: R. J.Mcleod, 1978).

2 Albert Seay, *Music in the Medieval World*, Prentice Hall History of Music Series (Englewood Cliffs, NJ: Prentice Hall, 1965; rev. 1975); Jeremy Yudkin, *Music in Medieval Europe*, Prentice Hall History of Music (Englewood Cliffs, NJ: Prentice Hall, 1989).

3 John Caldwell, *Medieval Music* (London: Hutchinson, 1978); Andrew Hughes, *Style and Symbol: Medieval Music 800–1453*, Musicological Studies 51 (Ottawa: Institute of Medieval Music, 1989).

4 Humphrey Vaughan [Anselm] Hughes, ed., *Early Medieval Music up to 1300*, New Oxford History of Music 2 (London, New York, and Toronto: Oxford University Press, 1954).

5 Richard Crocker and David Hiley, eds., *The Early Middle Ages to 1300*, New Oxford History of Music 2 (Oxford and New York: Oxford University Press, 1990).

a projected larger series edited by F. W. Sternfeld, *Music from the Middle Ages to the Renaissance* (1973), a volume that many feel remains without peer to this day.[6]

We stress this distinguished tradition in order to place *The Cambridge History of Medieval Music* in its own history. By the time of publication, there will have been no history of medieval music, single- or multi-authored, for over a quarter-century. The urgency for a volume of the scope of *The Cambridge History of Medieval Music* therefore hardly needs restating. Vast changes have taken place in the way in which medieval music is defined and considered in the last quarter-century, and this fact is one very clear motivation for this work. The scope of these volumes is wider than any so far published. This feature is common to the entire series, but is particularly important here where the weight of tradition is so strong.

In order to meet the challenge of tradition, *The Cambridge History of Medieval Music* assembles an international team of scholars and organizes their thoughts according to a number of paradigms. In some cases, chapters address a single repertory and give an up-to-date account of it. Although this is an essential component of the volume, and the chapters dedicated to this thread in the weave are distinguished ones, *The Cambridge History of Medieval Music* seeks both to follow trajectories across the entire period (music and politics, learning and teaching, collecting music) and to focus on flashpoints in the history of medieval music where views have recently changed or are in a state of flux (antecedents, *nova cantica*, questions of rhythm). The balance between the expository and the experimental is central to the interest of the volume.

This structure also explains the absence of some types of chapter, especially those based on geography: with the exception of chapters on the *trecento* in France and Italy, there are no contributions that focus on, say, Scandinavia, German-speaking states, the Iberian peninsula, and so on.[7] The contributors' brief is to ensure – especially in the expository chapters – that the reception of the repertory with which the chapter deals forms part of the chapter itself: chapters on the fourteenth-century motet, then, will include both repertories that might be thought central and those ranging from Cyprus to the

6 *Music from the Middle Ages to the Renaissance*, ed. Frederick W. Sternfeld, A History of Western Music (London: Weidenfeld & Nicolson, 1973).

7 Although *The Cambridge Companion to Medieval Music* (Cambridge University Press, 2011) is a multi-authored introduction to the subject whose size and scope place it in a different class of study from the current volumes, its chapters on England (Peter Lefferts), Italy (Marco Gozzi), the Iberian Peninsula (Nicolas Bell) and regions to the East of the Rhine (Robert Curry) provide an introduction to the topography of medieval music. Christopher Page's "The Geography of Medieval Music" outlines a potential methodology for working with such questions (ibid., 320–34).

Netherlands, from Bohemia to Portugal. This ensures that the volume retains a sense of coherence by formally tying in questions of chronology and topography within single chapters rather than risking separating out the two concerns with the possible consequence of omission or duplication. We hope that "peripheral" areas (one of the most important sources of early polyphony is from St. Andrews) are given due and serious consideration, but not in a succession of geographical chapters.

The volume covers at least five times the span of time treated by the analogous histories of seventeenth- to eighteenth-century music, and is consequently of ample proportions.

Defining the Middle Ages

There is of course no such thing as the Middle Ages, at least with respect to the history of music. The Middle Ages – if they are plural at all – get their name as the temporal space between the decline of classical Antiquity and its rediscovery in the Renaissance. Such a definition might once have been useful in literature and the fine arts, but it makes little sense in music. The history of Western music begins not with the music of Greece and Rome (about which we know far too little) but with the music of the Latin Christian church. The body of music known as Gregorian chant, and other similar repertories, are the first music that survives to us in Western culture, and are the foundation on which much later music is built, and the basis for describing music in its time and forever after.

We continue to use the term "medieval" for this music, even though it is the beginning of it all; there is some convenience in this, because historians in other fields continue to find the term useful; what musicians are doing in the twelfth century, however non-medieval it appears to us, is likely to be considered medieval by colleagues in other fields.

The chronological period in question is far from being a single thing. If we consider the Middle Ages as extending from the fall of the Roman empire, perhaps in 476 when Odoacer deposed Romulus Augustus, into the fifteenth century, we have defined a period of about a millennium, far longer than all subsequent style-periods ("Renaissance," "Baroque," "Classical," "Romantic," etc.) put together; and yet we tend to think of it as one thing.

There are three challenges in the study of medieval music that should be borne in mind. One is the fallacy of historical parallax: things that are nearer to us appear to be larger, so that the history of the twentieth century looms enormous while the distant medieval period appears comparatively

insignificant. Secondly, the progressive loss of historical materials over time means that more information survives from recent periods than from more distant ones, leading to the temptation to gauge importance by sheer volume. Thirdly, we tend to study what survives, not what does not – or what was never written down because it was extemporized or memorized. (The authors and editors are aware of this last, and the practices of non-written musical performance are considered in Chapters 14 and 21.)

There is no clear beginning and no clear end to medieval music. In this volume we acknowledge the heritage of Antiquity, and we note the continuation of musical ideas and styles beyond our period. The authors of relevant chapters have needed no explicit encouragement from us to make the volume's readers fully aware that nobody at the end of the fourteenth century felt that all musical styles now came to an end.

Defining Medieval Music: Texts

If defining the Middle Ages, their culture and their institutions, is clearly a challenge, when we turn to "works" of music, definitions are even more of a thorny problem. It could be said that everything we know about the Middle Ages comes from two things: notations and words on parchment that convey all the musical and theoretical data that musicians who occupy themselves with the period have at their disposal. There are no senses of hearing, touch or smell that can be evoked as the past is reimagined. The second thing is the tradition going back at least to the seventeenth century of attempts to turn these images into either legible texts about music or musical notation legible to the modern eye and thence into sound. And our modern editions, whether of theory or musical "works," when they looked similar to modern editions of Wittgenstein or Webern, represented treacherous ground as the twentieth century attempted to reconcile a need for "texts" of this music with the absence of so much that was needed to re-create them.

An example can illustrate many of the problems as we seek to understand medieval music in a modern world where the "work," the "composition," the "piece" is relatively clearly defined. Even talking about a piece as well known as Machaut's virelai "Douce dame jolie" raises problems. It survives in several medieval images, which all by and large resemble each other, and of which Figure i.1 is an example.[8]

Depending on age, one's point of entry to the work might be Margaret Philpot's ethereal solo performance on what – for many – was an

8 Paris, Bibliothèque nationale de France (*F-Pn*), fonds français 9221, fol. 159r.

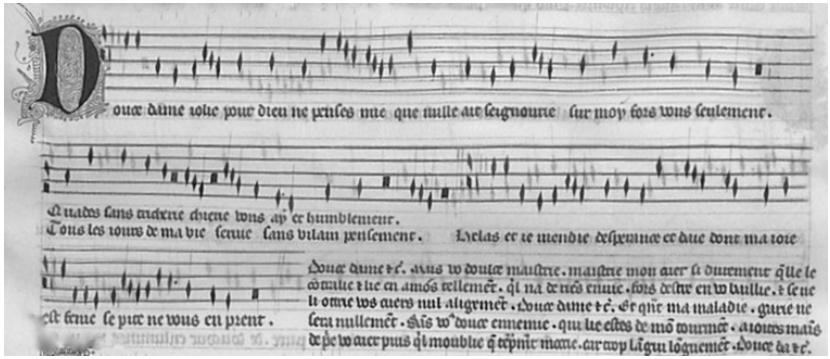


Figure i.1 Machaut's virelai "Douce dame jolie," in Paris, Bibliothèque nationale de France, fonds français (*F-Pn* fr.) 9221, fol. 159r

epoch-making recording by the ensemble Gothic Voices entitled *The Mirror of Narcissus* and released in 1983.[9] Philpot's cool, detached, unaccompanied and above all simple performance was surely a direct response to the previous recording of the piece on David Munrow's *The Art of Courtly Love*, which dates from 1973.[10] It was almost as if the clean lines of Leo Schrade's edition of the piece, published in 1956 as one of the earliest volumes in the series "Polyphonic Music of the Fourteenth Century," was coming directly off the page, with the generous white space around the single melodic line prompting the white sound of Philpot's performance and the absence of any other singers or instruments (Figure i.2).[11]

Only a decade older, Munrow's recording seems aeons away from Gothic Voices'. In *The Art of Courtly Love*, the performance is led by Martin Hill, who sings the verses, accompanied by James Bowman, Geoffrey Shaw and (perhaps) Charles Brett in the refrain.[12] But this description barely does justice either to the high-energy accompaniment from citole and tabor in the verses or to the added rebecs, cornetts and sopranino recorder – heavily ornamented – in the refrains (Munrow himself contributing to the top of

9 Gothic Voices, dir. Christopher Page, *Guillaume de Machaut: The Mirror of Narcissus* (Hyperion, CDA66087, 1983).
10 The Early Music Consort of London, dir. David Munrow, *The Art of Courtly Love* (HMV, SLS 863, 1973).
11 Leo Schrade, ed., *The Works of Guillaume de Machaut: Second Part – Motets nos. 17 to 24 – Mass – double hoquet – ballades – rondeaux – virelais*, PMFC 3 (Monaco: Oiseau-Lyre, 1956), 168.
12 It is possible that Munrow's 1973 recording was influenced by an earlier interpretation: New York Pro Musica, dir. John Reeves White, *Ah Sweet Lady (The Romance of Medieval France)* (Decca, DL 79431, 1967). See Daniel Leech-Wilkinson, *The Modern Invention of Medieval Music: Scholarship, Ideology, Performance* (Cambridge University Press, 2002), 279.

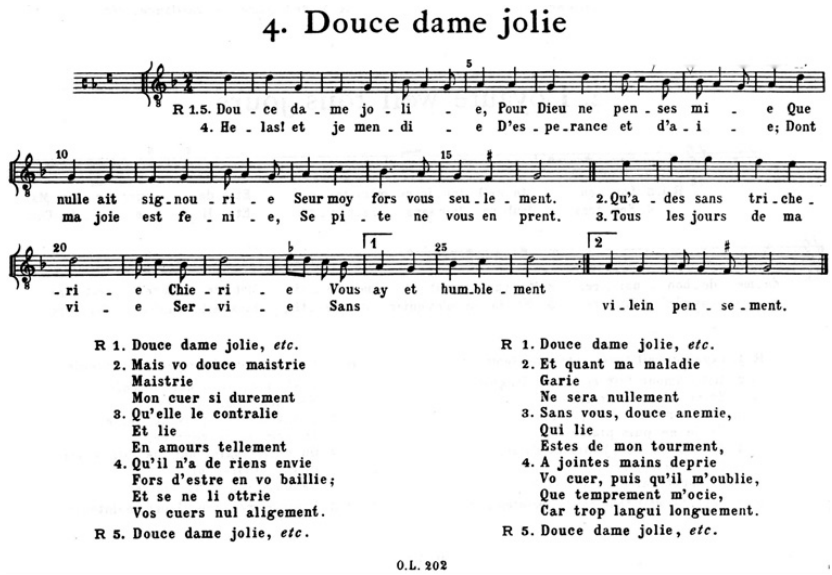


Figure i.2 Leo Schrade's edition of "Douce dame jolie" from PMFC 3 (Monaco: Éditions de l'Oiseau-Lyre, 1956), 168

the texture on the sopranino recorder). This was one of the key moments in the Early Music revival – as it was then called – in the United Kingdom, and a recording that was welcomed the world over. Here, Schrade's edition served only as a point of departure, barely a blueprint for the performance engendered by the Early Music Consort of London under Munrow's direction.

Munrow's aesthetic debt to Johan Huizinga's already venerable *The Waning of the Middle Ages* was clear not only from his performances but explicitly from the extensive liner notes that accompanied the lavish boxed set in which his recording of "Douce dame jolie" was found.[13] And when Christopher Page, the director of Gothic Voices, was asked to comment on BBC Radio in 1992, he responded with some caution but with direct reference to Huizinga: "I think that many people expect that any sound picture of the Middle Ages is going to be rumbustious and good fun. It's that sort of medieval banquet, rosy-cheeked wench, sucking-pig view of the medieval past and well, that's something I think that people like to have

13 Johan Huizinga, *The Waning of the Middle Ages: A Study of the Forms of Life, Thought and Art in France and the Netherlands in the XIVth and XVth Centuries* (London: Edward Arnold, 1924).

confirmed in performances."[14] Intellectual and musical debts are very much in evidence here.

Only a decade apart, and based on the same reading of the medieval past, these two recordings bear little resemblance one to the other, and others have probably shared our experience of playing both recordings to novices who have failed to recognize that they are one and the same "work." The example may be complicated slightly by an early example of moving from image to sound, from Roland Hayes. You could be forgiven for thinking that this was one of Duparc's simpler *mélodies*, with its simple piano accompaniment and g modality with very clearly articulated dominants and even a *tierce de picardie* at the end.[15] It's an elegant performance of a remarkable piece of music. The image that Hayes, and his pianist Reginald Boardman, take as their point of departure manages to turn Machaut's virelai into something very different. And unlike Page, and perhaps Munrow, who at least had a sense of what the original image of "Douce dame jolie" might have been, Hayes and Boardman never looked further than the edition from which they sang.

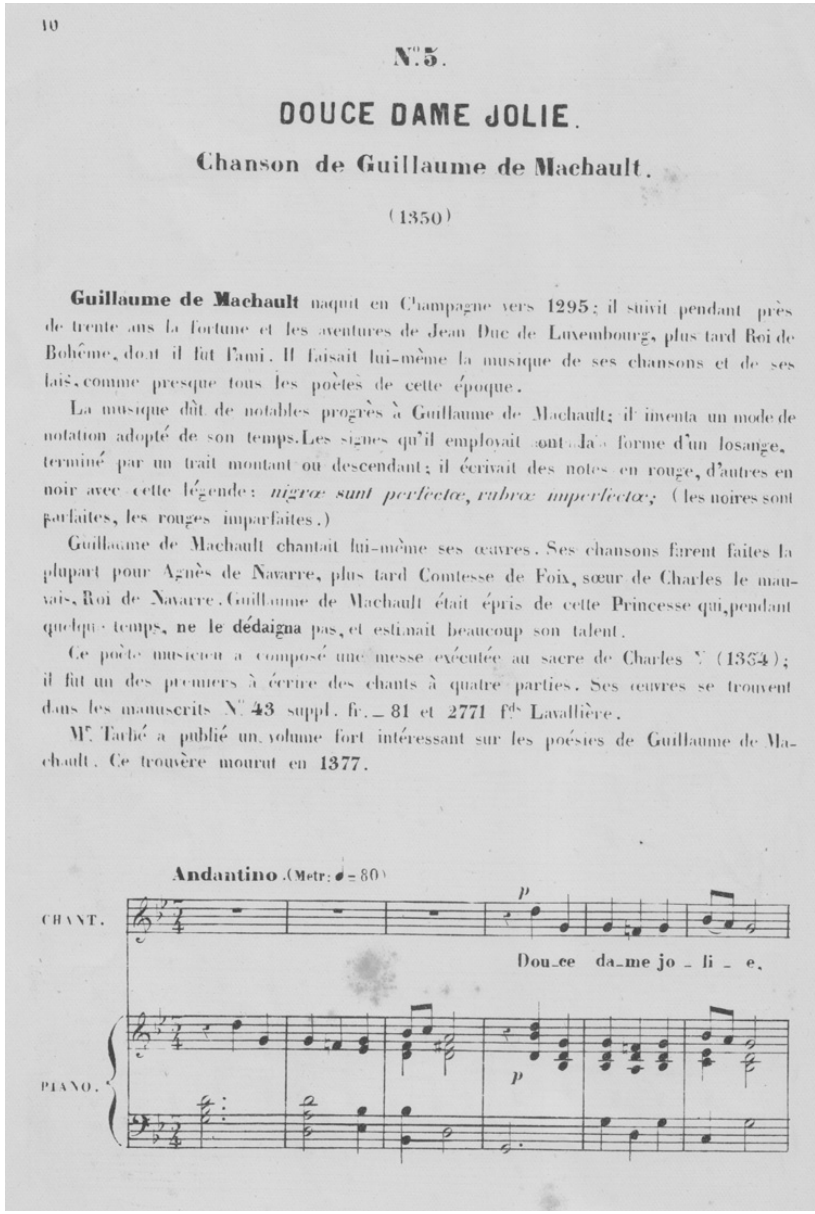
Remarkably, that edition, for a recording made just a few years before Schrade's version, was based on one a hundred years old. Published in the mid-1850s, *Echos du temps passé, transcrits avec Accompagnem[en]t de Piano* was edited by Jean-Baptiste Weckerlin, who later in the century would become the librarian of the Paris Conservatoire. When he published *Échos du temps passé*, he was the choral conductor of the Société Sainte Cécile in Paris.

As the facsimile of his edition of "Douce dame jolie" paradoxically shows, Weckerlin was not only prepared to compose an accompaniment to the song that is likely to provoke ridicule in certain Early Music circles today, but he was also committed to prefacing his edition with scholarly notes that went as far as citing primary sources and secondary bibliography (see Figure i.3).[16] But what these three examples show is two things – the radically different ways in which the same original images can find their way into a "modern" (mid-nineteenth- or mid-twentieth-century) edition, and how even the same edition can generate massively different results in the space of a decade.

14 London, British Library, British Library Sound Archive H777/01, cited in Edward Breen, "The Performance Practice of David Munrow and the Early Music Consort of London: Medieval Music in the 1960s and 1970s" (Ph.D. dissertation, King's College London, 2014), 130.

15 The recording comes from the very end of Hayes' career: Roland Hayes and Reginald Boardman, *The Art of Roland Hayes: Six Centuries of Song* (Vanguard, VRS 448-VRS 449, 1954).

16 ÉCHOS / DU / TEMPS PASSÉ, / transcrits / *avec Accompagnem.t de Piano* / PAR / J. B. Weckerlin. / *PARIS*, G. FLAXLAND, *Editeur*, / *4 Place de la Madeleine.*



10

N.° 5.

DOUCE DAME JOLIE.

Chanson de Guillaume de Machault.

(1350)

Guillaume de Machault naquit en Champagne vers 1295; il suivit pendant près de trente ans la fortune et les aventures de Jean Duc de Luxembourg, plus tard Roi de Bohême, dont il fut l'ami. Il faisait lui-même la musique de ses chansons et de ses lais, comme presque tous les poètes de cette époque.

La musique dût de notables progrès à Guillaume de Machault; il inventa un mode de notation adopté de son temps. Les signes qu'il employait ont la forme d'un losange, terminé par un trait montant ou descendant; il écrivait des notes en rouge, d'autres en noir avec cette légende: *nigræ sunt perfectæ, rubræ imperfectæ;* (les noires sont parfaites, les rouges imparfaites.)

Guillaume de Machault chantait lui-même ses œuvres. Ses chansons furent faites la plupart pour Agnès de Navarre, plus tard Comtesse de Foix, sœur de Charles le mauvais, Roi de Navarre. Guillaume de Machault était épris de cette Princesse qui, pendant quelque temps, ne le dédaigna pas, et estimait beaucoup son talent.

Ce poète musicien a composé une messe exécutée au sacre de Charles V (1364); il fut un des premiers à écrire des chants à quatre parties. Ses œuvres se trouvent dans les manuscrits N.° 43 suppl. fr. — 81 et 2771 f.ds Lavallière.

M.r Tarbé a publié un volume fort intéressant sur les poésies de Guillaume de Machault. Ce trouvère mourut en 1377.

Andantino. (Metr: ♩ = 80)

CHANT. *p* Dou-ce da-me jo - li - e,

PIANO. *p*

Figure i.3 Jean-Baptiste Weckerlin's edition of "Douce dame jolie" from *Echos du temps passé, transcrits avec Accompagnem[en]t de Piano* (Paris: G. Flaxland). Collection of M. Everist

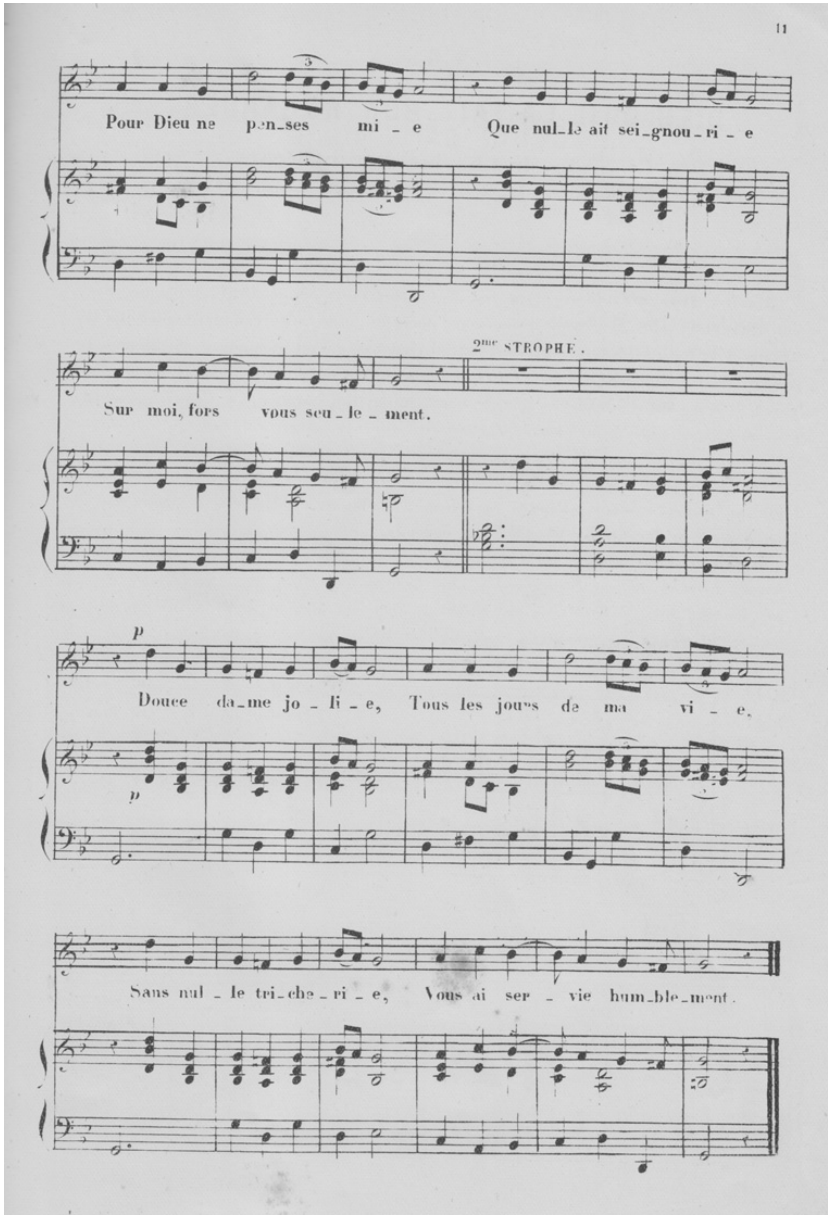


Figure i.3 (cont.)

