

Creative Practice and the Limits of Knowledge in Reconstructing Lost Songs from Boethius's *On the Consolation of Philosophy*

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The prospect of recovering lost medieval song repertoires has long held a fascination for scholars and performers. As early as 1852 Charles-Edmond-Henri de Coussemaker published in his *Histoire de l'harmonie au moyen âge* some forty-five examples of “chants

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The following manuscript *sigla* are used:

BE 179	Berne, Burgerbibliothek 179
BE 455	Berne, Burgerbibliothek 455
BER 58	Berlin, Staatsbibliothek zu Berlin, Preußischer Kulturbesitz theol. lat. 2° 58
CA CCC 260	Cambridge, Corpus Christi College 260
CA CCC 473	Cambridge, Corpus Christi College 473
CA Ff. i. 17	Cambridge, University Library Ff. i. 17
CA Gg. 5. 35	Cambridge, University Library Gg. 5. 35
GLA 229	Glasgow, University Library, Hunter 229 (U.3.2)

populaires et certains chants ecclésiastiques” gathered from the ninth to the fourteenth centuries.¹ Two notated poems from Boethius’s last work, his widely read *On the Consolation of Philosophy*, were placed at the opening of the third section of De Coussemaker’s book, presented first as meticulously hand-drawn facsimiles and then as admittedly speculative transcriptions into modern notation. These specimens collected from a distant past were key components in his formation of a new subdiscipline of archaeology called “archéologie musicale,” a forerunner to modern musicology.² A century and a half later, Benjamin Bagby recorded a CD titled *Lost Songs of a Rhineland Harper*, which opened with a performance of another *metrum* from Boethius’s *De consolatione philosophiae*.³ The recording was part of a larger project stretching back to the mid-1980s of reconstructing “lost songs,” exploring techniques for the reconstruction of European medieval song repertoires for which manuscript evidence does not allow reliable transcription.⁴ In the absence of secure information about pitch content in Anglo-Saxon, Old High German, Icelandic, and medieval Latin song repertoires,

NA IV. G. 68	Naples, Biblioteca Nazionale IV. G. 68
MU 18765	Munich, Bayerische Staatsbibliothek clm 18765
OX Auct. F. 3. 6	Oxford, Bodleian Library Auct. F. 3. 6
OX Bodley 775	Oxford, Bodleian Library Bodley 775
OX Junius 11	Oxford, Bodleian Library Junius 11
PA 904	Paris, Bibliothèque nationale de France lat. 904
PA 1121	Paris, Bibliothèque nationale de France lat. 1121
PA 1154	Paris, Bibliothèque nationale de France lat. 1154
PA na 1064	Paris, Bibliothèque nationale de France nouvelles acquisitions lat. 1064
PROV 12	Provins, Bibliothèque municipale 12
VAT 3363	Vatican City, Biblioteca Apostolica Vaticana lat. 3363
WOR 160	Worcester, Chapter Library F. 160

¹ Charles-Edmond-Henri de Coussemaker, *Histoire de l'harmonie au moyen âge* (Paris: V. Didron, 1852), v.

² For an introduction to De Coussemaker’s development of an *archéologie musicale* that preceded Guido Adler’s crystallization of Musikwissenschaft, see John Haines, *Eight Centuries of Troubadours and Trouvères: The Changing Identity of Medieval Music* (Cambridge: Cambridge University Press, 2004), 170–78, which builds on his earlier “Généalogies musicologiques aux origines d’une science de la musique vers 1900,” *Acta musicologica* 73 (2001): 21–44, esp. 21–31.

³ The *metrum* was *Felix, qui potuit* (III:12), a retelling of the myth of Orpheus and Eurydice: *Sequentia* – dir. Benjamin Bagby, *Lost Songs of a Rhineland Harper* (Deutsche Harmonia Mundi / BMG Classics 82876 58940 2, recorded in 2002, released in 2004).