Defining Medieval Music: Intertexts

In the previous section the word "work" has been carefully enclosed in quotation marks to draw attention to the distance between medieval and modern understandings of the concept. This is not to argue against, for example, the claims for a nineteenth-century system which supports both a work-based culture – for a string quartet by Mendelssohn, for example – and an event-based one – for French and Italian opera, say. But it is however to recognise the all-pervasive presence of an intertextuality between works and genres in all forms of music before 1400 and of course beyond.

The idea of the intertext immediately brings to mind claims for the formulaic construction of large parts of Latin liturgical chant and its derivatives, and the perhaps less contentious presence of contrafacta – replacing the verbal text of a composition with another, frequently in a different language – in large tracts of Latin and vernacular monophony and polyphony. The poems of the trouvères are frequently found with different melodies to the same text, and equally frequently with readings of sufficient variance that it is difficult even to arbitrate over where melodic difference ends and melodic variance begins. Less challenging perhaps is the presence in all polyphonic genres of the possibility of their existence in different numbers of parts: whether it is a clausula, a fourteenth-century polyphonic song, or a motet from around 1300, the idea that a "work" might exist in a different number of parts is a commonplace, and answering the obvious question – what is the original version? – is not only difficult but very often not the question to ask in the first place. The *ne plus ultra* of the intertextual "work" where poetic texts and musical voices interchange kaleidoscopically is the thirteenth-century motet.

So if we expect to find evidence of intertextual activity within a single genre, coupled to an expectation that a thorough investigation of that repertory would take account of such activity, we also have to recognise that intertexts transcend genres and reach across large swaths of the repertory of medieval monophony and polyphony. The use of the *cantus prius factus* in polyphony, or the retexting of melismas in the trope and sequence repertory, is so well known that it is easy to overlook. But it is fundamental to organum and clausula of the fifty years either side of 1200, and to the motet of all periods. And the *cantus prius factus* is not restricted to sacred Latin monophony: by the fourteenth century, vernacular songs are beginning to be found as the tenors in motets – still not as common as chant-based motets, but a significant repertory nevertheless.

Even plainsong is not immune to the temptation of intertextuality. The degree to which liturgical texts are based on biblical quotation and allusion brings even that genre into a larger network of intertextual working that encompasses – like contrafacta – both poetry and music.[17] This sort of exclusively poetic intertext spills over into the conductus repertory where the poetry is suffused with allusion and citation from the Bible also, but together with quotations from patristics and the classics.[18] But perhaps the most wide-ranging cross-genre intertextuality is found in the *refrain*; here fragments of poetry of between one and four lines, frequently together with their music, migrate among vernacular *chanson*, prose *romance*, rondeau and motet, in ways that are baffling in many respects but revelatory of both aesthetic and compositional practice in others.[19]

Analysis and Performance

Such considerations open up challenges and opportunities for the analysis and performance of medieval music. While the flexible nature of "works" – *de facto* the objects of analysis – renders many conventional approaches to analysis difficult to apply, it does open up the possibility of a different model of analysis, one that focuses more on the multiplicity of the object of inquiry than on the stability of its text. The thirteenth-century motet is a genre that has been the subject of much analysis that purports to uncover "listening" or "meaning," but it is striking that the methods used have stopped short of controlling versions of whatever single work is the subject of the analysis.[20]

17 The biblical sources of chant texts can be consulted in *Carmina scripturarum*, ed. Carolus Marbach (Strasbourg, 1907). The relationships among chant texts and related tropes, sequences, etc., are considered in Richard Crocker's classic article "The Troping Hypothesis," *The Musical Quarterly* 52 (1966), 183–202. See also the chapters by Andreas Haug and Lori Kruckenberg in this history. Texts of tropes are edited in the series *Corpus Troporum* (Stockholm, University of Stockholm, 1975–). A fascinating study on the selection and alteration of biblical texts to form chant texts, in this case for the Old-Spanish liturgy, is Rebecca Maloy's recent "Old Hispanic Chant and the Early History of Plainsong," *Journal of the American Musicological Society* 67 (2014), 1–76.

18 See, for example, the notes to the text editions in Gordon A. Anderson, ed., *Notre-Dame and Related Conductus: Opera omnia*, 11 vols., [Institute of Mediaeval Music] Collected Works 10 (Henryville, Ottawa, and Binningen: Institute of Mediaeval Music, 1979–) [all but vols. 7 and 11 have appeared].

19 The standard text for the *refrain*, Nico H. J. van den Boogaard, *Rondeaux et refrains du XII^e siècle au début du XIV^e: collationnement, introduction, et notes*, Bibliothèque française et romane, D:3 (Paris: Éditions Klincksieck, 1969), has now been supplemented, updated and digitised: *REFRAIN Music, Poetry Citation: The Refrain in the Middle Ages / Musique, poésie, citation: le* refrain *au moyen âge*, 2015, www.refrain.ac.uk/.

20 Ardis Butterfield, "The Language of Medieval Music: Two Thirteenth-Century Motets," *Plainsong and Medieval Music* 2 (1993) 1–16; Suzannah Clark, "'S'en dirai chançonete': Hearing Text and Music in a Medieval Motet," *Plainsong and Medieval Music* 16 (2007), 31–59; Anna Grau, "Hearing Voices: Heteroglossia, Homoglossia, and the Old French Motet," *Proceedings of Conference: The Gothic Revolution in Music, 1100–1300, Musica Disciplina* 58 (2013) 73–100; David Rothenberg, "The Marian Symbolism of Spring, ca. 1200–ca. 1500: Two Case Studies," *Journal of the American Musicological Society* 59 (2006), 319–98; Rothenberg, *The Flower of Paradise: Marian Devotion and Secular Song in Medieval and Renaissance Music* (New York: Oxford University Press, 2011), 24–91; Gerald Hoekstra, "The French Motet as Trope: Multiple Levels of Meaning in *Quant florist la violete/El mois de mai/Et gaudebit*," *Speculum* 73 (1998) 32–57;

This focus on the complexity of a work, coupled with the lack of interest in the historical trajectories in which the work is embedded, is redolent of the focus on Austro-German nineteenth-century instrumental music in so much analysis of the twentieth century.

A further opportunity for analysis lies in the relationship between notation (closely tied to the image) and interpretation. Reflexive methods where notation and analysis mutually inform each other, much in the manner of the analysis of melodic variance in the trouvère song popular in the 1960s and 1970s, still has value not only for the interpretation of individual works, but of repertories and historical drifts.[21] Despite the considerable amount of work dedicated to the passage of the *refrain* from one work or genre to another, the interpretative possibilities here go far beyond the types of study current in print.[22]

Another approach to the analysis of medieval music consists of a set of claims about meaning and sound. Claims to be able to reconstruct a medieval sound-world out of the evidence that posterity has bequeathed us seem strange when they are divorced from the imperatives of re-creating this music in the twenty-first century. All the music discussed in this volume has been the subject of some sort of performance project or another, some successful, some less so. When Gothic Voices released *The Mirror of Narcissus* in 1983, with a disc presenting fourteenth-century monophonic songs with no instrumental participation of any sort, they issued a challenge to those ensembles who had been performing polyphony with minimal vocal involvement and monophonic repertories with complex instrumental accompaniments; in both cases, these recent performing styles – fundamental to the Early Music revival of the 1960s and 1970s – were based on little evidence from the Middle Ages apart from a choice of images: the pictures of instruments in medieval art (manuscript decoration, sculpture and stained glass). And needless to say, a careful reading of a range of medieval authors lay behind the performance decisions that underpinned *The Mirror of Narcissus*.

Emma Dillon, *The Sense of Sound: Musical Meaning in France (1260–1330)*, The New Cultural History of Music (New York: Oxford University Press, 2012) 287–296.

21 Hendrik Van der Werf, "The Trouvère Chansons as Creations of a Notationless Musical Culture," *Current Musicology* 1 (1965), 61–68; Van der Werf, *The Chansons of the Troubadours and Trouvères: A Study of the Melodies and Their Relation to the Poems* (Utrecht: Oosthoek, 1972).

22 Ardis Butterfield, "Repetition and Variation in the Thirteenth-Century Refrain," *Journal of the Royal Musical Association* 116 (1991), 1–23; Jennifer Saltzstein, *The Refrain and the Rise of the Vernacular in Medieval French Music and Poetry* (Woodbridge and Rochester, NY: Brewer, 2013); Anne Ibos-Augé, "La fonction des insertions lyriques dans des œuvres narratives et didactiques aux XIII^{ème} et XIV^{ème} siècles," 4 vols. (Ph.D. dissertation, Université Michel de Montaigne-Bordeaux III, 2000); Ibos-Augé, "Les refrains de la *Court de paradis*: Variance et cohérence des insertions lyriques dans un poème narratif du XIII^{e} siècle," *Revue de musicologie* 93 (2007), 229–267.

Despite Page's and Gothic Voices' efforts, and the number of ensembles that have emulated them, there are still plenty of recordings that furnish paraliturgical monody with instrumental preludes, postludes and accompaniments, or that perform any voice-parts that fail to carry a text on instruments of all types. So in the 1960s and 1970s, claims to authenticity could be made to underwrite performances of medieval music that made full use of an *instrumentarium* that included objects from the twelfth to the seventeenth centuries – frequently because the ensembles were founded and largely staffed by instrumentalists. These claims now have to compete with those that take the view that vocal performance was the norm for pretty well all genres of polyphony and monophony; the resulting range of performances must leave any but the best informed in a position where they must wonder what they are in fact hearing. And of course, that understates the position, since advances – if that is what they are – in our understanding of notation and rhythm since the 1960s have resulted in editions that are as different – almost – as those of "Douce dame jolie" by Weckerlin and Schrade.

Organizing Medieval Music

We are pleased and honored that our contributors have agreed with us that this history is a project well worth undertaking, and doubly pleased that the breadth, the comprehensiveness, and the authority of our plan and of our contributors have met with more than routine approval by reviewers and by the Press. We have not attempted, in such a collaborative collection, to impose a "vision" on our contributors. (We would have no contributors if we did.) We have hoped to give some view of what history might mean by the very organization of the volume; the choice of topics, the avoidance of others (where genres become characters, for example, or styles triumph over adversity, or the modern finally breaks through), and a choice of authors whose broad view of history we accept, or admire, or dispute.

Many of the individual chapters are likely to present a view of history consistent with the view that music is of its culture. We believe that our choice of authors produces a textured understanding in which a variety of points of view can be held at once. We do not seek to impose a kind of uniformity by asking authors to reflect on thematic questions. We think that the themes are present in the structure and in the material.

This is not a single-author volume, and it makes no claim to represent a single overarching view of history, or of music. What it does propose is a stained-glass window whose individual panes, made by superb craftsmen,

are arranged in such a way as to transmit light of many colors arranged in patterns that are presented to, but not imposed upon, our readers.

There are, we believe, practical advantages in our organizational system. Let one example serve for many: chapters on secular song are deliberately spaced apart. The earlier chapters are placed where they are so as to keep the reader aware that not all monophonic music was liturgical; and the later chapters, on Latin song, are placed so as to situate monophonic song (here Latin song) in a wider social context, and in the permeable context in which polyphony and monophony coexist. To place all the chapters on monophonic song together runs the risk, we think, of Balkanizing the subject (a solution too often used); this spacing reminds the reader that there are multiple simultaneous strands that can be followed through the period.

We have specifically targeted this book as being about music. Discussion of music in the absence of music is a discussion of something else. Adequate musical examples allow authors to make their points, and readers to understand stylistic, notational, and other matters. The history of music must of course be associated with thinking about music, but excellent books on music theory already exist, and while we regret that the two cannot be more closely entwined, we feel that appropriate coverage of music theory would double the size of the project.

The essays collected here introduce readers to an enormous swath of musical history and style, and present the highest level of recent musical scholarship. We trust that taken together they will increase access to this rich body of music, and provide scholars and students with an authoritative guide to the best of current thinking about the music of the Middle Ages.

· 1 ·

Musical Legacies from the Ancient World

PETER JEFFERY

Like all great civilizations, medieval western Europe was built upon what came before. One can see this, for example, in many of the medieval church buildings that still stand today, like the cathedrals of Chartres, Cologne, Venice, or Compostela, St. Mary Major in Rome, or Westminster Abbey. Each of these structures exhibits a diversity of architectural styles, because it was built and rebuilt over many centuries, with every section reflecting its own historical period. Walking around the building as it exists today, one can see artworks, monuments, tombs, banners, and other items that date from every time period in the building's history. Some of the columns, stones, or other materials may be spolia – pieces taken from older dismantled buildings and put to new uses. The crypt, below ground, may include portions of an older building on the same site, along with the most important tombs: the bones of the patron saint, and the graves of kings and bishops who wanted to be buried near him or her. Safely locked in the church treasury, one will find the most valuable items: relics of the great saints and heroes of biblical times, textiles and vessels of gold and silver that may have come from as far away as Constantinople or the Holy Land, precious gifts from important people who died centuries ago. All of these things are still being used, sometimes in ways the original makers or owners could not have foreseen.

Of course, every culture is formed, in part, by repurposing some of the concepts, texts, technologies, and practices inherited from earlier times. But medieval people were particularly respectful of what survived from the world of Antiquity, even while they sought ways to innovate and adjust to new situations and challenges. The tension between honoring the past and engaging the present can be seen in the writings of the twelfth-century philosopher John of Salisbury, who praised his teacher's deep knowledge and love of the ancient Greek and Roman philosophers. "Bernard of Chartres used to compare us to dwarves perched on the shoulders of giants. He pointed out that we see more and farther than our predecessors, not

because we have keener vision or greater height, but because we are lifted up and borne aloft on their gigantic stature."[1] Yet John also wrote that, in his own works, "I have not been ashamed to cite moderns, whose opinions, in many instances, I unhesitatingly prefer over those of the ancients. I trust that posterity will honor our contemporaries, for I have profound admiration for the extraordinary talents, diligent studies, marvelous memories, fertile minds, remarkable eloquence, and linguistic proficiency of many of those of our own day."[2]

In a similar way, the musicians of the Middle Ages created new music and new kinds of music that had never existed before, yet they were very aware of being indebted to more ancient precedents. These precedents were survivals of three of the cultures of late Antiquity: (1) ancient Greek and Roman philosophy, which included some highly developed music theory, (2) the literature and poetry of ancient Israel, preserved in the Christian Bible, and (3) the transformative synthesis of the early Church.

Ancient Greece and Rome

Greek Learning

Poetry, Song, and Dance

Greek poetry was not merely for reading – it was performed, usually with song and often with dance. Thus Greek culture did not clearly distinguish music, dance, and poetry as separate arts. Musicians could create vigorously affecting songs when inspired by the gods, in a psychologically agitated state known as *enthousiasmos* ("possession by a god"), the origin of our word "enthusiasm." Classical mythology recognized the emotional or rhetorical power of such music in the story of Orpheus, whose songs could charm animals, trees, and stones – even the gods of the Underworld, the abode of the dead. However, divine frenzies could also be destructive, as dramatized in Euripides' play *The Bacchantes* (fifth century BCE) in which Pentheus, the young king of Thebes, infiltrates the orgiastic cult of the wine-god Bacchus by disguising himself as a maenad (a dancing female devotee) – only to be torn apart by his own cult-crazed mother when she mistakes him for a lion.

Yet the learning of sung poetry was central to ancient Greek education. Poems encoded much cultural information; the epic poetry of Homer in particular was widely regarded as a storehouse of knowledge, deserving a

1 John of Salisbury, *Metalogicon* 3.4, translated in Daniel D. McGarry, *The Metalogicon of John of Salisbury: A Twelfth-Century Defense of the Verbal and Logical Arts of the Trivium* (Berkeley and Los Angeles: University of California Press, 1955), 167.
2 *Metalogicon*, Prologue, trans. in McGarry, *Metalogicon*, 6.

central role in the educational process.[3] This type of education was associated with the figures of Apollo (god of the sun, of medical knowledge, and of the fine arts) and the nine Muses, the daughters of Memory (Mnēmosynē). Each Muse presided over one of the arts, covering four types of poetry (epic, elegiac, erotic, hymnic), two types of drama (comedy and tragedy), dance, history (often transmitted through poems and songs), and astronomy, where the constellations represented the same mythological gods and heroes that populated Greek poetry, and the movements of stars and planets were governed by the same numeric ratios as musical harmony. Thus, learning Greek culture through the arts of the Muses was a "Muse -ical" activity, giving rise to our word "music."[4]

Philosophy

However, Plato (ca. 428–347 BCE) strongly objected to an educational culture based on poetry, since he thought true knowledge could be reached only by philosophy. Since so much of ancient Greek poetry was about gods and heroes misbehaving, causing misfortune, acting emotionally and irrationally, most poetry was not suitable for training the young.[5] "Philosophy is the supreme music," Socrates says in Plato's *Phaedo* (61a), shortly before drinking the hemlock that ends his life. By that he means that philosophy is the highest form of learning, superior to the arts of the Muses, although here Socrates is musing on the strange fact that he had responded to his death sentence by starting to compose poetry. Thus Plato and other philosophers were more interested in finding scientific ways to investigate the art of sound than in poetry, and they did this by pursuing two schools of thought: the study of acoustics, associated with Pythagoras (ca. 570–ca. 490 BCE), and the study of music's relationship to human behavior, pioneered by Damon of Athens (fifth century BCE).

Pythagorean Acoustics No writings survive from Pythagoras himself. But according to his followers, the Pythagoreans, music was a branch of

3 Hence it is called "The Homeric Encyclopedia" in Eric A. Havelock, *Preface to Plato* (Cambridge, MA: Belknap Press, 1963, 1982), 61ff. See also Gregory Nagy, "Early Greek Views of Poets and Poetry," in *The Cambridge History of Literary Criticism*, vol. I: *Classical Criticism*, ed. George A. Kennedy (Cambridge University Press, 1989), 1–77.

4 *Music and the Muses: The Culture of "Mousikē" in the Classical Athenian City*, ed. Penelope Murray and Peter Wilson (Oxford University Press, 2004). Claude Calame, *The Craft of Poetic Speech in Ancient Greece*, trans. Janice Orion (Ithaca, NY: Cornell University Press, 1995).

5 Andrew Barker, *Greek Musical Writings*, vol. I: *The Musician and His Art*, Cambridge Readings in the Literature of Music (Cambridge University Press, 1984), 124–27; G. R. F. Ferrari, "Plato and Poetry," in *The Cambridge History of Literary Criticism*, I: 92–148. Werner Jaeger, *Paideia: The Ideals of Greek Culture*, vol. II: *In Search of the Divine Centre*, trans. Gilbert Highet (Oxford University Press, 1943, 1971), 211–30.

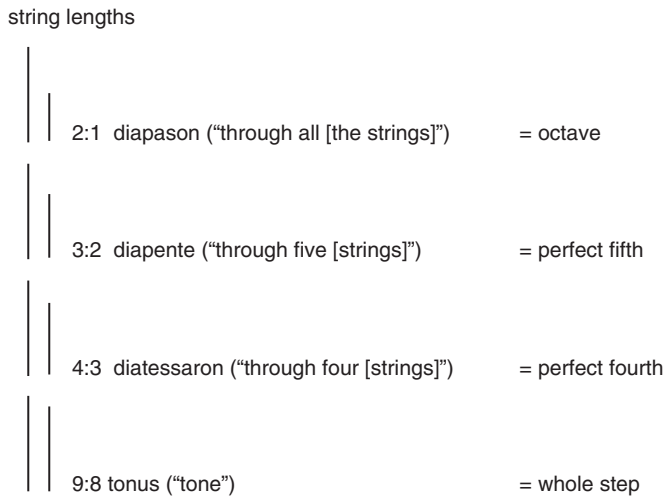


Figure 1.1 Pythagorean ratios for the most important intervals, with their Latinized Greek names, following Boethius, *De institutione musica* 1.16

mathematics that dealt with the investigation of mathematical ratios. Pythagoras was said to have discovered that consonant musical intervals could be calculated using the type of ratio that was called "superparticular" – that is, the numerator was higher than the denominator by one (i.e., [n+1]/n in modern algebraic terms). In other words, if one string is twice as long as another string, the ratio between them is 2:1 ([1+1]/1). Plucking the shorter string will produce a pitch one octave higher than the pitch produced by plucking the longer string. We can demonstrate this principle today by placing a finger exactly in the middle of a violin or guitar string; it sounds an octave higher than the open string.

However, if one string is only 1½ times longer than the other string, one could multiply by 2 to produce a ratio of 3:2 ([2+1]/2), called *sesquialtera*; the two strings will produce pitches that are a perfect fifth apart. If the ratio is 4:3 ([3+1]/3, called *sesquitertia*), the two strings will sound a perfect fourth apart. The difference between a 3:2 fifth and a 4:3 fourth is, of course, one whole tone, which in Pythagorean tuning has the ratio of 9:8 ([8+1]/8; *sesquioctava*), since 3:2 ÷ 4:3 = 9:8 (see Figure 1.1). By calculating these ratios on a one-stringed instrument known as a *monochord* (an instrument "having one string"), a musician could find all the pitches and intervals needed to perform a piece of music, though they might be defined differently from the way we think of them today. For example,

the interval corresponding to what we would call a major third was calculated as one 9:8 whole tone plus another 9:8 whole tone, resulting in a combination that was known as a *ditone* ("interval of two tones"). Major and minor thirds did not really exist conceptually in Pythagorean tuning – one reason that early medieval polyphony was based on octaves, fifths, and fourths rather than thirds.

This approach to calculating intervals, using only whole-number fractions, led to some discrepancies that do not trouble us today, since the tuning of modern keyboard instruments makes adjustments to prevent them. For example, if we measure out six 9:8 whole tones on a monochord, the last pitch will be slightly higher than a 2:1 octave from the same starting pitch would be. The difference is called a *comma* ("small cut") in Greek, and has the unwieldy ratio of 531441:524288. Pythagorean tuning produces other peculiar intervals smaller than a tone. If we measure a 4:3 perfect fourth on the monochord, and then measure two 9:8 whole tones from the same starting pitch, the remaining interval will have a ratio of 256:243 – less than half a 9:8 tone. It is therefore called a minor (i.e. smaller) semitone, or in Greek a *diesis* ("difference") or *leimma* ("remnant"). When a minor semitone is subtracted from a whole tone, what is left is called a major semitone (9:8 ÷ 256:243 = 2187:2048), or in Greek an *apotomē* ("cutting off"). In fact, it is impossible to compute a semitone that is precisely half of a 9:8 whole tone, since a superparticular ratio cannot be divided exactly in half using whole-number ratios. The difference between a major semitone and a minor semitone is the Pythagorean comma again (2187:2048 ÷ 256:243 = 531441:524288). Imagine calculating such fractions using only Roman numerals![6]

It was not until the Renaissance, with the availability of Arabic numerals and the decimal point, that advances in the construction of keyboard and fretted instruments made it possible to develop more sophisticated tuning systems, such as just intonation, mean-tone temperament, and (more recently) equal temperament, in which all intervals except the octave are slightly distorted, to avoid Pythagorean microtones and to enable transposition and modulation into any key. What ancient musicians were trying to compute with their Pythagorean ratios, however, were not merely keys or scales or modes, but a grand *harmonia*, literally a "framework" or attunement, in which all the various components are interconnected like the beams of a house or a

6 For the main early Pythagorean writings, see Andrew Barker, *Greek Musical Writings*, vol. II: *Harmonic and Acoustic Theory*, Cambridge Readings in the Literature of Music (Cambridge University Press, 1989), 28–52.

ship. An interval, a ratio, or a scale could be considered an example of harmonia, but harmonia itself was a concept larger than music.[7] The same mathematical ratios could be detected in other natural phenomena, such as the movements of the stars and planets studied by astronomers. Hence the entire cosmos could be thought of as a kind of "music of the spheres," a harmonious whole in perpetual but predictable motion, even though the resulting "music" could not be heard by human ears.[8]

Again, in ancient medicine, the physical and mental health of each human being was thought to be determined by the balance of fluids (which in ancient medicine were called *humors*) in the body. This allowed people to be categorized by temperament or disposition, good or bad humor, and vestiges of this idea still survive in our language today. According to the ancient medical authority Hippocrates (ca. 450–ca. 380 BCE), people with a high ratio of blood (*sanguis* in Latin) would be sanguine, with a ruddy complexion and a confident, hopeful outlook on life. Those with too much choler or yellow bile would be choleric or bilious: thin, ill-tempered and prone to anger, with a sallow or jaundiced complexion. Excessive phlegm would make people phlegmatic: calm, imperturbable, even sluggish, overweight, and apathetic. Melancholy people were dominated by black bile (*melancholia* in Latinized Greek), making them introspective, sad, pessimistic. Such imbalances could be affected by medical treatments and by natural factors, such as the changing seasons.[9] Thus Pythagorean science covered much more than music as we think of it.

Musical Ēthos The rhythmic and melodic features that characterize different kinds of music can help represent emotional states. Therefore, in accordance with the Platonic theory of *mimēsis* (that art imitates nature) music can have a positive or negative effect on human feeling and behavior. Music was therefore a subject that interested ancient philosophers thinking about *ēthos* ("custom" or "habit"), from which Aristotle derived the term "ethics." Plato traced the study of musical ethics back to Damon of Athens. Military music, for instance, could make people feel more brave, warlike, and patriotic, while laments would make a person sorrowful. Music played in "slack" tunings (i.e., relatively loose strings) could produce slackers, by encouraging indolence and

7 Thomas J. Mathiesen, "Problems of Terminology in Ancient Greek Music: ʹAPMONÍA," in *Festival Essays for Pauline Alderman*, ed. Burton Karson (Provo, UT: Brigham Young University Press, 1976), 3–17.
8 Kathi Meyer-Baer, *Music of the Spheres and the Dance of Death: Studies in Musical Iconology* (Princeton, NJ: Princeton University Press, 1970). Flora R. Levin, *Greek Reflections on the Nature of Music* (Cambridge University Press, 2009).
9 R. J. Hankinson, "Philosophy of Nature," in *The Cambridge Companion to Galen*, ed. R. J. Hankinson (Cambridge University Press, 2008), 210–31, esp. 217–25.

moral laxness.[10] Other musical features could be characterized as "masculine," "feminine," or in between.[11] Since every musical performance had a certain character or ēthos that could influence – for good or ill – the behavior of those who heard or performed it, philosophers who were concerned about the education of youth and the future of society were often inclined to advocate that certain kinds of music be banned.[12] On the other hand, there is still much to be learned about the practical background for such thinking – the ways music was actually employed in military, theatrical, legal and court ceremonial, which often involved the playing of instruments, dancing or marching by choirs, or competitions akin to athletic contests.[13] The Greek chorus of young men or women, in fact, was not only an essential element of classical drama, but also functioned as a kind of educational institution.[14]

Roman Learning

The elite, educated culture of the Roman empire was largely the transplanted learning of classical Greece, which Roman armies had conquered in the second century BCE. Educated Romans could read and speak Greek, and therefore most academic disciplines studied in Latin were profoundly shaped by Greek knowledge. Even the study of Latin grammar and poetry was heavily indebted to Greek grammatical and poetic theory. The major exception was probably the study of law, in which the Romans had always excelled. By the fifth century CE, however, the Roman empire was beginning to break up politically under pressure from the barbarian invasions. The knowledge of Greek was becoming increasingly rare in the West, and the few scholars who still knew both languages did what they could to preserve Greek knowledge by preparing Latin translations, paraphrases, and commentaries. Information about the "music of the spheres," for example, was preserved by commentaries on a partial Latin translation of Plato's *Timaeus* and on the *Somnium Scipionis* ("Scipio's Dream") – a section of Cicero's rewrite of Plato's *Republic*.[15] St. Augustine of Hippo (354–430), one of the most important

10 Barker, *Greek Musical Writings*, 1: 127–85.
11 Thomas J. Mathiesen, "Harmonia and Ethos in Ancient Greek Music," *Journal of Musicology* 3 (1984), 264–79.
12 Francesco Pelosi, *Plato on Music, Soul and Body*, trans. Sophie Henderson (Cambridge University Press, 2010).
13 On musical competitions see Jennifer Neils et al., *Goddess and Polis: The Panathenaic Festival in Ancient Athens* (Princeton, NJ: Princeton University Press, 1992).
14 Claude Calame, *Choruses of Young Women in Ancient Greece: Their Morphology, Religious Role, and Social Functions*, new ed., trans. Derek Collins and Janice Orion (Lanham, MD: Rowan and Littlefield, 2001).
15 *Platonis Timaeus interprete Chalcidio cum eiusdem commentario*, ed. Ioh. Wrobel (Leipzig: B. G. Teubner, 1876; reprint ed., Frankfurt am Main: Minerva, 1963). *Favonii Eulogii Disputatio de somnio Scipionis*, ed. Alfred Holder (Leipzig: B. G. Teubner, 1901). Macrobius Ambrosius Theodosius, *Commentarium in somnium Scipionis*, ed. Franciscus Eyssenhardt, in *Macrobius* (Leipzig: B. G. Teubner, 1868),

Latin Church Fathers, did not know Greek well, but in his book *De Musica* ("On Music") he described the meters of classical Latin poetry and song, which were derived from Greek poetry.[16] Martianus Capella (fifth century), in his allegorical poem *On the Nuptials of Philology and Mercury*, paraphrased Greek texts on the most essential pedagogical disciplines, which became known as the seven liberal arts.[17]

Four of these arts – arithmetic, geometry, music, and astronomy – were considered essentially mathematical, and were therefore grouped together and called the *quadrivium* ("the crossroads of four paths") by Anicius Manlius Severinus Boethius (died about 525). A high-ranking official in the court of the barbarian king Theodoric, and probably the last man in Europe who was equally at home in both Latin and Greek, Boethius may have planned to produce Latin paraphrases of Greek textbooks on all four subjects. Unfortunately, he did not live long enough to complete such an ambitious project. Imprisoned because his facility with Greek raised political suspicions, he spent his time while awaiting execution by writing *The Consolation of Philosophy*, on the interesting question of whether or not life is fair.[18] But his unfinished treatise *De Institutione Musica*[19] paraphrases some important Pythagorean texts, not all of which survive in Greek; it therefore became the most important music theory text of the Latin Middle Ages. Before long, the other three liberal arts described by Martianus – basically verbal rather than mathematical – were grouped into the *trivium* ("three paths"): grammar

465–652. Ambrosius Aurelius Theodosius Macrobius, *Commentary on the Dream of Scipio*, trans. William Harris Stahl, Records of Western Civilization (New York: Columbia University Press, 1990).

16 Aurelius Augustinus, *De Musica*, ed. in *PL*, vol. XXXII: 1081–194. Aurelii Augustini, *De Musica*, ed. Giovanni Marzi (Florence: Sansoni, 1969). Aurelius Augustinus, *De musica liber* VI: *A Critical Edition with a Translation and an Introduction*, ed. Martin Jacobsson, Acta Universitatis Stockholmiensis: Studia Latina Stockholmiensia 47 (Stockholm: Almqvist & Wiksell International, 2002). English translation by Robert Catesby Taliaferro in *The Fathers of the Church: A New Translation*, ed. Ludwig Schopp et al., Writings of Saint Augustine 2 (New York: CIMA Publishing, 1947), 151–379. Richard R. La Croix, ed., *Augustine on Music: An Interdisciplinary Collection of Essays*, Studies in the History and Interpretation of Music 6 (Lewiston, NY: Edwin Mellen Press, 1988).

17 Annotated translation by William Harris Stahl and Richard Johnson, *Martianus Capella and the Seven Liberal Arts*, 2 vols., Records of Civilization, Sources and Studies 84 (New York: Columbia University Press, 1971). James Willis, ed., *Martianus Capella* (Leipzig: Teubner, 1983). Mariken Teeuwen, *Harmony and the Music of the Spheres: The "ars musica" in Ninth-Century Commentaries on Martianus Capella*, Mittellateinische Studien und Texte 30 (Leiden; Boston: Brill, 2002).

18 Sam Barrett, *The Melodic Tradition of Boethius' De Consolatione Philosophiae in the Middle Ages*, 2 vols., Monumenta Monodica Medii Aevi Subsidia 7 (Kassel: Bärenreiter, 2013).

19 *Anicii Manlii Torquati Severini Boetii De institutione arithmetica libri duo*, *De institutione musica libri quinque*, *Accedit Geometria quae fertur Boetii*, ed. Godofredus Friedlein (Leipzig: Teubner, 1867), 177–371. English translation by Calvin Bower as *Fundamentals of Music*, Music Theory Translation Series (New Haven, CT: Yale University Press, 1989). Michael Bernhard, *Wortkonkordanz zu Anicius Manlius Severinus Boethius*, *De institutione musica*, Veröffentlichungen der Musikhistorischen Kommission 4 (Munich: Bayerische Akademie der Wissenschaften, 1979). Michael Bernhard and Calvin M. Bower, eds., *Glossa maior in institutionem musicam Boethii*, 4 vols., Veröffentlichungen der Musikhistorischen Kommission 9–12 (Munich: Bayerische Akademie der Wissenschaften, 1993–2011).

(the basic structure of language), rhetoric (the art of composing persuasive texts), and dialectic or logic (the construction of true arguments and the disproof of false ones). The trivium and quadrivium became the basis of the medieval curriculum, preparatory to the study of theology, the most important subject of all.

The man who succeeded to Boethius' old job at court was the politically more pliable Cassiodorus Senator (died about 585). Thus he lived long enough to retire to his private estate in southern Italy, with a large library he had once hoped would support the founding of a Christian university in Rome. His book *Institutions of Divine and Secular Learning*, which describes the texts in this library, became the most important source of bibliographical information in the medieval period, and gives us some information about the contents of Latin and Greek music theory treatises that have not survived.[20] Isidore of Seville (died 636), who did not know Greek, assembled and defined in his *Etymologies*[21] many technical terms, including musical terms, which he found through his wide reading of Latin texts and translations. The *Etymologies* thus became the most important early medieval lexicon.

It was during the "Carolingian Renaissance" of the ninth century that the works of Boethius, Cassiodorus, Isidore and other Latin writers began to be studied seriously by musicians seeking to improve the pedagogy of Gregorian chant, the liturgical music of the medieval Western Church, even though Gregorian chant was very different from the ancient Greek music on which the theory was based. Ancient Greek music theory continued to be studied in medieval Byzantium – in fact most of the theory texts are preserved only in manuscripts from the Byzantine period.[22] As parts of the Greek-speaking East succumbed to the Muslim conquest, many Greek pedagogical texts were translated into Arabic, where they contributed much to the development of Arab music theory.[23] The Latin world had access only to the late-antique Latin translations until about the twelfth century, when the European discovery of

20 *Cassiodori Senatoris Institutiones*, ed. R. A. B. Mynors (Oxford: Clarendon Press, 1937). English translations by Leslie Webber Jones, *An Introduction to Divine and Human Readings* (New York: Columbia University Press, 1946) and James W. Halporn and Mark Vessy, *Institutions of Divine and Secular Learning and On the Soul*, Translated Texts for Historians 42 (Liverpool: Liverpool University Press, 2003).

21 *Isidori Hispalensis episcopi Etymologiarum sive originum libri xx*, 2 vols., ed. W. M. Lindsay (Oxford: Clarendon Press, 1911). *The Etymologies of Isidore of Seville*, trans. Stephen A. Barney et al. (Cambridge University Press, 2006).

22 Cataloged in Thomas J. Mathiesen, *Ancient Greek Music Theory: A Catalogue Raisonné of Manuscripts*, Répertoire International des Sources Musicales B$_{XI}$ (Munich: G. Henle Verlag, 1988).

23 Amnon Shiloah, *The Theory of Music in Arabic Writings (c. 900–1900)*, 2 vols., Répertoire International des Sources Musicales B$_{X}$–B$_{X}^{a}$ (Munich: G. Henle Verlag, 1979–2003). Max Haas, "Griechische Musiktheorie in arabischen, hebräischen und syrischen Zeugnissen, Quellen, Literatur," *Vom Mythos zur Fachdisziplin: Antike und Byzanz*, Geschichte der Musiktheorie 2, ed. Konrad Volk et al. (Darmstadt: Wissenschaftliche Buchgesellschaft, 2006), 635–785. Lois Ibsen al Faruqi, *An Annotated Glossary of Arabic Musical Terms* (Westport, CT: Greenwood Press, 1981).

Arab learning brought Latin translations of Arab writings on music.[24] Not until the revival of classical learning during the Renaissance were large numbers of Westerners able to find and read the Greek originals for themselves.

The Latin Transmission of Greek Music Theory

Rhythm and Meter

Since ancient Greek poetry was usually sung, and song was often accompanied by dance, the study of poetic and musical rhythms constituted a single two-tiered subject. The lower tier, the study of rhythm, was about patterns of long and short syllables, usually in ratios of 2:1 or 3:1 (i.e., a long syllable had twice or thrice the duration of a short syllable). The length of a syllable is known (from Latin) as its *quantity*. A syllable would be long if it contained a long vowel or a diphthong, or if two or more consonants separated it from the following vowel. In pedagogical texts, a long vowel could be marked by a *macron* or *longa* (ā, ē, ī, ō, ū), a short vowel by a *brachys* or *brevis* (ă, ĕ, ĭ, ŏ, ŭ). The Greek names of the best-known rhythmic units are still well known today: iambic (a short followed by a long, ˘ ¯), trochaic (long, then short, ¯ ˘), dactylic (¯ ˘ ˘), amphibrachic (˘ ˘ ¯), spondaic (¯ ¯), pyrrhic (˘ ˘), and so on. Each such unit was known as a *foot* (Greek *pous*), since it corresponded to one dance step. A foot or step could be subdivided into an *arsis* ("lift," the "upbeat" when the dancer's foot was raised) and a *thesis* ("placement," the "downbeat" when the dancer's foot was placed on the ground). Hence the thesis was the accented or long syllable within the foot. When these terms passed into Latin, however, they were reapplied to the raising and lowering of the vocal melody, rather than the dancer's foot. As a result their meanings were somewhat reversed: the arsis was identified with the strong, loud part at the beginning of the foot (like the downbeat of a modern measure); the thesis was identified with the weakening and lowering of the voice as the singer approached the end of the foot and the next breath (like a modern upbeat).[25]

Poetic feet could be grouped into larger units such as a *dipody* (two feet) or *tripody* (three feet), and such units would be further grouped to form the higher level of organization in this two-tier subject: the meter. Thus, in the meter known as iambic dimeter, a line of poetry contained two iambic dipodies, a total of four repetitions of the short-long pattern. A dactylic hexameter line consisted of six dactylic *monopodies*: six repetitions of the

24 Don Randel, "Al-Fārābī and the Role of Arabic Music Theory in the Latin Middle Ages," *Journal of the American Musicological Society* 29 (1976), 173–88.

25 See the article "arsis" in *Lexicon Musicum Latinum Medii Aevi*, ed. Michael Bernhard (Munich: Verlag der Bayerischen Akademie der Wissenschaften, C. H. Beck, 1992–2006), vol. 1, 126–30.

long-short-short pattern. Hence this type of poetry is known as metrical (because it is measured by the meters) or quantitative (because it is based on syllable quantity).[26]

However, by the time Augustine wrote his *De Musica*, the long and short vowels of Latin were no longer being distinguished in ordinary speech (*De Musica* 1.1–2.2, 3.3.5). Speakers of Latin were marking the accented syllables by stress rather than length, as in modern English today. Thus a second type of poetry developed in the medieval period, called accentual (rather than quantitative). From the time of the Venerable Bede[27] (died 735) it has also been called rhythmical (rather than metrical). That is because, though a line of poetry can still be considered iambic or trochaic if we substitute stress for length, the complicated rules for eliding or distinguishing syllables at the metrical level cannot be applied. Therefore this type of poetry can only be analyzed at the lower, rhythmic level. A thorough understanding of both quantitative and accentual poetry is therefore essential for understanding medieval musical rhythm and rhythmic theory.[28]

Prosody

Ancient grammarians had another way of thinking about word accent. Speakers of ancient Greek apparently pronounced accented syllables at a higher pitch than unaccented syllables, so that it could be said Greek had a pitch accent rather than a stress accent. Since a student had to learn to distinguish high from low as well as long from short, pedagogical texts would mark the higher-pitched syllables with an acute accent; its upward slant visually suggests a rising pitch (á é í ó ú). Unaccented syllables could be marked with the opposite sign, the grave accent (à è ì ò ù). For some grammarians, the acute accent suggested greater length as well as greater height, which contributed to the ways these accents are used in the modern Romance languages. Ancient Greek also made use of the circumflex (â ê î ô û), which combined the acute and grave accents to indicate a pronunciation that began at a high pitch, then descended. Since only long syllables had sufficient

26 Martin L. West, *Ancient Greek Music* (Oxford: Clarendon Press, 1992), 129–59. Joan Silva Barris, *Metre and Rhythm in Greek Verse*, Wiener Studien, Beiheft 35 (Vienna: Verlag der Österreichischen Akademie der Wissenschaften, 2011). Felix Budelmann, ed., *The Cambridge Companion to Greek Lyric* (Cambridge University Press, 2009). David J. Califf, *A Guide to Latin Meter and Verse Composition* (London: Anthem, 2002). D. S. Raven, *Latin Metre* (London: Bristol Classical Press, 1998).

27 Trans. and ed. by Calvin B. Kendall in *Libri II De arte metrica et De schematibus et tropis: The Art of Poetry and Rhetoric*, Bibliotheca Germanica ser. nov. 2 (Saarbrücken: AQ-Verlag, 1991).

28 Dag Norberg, *An Introduction to the Study of Medieval Latin Versification*, trans. Grant C. Roti and Jacqueline de La Chapelle Skubly (Washington, DC: Catholic University of America Press, 2004). *Corpus Rhythmorum Musicum saec. IV–IX*. 1: *Songs in Non-Liturgical Sources* 1, ed. M. P. Bachmann, Sam Barrett et al. (Florence: Sismel, 2007).

quantity to permit such a pronunciation, the circumflex indicated length as well (the modern French circumflex has a more complicated origin). Since marking pitch differences in a text was rather like setting words to song, the Greek term for this subject was *pros ōdia* ("to song"), the origin of our English word *prosody*. Literal translation into Latin produced the calque *ad cantus*, which became *accentus*, the origin of our word *accent*.

Hence a fifth-century commentator on the fourth-century grammarian Donatus wrote that "prosody is a representation of music."[29] His Christian contemporary Quodvultdeus, a follower of St. Augustine, knew that the clergy used the accents to practice reading the Bible in church services; therefore he could describe the ceremonial reading of the Bible as "the delight of musicians: you have the organ [formed] out of the diverse pipes of the holy apostles and teachers of all the churches, furnished with certain accents – grave, acute, and circumflex – which that musician, the Spirit of God, touches, fills, and resounds through the Word."[30] The reference to the organ is metaphorical, since pipe organs were not then being used for church music, but only in outdoor theatres.[31] However, readers did use accent marks to guide the oral proclamation of texts. In fact the acute, grave, and circumflex accents fell within a larger category of grammatical and punctuation signs that were known in Latin as *notae*, some of which had performative or quasi-musical significance. For example, the apostrophe could signal the weakening sound of a dropped syllable; the question mark implied the trembling rising pitch with which we ask a question. The musical potential of such markings was already recognized in the first century.[32]

About the ninth century, therefore, the accents and certain other notae provided the inspiration for several systems of neumes, which constituted the first real music notation to be developed during the Middle Ages. The Greek word *neuma* means "sign" in the sense of "gesture" or "command" (from a verb meaning "to nod"), not "sign" in the sense of "written mark" (for which there are other words); this suggests the dynamic, gestural, performed quality of what the neumes signify. In the Latin West, "neuma" was often confused

29 "musica. . . cuius imago prosodia." [Sergii,] *Explanationum in Artem Donati Libri II*, ed. Heinrich Keil, *Grammatici Latini* 4 (Leipzig: Teubner, 1864), 486–565; see 531 lines 24–25.

30 *Liber Promissionum et Praedictorum Dei: De Gloria Regnoque Sanctorum Capitula* 13.15, 17–18, ed. R. Braun in *Opera Quodvultdeo Carthaginiensi Episcopo Tributa*, Corpus Christianorum Series Latina 60 (Turnhout: Brepols, 1976), 220; 221–22.

31 West, *Ancient Greek Music* 114–18, 380–81. Thomas J. Mathiesen, *Apollo's Lyre: Greek Music and Music Theory in Antiquity and the Middle Ages*, Publications of the Center for the History of Music Theory and Literature 2 (Lincoln: University of Nebraska Press, 1999), 225–30.

32 Thus the Roman orator Quintilian (CE 35 – after 96) could say "musicis notis cantica excipiat" ("Let him draw out songs from musical notes": *Institutio Oratoria* 1.12.14). Quintilian, *The Orator's Education: Books 1–2*, ed. and trans. Donald A. Russell, Loeb Classical Library 124 (Cambridge, MA: Harvard University Press, 2001), 250.

with the similar-looking Greek word *pneuma*, which can mean "spirit," "wind," or "breath" (as in "pneumonia"); "pneuma" thus was applied to a wordless melisma that could be sung in one breath. But this meaning of "pneuma" had nothing to do with the original meaning of "neuma."