⁴ For an account of the “Lost Songs” project, see Benjamin Bagby, “Searching in Song for My Lost German Ancestors,” *Early Music America* 8 (2002): 24–29; and idem, “*Beowulf*, the *Edda*, and the Performance of Medieval Epic: Notes from the Workshop of a Reconstructed ‘Singer of Tales’,” in *Performing Medieval Narrative*, ed. Evelyn B. Vitz, Nancy F. Regalado, and Marilyn Lawrence (Cambridge: D. S. Brewer, 2005), 181–92. A brief overview of the project with full discography is provided at: https://sequentia.org/projects/lost_songs.html.

attention focused on reconstituting performance practices, drawing inspiration from models of orality and memory that came to prominence from the 1960s onwards.⁵

These two attempts to reconstruct “lost songs” of the Middle Ages were founded on different historical models. For De Coussemaker songs whose sounds remained in a distant past were deployed in an outwardly objective manner to ground an overarching historical narrative of national identity.⁶ Since Boethian songs could not be fully recovered as “texts,” notations and transcriptions were offered to enable direct access to historical evidence. The transcriptions were acknowledged as conjectural and were intended, in a quasi-archaeological manner, to allow readers the opportunity to observe “quelques spécimens des mélodies de ces temps reculés” (a few melodic specimens from those remote times).⁷ For Bagby the reconstruction of a melody for a Boethian *metrum* proceeded from a marked absence of primary documentary evidence: his sung performance began from an unnotated poem whose text in all probability continued on a leaf that is now lost. The reconstruction was based on the understanding that the song itself was created and recreated from standard procedures adapted to a given text during the Middle Ages.⁸ The performance was thereby aligned with other projects directed by Bagby and undertaken by members of *Sequentia* in which emphasis was placed on the creative arts of memory.⁹ “Lost songs” are re-presented in contemporary performance and at the same time understood to be irrecoverably lost. This paradox arguably underpins much of the appeal of a project that focuses on re-production,

⁵ An important text in opening models of orality to a wide audience, cited as influential by Bagby in later studies, was Alfred Lord, *The Singer of Tales* (Cambridge, MA: Harvard University Press, 1960). For a broader account of the development of studies in orality to the 1980s, see Walter J. Ong, *Orality and Literacy* (London and New York: Methuen, 1982), ch. 1 (“The Orality of Language”), 5–15.

⁶ For an account of the variously intersecting national and regional debates about musical origins that informed De Coussemaker’s claim of a French identity for early music via a tradition of *chant populaire*, see Katharine Ellis, *Interpreting the Musical Past: Early Music in Nineteenth-Century France* (New York and Oxford: Oxford University Press, 2005), ch. 5 (“Sources of Frenchness”), 147–77, esp. 150–52.

⁷ De Coussemaker, *Histoire*, xi.

⁸ The immediate model for the recorded version was the Introit trope element *Iam philomelinis* as transmitted in PA 1121, fol. 16r. For a transcription of the hexameter couplet and melody, see Paul Evans, *The Early Trope Repertory of Saint Martial de Limoges* (Princeton, NJ: Princeton University Press, 1970), 170–71.

⁹ For an ethnographic account of the techniques used by Bagby and *Sequentia* in reconstruction, see Jonathan Shull, “Locating the Past in the Present: Living Traditions and the Performance of Early Music,” *Ethnomusicology Forum* 15 (2006): 87–111, at 94–96. A full account of the involvement of *Sequentia* in reconstruction of Boethian *metra* dating back to the 1980s is given in the liner note by Bagby to the recording: *Sequentia*—dir. Benjamin Bagby, *Boethius: Songs of Consolation—Metra from 11th-century Canterbury* (Glossa: GCD922518, released 22 June 2018).

re-creation, and re-invention, whether of the instrumental materials, the refashioned historical models, or the imagined conditions of performance. Whereas for De Coussemaker the past was kept at one remove in the form of evidence for a historical hypothesis, *Sequentia*'s reconstructions appeal to an affectively engaging "present past," echoing a postmodern fascination with a "culture of the copy, with or without the original."¹⁰