Multiple systems of neumes developed in both the Greek and Latin worlds, and in both languages the earliest surviving fully neumated manuscripts date from the tenth century. Somewhat later we also find neumes in Slavonic, Armenian, and Georgian manuscripts.[33] Even though many of these systems share some common signs, notably the acute accent, they cannot all be traced back to a single original system.[34] Some systems of neumatic notation use a relatively large number of signs, while others use only a few signs but combine them in a wide variety of ways, as the circumflex combines acute and grave. Intermediate between neumatic music notation and the grammatical/punctuating notae are the ekphonetic neumes we find in many Greek manuscripts of the Bible.[35]

Harmonics

The most highly developed part of ancient Greek musical thought dealt with the organization of musical pitch, which was based on the method of tuning the kithara and other instruments of the lyre family. In these instruments the

33 Christian Troelsgård, *Byzantine Neumes: A New Introduction to the Middle Byzantine Musical Notation*, Monumenta Musicae Byzantinae: Subsidia 9 (Copenhagen: Museum Tusculum Press, 2011). Johann von Gardner and Erwin Koschmieder, eds., *Ein handschriftliches Lehrbuch der altrussischen Neumenschrift*, Abhandlungen der Bayerische Akademie der Wissenschaften, Philosophisch-Historische Klasse, Neue Folge 57, 62, 68 (Munich: Verlag der Bayerischen Akademie der Wissenschaften, in Kommission bei der C. H. Beck'schen Verlagsbuchhandlung, 1963, 1966, 1972). Miloš Velimirović, "Evolution of Byzantine Musical Notation in Russia," *Studi di musica bizantina in onore di Giovanni Marzi*, ed. Alberto Doda, Studi e testi musicali: Nuova serie 6 (Lucca: Libreria Musicale Italiana, 1995), 29–32. Nicolas Schidlovsky, ed., *Sticherarium Palaeoslavicum Petropolitanum*, 2 parts, Monumenta Musicae Byzantinae 12 (Copenhagen: C. A. Reitzel, 2000). Robert At'ayan, *The Armenian Neume System of Notation*, trans. Vrej Nersessian (Richmond: Curzon, 1999). Aram Kerovpyan, *Manuel de notation musicale arménienne moderne*, Musica Mediaevalis Europae Occidentalis 2 (Tutzing: H. Schneider, 2001).

34 The proposals made in Constantin Floros, *Universale Neumenkunde*, 3 vols. (Kassel-Wilhelmshöhe: Bärenreiter, 1970) have not attained wide acceptance. Reviews include: Wolfgang Krueger in *German Studies* 6 (1971), 69–75; Miloš Velimirović in *Journal of the American Musicological Society* 25 (1972), 479–83; Michel Huglo in *Revue de Musicologie* 58 (1972), 109–112. On the Latin traditions see Michel Huglo, "Bilan de 50 années de recherche (1939–1989) sur les notations musicales de 850 à 1300," *Acta Musicologica* 62 (1990), 224–259. Kenneth Levy, *Gregorian Chant and the Carolingians* (Princeton, NJ: Princeton University Press, 1998) esp. 82–140.

35 Jørgen Raasted and Christian Troelsgård, eds., *Paleobyzantine Notations: A Reconsideration of the Source Material* (Hernen: A. A. Bredius Foundation, 1995). Christian Troelsgård and Gerda Wolfram, eds., *Paleobyzantine Notations II: Acta of the Congress Held at Hernen Castle, the Netherlands, in October 1996* (Hernen: A. A. Brediusstichting, 1999). Gerda Wolfram, ed., *Paleobyzantine Notations III: Acta of the Congress Held at Hernen Castle, the Netherlands, in March 2001* (Leuven: Peeters, 2004). The major publication on ekphonetic neumes is Carsten Höeg, Günther Zuntz, and Sysse Gudrun Engberg, eds., *Prophetologium* 1–2, 8 vols., Monumenta Musicae Byzantinae: Lectionaria 1 (Copenhagen: Munksgaard, 1939–81). Christian Hannick, ed., *Rhythm in Byzantine Chant: Acta of the Congress Held at Hernen Castle in November 1986* (Hernen: A. A. Bredius Foundation, 1991).

strings are attached to a sound box at the bottom, and extend vertically up to a horizontal bar held up by two vertical arms. The classical Greek kithara had seven strings, and thus could only play about an octave (see Figure 1.2), though Boethius reproduces Greek accounts of ancient innovators who added an eighth, ninth, tenth, and even an eleventh string (*De Institutione Musica* 1.20).[36]

The kithara strings could be tuned many different ways, however, and the theory of harmonics determined the possibilities. A hypothetical musical space, extending as far as two octaves, was divided into tetrachords or series of four pitches (*tetrachordon* actually means "having four strings"). The two outermost notes of every tetrachord were a perfect fourth apart, but the placement of the two intermediate notes could vary, so that there were basically three types of tetrachord (see Figure 1.3). Each type is known in Latin as a *genus* (plural *genera*). In a tetrachord of the diatonic genus, there were two descending whole tones followed by a half step, or rather a minor semitone; this could be represented by the modern pitch classes A-G-F-E or E-D-C-B. The tetrachord of the chromatic genus began with a *trihemitone*, equal to three half steps or a minor third, followed by two minor semitones; it could be represented by the modern pitch classes A-G♭-F-E. At the top of the enharmonic genus was a ditone or major third, with two quarter tones beneath it. This could be represented as A-F𝄲-F (a quarter tone flat)-E. Medieval music, however, made exclusive use of the diatonic genus; not until the Renaissance did composers begin to explore the other two genera.[37]

There were two ways to align tetrachords so that they formed a larger musical space: the Greater Perfect System and the Lesser Perfect System.[38] In either case the kithara player apparently began tuning with the pitch in the middle of the range, known in Greek as *mesē* ("middle [string]"). The tetrachord that descended from *mesē* (which could be represented a-G-F-E) was therefore known as the "tetrachord of the middles" (*mesōn*), since it consisted of the pitches in the middle of the System (see Figure 1.4). The note below *mesē* (G) was called *lichanos mesōn*, "the forefinger of the middles," apparently because the kithara player would put his forefinger (index finger) on the string

36 See also Martha Maas and Jane McIntosh Snyder, *Stringed Instruments of Ancient Greece* (New Haven, CT: Yale University Press, 1989), 53–78.

37 For attempts to reconstruct the ancient Greek tuning of the genera, see John C. Franklin, "Hearing Greek Microtones" and Stefan Hagel, "Twenty-Four in Auloi: Aristotle, *Met.* 1093b, the Harmony of the Spheres, and the Formation of the Perfect System," in *Ancient Greek Music in Performance: Symposion Wien 29. Sept.–1. Okt. 2003*, ed. Stefan Hagel and Christine Harrauer, Wiener Studien Beiheft 30 (Vienna: Verlag der Österreichischen Akademie der Wissenschaften, 2005), 9–50, 51–91.

38 On the historical evolution of these Systems, see Stefan Hagel, *Ancient Greek Music: A New Technical History* (Cambridge University Press, 2009).

Figure 1.2 In this unusually detailed picture of a young kitharode (a person who sings to the kithara), the musician's head is thrown back as his mouth opens in song. He wears a crown of laurel leaves, indicating that he has just won a musicians' competition. That probably means that this particular amphora, filled with wine, olive oil, or some other valuable commodity, was given away as the prize. In fact the old man depicted on the other side of the amphora (not visible here) may represent the judge of the contest. The kithara has seven strings, which pass over a bridge on the hollow sound box near the bottom of the instrument, and are attached to a horizontal bar at the top. The

for that note. The next two pitches were called *parhypatē* or "next to the highest [string]" (F) and *hypatē* or "highest [string]" (E), even though, in pitch, they were really the next to the lowest and the lowest. The reason for this is that, when the player was tuning the kithara, he held it at an angle away from his body (see Figure 1.5). In this position the strings that were lowest in pitch were at the top of the instrument, closest to the player's face, while the highest-pitched strings were at the bottom of the instrument, closest to the ground. This is easier to imagine if we recall that a modern guitar is arranged the same way, with the low-pitched strings at the top of the instrument, the high-pitched strings at the bottom, closest to the ground.

To show how tetrachords were combined to form the Greater and Lesser Perfect systems, it is convenient to represent *mesē* as equivalent to the modern pitch A below middle C, but this should not be taken to imply that *mesē* was set to or near 220 Hz. The ancient world had no way to calculate absolute pitch. Thus in figures 1.6 and 1.7, the lower octave A–G is shown in upper-case letters, the higher one in lower-case, as a way to distinguish the two, but without implying correspondence to the Helmholtz or any other modern

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Caption for Figure 1.2 (cont.)

handles to the right and left of the bar apparently permitted the player to loosen the strings when the kithara was put away after playing. The player's left hand can be seen behind the strings, with his index finger (lichanos) on the third string from the left. That might mean that the fourth string was mesē, in which case the mode would be Dorian (see Table 1.1). If so, it could be significant that, on the tuning bar, there seems to be a slight space between the third and fourth strings, as if dividing the seven strings into groups of three (the hypatōn tetrachord?) and four (the mesōn tetrachord?). Beneath the young man's thumb we can see part of the colored strap that is wrapped around his left wrist and attached to the right side of the kithara, where the upright post that holds the horizontal bar joins the sound box of the instrument. This made it easier for him to hold up the kithara while playing, but it also suggests that he could not move his left hand very much. On the contrary, the right hand could move freely, plucking the strings with a plectrum, which is attached to the kithara by a cord to prevent loss. Attic red-figure amphora, attributed to the Berlin Painter, ca. 490 BCE. The Metropolitan Museum of Art, New York, NY, USA. Fletcher Fund, 1956 (56.171.38). Image copyright © The Metropolitan Museum of Art. Image source: Art Resource, NY. Image Reference: ART322669

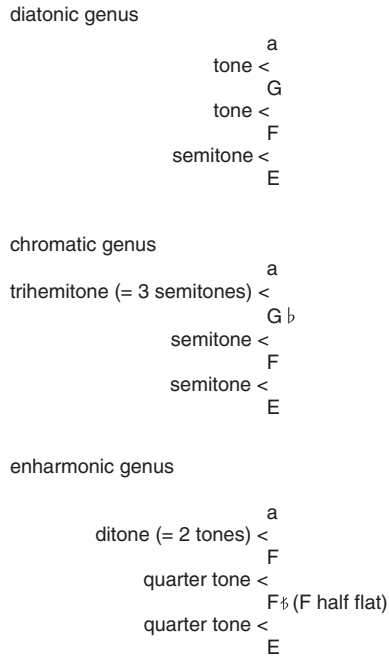


Figure 1.3 The genera: three types of tetrachords, after Boethius, *De institutione musica* 1.21

	Greek name	translation	modern pitch letter
mesōn ("of the middles")	mesē	"middle"	a
	lichanos	"forefinger"	G
	parhypatē	"next to the highest"	F
	hypatē	"highest"	E

Figure 1.4 The tetrachord of the middle pitches (*mesōn*)

system of pitch notation. The *mesōn* tetrachord is now shown as a-G-F-E. The tetrachord below it, though lower in pitch than the *mesōn*, was known as "the tetrachord of the highest [strings]," *hypatōn*, because it was played on the strings at the top of the instrument (see Figures 1.6 and 1.7). Since *hypatōn* was a conjunct tetrachord, its highest note was the same as the lowest note of

Figure 1.5 A kithara player tunes his instrument. He holds it in tuning position, with the low-pitched strings close to his face (and therefore "highest") and the high-pitched strings nearer to the ground. Since we are now looking at the left side of the kithara (instead of the right side as in Figure 1.2), the wrist strap for holding up the instrument can clearly be seen. With his right hand, the musician turns the tuning bar at the top of the instrument, to adjust the tension of the strings. Eye Cup, ca. 520 BCE. Attributed to Psiax (Greek). Red-figure terracotta; diameter: 6.4 cm (2½ inches); overall: 11.2 × 33.6 cm (4⅜ × 13³⁄₁₆ inches). The Cleveland Museum of Art, Purchase from the J. H. Wade Fund 1976.89

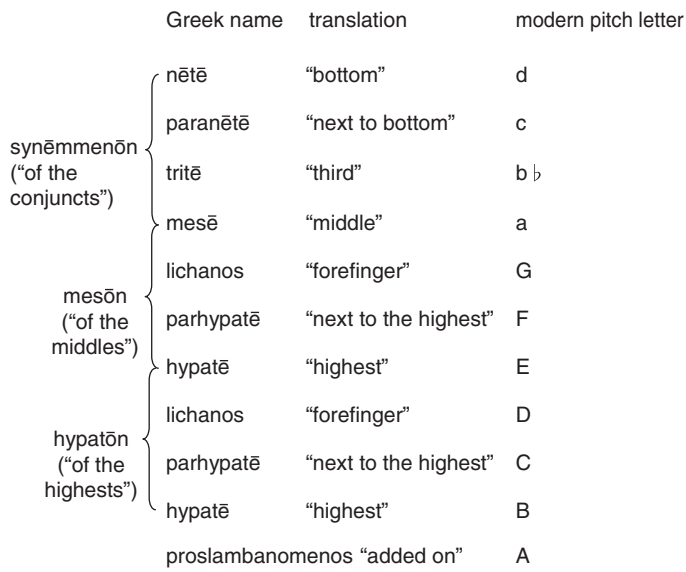


Figure 1.6 The Lesser Perfect System, showing the middle tetrachord with the "highest" tetrachord below, and the conjunct tetrachord above

the mesōn tetrachord, *hypatē mesōn*, "the highest of the middles" (E). Below that was *lichanos hypatōn*, "the forefinger of the highest [tetrachord]" (D), *parhypatē hypatōn* "next to the highest [string] of the highest [tetrachord]" (C), and *hypatē hypatōn*, "the highest [string] of the highest" (B). An extra note was added below that, called *proslambanomenos* or "added on" (A) to complete the octave with *mesē*.

Above the mesōn tetrachord, there were two ways to proceed, depending on whether the next tetrachord was conjunct or disjunct. In the *synēmmenōn* or tetrachord "of the conjuncts" (see Figure 1.6), the lowest note was *mesē* (a), and the note above that (b♭) was called *tritē* or "third," i.e., the third string counting from the highest pitch in the tetrachord. Above tritē was *paranētē* or "next to the bottom [string]" (c) and *nētē* "bottom [string]" (d), even though these lowest strings on the physical instrument were actually the highest in pitch. The three tetrachords hypatōn, mesōn and synēmmenōn formed the Lesser Perfect System, illustrated in Figure 1.6. However, if the tetrachord above mesōn was disjunct (see Figure 1.7), the *diezeugmenōn* or tetrachord "of the disjuncts" began with the note above mesē, called *paramesē* or "next to the middle [string]" (b♮), with tritē above that (c), then paranētē (d) and nētē (e). Beyond diezeugmenōn was another tetrachord, the *hyperbolaiōn* or tetrachord

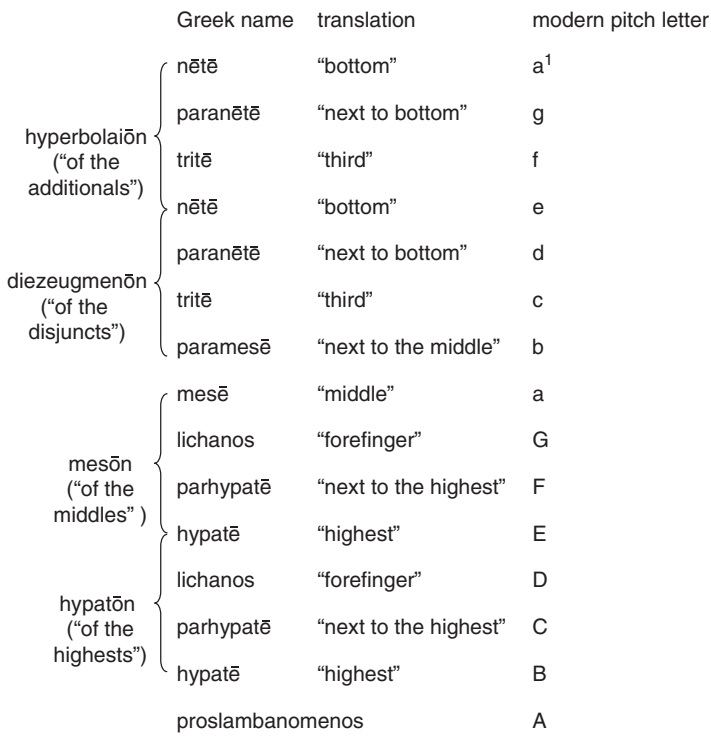


Figure 1.7 The Greater Perfect System, showing the middle tetrachord with the "highest" tetrachord below, and the disjunct and additional tetrachords above

"of additionals." Being conjunct, it included *nētē diezeugmenōn*, "the bottom [string] of the disjuncts" (e), then ascended through *tritē hyperbolaiōn*, "the third [string] of the additionals" (f), *paranētē hyperbolaiōn*, "next to the bottom [string] of the additionals" (g), and *nētē hyperbolaiōn*, "the bottom string of the additionals" (a^1). This produced the Greater Perfect System of two octaves or fifteen pitches (Figure 1.7).

A kithara could not cover fifteen pitches, however, because it did not have enough strings. But the performer could choose to play any portion of the two-octave range by setting mesē to any string, and then tuning either the Greater or Lesser Perfect System from there. Each tuning, therefore, produced a different octave species or sequence of whole and half steps. Boethius usually called these tunings *modi* ("modes") in Latin, but sometimes *toni* ("tones") or *tropi* ("tropes") in Greek; each mode had its own Greek name,

after an ancient Greek tribe that supposedly favored this tuning. A modernized version of Boethius' table of the modes can be seen in Table 1.1, translated into the same pitch letters used in Figures 1.6 and 1.7. In Table 1.1, which assumes the Greater Perfect System, the natural range from A to a^1 has been set to the Dorian mode, so that the mesē can be set to the fourth string in the middle of the instrument, on the pitch letter a (marked with an M for mesē). The other modes are produced by setting mesē to other strings, so that sharps and flats are required to represent the whole and half steps accurately. But Table 1.1 would have been just as accurate if the A– a^1 range had been set to another mode, such as the Hypodorian a fourth lower, where Boethius' table begins.[39] The sole purpose of the table is to show where the half steps are, not to suggest equivalence to modern pitches. In Table 1.1, therefore, the space between E and e represents the actual strings of an eight-string kithara, which could be tuned to any of the eight modes depending on which string is identified as mesē. The notes to the left and right of the E-e range are merely hypothetical, illustrating the portions of the Greater Perfect System that are left off the kithara with each particular tuning or mode.

As the mesē moves up from the fourth string, the Greek tribal names are Phrygian, Lydian, and Mixolydian. As the mesē moves down, we have the Hypolydian, Hypophrygian, and Hypodorian at the interval of a fourth below their counterparts (*hypo-* means "beneath"). At the other end of the kithara, since the Mixolydian is a fourth above the Dorian, it can also be called the Hyperdorian mode (*hyper-* means "above"). Boethius himself may have added the Hypermixolydian at the high end, above the Mixolydian, to provide for an eighth string, even though the octave species is the same as that of the Hypodorian mode at the low end. It should be understood that, even though Boethius called these "modes," they should be thought of as tunings, octave species, or transpositions rather than scales. The pitches do not have scalar functions such as tonic or dominant. The mesē is not a final. It was early medieval Latin theorists who misidentified Boethius' tribally-named modes with the very different modal system of Gregorian chant (see below), spawning a thousand years of confusion from which we still have not yet fully emerged.[40]

39 For other modern realizations of Boethius' table see Calvin M. Bower, "The Modes of Boethius," *Journal of Musicology* 3 (1984), 252–63, esp. 260–61; Harold S. Powers et al., "Mode," *NG2*, vol. XVI: 778.

40 The complicated story is now best told in Charles M. Atkinson, *The Critical Nexus: Tone-System, Mode, and Notation in Early Medieval Music*, AMS Studies in Music (New York: Oxford University Press, 2009).

Table 1.1 Table of the modes from Boethius, *De Institutione Musica* 4.16, translated into modern pitch letters. The letter M indicates the pitch set to *mesē*. When a box contains two pitch letters, the upper one belongs to the conjunct tetrachord (*synēmmenōn*), the lower one to the disjunct tetrachord (*diezeugmenōn*).

Hypermixolydian												E		F#	G		a		b	c		d		M e		f f#		g g		a¹ a¹		b¹	c¹		d¹		e¹
Mixolydian or Hyperdorian										D		E	F		G		a	b♭		c		M d	e♭		f f		g g		a¹	b♭¹		c¹		d¹		
Lydian									C#		D#	E		F#		G#	a		b		M c#	d	d#	e e		f# f#		g#	a¹		b¹		c#¹			
Phrygian								B		C#	D		E		F#	G		a		M b	c	d c#	d		e e		f#	g		a¹		b¹					
Dorian						A		B	C		D		E	F		G		M a	b♭		c c		d d			e	f		g		a¹							
Hypolydian					G#₁		A#	B		C#		D#	E		F#		M G#	a		b b		c# c#		d#	e		f#		g#									
Hypophrygian			F#₁		G#₁	A		B		C#	D		E		M F#	G		a a		b b		c#	d		e		f#											
Hypodorian	E₁		F#₁	G₁		A		B	C		D		M E	F		F#	G G		a a		b	c		d		e											

The Israelite Heritage

Though Christianity arose as one of many sects within late antique Judaism, it began attracting non-Jewish converts very quickly, setting in motion the tensions that would eventually lead to a complete separation into two discrete religions. A recent spate of new research on this topic, under the epithet "the parting of the ways"[41] has found it to be a complex of long-term processes that varied quite a bit from region to region.[42] But among the historical events that propelled it were the First and Second Jewish Wars (CE 66–70 and 132–35), when groups of rebels twice failed to overthrow Roman rule and establish an independent Jewish state centered on Jerusalem. The political turmoil brought new urgency to the question of who was really Jewish, and contributed to the decline of most of the Jewish sects that competed with emergent Christianity – the Pharisees, Sadducees, Essenes, Zealots, and so on. However, the greatest casualty of the First Jewish War was the Temple of Herod in Jerusalem, known as the "Second Temple" even though it was actually the third construction on the site of the original Temple of Solomon.[43] Because this building was the cultic center of the Jewish religion at the time, this period of Jewish history is often referred to as "Second Temple Judaism."[44]

The Temple

In the Temple, the central acts of worship involved the ritual slaughter and sacrificing of animals and agricultural products by the priests, who were descendants of Moses' brother Aaron. The sacrifices themselves were carried out in ritual silence, following prescriptions laid out in the Torah of Moses,

41 Probably derived from Peter Brown, *The Body and Society: Men, Women, and Sexual Renunciation in Early Christianity* (New York: Columbia University Press, 1988; 2nd ed. 2008), 61–64.

42 The vast bibliography includes: Stephen Spence, *The Parting of the Ways: The Roman Church as a Case Study*, Interdisciplinary Studies in Ancient Culture and Religion 5 (Leuven: Peeters, 2004); James D. G. Dunn, ed., *Jews and Christians: The Parting of the Ways, AD 70 to 135: The Second Durham-Tübingen Research Symposium on Earliest Christianity and Judaism (Durham, September 1989)* (Grand Rapids, MI: William. B. Eerdmans, 1999); Adam H. Becker and Annette Yoshiko Reed, eds., *The Ways That Never Parted: Jews and Christians in Late Antiquity and the Early Middle Ages* (Minneapolis, MN: Fortress Press, 2007).

43 Steven Fine, ed., *The Temple of Jerusalem from Moses to the Messiah: In Honor of Professor Louis H. Feldman*, Brill Reference Library of Judaism 29 (Leiden: Brill, 2011). Lester L. Grabbe, *An Introduction to Second Temple Judaism: History and Religion of the Jews in the Time of Nehemiah, the Maccabees, Hillel and Jesus* (London: T. & T. Clark, 2010). Timothy Wardle, *The Jerusalem Temple and Early Christian Identity*, Wissenschaftliche Untersuchungen zum Neuen Testament, 2. Reihe, 291 (Tübingen: Mohr Siebeck, 2010). Wayne O. McCready and Adele Reinhartz, *Common Judaism: Explorations in Second Temple Judaism* (Minneapolis, MN: Fortress Press, 2008).

44 On the literary history see: George W. E. Nickelsburg, *Jewish Literature between the Bible and the Mishnah* (Philadelphia: Fortress Press, 1981). Neil S. Hecht et al., eds., *An Introduction to the History and Sources of Jewish Law* (Oxford University Press, 2002). For a concise historical summary see Neil S. Fujita, *A Crack in the Jar: What Ancient Jewish Documents Tell Us about the New Testament* (New York: Paulist Press, 1986).

Figure 1.8 A bas-relief on the triumphal Arch of Titus, in the Roman Forum

most familiar today as the Pentateuch or first five books of the Bible. At the end of each sacrifice, the priests would break the silence by blasting silver trumpets, and the people would kneel down or fall prostrate on their faces. A psalm would be sung by the Levites, who were descendants of the tribe of Levi, one of the twelve tribes of ancient Israel and the tribe to which Moses and Aaron belonged. After the psalm the priests would recite blessings over the people (Sirach 50:1–21).

The Temple burned down in CE 70 during an attack by the Roman army, even though (according to the Jewish priest and historian Josephus) the Roman general Titus, son of the emperor Vespasian, had ordered his troops not to destroy it, and tried to rally them to put the fire out (*Jewish War* 6.4.5–7). On the Arch of Titus in the Roman forum, one can still see a relief depicting the great menorah, the silver trumpets, and other Temple furnishings being carried through the streets of Rome in a triumphant victory parade (Figure 1.8). Today the site of the Temple is covered by the Dome of the Rock, one of the holiest shrines in the Islamic world, marking the place from which Muhammad ascended to Heaven. This situation renders unthinkable any possibility of either building a new Jewish Temple or excavating the original one, at what would doubtless be one of the most fascinating archaeological sites in the world.

The Synagogue

After the Temple's destruction, scholar/teachers known as *rabbis* ("masters") took over the religious leadership from the priests and Levites. They began a process of reformulating Judaism so that it centered on the learned study of the Bible and other texts, rather than the sacrificial cult of the lost Temple. About CE 200, they produced the Mishnah, the oldest portion of the Talmud, which remains the basis of most forms of Judaism even today. They formalized and expanded an alternate form of worship based on the chanting of biblical texts and prayers, which was already being practiced in a type of building known as a *synagogue* (a place where people are "brought together"). Unlike the Temple, which could only exist in one place, however, a synagogue could be built anywhere, making it possible for Judaism to become a worldwide religion.[45]

The oldest regulations for synagogue worship are included in the Talmudic writings, but the first comprehensive synagogue prayerbook, the Seder Rav Amram Gaon, dates from the ninth century CE.[46] However, the Temple is still remembered ritually in various ways. The daily and holiday services of the synagogue are still scheduled at the times when the Temple sacrifices used to take place, and on some occasions texts are read that describe the Temple ritual corresponding to the day and time. The shofar or ram's horn is still blown on Jewish New Year as it was in the Temple. Except for the shofar, however, no musical instruments were played in the synagogue before modern times; the chanting remained purely vocal, and this was interpreted as a sign of mourning for the lost Temple.[47]

The Bible

Because Rabbinic Judaism, the Judaism of Mishnah and Talmud, came to the fore after the destruction of the Temple, it is not the ancestor of Christianity, but a sibling or cousin. Nor are the Temple and synagogue rituals the direct ancestors of the Christian liturgy. In fact the leaders of

45 Lee I. Levine, *The Ancient Synagogue: The First Thousand Years* (New Haven, CT: Yale University Press, 2005).

46 For the history of liturgical texts and their study, see: Lawrence Hoffman, "Jewish Liturgy and Jewish Scholarship," *Judaism in Late Antiquity* 1: *The Literary and Archaeological Sources*, ed. Jacob Neusner, Handbuch der Orientalistik 1: Der nahe und mittlere Osten 16 (Leiden: E. J. Brill, 1994), 239–66; Stefan C. Reif, *Judaism and Hebrew Prayer: New Perspectives on Jewish Liturgical History* (Cambridge University Press, 1993); Alistair Stewart-Sykes and Judith Hood Newman, *Early Jewish Liturgy: A Sourcebook for Use by Students of Early Christian Liturgy* (Cambridge: Grove Books, 2001).

47 Ruth Langer, *To Worship God Properly: Tensions between Liturgical Custom and Halakhah in Judaism* (n.p.: Hebrew Union College Press, 1998), 1–19. James W. McKinnon, "On the Question of Psalmody in the Ancient Synagogue," *Early Music History* 6 (1986), 159–91. James McKinnon, "The Exclusion of Musical Instruments from the Ancient Synagogue," *Proceedings of the Royal Musical Association* 106 (1979–80) especially 84–85.

each emerging religion deliberately shaped its liturgies so that members of the other group would be excluded from taking part.[48] By the second century, probably, the majority of Christians no longer had Jewish ancestry, could not read Hebrew, and lacked first-hand knowledge of Jewish practices. What Christians did know about Judaism was what they read about in the Christian Bible, a collection of about seventy-two books (the word "Bible" comes from *biblia*, which is Greek for "books") written by many authors over as much as 1,000 years. The largest part of the Christian Bible – the so-called Old Testament – contained Greek or Latin translations of all the Hebrew and Aramaic texts found in the Jewish Bible, plus about a dozen other ancient Jewish writings that had been composed in Greek and are not included in the Jewish Bible. (Today these Greek Jewish writings are also omitted from most Protestant Bibles, or relegated to an appendix as the Apocrypha, but they remain in Roman Catholic and Eastern Orthodox Christian Bibles.) Appended to the Old Testament was the much smaller New Testament, consisting of the earliest writings by Christian authors, all originally written in Greek.[49]

In the Bible, the singing of songs is closely connected to prophecy, or the experience of divine revelation. Listening to or performing songs was one way a prophet could bring on an enthusiastic or inspired state, enabling him or her to pronounce messages from God (1 Samuel 16:14–23, 2 Kings 3:1–20). Prophetic songs that have been preserved in the Bible include the song of Moses and Miriam at the Red Sea (Exodus 15), the song of Deborah and Barak (Judges 5), the song of Hannah, mother of the prophet Samuel (1 Samuel 2:1–10), and the song of Jonah while he was trapped inside the whale (Jonah 2). The Song of the Three Hebrew Children in the Fiery Furnace (Daniel 3) is one of the Jewish Greek texts found in medieval Christian (and modern Catholic and Orthodox) Bibles, but not in Jewish or Protestant Bibles. In Christian tradition, such songs were known as odes or canticles; they were often collected in a special section at the end of the Psalter, alongside canticles from the New Testament such as the Magnificat, Benedictus, Nunc Dimittis and Gloria in excelsis (Luke 1:46–55, 68–79, 2:29–32, 2:14 expanded).

48 Eviatar Zerubavel, "Easter and Passover: On Calendars and Group Identity," *American Sociological Review* 47 (1982), 284–89; Robert L. Wilken, *John Chrysostom and the Jews: Rhetoric and Reality in the Late Fourth Century*, Transformation of the Classical Heritage 4 (Berkeley: University of California Press, 1983; repr. Eugene, OR: Wipf & Stock, 2004); Karl Gerlach, *The Antenicene Pascha: A Rhetorical History*, Liturgia Condenda 7 (Leuven: Peeters, 1998); Ruth Langer, *Cursing the Christians? A History of the Birkat HaMinim* (New York: Oxford University Press, 2011).

49 On the historical formation of the biblical canon, see Lee M. McDonald and James A. Sanders, *The Canon Debate* (Peabody, MA: Hendrickson, 2002); Lee Martin McDonald, *The Biblical Canon: Its Origin, Transmission, and Authority*, 3rd ed. (Peabody, MA: Hendrickson, 2007).

The psalter or book of psalms was by far the most important part of the Bible for musical purposes. It contains 150 hymns known as psalms, though the way they are numbered in Latin and Greek Bibles differs from the Hebrew way of numbering them. Almost all modern English Bibles, whether Catholic or Protestant, use the Hebrew numbering, but older Catholic Bibles in English use the Greek-Latin numbering (see Table 1.2).

Many of the psalms are ascribed to King David, who lived about 1000 BCE. He is thought to have sung them while accompanying himself on a stringed instrument called the *kinnor*, a type of lyre.[50] Hence the Greek word *psalmos*, which originally referred to the twanging sound of a plucked string, but later came to mean a song accompanied by a plucked-string instrument, was applied to these texts on the assumption that David performed them that way. In Christian art, however, David is usually shown playing a more familiar instrument, such as a harp in western Europe[51] (Figure 1.9) or a lute in Armenia. On the other hand, it is also believed that at least some of the psalms were sung in the Temple,[52] and indeed some of them are attributed to the Levites Asaph,[53] Jeduthun,[54] and the sons of Korah.[55] The Levitical families both sang and played a wide variety of instruments, and were said to have been appointed for this role by David himself (1 Chronicles 16:16–29, 35:1–8).

The Cantillation of the Hebrew Bible

We cannot know what melodies were sung by King David, the Levites or anyone else in ancient Israel, since we have no music notation from that period. The melodies of synagogue hymns and prayers were not written down in staff notation until the nineteenth century, with very few exceptions.[56] However, Hebrew Bible codices (not the scrolls actually used in the liturgy) traditionally include a system of punctuation signs,

50 1 Samuel 16:16, 23, 18:10–11, 19:9–10; 2 Samuel 22:1–23:7; Psalm 18. Joachim Braun, *Music in Ancient Israel/Palestine: Archeological, Written, and Comparative Sources*, trans. Douglas W. Stott (Grand Rapids, MI: William B. Eerdmans, 2002), 16–19. Yelena Kolyada, *A Compendium of Musical Instruments and Instrumental Terminology in the Bible*, trans. Y. Kolyada and David J. Clark (London: Equinox, 2009), 32–42.

51 Colum Hourihane, ed., *King David in the Index of Christian Art* (Princeton, NJ: Index of Christian Art, Princeton University Department of Art and Archaeology, Princeton University Press, 2002), 391–401.

52 Compare the refrain "his mercy endures forever" in Psalms 106, 107, 118, 136 (English numbers), with the reports of Temple singing in 1 Chronicles 16:34–41; 2 Chronicles 5:13, 7:3–6; 20:21; Ezra 3:11.

53 Psalms 50 and 73–83; 1 Chronicles 15:17–19, 16:5–7 and 37, 25:1–9; 2 Chronicles 5:12; Ezra 3:10; Nehemiah 12:46.

54 Psalms 39, 62, 77; 1 Chronicles 25:3–6; 2 Chronicles 5:12, 35:15.

55 Psalms 42, 44–49, 84–85, 87–88; 1 Chronicles 26; 2 Chronicles 20:19. See also Louis Jonker, "Another Look at the Psalm Headings: Observations on the Musical Terminology," *Journal of Northwest Semitic Languages* 30 (2004), 65–85.

56 Cataloged in Israel Adler, *Hebrew Notated Manuscript Sources up to circa 1840: A Descriptive and Thematic Catalogue with a Checklist of Printed Sources*, 2 vols., Répertoire International des Sources Musicales B IX[1] (Munich: G. Henle Verlag, 1989). See the chronological listing on pp. xlvi–xlix.

Table 1.2 Greek, Latin, Hebrew, and English systems for numbering the 150 psalms. Psalms 1 through 8 and 148 through 150 are the same in all versions. Psalms 9 and 10 and Psalms 113 through 116 are divided up differently. In most other cases, the Hebrew/English number is one number higher than the Latin/Greek number. Thus the Hebrew psalms 11 through 113 are the Greek psalms 10 through 112. The Latin Vulgate numbers were the same as the Greek Septuagint numbers until the twentieth century, when they were modified slightly as shown in the "Latin" column below. English Bibles that are translated from the Vulgate use Vulgate numbers, but the vast majority of English translations are made from the Hebrew and use the Hebrew numbers. However, English Protestant translations, unlike those in most other languages, often treat the first verse or two as unnumbered titles, so that the English verse 1 will be verse 2 or 3 in Hebrew, Greek, Latin, and most modern languages.

Greek	Latin	Hebrew	English
1–8	1–8	1–8	1–8
9	9A–9B	9–10	9–10
10–112	10–112	11–113	11–113
113	113A–113B	114–15	114–15
114–15	114–15	116	116
116–45	116–45	117–46	117–46
146–47	146–47	147	147
148–50	148–50	148–50	148–50

some of which are also used to learn how to chant the text. These signs are part of the Masorah ("transmission"), the apparatus for assuring that the text is transmitted correctly. For many centuries all Jewish communities have used the Tiberian Masorah, which dates from about the tenth century CE, though older manuscripts with different punctuation systems do exist. Since traditional Hebrew writing indicates only the consonants, the Tiberian Masoretic signs indicate the vowels, specify aspects of pronunciation and accentuation, and serve to mark the beginnings and ends of syntactical phrases. It is the syntactical signs, the *ṭeʿamim* (from a word meaning "discern"), that are used to assist the musical rendition, even though that is not their primary function. The disjunctive ṭeʿamim indicate the endings of phrases, clauses, sentences, or verses, where the reader should pause. The conjunctive signs mark places where the chanter should not pause but continue, until reaching the next disjunctive sign (see Figure 1.10). Both disjunctive and conjunctive signs are placed on accented syllables, so that they have a secondary function of indicating

Figure 1.9 King David strumming a harp, from an early thirteenth-century lancet window in the north transept at Chartres Cathedral. Even though the Bible says that David played a kinnor (a lyre-like instrument), the harp was more familiar to medieval Europeans. A harp has strings that extend from the sound board or sound box to an arm that extends out at an angle, whereas lyre strings extend to a horizontal bar held up by two vertical arms. But the fact that this harp has ten strings does not reflect medieval harp construction, but has a symbolic meaning instead. The artist was seeking to illustrate the "ten-stringed psaltery" mentioned in the Latin Vulgate, following the Greek Septuagint: *psaltērion dekachordon* (Psalms 32:2, 91:4, 143:9). However, the original Hebrew term, *nevel ʿaśor* (Hebrew Psalms 33:2, 92:4 [= English 92:3], 144:9), may have referred to a zither-like instrument, i.e., one in which the strings extend horizontally directly over the sound box (Kolyada, *Compendium*, 29–31; Braun, *Music*, 22–24). © 2004, Henri Alain de Feraudy


Sof pasuq (“end of verse”) marks the end of every biblical verse.


Etnaḥta (“pause”) marks the main pause in the middle of each verse.


Tifḥa (“diagonal”) is often the last disjunctive before sof pasuq or etnahta.


Revia (“fourth”) is one of the less important disjunctives.


Zarqa (“scatterer”) is another less important disjunctive.


Munaḥ (“resting”) is the most common conjunctive sign; it can precede many of the disjunctive signs.


Merḥa (“lengthener”) often precedes tifḥa.

Dotted circles show the position of the Hebrew letters relative to the ṭe‘amim signs. A sign can occur on any letter.

Figure 1.10 Examples of the more common ṭe‘amim

where the accents are. But at some point in history the practice of reading the Bible out loud acquired a musical aspect, so that it was more like singing than speaking. This in-between character is called “cantillation” in English.

In the most important parts of the Bible, the Torah (i.e., the first five books), and the excerpts from the prophets that are read in the synagogue (*haftarot*), each of the ṭe‘amim is traditionally associated with a melodic phrase. These melodies are taught to every Jewish boy (and in some communities now to girls also) in preparation for the Bar Mitzvah ceremony when, having reached the age of thirteen, he will read the Torah scroll during the Sabbath service, for the first time as an adult. However, since the scroll contains only the Hebrew consonants, he must memorize the ṭe‘amim and their melodies beforehand, using a manuscript codex or, nowadays, a printed book. Since the cantillation is complex and requires considerable ability to memorize, however, most liturgical readings are performed by a *ba‘al-ḳeri’ah* or master reader, who has made the commitment to learn the tradition thoroughly. The man who is called up from the congregation to read recites the requisite prayers, then stands nearby as the master reader cantillates in his place.

Since the ṭeʿamim have a syntactical function and do not of themselves convey musical information, the melodies associated with them differ from one Jewish community to another, according to the local oral tradition.[57] As a result it is difficult to know how old the melodies of any particular community may be. Only in the twentieth century did it become possible to learn the ṭeʿamim from audio recordings and books with staff notation. And the ṭeʿamim for the psalms and other books of the Bible, which are not routinely read in the synagogue, do not even have the same kind of fixed relationship to corresponding musical formulas that one finds in the Torah.[58]

Thus there is no way to demonstrate that the melodies sung in the Temple or the Kingdom of David have survived in the music of any Jewish community. Most of the parallels presented in Eric Werner's well-known book *The Sacred Bridge* involve misunderstanding or misinterpretation.[59] The scores and recordings produced by Suzanne Haïk-Vantoura under the title "The Music of the Bible Revealed" are utterly without historical basis and completely misrepresent the functions of the ṭeʿamim.[60] No less problematic is the oft-heard supposition that ancient Israelite melodies may have been preserved in medieval Christian chant, since neither tradition was fixed in writing until a millennium after the two religions separated. The rapid disappearance of Hebrew knowledge among early Christians, the history of hostility between the two religions, and the considerable differences between their liturgies present formidable obstacles to anyone trying to prove that any

57 The Eastern European interpretation of the ṭeʿamim has a far larger bibliography than any other. Classic works include: Solomon Rosowsky, *The Cantillation of the Bible: The Five Books of Moses* (New York: Reconstructionist Press, 1957); Abraham W. Binder, *Biblical Chant* (New York: Philosophical Library, 1959); Avigdor Herzog, "Masoretic Accents (Musical Rendition)," in *Encyclopedia Judaica* (Jerusalem: Encyclopedia Judaica; New York: Macmillan, 1971), XI: 1098–112; Joshua R. Jacobson, *Chanting the Hebrew Bible: The Art of Cantillation* (Philadelphia: Jewish Publication Society, 2002). For some other traditions: Avigdor Herzog, *The Intonation of the Pentateuch in the Heder of Tunis* (Tel Aviv: Israel Music Institute, 1963); Uri Sharvit, "The Musical Realization of Biblical Cantillation Symbols (*Teʿamim*) in the Jewish Yemenite Tradition," *Yuval: Studies of the Jewish Music Research Center* 4 (Jerusalem: Magnes Press of Hebrew University, 1982), 179–210; Johanna Spector, "Chant and Cantillation," *Musica Judaica* 9 (1986–87), 1–21; Reinhard Flender, *Der biblische Sprechgesang und seine mündliche Überlieferung in Synagoge und Griechischer Kirche*, Quellenkataloge zur Musikgeschichte 20 (Wilhelmshaven: Heinrichshofen, 1988); Reinhard Flender, "Die Entzifferung der massoretischen Akzente und der ekphonetischen Notation – ein Forschungsbericht," in *Musikkulturgeschichte: Festschrift Constantin Floros zum 60. Geburtstag*, ed. P. Petersen (Wiesbaden: Breitkopf & Härtel, 1990), 479–90.

58 Reinhard Flender, *Hebrew Psalmody: A Structural Investigation*, Yuval Monograph Series 9 (Jerusalem: Magnes Press, 1990).

59 Eric Werner, *The Sacred Bridge: The Interdependence of Liturgy and Music in Synagogue and Church during the First Millennium* (London: Denis Dobson; New York: Columbia University Press, 1959; with many reprints). Eric Werner, *The Sacred Bridge: The Interdependence of Liturgy and Music in Synagogue and Church during the First Millennium*, vol. 2 (London: Dobson; New York: Ktav, 1984). See Peter Jeffery, "Werner's *The Sacred Bridge*, Volume II: A Review Essay," *Jewish Quarterly Review* (1987), 283–98.

60 See my review of Suzanne Haïk-Vantoura, *The Music of the Bible Revealed: The Deciphering of a Millenary Notation*, trans. Dennis Webber, ed. John Wheeler (Berkeley, CA: BIBAL Press; San Francisco, CA: King David's Harp, 1991) *Biblical Archaeology Review* 18/4 (July/August 1992), 6.

ancient Israelite melodies have survived in Christian usage. "Ultimately it must be conceded that there is simply insufficient reliable information available at present to permit more than general and inconclusive observations about the relationship between ancient Jewish and early Christian chant in the first four centuries of the Common Era."[61]

On the other hand, melodic similarities have been pointed out between specific orally transmitted Jewish tunes and certain Christian chants, beginning with the work of Abraham Zwi Idelsohn.[62] Such resemblances might be due to coincidence, to borrowing or imitation during the medieval period or later, or to a common European or Middle Eastern background. The true significance of these similarities, if there is any, may eventually emerge as researchers on Jewish music develop more sophisticated ways of investigating the history and development of these mostly unwritten traditions.[63]

The Early Church

Early Christian worship did not develop out of Temple or synagogue ritual, but from more informal kinds of prayer and Bible study that took place during the banquets and meetings of Jewish sectarian groups. The best example is the group known as the Therapeutae, whose practices were described by Philo of Alexandria (died after CE 40), a Jewish Platonist philosopher who was a contemporary of Jesus and St. Paul. The common meals of the Therapeutae included Bible reading and instruction, with the singing of psalms and hymns, followed by all-night vigils of song and even dance.[64] Singing after banquets was in fact a common practice in the ancient world, among both Jews and Greeks (cf. Mark 14:26, Matthew 26:30). St. Clement of Alexandria (died about CE 215) wrote about early Christian dining practices and their accompanying hymnody, and his book *The Pedagogue* even ends (3.101.3) with the text of a

61 John Arthur Smith, *Music in Ancient Judaism and Early Christianity* (Farnham and Burlington, VT: Ashgate, 2011), 234.

62 Abraham Z. Idelsohn, *Jewish Music in Its Historical Development* (New York: Schocken Books, 1967), 31–34, 42, 47, 55–56, 58–65, 132. Idelsohn's pioneering and extremely important research on the musical oral traditions of various Jewish communities is summarized in Jehoash Hirshberg, *Music in the Jewish Community of Palestine 1880–1948: A Social History* (Oxford: Clarendon Press, 1995), 11–22; 184–86. *The Abraham Zvi Idelsohn Memorial Volume*, ed. Israel Adler, Bathja Bayer, and Eliyahu Schleifer, Yuval: Studies of the Jewish Music Research Centre 5 (Jerusalem: Magnes Press of Hebrew University, 1986), 15–180; Hebrew 15–40.