De Coussemaker's and Bagby's projects form an important background to this study not only for their differing approaches to music history, but also for turning to disciplines outside of musicology in seeking to bring coherence to fragmentary survivals. De Coussemaker employed a foundational archaeological distinction between monuments and documents in presenting evidence to his readers: monuments comprised notations in historical sources; documents consisted of theoretical writings on music.¹¹ Color plates manufactured using the latest developments in lithography reproduced a meticulous, hand-drawn copy of every detail of notated leaves. While sounds remained out of reach of the new science of *archéologie musicale*, historical remnants could still be brought *ad lucem publicam*.¹² Bagby's work turned to oral traditions and studies of memory that had been of considerable interest both to practicing musicians and to medieval musicologists for some time and especially since the 1960s. Thomas Binkley's recourse to living oral traditions to inform performances of medieval music with his *Studio der frühen Musik* in Munich was passed on via his teaching at the Schola Cantorum in Basel in the mid-1970s. Around the same time Leo Treitler's musicological explorations of the implications of orality and memory for early medieval music opened up to a wider audience lines of investigation earlier pursued by chant scholars, such as Helmut Huke.¹³ More recently the rise of memory studies has promised

¹⁰ Andreas Huyssen, *Present Pasts: Urban Palimpsests and the Politics of Memory* (California: Stanford University Press, 2003), ch. 1 ("Present Pasts: Media, Politics, Amnesia"), 21.

¹¹ The turn to monuments alongside documents to study the ancient past was central to the work of one of the founding fathers of modern archaeology, Bernard de Montfaucon (1655–1741), as illustrated by the 1,400 prints depicting statues, reliefs, and other objects in his *L'Antiquité expliquée et représentée en figures*, 10 vols. (Paris: F. Delaulne, 1719, rev. 1722–24); and *Supplément*, 5 vols. (Paris: F. Delaulne, 1724).

¹² The subtitle of Gerbert's *Scriptores* announces that the writers are *nunc primum publica luce donati* (now for the first time brought into the public light): Martin Gerbert, ed., *Scriptores ecclesiastici de musica sacra potissimum* (St. Blasien: Typis San-Blasianis, 1784) vol. 1, title page, as noted in Haines, "Généalogies musicologiques," 29.

¹³ On the interest of chant scholars in questions of orality stretching back to the International Congress of Sacred Music held in Rome in 1950, see Kenneth Levy, "On Gregorian Orality," *Journal of the American Musicological Society* 43 (1990): 185–227, esp. 185–92, repr. in idem, *Gregorian Chant and the Carolingians* (Princeton: Princeton University Press, 1998), 141–77, esp. 141–48. Key texts in both orality and memory were drawn into anglophone medieval musicology principally through Leo Treitler, "Homer and Gregory:

musicology an alternative to historical methodologies in assessing the past; in particular, ethnomusicologists have become interested in the historical dynamics of music revivals understood as a form of “present past.”¹⁴ Read as a form of sonic “represence,” the reconstruction by Bagby and others of lost European traditions of song may be aligned with what has been called by ethnomusicologists the “New Old Europe Sound.”¹⁵ In other words, interest dating back to the 1980s in recuperating lost medieval song traditions may be read as a sonic response to a moment of upheaval in European identity following the fall of the Iron Curtain through appeal to an archaic shared identity that crosses national borders.

The appearance of Boethian song at the outer edges of modern musicology, whether preceding it in the form of *archéologie musicale* or alongside it in performance traditions seeking to recover oral practices, is significant in recognizing the limits of approaches shaped by primarily textual models. The exploration of reconstruction in this essay is accordingly motivated by an attempt to investigate a range of working methods that might be used to restore lost songs. The prospects for a conventional historical overview of the song tradition are considered first by piecing together surviving source material, drawing on and extending research undertaken for the first survey of the evidence published in 2013.¹⁶ There follows in the second part a new case study in reconstruction that explores the potential and limits of philological methods when working with incomplete information. An account of what can be learned from creative practice in scholar-performer interaction is given in the third part. A common thread is the question of how we come to know a medieval song tradition, focusing ultimately on the prospects of employing performative and experimental approaches as an aid to recovering song traditions “lost” to text-based methods of research.