63 Recent examples: Regina Randhofer, "By the Rivers of Babylon: Echoes of the Babylonian Past in the Musical Heritage of the Iraqi Jewish Diaspora," *Ethnomusicology Forum* 13 (2004), 21–45; Sholom Kalib, *The Musical Tradition of the Eastern European Synagogue*, 2 vols. in 6 (Syracuse, NY: Syracuse University Press, 2001–05).

64 Peter Jeffery, "Philo's Impact on Christian Psalmody," in *Psalms in Community: Jewish and Christian Textual, Liturgical, and Artistic Traditions*, ed. Harold W. Attridge and Margot E. Fassler, Society of Biblical Literature Symposium Series 25 (Leiden: E. J. Brill; Atlanta: Society of Biblical Literature, 2003), 147–87.

hymn he may have composed himself.[65] Like Philo, whose works he knew well, Clement drew sharp contrasts between the devout, chaste, edifying meals of his own religious community and the drunken revelry and sexual antics that characterized so many pagan repasts.[66]

The Dead Sea Scrolls, discovered just after World War II, preserve evidence of the practices of another Jewish sect, which inhabited the monastic building complex at Qumran until it was destroyed during the First Jewish War. The library of scrolls, hidden in caves near the Dead Sea for almost 2,000 years, include many non-biblical psalms and hymns, as well as descriptions of ritual bathing, communal banquets, and prayer at fixed times of the day and night, all of which make for interesting comparisons with early Christian texts as well as with later synagogue worship. The Qumran sect rejected the Jerusalem Temple, whose priests they saw as corrupt. But many of the Qumran texts, particularly the hymns, imagine an idealized Temple in Heaven, where perfect worship was offered by angels – perfect worship that should be imitated by humans on earth.

After the earthly Temple's destruction, a comparable idea became popular in the early Church, namely that human praise and singing imitates the eternal song of the angels in Heaven (Revelation 4:1–11, 5:6–14, 7:9–12, 11:15–19, 14:2–3, 15:2–5). Thus there were some parallels among early Christian worship, early synagogue worship, and the worship of Jewish groups like the Qumran sect: they all remembered a lost Temple that prefigured a more perfect angelic worship to come. It is this parallelism, not a line of direct descent from Jewish to Christian worship, that appears to explain most of the cases where a Christian prayer text seems to be derived or adapted from a Jewish prayer text.[67]

65 Clement of Alexandria, *Clemens Alexandrinus*, vol. 1: *Protrepticus und Paedagogus*, 3rd ed., ed. Otto Stählin and Ursula Treu, Die griechischen christlichen Schriftsteller (Berlin: Akademie Verlag, 1972), 291. English translation: Clement of Alexandria, *Christ the Educator*, trans. Simon P. Wood, The Fathers of the Church: A New Translation (New York: Fathers of the Church, 1954), 276–78. John Anthony McGuckin, *At the Lighting of the Lamps: Hymns of the Ancient Church* (Oxford: SLG Press; Harrisburg, PA: Morehouse, 1995), 14–17.

66 James McKinnon, *Music in Early Christian Literature* (Cambridge University Press, 1987), 28–36; 1–4.

67 Examples can be found in the following books, though the authors' theories and interpretations are debatable: David A. Fiensy, *Prayers Alleged to Be Jewish: An Examination of the Constitutiones Apostolorum*, Brown Judaic Studies 65 (Chico, CA: Scholars Press, 1985); Stéphane Verhelst, *Les traditions Judéo-Chrétiennes dans la liturgie de Jérusalem: spécialement la Liturgie de saint Jacques frère de Dieu*, Textes et études liturgiques / Studies in Liturgy 17 (Leuven: Peeters, 2003); Daniel Stökl Ben Ezra, *The Impact of Yom Kippur on Early Christianity: The Day of Atonement from Second Temple Judaism to the Fifth Century* (Tübingen: Mohr Siebeck, 2003); Margaret Barker, *The Great High Priest: The Temple Roots of Christian Liturgy* (London: T. & T. Clark, 2003); Margaret Barker, *Temple Themes in Christian Worship* (London: T. & T. Clark, 2007).

Christological Hymns

Informative comparisons can also be made between early Christianity and the pagan polytheism that was the majority religion of the Roman empire. About the year 110 CE, Pliny the Younger (ca. CE 61–ca. CE 112), the Roman governor of Bythinia and Pontus in modern Turkey, wrote a letter to the emperor Trajan (ruled 98–117), seeking advice on how to prosecute Christians. By interrogating Christians who had been arrested, Pliny learned that, like Philo's Therapeutae, they engaged in two kinds of rites: (1) communal banquets and (2) nocturnal vigils, at which "they sing with each other spells to Christ, as if to a god." Nevertheless Pliny wasn't entirely sure what the Christians were actually guilty of; even when tortured they confessed to nothing more than "depraved and excessive superstition."[68] Still, Pliny's mention of "spells to Christ" may refer to what modern scholars call "Christological hymns," which poetically outline the main doctrinal beliefs about Christ. Biblical passages like John 1, Philippians 2, and Colossians 1:15–22 are thought by some to be early examples of such Christological hymns. In one particularly interesting case, Ephesians 5:14 seems to quote an early hymn, and Clement of Alexandria gives us the rest of the stanza (see Figure 1.11). The theme of Christ as the sun or light of the world occurs in several early hymn texts, notably the lamp-lighting hymn *Phōs hilaron*, already noted as very old by St. Basil the Great (died 379), and still sung today at Vespers in the Greek Orthodox Church.[69] Another early hymn that survived into medieval and even modern usage, in both East and West, is *Sub tuum praesidium*, the earliest hymn to the Virgin Mary (see Figure 1.11).[70] Regrettably none of their early melodies survive, even though ancient Greeks had a kind of music notation. The sole exception is a papyrus fragment found at Oxyrhynchus in Egypt, which preserves the ending of an otherwise unknown Christian hymn with musical signs above the text.[71]

68 Pliny the Younger, *Epistularum Libri Decem* 10.96. A different but full translation by Betty Radice is in Pliny, *Letters and Panegyricus*, 2 vols., Loeb Classical Library 55; 59 (Cambridge, MA: Harvard University Press, 1969), II: 285–93. I do not agree with those who say that the "spells to Christ" were sung antiphonally or in alternation; I have translated *secum invicem* as "with each other." For recent bibliography see Alistair C. Stewart, "The Christological Form of the Earliest Syntaxis: The Evidence of Pliny," *Studia Liturgica* 41 (2011), 1–8.

69 Peter Plank, ΦΩΣ ΙΛΑΡΟΝ*: Christushymnus und Lichtdanksagung der frühen Christenheit*, Hereditas: Studien zur Alten Kirchengeschichte 20 (Bonn: Borengässer, 2001). Frieder Schulz, "*Lumen Christi:* Der altkirchliche Vespergesang Phos hilaron; Zur westkirchlichen Rezeption: Forschung, Übertragung, Musikfassung," *Jahrbuch für Liturgik und Hymnologie* 43 (2004), 11–48.

70 Maxwell Johnson, "*Sub Tuum Praesidium:* The *Theotokos* in Christian Life and Worship before Ephesus," in *The Place of Christ in Liturgical Prayer: Trinity, Christology, and Liturgical Theology*, ed. Bryan D. Spinks (Collegeville, MN: Liturgical Press, 2008), 243–67.

71 Egert Pöhlmann and Martin L. West, eds. *Documents of Ancient Greek Music: The Extant Melodies and Fragments* (Oxford: Clarendon Press, 2001), 190–94.

1. A hymn quoted in the New Testament and in Clement of Alexandria, *Protrepticus* 9.84.2.

Awake, O sleeper, and arise from the dead,
and Christ shall give you light [= Eph 5:14],
the sun of the resurrection,
begotten before the morning star [Ps 110:3]
who gives life by his own very rays.

Translation: Robert Taft, *The Liturgy of the Hours in East and West: The Origins of the Divine Office and its Meaning for Today*, 2nd rev. ed. (Collegeville, MN.: Liturgical Press, 1993), 350.

2. *Sub tuum praesidium* (mid 3rd cent.), the earliest known hymn to the Virgin Mary.

We take refuge in your mercy, O Mother of God.
Do not disregard our prayers in troubling times,
but deliver us from danger,
O only pure one, only blessed one.

Translation adapted from Stephen J. Shoemaker, "Marian Liturgies and Devotion in Early Christianity," *Mary: The Complete Resource*, ed. Sarah Jane Boss (London: Continuum, 2007), 130–45, at p. 130.

3. The Oxyrhynchus hymn (late 3rd cent., named for the place it was found, the only ancient Christian text with music notation).

. . . Let it be silent
let the luminous stars not shine,
let the winds (?) and all the noisy rivers die down;
and as we hymn the Father, the Son and the Holy Spirit,
let all the powers add "Amen, Amen."
Empire, praise always, and glory to God,
the sole giver of all good things. Amen, amen.

Translation: M. L. West, *Ancient Greek Music* (Oxford University Press, 1992), 325.

4. *Phōs hilaron*, hymn for lighting the evening lamps.

O cheerful Light, Jesus Christ,
holy glory of the immortal Father, who is heavenly, holy, blessed!
As we come to the setting of the sun, and behold the evening light,
we hymn the Father, Son and Holy Spirit: God.
Worthy are you in every moment to be hymned by happy voices,
O Son of God, giver of life.
Therefore the cosmos glorifies you.

Figure 1.11 Some early Christian hymn texts

The Post-Nicene Period

Two Types of Worship

With the Edict of Milan in CE 313, Christianity became a legal religion within the Roman empire. Persecution ended, and the Church held its first ecumenical (worldwide) council in CE 325, at Nicea near Constantinople.

The council serves as a convenient marker for historians, separating early Church history into pre-Nicene and post-Nicene periods, with liturgical and musical practices being much better documented in the latter. By the end of the fourth century Christianity had become the predominant religion of the Roman empire, and by then two approaches to Christian worship had emerged, each with its own kind of music. In twentieth-century scholarship it became common to refer to these two types as "cathedral" and "monastic" worship.[72]

Desert or Monastic Worship Monastic or desert worship, the simpler of the two kinds, looked back to the practices of the first monks in the Egyptian desert, where many fourth-century Christians had fled to lead lives of austerity and asceticism – rejecting the lukewarm, superficial and opportunistic kinds of Christianity that became common once large numbers of people began converting to the newly official religion.[73] In fact, however, monasticism was never limited to the desert, since there were monastic communities inside the cities as well. The key features of monastic worship were:

(1) It was relatively egalitarian, since the early monks were lay men and women, not members of the clergy. Differences were based on seniority rather than clerical rank.
(2) It emphasized memorization of the Bible, especially the psalms and canticles, to enable constant meditation on these texts, and therefore their continuous recitation over fixed periods of time. Reciting all 150 psalms in one day or one week became a typical ideal.
(3) It had little use for newly composed hymn texts that were not in the Bible.

Urban or Cathedral Worship The other kind of worship to emerge clearly in the fourth century might be called "urban," since it took place in the large cities, but it is usually called "cathedral" worship, since the cathedral was the main church in each city, where the chief clergyman, the bishop, had his throne (Greek *kathedra*). Urban/cathedral worship differed from monastic worship because it was intended to include the entire urban community: clergy, laity, and even monks.[74] Thus several features of urban or cathedral worship distinguished it from desert or monastic worship.

72 Paul F. Bradshaw, "Cathedral and Monastic: What's in a Name?" *Worship* 77 (2003), 341–53. Stig Simeon R. Frøyshov, "The Cathedral–Monastic Distinction Revisited 1: Was Egyptian Desert Liturgy a Pure Monastic Office?" *Studia Liturgica* 37 (2007), 198–216.
73 Relevant excerpts in McKinnon, *Music in Early Christian Literature*, 51–63.
74 Excerpts from relevant texts in McKinnon, *Music in Early Christian Literature*, 75–111.

(1) Cathedral worship was hierarchical, since the lay people were led by the clergy, headed by the bishop of the city. Below the bishop were the priests or elders, followed by the deacons, and lower still the minor orders, including readers, singers, acolytes, exorcists, doorkeepers, gravediggers, and so on.
(2) Cathedral worship was stational: every Sunday and major feast day, the bishop and his entourage traveled to one of the churches in the city or the surrounding area, and there celebrated the services of morning and evening prayer, as well as the Mass of the day. Over the course of the year, therefore, a station or round of services would be held at least once at each of the major churches of the city.
(3) Because of the stational system, urban worship put a lot of emphasis on marking the passage of time – both the hours of the day and night and the annual cycle of liturgical feasts and fasts.
(4) Therefore, instead of reciting all the psalms or complete Biblical books within a fixed space of time, as in monastic worship, the psalms and other sections of the Bible were chosen to fit the occasion or time of day. Thus emerged the distinction between ordinary texts (which rarely or never changed) and proper texts (which were different every day). This in turn created a need for liturgical books to keep track of when each text needed to be read or sung.
(5) Urban worship made greater use of non-scriptural songs and hymns than monastic worship did.

Their Influence on Each Other Though early Christian music cannot be understood without the monastic/urban distinction, it is important to note that these ideal types were often mixed in practice. Desert monastic communities that lacked priests of their own would need to go into town to attend Sunday Mass. Monastic communities located in cities found ways to be included in the daily and annual cycles of urban stational worship. Then, as late Antiquity gave way to the Middle Ages, it became more common for monks to be ordained to the clergy, and for the clergy to adopt monastic practices such as celibacy and communal life. By the Middle Ages, then, both monk-priests and ordinary priests celebrated the Mass and the other sacraments, and both had the obligation (*officium*) to observe all the daily prayer hours, which therefore became known as the Divine Office.[75]

75 Robert Taft, *The Liturgy of the Hours in East and West: The Origins of the Divine Office and its Meaning for Today*, 2nd rev. ed. (Collegeville, MN: Liturgical Press, 1993).

The monastic emphasis on the psalms also came to transform elementary education. Jewish and Christian authors, like some of the pagan philosophers, had long been troubled by the fact that children were taught to read from texts that described the excessive drinking, sexual escapades, and vengeful violence of the pagan gods. But the need to learn to read the Bible made most Christians unwilling to give up on literacy altogether. St. Basil of Caesarea (died 379) tried to strike a balance in his *Address to Young Men on Reading Greek Literature*,[76] and St. Augustine tried to do the same for Latin readers in his *On Christian Doctrine*.[77] Monasticism, however, offered a new model, since illiterate novices were required to learn to read and memorize the psalms as part of their training to become monks. Thus Cassiodorus, in the sixth century, tried to turn the psalter into an introductory guide to the liberal arts by writing his *Exposition of the Psalms*,[78] thereby pointing the way to the medieval curriculum that began the teaching of literacy with the psalms.

For all these reasons, then, every medieval chant tradition, Eastern and Western, represents some kind of hybrid or synthesis of the two kinds of worship. In Rome, each of the great basilicas of St. Peter, St. Paul, St. Mary Major, and so on was served by one or more monasteries that provided clergy to the basilica. As a result, a monastic approach prevailed in the shaping of the Divine Office at Rome, and the non-monastic services of cathedral worship disappeared almost completely. Both monks and ordinary clergy shouldered the obligation to recite all 150 psalms every week, but each group had its own arrangement for distributing the psalms across the days and hours. The Monastic cursus, outlined in the sixth-century Rule of St. Benedict (chapters 8–20)[79] was used by all monastic orders of Benedictine origin. The Roman cursus was used by diocesan priests and all non-Benedictine religious orders. In some of the great Greek-speaking cities, on the other hand, the non-monastic urban rite lasted much longer than in the West: in Constantinople until the Latin kingdom of the Crusaders (1204–61), in Thessalonica even up to the

76 Translated by Roy Joseph Deferrari and Martin R. P. McGuire in Saint Basil, *The Letters*, vol. IV, Loeb Classical Library 270 (Cambridge, MA: Harvard University Press, 1934; with many reprints), 363–435.
77 Ed. and trans. R. P. H. Green in Augustine, *De Doctrina Christiana* (Oxford: Clarendon Press, 1995).
78 Magni Aurelii Cassiodori, *Expositio Psalmorum*, ed. M. Adriaen, Corpus Christianorum Series Latina 97–98 (Turnhout: Brepols, 1958). Trans. P. G. Walsh in Cassiodorus Senator, *Explanation of the Psalms*, 3 vols., Ancient Christian Writers 51–53 (New York: Paulist Press, 1990–91).
79 The best edition, with extensive commentary, is Adalbert de Vogüé and Jean Neufville, eds., *La Règle de saint Benoît*, 7 vols., Sources Chrétiennes 181–86 [no series number for vol. 7] (Paris: Cerf, 1971–72; 1977). The best English translations for historical research purposes are: Terrence G. Kardong, *Benedict's Rule: A Translation and Commentary* (Collegeville, MN: Liturgical Press, 1996); Timothy Fry, ed., *RB 1980: The Rule of St. Benedict in Latin and English with Notes* (Collegeville, MN: Liturgical Press, 1981). The latter includes [Nathan Mitchell,] "The Liturgical Code in the Rule of Benedict," 379–414.

fifteenth-century Ottoman conquest.[80] Inevitably it was the monks who took on the task of rebuilding, but the Byzantine monastic office included more "cathedral" elements than the Latin Monastic and Roman cursus did. These "cathedral" elements came from the urban rite of Jerusalem, where the Greek-speaking Christian community had been under Arab Muslim rule since the year 637.

The Liturgical Tradition of Jerusalem

It is in fact in the early liturgy of Jerusalem, Christianity's holy city, that we can see the emergence of urban worship most clearly, while learning something about early monastic worship as well. Information begins in the fourth century, with the Greek sermons of the city's bishop, St. Cyril of Jerusalem (died 387).[81] A particularly important source, though it survives in only one manuscript with several missing pages, is the travelogue or *Itinerarium* written by Egeria, a Latin nun from somewhere in Spain or southern France, who wrote up her experiences in order to share them with her sisters back home. One of the very few early Christian texts known to have been composed by a woman, it originally included a description of the entire liturgical year as she herself observed it in CE 381–83.[82] Jerusalem was probably the place where stational liturgy originated: on every holiday, whether the celebration commemorated Jesus' birth or death, the Raising of Lazarus, the Last Supper, the Ascension, the martyrdom of St. Stephen or whatever else, the people and the clergy traveled to the exact location where (according to local memory) the original event had taken place. And, as Egeria frequently marveled, all the texts of the readings and the psalms were chosen to match both the day and the place.[83]

The early liturgical books from Jerusalem are among the oldest extant Christian liturgical sources, but for the most part they survive in translations, not the original Greek. Because the fifth-century church of Armenia decided to adopt the Jerusalem rite for its own use, early Armenian manuscripts faithfully preserve the calendar of readings and responsorial psalms used in

80 Oliver Strunk, "The Byzantine Office at Hagia Sophia," *Essays on Music in the Byzantine World* (New York: W. W. Norton, 1977), 112–50. St. Symeon of Thessalonike, *The Liturgical Commentaries*, trans. and ed. Steven Hawkes-Teeples (Toronto: Pontifical Institute of Mediaeval Studies, 2010). St. Symeon of Thessalonike, *Treatise on Prayer: An Explanation of the Services Conducted in the Orthodox Church*, trans. H. L. N. Simmons (Brookline, MA: Hellenic College Press, 1984).

81 Edward Yarnold, *Cyril of Jerusalem* (London: Routledge, 2000). Alexis James Doval, *Cyril of Jerusalem, Mystagogue: The Authorship of the Mystagogic Catecheses*, Patristic Monograph Series 17 (Washington, DC: Catholic University of America Press, 2001). Jan Willem Drijvers, *Cyril of Jerusalem: Bishop and City*, Supplements to Vigiliae Christianae 72 (Leiden: Brill, 2004).

82 *Egérie: Journal de Voyage (Itinéraire)*, ed. Pierre Maraval, Sources Chrétiennes 296 (Paris: Cerf, 1982). Translated in John Wilkinson, *Egeria's Travels*, 3rd ed. corrected (Oxford: Aris & Phillips; Oxbow Books, 2006). On the date, see 35–45, 169–71.

83 Some excerpts in McKinnon, *Music in Early Christian Literature*, 111–17.

fifth-century Jerusalem, even though no Greek MSS are known. A similar transplantation into Georgia occurred in the eighth century, producing Georgian translations of the entire annual cycle of Jerusalem hymns, along with much other material.[84] However, Greek liturgical texts from Jerusalem recently turned up in manuscripts discovered at Mount Sinai in Egypt, which have barely begun to be investigated.[85] From what we already know, though, it is possible to see that, although only Armenia and Georgia adopted the Jerusalem rite wholesale, many other liturgical traditions throughout the Christian world were partly shaped by influences and borrowings from Jerusalem. The most important of these borrowings was the Oktōēchos, the eight musical "church modes" that govern Gregorian chant and many, but not all, of the Eastern chant traditions.

The Eight Church Modes

One of the most impressive services in the rite of Jerusalem was the Resurrection Vigil, celebrated early on Sunday mornings before the tomb of Jesus, now known as the Holy Sepulchre. Egeria described how the lay people and monks gathered outside during the night, singing "hymns and antiphons" until cockcrow, when the bishop arrived and everyone went in. Then three psalms were "said," incense was lit, and the bishop went to the door of the tomb to read the entire story of Jesus' Passion and Resurrection from one of the Gospels.[86] Over time, the bishop's one long reading from a single Gospel developed into a series of shorter readings from all four Gospels, covering only the Resurrection story and spread across a four-week cycle. However, since some Gospels include more than one account of the Resurrection, the four-week cycle was doubled to eight weeks, so that shorter excerpts could be read each week, as shown in Figure 1.12.[87] This practice survived in different forms in the Armenian and Byzantine rites, but not in most others.

84 Peter Jeffery, "The Sunday Office of Seventh-Century Jerusalem in the Georgian Chantbook (Iadgari): A Preliminary Report," *Studia Liturgica* 21 (1991), 52–75. P. Jeffery, "The Lost Chant Tradition of Early Christian Jerusalem: Some Possible Melodic Survivals in the Byzantine and Latin Chant Repertories," *Early Music History* 11 (1992), 151–90. P. Jeffery, "Jerusalem and Rome (and Constantinople): The Heritage of Two Great Cities in the Formation of the Medieval Chant Traditions," *Cantus Planus: Papers Read at the Fourth Meeting, Pécs, Hungary 3–8 September 1990* (Budapest: Hungarian Academy of Sciences, Institute for Musicology, 1992), 163–74. P. Jeffery, "The Earliest Christian Chant Repertory Recovered: The Georgian Witnesses to Jerusalem Chant," *Journal of the American Musicological Society* 47 (1994), 1–39.

85 Holy Monastery and Archiepiscopate of Sinai, Τα νέα ευρήματα του Σινά (Athens: Ministry of Culture, Mount Sinai Foundation, 1998).