The Transmission of Epic Poetry and Plainchant,” *Musical Quarterly* 60 (1974): 333–72, an article reprinted with an extended introduction drawing on more recent studies in both fields in idem, *With Voice and Pen: Coming to Know Medieval Song and How It Was Made* (New York and Oxford: Oxford University Press, 2003), ch. 6, 131–85.

¹⁴ For a summary of recent ethnomusicological interest in acts of revival, see Caroline Bithell and Juniper Hill, “An Introduction to Music Revival as Concept, Cultural Process, and Medium of Change,” in *The Oxford Handbook of Music Revival*, ed. Caroline Bithell and Juniper Hill (New York and Oxford: Oxford University Press, 2014), 3–42. Philip Bohlman’s interest in a New Europe following the fall of the Berlin wall takes the notion of a “present past” as its point of departure: see Philip V. Bohlman, *Revival and Reconciliation: Sacred Music in the Making of European Modernity* (Lanham, MD: Scarecrow Press, 2013), xxii.

¹⁵ David Kaminsky, “Introduction: The New Old Europe Sound,” *Ethnomusicology Forum* 24 (2015): 143–58.

¹⁶ Sam Barrett, *The Melodic Tradition of Boethius’ De consolazione philosophiae in the Middle Ages*, 2 vols. (Kassel and Basel: Bärenreiter, 2013).

Historical Overview

Consideration of Boethius and music usually brings to mind his *De institutione musica*, written shortly after the turn of the sixth century when he was in his early twenties undertaking an ambitious project to summarize ancient knowledge of the four mathematical sciences or *quadriivium*. Less well known is that music is integral to his last and most widely read book, *De consolazione philosophiae*, written while he was imprisoned at Pavia in the 520s on trumped-up charges of conspiracy against Theodoric, King of the Ostrogoths, then ruler of Italy. Over the course of five books Boethius gradually reconciles himself to his fate through dialogue with a personified figure of *Philosophia*, who uses the “sweet medicine” of rhetoric and music intermingled with philosophical argument to restore him to his former state. The narrative may accordingly be considered as a therapeutic dialogue enacted partially through song. It offers not only for Boethius but also for its readers “a script for performance in the broadest sense, i.e., an exhortation to return to knowledge of the *sum-mum bonum* [highest good] through singing rightly ordered song and philosophical examination.”¹⁷

The thin line Boethius’s final work treads between actuality and allegory raises the historical question, “Were the *metra* sung outside of the narrative?” As might be expected, there is no direct evidence for Boethius singing the *metra* during his imprisonment. More pertinently, none of the thirty-nine poems is in strophic form, and all are complex in their density of expression or meter. What may be imagined is that Boethius recited the poems in an intermediate voice that he himself described in his *De institutione musica* as suitable for the rendition of heroic poetry, lying between that used for speaking prose and that used for singing.¹⁸

Secure evidence for the singing of *metra* comes in the form of neumes added to manuscripts from the ninth century onwards. The existence of a handful of notations was known to Martin Gerbert in the late eighteenth century and to De Coussemaker in the mid-nineteenth.¹⁹ A few more notations were listed in studies by Henry Bannister and

¹⁷ Ibid., 1:11.

¹⁸ “To these, as Albinus asserts, is added a third, different kind, which can incorporate intermediate voices, such as when we recite heroic poems not in continuous flow as in prose or in a sustained and slower moving manner as in song.” Calvin M. Bower, trans., *Fundamentals of Music: Anicius Manlius Severinus Boetius* (New Haven and London: Yale University Press, 1989), 20–21. “His, ut Albinus autumat, additur tertia differentia, quae medias voces possit includere, cum scilicet heroum poema legimus neque continuo cursu, ut prosam, neque suspenso segniorique modo vocis, ut canticum.” Boethius, *De institutione musica*, 1.12, in *Anicii Manlii Torquati Severini Boetii De institutione arithmetica libri duo, De institutione musica libri quinque, accedit Geometria quae fertur Boetii*, ed. Gottfried Friedlein (Leipzig: Teubner, 1867), 199.

¹⁹ Gerbert, *Scriptores*, 1:270a, 282a; and De Coussemaker, *Histoire*, Planche 1, nos. 1, 2.

Friedrich Ludwig in the early twentieth century before the first comprehensive survey was conducted by the philologist Yves-François Riou as part of his research into notated manuscripts of Latin classics.²⁰ Several years spent exploring major library and microfilm archives revealed a more extensive melodic tradition than was even known to Riou. It has proven possible to identify thirty-three manuscripts containing 125 separate notations spanning all but five of the thirty-nine poems. In addition, nearly half of the poems were copied into verse collections in adapted strophic forms, thereby strongly implying musical performance while remaining unnotated.²¹

This range of evidence for sung performance survives in manuscripts copied from the ninth century through to ca. 1100, precisely the period that *De consolazione philosophiae* was one of a canon of authorities taught in monastic and cathedral schools.²² The simplest conclusion to draw is that singing these songs aided the learning of the text; it is perhaps no surprise that notated manuscripts survive from large abbeys and cathedrals famed for their learning, such as at St. Gall, Laon, Fleury, Trier, and Canterbury.²³ Neumes were typically squeezed between the lines of codices transmitting *De consolazione philosophiae* alone, or a range of works by Boethius, or collections of works known to have been used in teaching (i.e., works by Christian poets and grammarians). Such manuscripts contain the hands and sometimes autographs of young pupils and identifiable masters, but these volumes were also used and owned by a notary, a dean, an abbot, an abbess, a bishop and an archbishop. Notated songs also appear in poetic and penitential collections, including three shortened, neumed *metra* added in the late ninth century to the opening leaves of a psalter owned by Louis the German and later by

²⁰ Henry M. Bannister, ed., *Monumenti Vaticani di paleografia musicale latina*, Codices e Vaticanis selecti 12 (Leipzig: Teubner, 1913), 112 (no. 301); Friedrich Ludwig, "Die geistliche nichtliturgische, weltliche einstimmige und die mehrstimmige Musik des Mittelalters bis zum Anfang des 15. Jahrhunderts," in *Handbuch der Musikgeschichte*, I, ed. Guido Adler (Frankfurt am Main: Frankfurter Verlagsanstalt, 1924), 160; and Yves-François Riou, "Chronologie et provenance des manuscrits classiques Latins neumés," *Revue d'Histoire des Textes* 21 (1991): 77–113, at 102n41.

²¹ For a full list of identified sources, see Barrett, *The Melodic Tradition*, 1:16, with further observations at 17–20.

²² On the place of Boethius's *De consolazione philosophiae* in canons of Carolingian and Ottonian learning, see principally Günter Glauche, *Schullektüre im Mittelalter: Entstehung und Wandlungen des Lektürekanons bis 1200 nach den Quellen dargestellt* (Munich: Arbeo-Gesellschaft, 1970), 1–61; idem, "Die Rolle der Schulaufgaben im Unterricht von 800 bis 1100," in *La scuola nell'occidente latino dell'alto medioevo II* (Spoleto: Presso la sede del Centro, 1972), 617–38; Margaret T. Gibson, "The Continuity of Learning circa 850–circa 1050," *Viator* 6 (1975): 1–13; and eadem, "Boethius in the Carolingian Schools," *Transactions of the Royal Historical Society*, 5th ser., 32 (1982): 43–56.

²³ For observations on the provenance and users of notated manuscripts of *De consolazione philosophiae*, see Barrett, *The Melodic Tradition*, 1:43–47.