86 *Itinerarium* 24.8–11, trans. Wilkinson, *Egeria's Travels*, 144–45.

87 Sebastià Janeras, "I vangeli domenicali della resurrezione nelle tradizioni liturgiche agiopolita e bizantina," *Paschale Mysterium: Studi in memoria dell'Abate Prof. Salvatore Marsili (1910–1983)*, ed. Giustino Farnedi, Studia Anselmiana 91; Analecta Liturgica 10 (Rome: Pontificio Ateneo S. Anselmo,

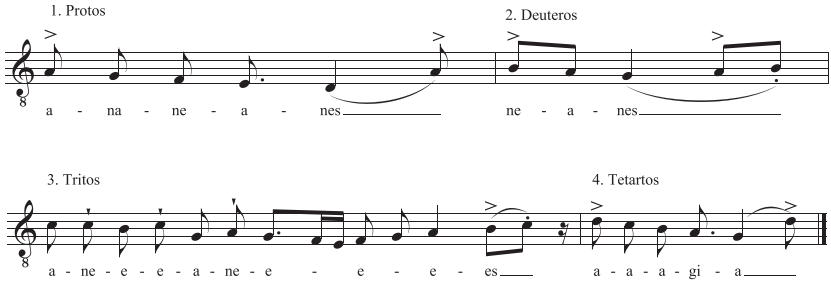
Matthew 28:1–20	Mode 1
Matthew 28:1–20	Mode 1 plagal
Mark 16:2–8	Mode 2
Mark 16:9–20	Mode 2 plagal
Luke 24:1–12	Mode 3
Luke 24:36–53	Mode 3 plagal
John 20:1–10	Mode 4
John 20:11–18	Mode 4 plagal

Figure 1.12 Cycle of eight readings from the four Gospels for the Resurrection vigil at Jerusalem, with corresponding musical modes. After Stig Simeon R. Frøyshov, "The Early Development of the Liturgical Eight-Mode System in Jerusalem," *Saint Vladimir's Theological Quarterly* 51 (2007), 139–78 at 159.

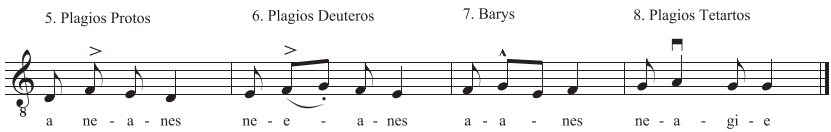
By the sixth century, apparently, the 4 × 2 arrangement of Resurrection Gospel readings was being paralleled in hymnody by a system of four "principal" (*authentikos*) modes, numbered 1–4, and four "side" (*plagios*) modes, also numbered 1–4. The earliest theoretical discussions of their musical characteristics are found in a half dozen Armenian liturgiological and musicological treatises, which have yet to be fully edited and evaluated.[88] But we may be able to get some sense of the musical content at an early stage of development from the ēchēmata ("sounds") of Byzantine chant. Also known as apēchēmata and enēchēmata, they are brief tune-up melodies set mostly to nasal syllables, one for each mode. They may originally have been sung by the choir leader, or by individual singers, as a way to recall the modal characteristics of the chant they were about to perform. But they became the basis of the modal signatures that are found in notated Byzantine chant manuscripts from the tenth century. In their most basic form, shown in Example 1.1a, the ēchēmata of the authentic modes each begin and end on the same pitch, a, b, c, or d, moving through a tetrachordal or pentachordal space in between, though there are other forms in which they end on other pitches. The four plagal or "side" modes, similarly, begin and end on D, E, F, or G in their most basic form, as shown in Example 1.1b. As a result the two tetrachords cover

1986), 55–69. Stig Simeon R. Frøyshov, "The Early Development of the Liturgical Eight-Mode System in Jerusalem," *Saint Vladimir's Theological Quarterly* 51 (2007), 139–78 at 158–61.
88 Frøyshov, "The Early Development," 169–71.

Example 1.1a The ēchēmata of the Greek authentic modes in their most basic form. Source for concept: Jørgen Raasted, *Intonation Formulas and Modal Signatures in Byzantine Musical Manuscripts*, Monumenta Musicae Byzantinae: Subsidia 7 (Copenhagen: Munksgaard, 1966), 9. Actual image is the author's own.



Example 1.1b The ēchēmata of the Greek plagal modes in their most basic form. Source for concept: Jørgen Raasted, *Intonation Formulas and Modal Signatures in Byzantine Musical Manuscripts*, Monumenta Musicae Byzantinae: Subsidia 7 (Copenhagen: Munksgaard, 1966), 9. Actual image is the author's own.



an octave from D to d.[89] To some extent the syllabic psalm tones of Byzantine chant follow a similar pattern, particularly in the four authentic modes, in which the reciting pitches are a, b, c, and d.[90] Thus one can hypothesize, for the time being, that each mode originally centered on a specific recitation pitch in a two-tetrachord space.

Of course things quickly got more complicated. In Jerusalem, the eight modes gradually spread from the hymnody close to the four Gospels to include all the hymn texts sung on Sundays. The result was an eight-week

89 Jørgen Raasted, *Intonation Formulas and Modal Signatures in Byzantine Musical Manuscripts*, Monumenta Musicae Byzantinae: Subsidia 7 (Copenhagen: Munksgaard, 1966), 9. See also Oliver Strunk, "Intonations and Signatures of the Byzantine Modes," in O. Strunk, *Essays on Music in the Byzantine World*, ed. Kenneth Levy (New York: W. W. Norton, 1977), 19–36, esp. 32–33.

90 Christian Troelsgård, "Simple Psalmody in Byzantine Chant," *Papers R.ead at the 12th Meeting of the I[nternational] M[usicological] S[ociety] Study Group Cantus Planus: Lillafüred/Hungary, 2004. Aug. 23–28*, ed. László Dobszay (Budapest: Hungarian Academy of Sciences, 2006), 83–92.

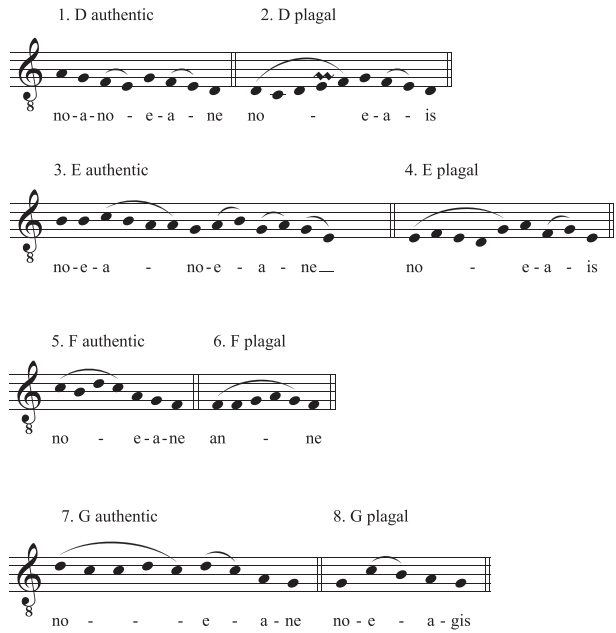
cycle of Resurrection-themed chant texts, one mode per week. These were collected in a book called Oktōēchos (after the eight ēchoi or modes), which later evolved into the Anastasimatarion or Resurrection-book of the modern Byzantine rite. Another book organized by musical mode was the Heirmologion, containing the model melodies or heirmoi used to sing the canons, or series of stanzas composed to accompany the nine biblical odes used in the Byzantine morning service. Both books appear to have formed in the Palestinian monasteries near Jerusalem, hence their traditional association with St. John of Damascus (ca. 676–749), a monk of Mar Saba and one of the greatest theologians of the Eastern Orthodox Church.

From Jerusalem, the eight modes gradually spread to other chant repertories in the Greek, Slavonic, Syriac, Armenian, and Georgian linguistic realms. In the eighth century, the eight modes were imported into the Latin West, to serve a central role in the Frankish reformulation of Roman chant that became known as Gregorian chant. They were never adopted by the older local Latin traditions that Gregorian chant largely replaced – Milanese, Visigothic or Mozarabic, Beneventan, Old Roman. In each of the Eastern and Western musical cultures that did adopt the eight modes, however, changes were made, as if to adjust the theory to local usage. In the Latin world, where the modes had arrived by the late eighth century, for some reason they were adjusted so that the authentic modes ended on the same four finals as the plagal modes: D, E, F, or G. Thus each final would henceforth host two modes: one authentic, one plagal, as shown in Example 1.2.[91] In the later history of the Eastern churches it became common to number the plagal modes 5–8, retaining the authentic modes as 1–4. But in the West, modes with the same final were grouped together, with authentic and plagal alternating, so that the Latin authentic modes came to be numbered 1, 3, 5, 7, and the plagal modes 2, 4, 6, 8.

Before long, efforts were being made to conflate the Latinized Oktōēchos with the modes of Boethius, though the two originally had nothing to do with each other. The octave of the church modes ascends from D to d, while the System descends two octaves from a′ to A, and the tetrachords of the Greater and Lesser Perfect Systems were not the same as the tetrachords of the Jerusalem modes. These efforts resulted in the D mode being linked to the name Dorian and so on, as students are still being taught today. But the notion that the modes of Gregorian chant go back to ancient Greece has no more historical reality than the idea that Gregorian psalmody goes back to the Jerusalem Temple.

91 Terence Bailey, *The Intonation Formulas of Western Chant*, Studies and Texts 28 (Toronto: Pontifical Institute of Mediaeval Studies, 1974), 12.

Example 1.2 The ēchēmata of the Latin modes in their shortest form. Source for concept: Terence Bailey, *The Intonation Formulas of Western Chant*, Studies and Texts 28 (Toronto: Pontifical Institute of Mediaeval Studies, 1974), 12. Actual image is the author's own



Summary

The music of medieval Western Europe was created with the help of three legacies from older civilizations: the philosophy and learning of ancient Greece, the poetry and narratives of ancient Israel, and the cultural synthesis of the early Church. From ancient Platonic philosophy, medieval Europe inherited the Pythagorean theory of acoustics based on numerical ratios, as well as concepts about the ability of music to mimic and influence different types of behavior. As Greek music theory was transmitted through Latin writers, it was identified as one of the seven liberal arts, indeed part of the mathematical quadrivium. This included concepts of rhythm and meter that originated in the theory of Greek poetry, but were modified somewhat as they came to be reapplied to Latin poetry. It also involved a theory of word accent, marked by various notae or signs, which underlay the medieval development of more advanced systems of musical neumes. Finally it included the theory of harmonics, based on the tuning of the ancient Greek kithara, particularly as

described by Boethius in his Latin paraphrases of Greek theoretical texts. From this medieval Europe inherited a fundamentally tetrachordal arrangement of musical space and a system of tuning transpositions that contributed to the formation of medieval modal theory.

From ancient Israel, medieval Europe inherited the religious writings that were incorporated into the Christian Bible, notably the psalms. From the historical narratives in the Bible, medieval Christians learned about the Temple as representing an ideal form of worship, an earthly copy of the eternal praises sung by the angels in Heaven. The destruction of the Temple during the first century CE, however, forced a reformulation of Judaism around Talmudic study and synagogue worship, where the cantillation of the Torah of Moses was an act of central importance. Since musical notation was rare in Jewish cultures, reconstructing the history of oral traditions that survive today requires rather different methodologies from the heavily paleographical approach used for medieval Christian music, where notated sources are abundant.

In the early Church, the use of hymns – largely Christological in content – gave way to the two kinds of worship that emerged in the fourth century. Monastic or desert worship, more ascetic and egalitarian, focused on the recitation of the psalms. This contributed to a reformulation of the educational curriculum, so that basic literacy was acquired by reading the psalms instead of texts full of pagan deities. In cathedral or urban worship, the entire urban community, led by the clergy, celebrated the liturgical year by traveling to various sites of religious significance around the city. The model for urban worship was Jerusalem, where the first Christian community had lived under the leadership of the apostles. There the most important religious site was the tomb of Jesus, and it was in the Resurrection Vigil of Sunday morning, where the bishop read from the four Gospels, that a form of musical organization emerged based on recitation tones organized in two tetrachords. These became the medieval modes of Gregorian chant, Byzantine chant, and some other Eastern chant traditions.

It was in the Carolingian period, during the reign of Charlemagne and his successors, that the elements inherited from these three cultures were brought together for the first time, and molded into the Frankish recension of Gregorian chant – the first truly medieval music.

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Origins and Transmission of Franco-Roman Chant

ANDREAS PFISTERER

This chapter deals with events for which there is no direct documentation and about which there is no consensus among scholars. To hope that a consensus might be established by virtue of better arguments is utopian. Therefore, there are two possible ways of writing an article on this topic. One can be silent about history and speak about documents, or one can put forward one's own view in a hopefully consistent manner and present arguments that might prove relevant even within the framework of a different view. I will follow the second path.

The first half of the chapter deals with the origins of the Roman chant repertory – this topic is part of the history of liturgy and can be treated mostly without looking at the music. The second half deals with the phase of transmission that connects the origins with the musical manuscripts – this topic is treated here from the point of view of the melodies. I am convinced that the music provides more and better evidence than all the arguments by analogy from cultural history.

Professionalization of Liturgy

In contrast to the chant of Eastern liturgies, in late Antiquity in the West creativity is centered on chants with biblical texts; Mass chants are mainly from the psalms, office chants include texts from the whole Bible. There is a special feature, most clearly visible in the Roman Mass, that James McKinnon has termed "properization."[1] Not only feasts but also each Sunday and each day of Lent has its own chant formulary. Thus the repertory of the Mass chants in existence ca. CE 750 includes 148 Introits, 117 Graduals, about 40–50 Alleluias, 15 Tracts, 93 offertories, and 146 communions.[2] The Office repertory is less

1 James McKinnon, "Properization: The Roman Mass," in *International Musicological Society Study Group Cantus Planus: Papers Read at the 6th Meeting, Eger, Hungary, 1993* (Budapest: Hungarian Academy of Sciences, Institute for Musicology, 1995), 15–22.

2 The numbers are based on the manuscripts from the ninth and tenth centuries, excluding pieces that are probably Frankish additions, while including a few cases of pieces (almost) lost in transmission.

easily defined; it numbers a few hundred antiphons and responsories. Building up a repertory of that sort, and even more so preserving it in the memory and transmitting it to the following generations, requires the concentrated effort of an institution. For these reasons McKinnon attributed it to the Roman Schola cantorum and proposed a date in the second half of the seventh century, i.e., during a time of recovery from the catastrophes of the sixth century (Gothic wars, invasion of the Langobards). This late date has been contested in the course of my defense of a more traditional early date. In fact, McKinnon's argument is fragile in some points and there are clear indications of the existence of substantial parts of the repertory before Gregory I (590–604).[3]

The analysis of the liturgical order of the Mass antiphonary in the light of the history of the Roman calendar within the seventh century leads to a *terminus ante quem* in the middle of that century. The formularies of the feasts Hypapanti (2.2.) and Cena Domini, introduced around that time, borrow pieces from the Temporale. So the last comprehensive reworking of the Mass antiphonary seems to have taken place in the first half of the seventh century. But parts of the repertory are older.

The Introit "Ecce aduenit" is cited in the Vita of Pope Vigilius (537–555) in the roughly contemporary *Liber pontificalis*. A decisive piece of evidence is provided by the study of the chant texts from Isaiah: the pieces for the Advent season (introduced in the late sixth century) use the Latin text version called Vulgata; the pieces for the rest of the year use instead (with a few exceptions) older text versions that are today called collectively Vetus Latina. For some of these Vetus Latina texts it is clear that they have been chosen for the special Sunday or feast to which they are assigned, so they cannot constitute a pre-properization repertory. It is thus impossible to interpret the Advent chants as the initial layer of the repertory as McKinnon did; on the contrary, they must be seen as a late layer.

So the date of the properization project should be moved back to the period before the Gothic wars (535–555) devastated Italy. And this brings it closer to another development in liturgical history which might appropriately be called "professionalization."

3 McKinnon, *The Advent Project: The Later-Seventh-Century Creation of the Roman Mass Proper* (Berkeley: University of California Press, 2000). Andreas Pfisterer, "James McKinnon und die Datierung des gregorianischen Chorals," *Kirchenmusikalisches Jahrbuch* 85 (2001), 31–53. Pfisterer, *Cantilena Romana: Untersuchungen zur Überlieferung des gregorianischen Chorals*, Beiträge zur Geschichte der Kirchenmusik 11 (Paderborn: Schöningh, 2002), 217–32. Cf. the similar results of the independent study of non-psalmic Introit texts in Christoph Tietze, "The Use of Old Latin in the Non-Psalmic Introit Texts" in *Papers Read at the 12th Meeting of the IMS Study Group Cantus Planus, Lillafüred/Hungary, 2004, Aug. 23–28* (Budapest: Hungarian Academy of Sciences, Institute for Musicology, 2006), 259–83.

Simplifying somewhat, in patristic times one may distinguish two liturgical spheres: cathedral and monastery.[4] The liturgy of the cathedral is characterized by the opposing roles of clergy and people; in the monastery, there are neither clergy nor people, but a group of professional worshipers. In the Middle Ages, however, the difference between cathedrals, collegiate churches and monasteries is not very great, for in all of them the liturgy is performed by a community of professional worshipers. The presence of the people is not required for any part of the liturgy, the presence of the bishop only rarely. The development that led from one stage to the other remains obscure due to the lack of sources. What seems to be clear is the mutual influence of cathedral and monastery beginning in the fourth century: one could speak of the clericalization of monks and the monasticization of clerics.

The musical implications of this development have been described by McKinnon as a change "from lector chant to schola chant."[5] The "responsorial" way of psalmody, as we know it from patristic texts, corresponds to the situation of the cathedral liturgy: a cleric, who knows the psalms by heart or is able to read them from a book, sings the successive verses, the people respond to each verse with a refrain that can be sung by heart by everybody. In the monasteries the same way of soloistic performance was used in the Office, sometimes even without a refrain. The preference for listening seems to correspond to the original monastic interpretation of psalmody as a type of meditation on scriptural texts.[6] But then the possibility of singing the verses together, since all members knew them by heart, was put into practice. As with all long texts (hymns, ordinary chants), the division into two choirs that sing alternately is a means of avoiding exhaustion. The refrain, originally a means of allowing the participation of the people, becomes superfluous in that respect; it is retained as the common beginning and ending of the psalm and as a means of adding thematic emphasis to the psalm text. The question of when and where this change in the office psalmody took place remains open; from the ninth century onwards the "antiphonal" type of psalmody is attested as the normal way.[7]

According to the traditional view, going back to Isidore of Seville (d. 636), Ambrose of Milan (d. 397) introduced double-choir psalmody in Western

4 This distinction, indispensable for the history of the Office, was developed by the school of Anton Baumstark; see Robert Taft, *The Liturgy of the Hours in East and West: The Origins of the Divine Office and Its Meaning for Today*, 2nd ed. (Collegeville, MN: The Liturgical Press, 1993).

5 McKinnon, *The Advent Project*, 62–65. 6 Taft, *The Liturgy of the Hours*, 364.

7 Helmut Leeb, *Die Psalmodie bei Ambrosius* (Vienna: Herder, 1967). Joseph Dyer, "Monastic Psalmody of the Middle Ages," *Revue Bénédictine* 99 (1989), 41–74. Edward Nowacki, "Antiphonal Psalmody in Christian Antiquity and Early Middle Ages" in *Essays on Medieval Music in Honor of David G. Hughes*, ed. G.M. Boone (Cambridge, MA: Harvard University Press, 1995), 287–315. Philippe Bernard, "A-t-on connu la psalmodie alternée à deux choeurs, en Gaule, avant l'époque carolingienne?" *Revue Bénédictine* 114 (2004), 291–325; 115 (2005), 33–60. Michel Huglo, "Recherches sur la psalmodie alternée à deux choeurs," *Revue Bénédictine* 116 (2006), 352–66.

Europe (this view has recently been defended by Huglo). Helmut Leeb rejected this view by demonstrating that there is no trace of that way of singing in the writings of Ambrose. Joseph Dyer then proposed the hypothesis that the Carolingian reform of the eighth century was responsible for the general introduction of double-choir psalmody, previously used only in special circumstances. One testimony has not yet been taken into consideration: Bede mentions double-choir psalmody in the narration of the death of his teacher Benedict Biscop (d. 689/90)[8]; this testimony would lead back to the seventh-century Roman monasteries that Biscop tried to imitate.

In Office psalmody, the choir took over the role of the soloist; the people as it were disappeared. In those genres, however, that retained the responsorial way of performance (especially the Gradual of the Mass) as well as in chants without psalmody (especially the Mass Ordinary) the choir took over the role of the people. These are two different paths of the development toward "schola chant."

The appropriation of chants by the choir may have occurred at different times for different genres. The proper chants of the Roman Mass were probably taken over by the choir by the end of the fifth century. The participation of the people in singing the chants for the Ordinary of Mass, however, seems to persist at least at some places into the Carolingian age.[9] This is probably the reason why ordinary melodies did not become part of the canonical repertory of the Mass antiphonary, the book of the choir.

At least for the Gradual, one can assume that it developed out of its predecessor, the patristic responsorial psalm placed within the series of scriptural readings. Its introduction to the Roman liturgy seems to have occurred rather late, under Pope Celestine I (422–32).[10] If one accepts a direct continuity, the text must have been abbreviated to one verse (additionally to the refrain) while the melody was extended. A parallel development seems to apply to all Christian rites.

Institutions

The Roman Schola cantorum is mentioned in various texts from the seventh to the fourteenth century.[11] It is not easy, however, to get a comprehensive picture of this institution. On the one hand it appears as an ensemble

8 Venerabilis Baeda, *Historia ecclesiastica gentis Anglorum*, *Historia abbatum*, *Epistola ad Ecgberctum*, *una cum Historia abbatum auctore anonymo*, ed. Carolus Plummer, 2 vols. (Oxford: Clarendon Press, 1896), 376.

9 Joseph A. Jungmann, *Missarum Sollemnia: Eine genetische Erklärung der römischen Messe*, 2 vols., 3rd ed. (Freiburg: Herder, 1952), vol. I: 460 and 603–05; vol. II: 161–64.

10 Peter Jeffery, "The Introduction of Psalmody into the Roman Mass by Pope Celestine I (422–432): Reinterpreting a Passage in the *Liber pontificalis*," *Archiv für Liturgiewissenschaft* 26 (1984), 147–65.

11 Dyer, "Schola cantorum," in *MGG2*, *Sachteil*, vol. VIII: cols. 1119–123. Cf. Pfisterer, *Cantilena Romana*, 232–34.

consisting of men and boys and performing in the papal stational service; on the other hand it appears as a school that offers to gifted poor children a school education and the possibility of a clerical career. This second aspect is witnessed by Ordo Romanus XXXVI:[12]

Primum in qualicumque scola reperti fuerint pueri bene psallentes, tolluntur unde et nutriuntur in scola cantorum et postea fiunt cubicularii. Si autem nobilium filii fuerint, statim in cubiculo nutriuntur. (Ordo Romanus XXXVI 1)

First, in whichever school there are found boys that sing well, they are taken away from there and brought up in the Schola cantorum, and later they become privy servants (of the pope). If, however, they are sons of nobles, they are brought up from the beginning in the (papal) chamber.

Dyer is probably right in assuming that the alumni of the Schola cantorum later became clerics serving at the Roman titular churches and provided the chant in these churches.[13] In some documents the Schola cantorum or its building are called "orphanotrophium" (orphanage); this might have been its original function, but that had become secondary by the late seventh century at the latest. The question of the origin of the Schola cantorum was for a long time overshadowed by the person of Pope Gregory I who is named founder of the Schola cantorum from the ninth century on. Dyer has managed to make this claim implausible; he moves the origin of the Schola to the time of our first documents, i.e., the late seventh century.[14] There is one problem with this latest possible date: it cannot be reconciled with an early dating of the Roman Mass Proper. In order to produce and reproduce such a large repertory there must have been some established institution. Since the argument for an early date of the Mass Proper is much stronger than the absence of documents for the early existence of the Schola, there is no reasonable alternative to assuming that the Schola originated in the fifth or early sixth century.

One of the few documents of Gregory's intervention in liturgical chant is the decree of the Roman synod of 595:

12 Michel Andrieu, ed., *Les Ordines Romani du haut moyen age IV*, Spicilegium sacrum Lovaniense 28 (Louvain: Université Catholique, 1956), 195. This Ordo was probably composed by a non-Roman author in the later ninth century. In many details it is contradicted by Roman documents (see ibid., 185–91); there is, however, no Roman document that might confirm or correct the cited statement about the Schola cantorum.

13 Dyer, "The Schola Cantorum and Its Roman Milieu in the Early Middle Ages," in *De musica et cantu: Studien zur Geschichte der Kirchenmusik und der Oper: Helmut Hucke zum 60. Geburtstag*, ed. P. Cahn and A.-K. Heimer (Hildesheim: Olms, 1993), 19–40 at 37–38.

14 Ibid.

In sancta hac Romana ecclesia, cui divina dispensatio praeesse me voluit, dudum consuetudo est valde reprehensibilis exorta, ut quidam ad sacri altaris ministerium cantores eligantur et in diaconatus ordine constituti modulationi vocis serviant, quos ad praedicationis officium elemosinarumque studium vacare congruebat.

Unde fit plerumque, ut ad sacrum ministerium, dum blanda vox quaeritur, quaeri congrua vita neglegatur et cantor minister Deum moribus stimulet, cum populum vocibus delectat.

Qua de re praesenti decreto constituo, ut in sede hac sacri altaris ministri cantare non debeant solumque evangelicae lectionis officium inter missarum sollemnia exsolvant. Psalmos vero ac reliquas lectiones censeo per subdiaconos vel, si necessitas exigit, per minores ordines exhiberi. (Registrum 5,57a)

In this holy Roman church, over which the divine dispensation wanted me to preside, the very reprehensible habit arose long ago that some singers are elected to the ministry of the holy altar, and that those in the order of deacon perform the task of singing, who should devote themselves to the office of preaching and the care for alms.

This is why most often, while a charming voice is required for the holy ministry, the requirement of an appropriate way of life is neglected, and the singer-minister provokes God by his manners, while he delights the people by his sounds.

Therefore I order by this decree that at this [bishop's] seat the ministers of the holy altar must not sing and should perform only the task of the Gospel reading in the Mass service. For the psalms, however, and the remaining readings, I want them to be presented by subdeacons or, if required by necessity, by lower orders.

This decree puts an end to the musical role of the seven Roman deacons which is attested additionally by epitaphs from the fifth and sixth centuries.[15] From the point of view of McKinnon's chronology, the singing deacons are part of the prehistory of the Gregorian repertory; by my reckoning, however, they must have been involved in its formation. We have no records about the relationship between the deacons and the Schola cantorum. But it seems improbable that the deacons, often coming from the local nobility, could

15 Ernst Diehl, ed., *Inscriptiones Latinae christianae veteres*, 3 vols. (Berlin: Weidmann, 1925–31), nos. 1194 and 1195, vol. 1: 231–32. Antonio Ferrua, ed., *Epigrammata Damasiana* (Città del Vaticano: Pontificio Istituto di archeologia cristiana, 1942), no. 63, pp. 233–35. These documents have been largely ignored in anglophone literature, but see Anton de Waal, "Le chant liturgique dans les inscriptions romaines du IVe au IXe siècle," in *Compte rendu du troisième congrès scientifique international des catholiques 2: Sciences religieuses* (Brussels: Societé belge de librairie, 1895), 310–17. Ernesto T. Moneta Caglio, *Lo iubilus e le origini della salmodia responsoriale* (Venice, 1977), 184–85.

have attended the "orphanage"; there must have been ways of acquiring privately a training in chant as well as a normal school education.

Until 595, deacons and Schola had to cooperate in the stational service; in the Gradual responsory the deacon sang the refrain first, the Schola repeated it. Since there is no trace of different melodic styles used by soloist and choir (as in the Byzantine prokeimenon) in the melodic transmission, it is reasonable to assume that they sang the same melodies to the same words. On the other hand, it would be possible to connect the existing stylistic differences with the different institutions, if the Gradual, Tract, and possibly the oldest layer of Alleluia were the responsibility of the deacons, while the Introit, Offertory, and Communion were the responsibility of the Schola.[16] This would imply, however, that the Schola cantorum preserved the style of the deacons in the respective genres when it took over their role in 595.

For the Office, our knowledge of the institutions is even poorer. We know the Schola cantorum performed the Vespers of Easter week[17] and some festive vigils, but we have no further evidence of what they may have done.[18] We know of an Office at the Roman titular churches from a passing notice in Ordo Romani XXVII 79.[19] The main institutions concerned with the Roman Office as we know it are probably the basilical monasteries. The *Liber pontificalis* includes notices on the foundation of monastic communities at the Roman basilicas from the fifth century on.[20] They developed partly into Benedictine monasteries (St. Paul), partly into collegiate chapters (Lateran, St. Peter). The liturgical regulations of the *Regula Benedicti* of the sixth century seem to follow the use of the Roman basilical monasteries – with significant changes. Since Pope Stephen III (768–72) ordered that one of the cardinal bishops should celebrate the Mass at St. Peter's on Sundays,[21] it seems clear that the monks attached to St. Peter's were responsible for the Office only. We cannot exclude, however, that they additionally served as choir in the Mass. Johannes, abbot of one of the monasteries at St. Peter's in 678, bears the

16 For the different conceptions of musical form see Pfisterer, "Skizzen zu einer gregorianischen Formenlehre," *Archiv für Musikwissenschaft* 63 (2006), 145–61.
17 Stephen J. P. van Dijk, "The Medieval Easter Vespers of the Roman Clergy," *Sacris Erudiri* 19 (1969/70), 261–363.
18 If the twelfth-century antiphoner London, British Library add. 29988 belonged to the Schola, this would verify the existence of a complete Office for the late phase of the Schola.
19 Michel Andrieu, ed., *Les Ordines Romani du haut moyen age III*, Spicilegium sacrum Lovaniense 24 (Louvain: Université Catholique, 1951), 366.
20 Louis Duchesne, ed., *Le Liber Pontificalis: Texte, introduction et commentaire*, 2 vols. (Paris: Thorin/Boccard, 1886–92), vol. 1: 234, 239, 245.
21 Ibid., vol. 1: 478.

title *archicantor aecclesiae beati apostoli Petri*.[22] This might imply that the monks were integrated into the chant tradition of the city of Rome. The stylistic similarity of the great responsories of the Office and the antiphons of the Mass, which extends even to melodic identity, seems to confirm the unity of the chant tradition.

Melodic identity between different liturgical genres is often seen as a sign of the secondary reuse of pieces from one genre to fill gaps in the other genre (McKinnon, Maiani). Willibrord Heckenbach, however, judged it an archaism, implying an evolution toward more musical differentiation between the liturgical genres. My own research in the transmission of the melodies suggests another possibility: melodies that were different might be assimilated mutually (unconsciously).[23]

Repertory

The Proper of the Mass appears in the manuscripts as a monolithic block, largely resisting an analysis of historical layers. In the Office the transmission is much more diffuse; it will perhaps be possible to distinguish layers, but even the first step toward doing this, distinguishing between Roman pieces and Frankish additions, still remains to be done in a comprehensive way.[24] The Alleluia is an exception within the Mass Proper. It was clearly introduced late into the Roman Mass, i.e., after the "properization project." The Alleluia might therefore offer some insights into the mechanisms of properization, but even here it is difficult to reach a consensus about the definition of the Roman repertory.[25]

In some cases, favorable circumstances give us a glimpse of the prehistory of a single piece. Some pieces, especially offertories, have close cognates in other repertories, in particular the Old Spanish.[26] The question of the original

22 Venerabilis Baeda, *Historia ecclesiastica*, 369. The title *archicantor Romanae aecclesiae*, given by the anonymous author of the earlier *Historia abbatum* (ibid., 391), seems to be a simplification that should not be pressed.

23 McKinnon, "The Eighth-Century Frankish-Roman Communion Cycle," *Journal of the American Musicological Society* 45 (1992), 179–227. Bradford Maiani, "The Responsory-Communions for Paschaltide," *Studia Musicologica* 39 (1998), 233–40. Willibrord Heckenbach, "Responsoriale Communio-Antiphonen," in *Ars musica, musica scientia: Festschrift Heinrich Hüschen*, ed. D. Altenburg (Köln: Gitarre und Laute Verlagsgesellschaft, 1980), 224–32. Pfisterer, *Cantilena*, 173–74.

24 Some attempts can be found in Pfisterer, "Hesbert, Amalar und die fränkische Responsorienkomposition," in *Papers Read at the 13th Meeting of the IMS Study Group Cantus Planus, Niederaltaich/Germany, 2006. Aug. 29-Sept. 4* (Budapest: Hungarian Academy of Sciences, Institute for Musicology, 2009), 535–46. David Eben, "Die Ofiziumsantiphonen der Adventszeit," 2 vols., Ph. D. dissertation, University of Prague, 2003 (print in preparation).

25 Cf. McKinnon, *The Advent Project*, 249–79. Pfisterer, *Cantilena*, 126–27.

26 Louis Brou, "Le IVe Livre d'Esdras dans la Liturgie Hispanique et le Graduel Romain *Locus iste* de la Messe de la Dédicace," *Sacris Erudiri* 9 (1957), 75–109. Kenneth Levy, "Toledo, Rome, and the Legacy of Gaul," *Early Music History* 4 (1984), 49–99.

provenance of such "international" pieces can often be elucidated by the study of the biblical text on which they are based. The Latin text of the psalms exists in many local versions that seem to be rather stable through the centuries. By that criterion, it has been possible to establish that most chants common to Rome and Milan are of Roman origin.[27] On the other hand, some chants of the Roman repertory seem to be of foreign origin, e.g. probably from Gaul or from Africa.[28] Texts from outside the psalter are often inconclusive in respect of geography, but significant in respect of chronology. These conclusions drawn from versions of the Latin text have to acknowledge many blind spots, since we cannot know all versions that have existed, and since assimilation to the version in actual use often covers the tracks of a piece which has wandered from one tradition to another. Nevertheless, the cases we can recognize show that the Roman Schola cantorum not only created pieces of their own, but also collected pieces from other liturgical centers and integrated them into their repertory.

Oral Tradition

The question of how one might imagine the transmission of a large treasury of melodies without the use of musical notation remained marginal for a long time. It was in 1970 that Leo Treitler put it into the center of the discussion. Instead of looking on oral tradition as a less effective way of transmission, he provided a model for the functioning of oral tradition different from written tradition. Inspired by a position in Homer scholarship, he saw the performance of a chant in oral tradition not as reproduction of an individual melody but as an improvisational reconstruction. Musical formulas and "grammatical" rules are adapted to a given (written) text; the object of transmission is these rules, not the performances resulting from their adaption. From this point of view, notated melodies are neither prescriptive nor descriptive, but exemplary.[29]

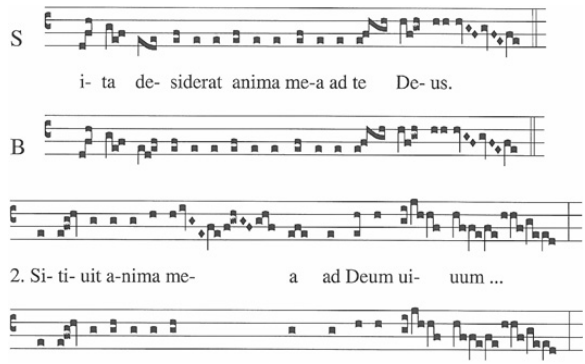
Helmut Hucke transformed this theory of oral transmission into a history of chant transmission by the way of deduction (thereby changing some of his former positions): the unanimity of chant manuscripts cannot be due to the (impossible) unanimity of oral performance, it must be the result of a written transmission. The various stages of codification (adiastematic notation about

27 Huglo et al., *Fonti e paleografia del canto ambrosiano*, Archivio Ambrosiano 7 (Milan: Rivista Ambrosius, 1956), 127–36.

28 Pfisterer, "Remarks on Roman and Non-Roman Offertories," *Plainsong and Medieval Music* 14 (2005), 169–81. Rebecca Maloy, *Inside the Offertory: Aspects of Chronology and Transmission* (Oxford University Press, 2010).

29 Leo Treitler, "Homer and Gregory: The Transmission of Epic Poetry and Plainchant," *The Musical Quarterly* 60 (1974), 333–72. Treitler, "Centonate Chant: Übles Flickwerk or E pluribus unus?" *Journal of the American Musicological Society* 28 (1975), 1–23.

Example 2.1 Comparison of standard and Beneventan versions of the Tract "Sicut ceruus" (excerpt): S – standard version; B – Beneventan version



900, diastematic notation about 1100) each imply a break of transmission; the repertory of individual melodies we know is the final result of this development.[30]

Kenneth Levy defended the notion of a uniform Carolingian repertory of individual melodies. By supposing that adiastematic notation was already used about 800 he connects the testimony of the manuscripts for a stable transmission already in the ninth century with the notion that stability requires writing.

My own work continues that of David Hughes on the melodic variants in chant manuscripts.[31] The picture emerging from those studies will be sketched by some selected examples.

Accidents of Transmission

Example 2.1 shows the second half of the first verse and the first half of the second verse of the canticle "Sicut ceruus" from the Easter Vigil. This melody is part of the family of Tracts in the eighth mode; the four Easter Vigil canticles consist exclusively of formulaic phrases that are connected with certain formal positions within the verse. The manuscripts from Benevento transmit a common variant for the second verse that omits the division of the half verse into two

30 Helmut Hucke, "Toward a New Historical View of Gregorian Chant," *Journal of the American Musicological Society* 33 (1980), 437–67. Helmut Hucke and Hartmut Möller, "Gregorianischer Gesang," in *MGG2*, Sachteil III (1995), cols. 1609–21.

31 David Hughes, "Evidence for the Traditional View of the Transmission of Gregorian Chant," *Journal of the American Musicological Society* 40 (1987), 377–404.

phrases. The verse begins with the intonation of the first phrase, but ends with the melisma of the second phrase. Since the first phrase has a recitation on b, the second phrase a recitation on c, there is an internal change of the recitation pitch. One could imagine various different scenarios for the origin of this deviation from the formulaic system. At this place, the Beneventan manuscripts are opposed to the consensus of the rest of the manuscripts, which present the melody in regular form;[32] it is therefore probable that the variant arose when the chant was transferred to Benevento (probably around 800). It is not possible to explain this variant by a scribe's error; even in the case of a defective exemplar the scribe would have been able to complete the melody by analogy with the other verses. The most reasonable assumption seems to be that a singer failed to reconstruct the melody correctly from memory. He began the verse in the correct way, overlooked by accident the caesura at *anima mea*, perhaps induced by the similar behavior of the same words in the first verse. At *Deum uiuum* he remembered the melisma connected with these words, so he had to produce the change of reciting pitch in order to get back into the melody. However the variant came into being, it remained uncorrected and became part of the Beneventan tradition of chant, even though everyone familiar with the formulaic system of the Tracts would have been able to recognize and emend the error.

This (not very common) case gives several clues:

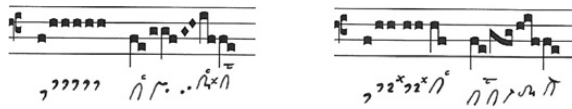
- Even within a simple formulaic system, melodies that are "grammatically" wrong can remain uncorrected; this implies that the chants are remembered as individual pieces;
- In the reconstruction from memory, the connection of the words *Deum uiuum* to a certain melisma was stronger than the integrity of the formulaic phrase;
- The normal control of the transmission by the collective memory may fail; there seems to have been no additional control through a normative notated book. The manuscripts preserve instead the variant that has emerged in performance.

Assimilation

The Tracts of the second mode rely strongly on formulas, the most stable element being the medial caesura of the verses.[33] Example 2.2 shows on the

32 For some isolated exceptions see Pfisterer, *Cantilena*, 83.
33 For an extensive discussion of the formulaic system see Emma Hornby, *Medieval Liturgical Chant and Patristic Exegesis: Words and Music in the Second-Mode Tracts* (Woodbridge: Boydell Press, 2009).

Example 2.2 Medial caesuras of second-mode Tracts, with neumatic notation from St. Gallen, Stiftsbibliothek, codex sangallensis 359



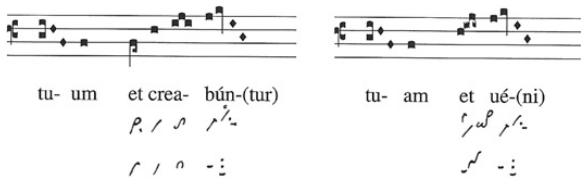
left the normal melisma on the final syllable, if the last word has its accent on the penultimate syllable; on the right it shows a variant that appears under the same conditions in the first verses of the tracts "Domine audiui" and "Domine exaudi." The difference between these two versions concerns not only the repetition of the third note, but also the rhythm as indicated by some early neumatic notations. In the normal version only the last three notes are long, in the special version the first five notes are long, too. There is no obvious reason for that difference, but it corresponds to further common features of these two pieces, so there may be some chronological reason. The special version is witnessed by the manuscripts of the tenth century and some conservative later ones; most later manuscripts, however, give the normal version every time, and one eleventh-century manuscript represents a tradition with the special version every time.[34]

One could imagine a development from a unique version to two different versions arbitrarily or by chance, but this cannot happen independently at different places. On the contrary, an assimilation of the special version to the normal one may happen independently. Thus it is probable that the older manuscripts reflect the state of development at the time of the diffusion of the repertory, whereas the later manuscripts represent the result of a regularization.

There may be cases of regularization that have been done intentionally; it is much more probable, however, that it happened inadvertently. Again this is not a typical scribal error, but rather a memory error. The transmission of literary texts knows comparable variants by assimilation especially in texts people know by heart, as the Bible or Virgil; there these variants may be judged as a contamination caused by memory. In chant transmission the frequency of such variants, together with the rarity of typical scribal errors, is a clear sign for the dominance of the transmission by memory even after the introduction of musical notation.

34 See Pfisterer, *Cantilena*, 53.

Example 2.3 Alleluias *Emitte* and *Excita* (excerpts) with neumatic notation from St. Gallen, Stiftsbibliothek, codex sangallensis 359 and Chartres, Bibliothèque municipale 47



Reiterated Variants

Most variants in chant transmission are not isolated, but reappear regularly in similar melodic situations. Their counterparts in literary transmission would not be scribal errors, but phonetic changes or dialect variants. It is reasonable, therefore, to speak of chant dialects.[35] Two early types of such variants will be presented here: the omission of the lower note of an ascending motion and the filling in of thirds.

Example 2.3 shows one of several typical situations for the former: a torculus-figure that connects two notes at the distance of a major third (most often F-GaG-a), the word accent being placed on the last note. The first note of the torculus-figure is regularly missing in the geographical western region (Brittany, Chartres, Aquitaine), it is regularly present in the east, while between them there is a large transitional zone. The example shows additionally a case where (due to the lack of syllables) the first note is connected with the torculus-figure; there the respective note is written as a quilisma and is present in all early manuscripts. This may be explained by assuming that the eastern version is the earlier one and that the western version is the result of the erosion of this ornamental note at the point of syllable articulation, whereas it survived within the syllable.[36]

Example 2.7 shows the filling in of thirds in ascending and descending motion with a passing note. This variant appears regularly in a group of manuscripts whose center may be the monastery of St. Denis near Paris; through the English ecclesiastical reform of the tenth century it also came

35 This term was introduced by Peter Wagner, in "Der gregorianische Gesang," in *Handbuch der Musikgeschichte*, ed. G. Adler (Frankfurt: Frankfurter Verlags-Anstalt, 1924), 65–105 at 87–88.
36 Pfisterer, *Cantilena*, 26–29.

to the British Isles. The question of priority between the two versions cannot be easily judged by internal arguments; more helpful is the geographical method developed by Romance linguistics. The basic idea of this method is that novelties originate somewhere and spread out from there. The spread is dependent on the radiance of the place of origin and on the ease of communication. The earlier state of development is often preserved in peripheral and backward regions. Applied to our case, the area of the St. Denis variant is almost completely surrounded by the area of the standard variant. Therefore it may be assumed that the standard variant is the earlier one.[37]

The areas of this and other dialect variants often overlap; e.g., the tradition of Cluny partakes to some extent in both variants commented on here. A genealogical model of so-called vertical transmission cannot explain such overlappings; it is horizontal transmission that seems to dominate the spread of variants in chant.

"Old Roman" Chant: Manuscripts and Institutions

Hundreds of manuscripts from the whole of Latin Europe transmit us the Gregorian repertory with many small variants, but generally with astonishing uniformity. Besides that there is a small group of manuscripts, fragments, and notations of single pieces from the city of Rome that transmit a related, but clearly different melodic version.[38] There are several pairs of terms to distinguish the two versions; these reflect the different historical scenarios proposed for the origin of the double tradition of the repertory. Bruno Stäblein introduced "Old Roman" in contrast to "Gregorian," Helmut Hucke spoke of "Gregorian chant in Roman and Frankish transmission" instead.[39] Hucke's terminology has the advantage of preserving "Gregorian" as a comprehensive term for both branches; additionally it is compatible with my historical scenario, thus I will use it in the following discussion.

The most important witnesses of the Roman transmission are three graduals and two antiphoners.

37 Pfisterer, "Y a-t-il une tradition française."
38 Huglo, "Le chant vieux-romain: Liste des manuscrits et témoins indirects," *Sacris Erudiri* 6 (1954), 96–124.
39 Bruno Stäblein, "Zur Frühgeschichte des römischen Chorals," in *Atti del congresso internazionale di Musica Sacra, Roma 1950*, ed. H. Anglès (Tournai, 1952), 271–75. Hucke, "Gregorianischer Gesang in altrömischer und fränkischer Überlieferung," *Archiv für Musikwissenschaft* 12 (1955), 74–87.