TABLE 1.
Distribution of neumatic notations in the *De consolations
philosophiae*

Bk I	No. of notations	Bk II	No. of notations	Bk III	No. of notations	Bk IV	No of notations	Bk V	No. of notations
I:1	11	II:1	2	III:1	0	IV:1	2	V:1	1
I:2	6	II:2	5	III:2	6	IV:2	0	V:2	1
I:3	1	II:3	0	III:3	2	IV:3	3	V:3	1
I:4	2	II:4	2	III:4	1	IV:4	2	V:4	0
I:5	13	II:5	8	III:5	3	IV:5	2	V:5	0
I:6	2	II:6	3	III:6	5	IV:6	4		
I:7	11	II:7	1	III:7	1	IV:7	10		
		II:8	2	III:8	4				
				III:9	3				
				III:10	2				
				III:11	2				
				III:12	4				
Totals	46		23		33		23		3

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his grandson Arnulf.²⁴ This range of evidence indicates that Boethian *metra* were part of a widespread and continuous culture of clerical Latin song extending from oblates to magnates and across the Carolingian and Anglo-Saxon kingdoms and their immediate successors.

The overall distribution of notation among the thirty-nine poems of *De consolations philosophiae* reflects the types of song found within the broader Latin song culture of the time (table 1). The most frequently notated were the poems of the more dramatic first book, in which Boethius laments his imprisoned state and Philosophy uses artful means to persuade him to begin philosophical reflection. The seven *metra* of the first book lie close to established song genres, drawing on tropes of the lament, the hymn, and admonitory songs in particular. The frequency of notation drops for books two to four, whose *metra* are less dramatic, turning instead to themes of classical mythology, history, and nature allegory. Notations are rarely found for the *metra* of book V, whose language becomes more abstract as the dialogue turns to questions of providence. Verse form and structure appear to have played a role in addition to genre in determining which songs were rendered melodically. Those *metra* composed in meters that resembled forms found in the wider song

²⁴ This is BER 58. See, with further references, *ibid.*, 1:31–32, 64–65, 227–29, and vol. 2, no. 1.

culture were the most frequently notated, whereas more extended lyric meters were rarely notated.²⁵

Although a significant amount of information can be recovered about the conditions for singing Boethian *metra*, the musical tradition has proven difficult to reconstruct. With the exception of one *metrum* (*Bella bis quinis*, IV:7), which survives in alphabetical notation in a north Italian theory treatise from the turn of the second millennium, specific pitches cannot be straightforwardly recovered from the surviving notations.²⁶ In earlier studies this led either to silence or to the pure invention of melodies.²⁷ A more scholarly approach was enabled by identification of a critical mass of notations, the copying of these into synoptic tables, and analysis of neumed information without leaping into reconstruction. These activities facilitated recognition of models that informed individual settings and opened up the prospect of reconstructing the craft that informed the making of melodies for Boethian *metra*.

The Cambridge Songs Leaf

The notation from a single leaf serves to illustrate the potential and limits of historical reconstruction of melodies from *De consolazione philosophiae*. A leaf from the so-called Cambridge Songs manuscript was returned to the University Library in Cambridge almost a century and a half after it was removed by a visiting scholar from Frankfurt in 1840.²⁸ It contains *metra* only from *De consolazione philosophiae*, copied in series: on the recto, the only side with notation, the seven *metra* from book I up to and including the first *metrum* in book II were copied (fig. 1); on the verso, the *metra* continue up to the opening of the last one in book III. Following the copying of the first two poems in full, the opening lines of all the *metra* were originally copied in series, which suggests an interest in the

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²⁵ Ibid., vol. 1, ch. 11 ("Song Themes"), 203–11.

²⁶ The alphabetical melody transmitted in various versions in the north Italian Pseudo-Odo treatise of ca. 1100 is reproduced in Gerbert, *Scriptores*, 1:270a, 282a. For further discussion and transcriptions drawn from the wider manuscript transmission, see Barrett, *The Melodic Tradition*, vol. 2, no. 34.

²⁷ For creative reconstructions whose premises are not made explicit, see De Coussemaker, *Histoire*, "traductions" 1 and 2; and Bryan Gillingham, ed., *Secular Medieval Latin Song: An Anthology* (Ottawa: Institute of Mediaeval Music, 1993), 66–67. A more measured approach was taken by Christopher Page, who used the alphabetical melody for *Bella bis quinis* recorded in the Pseudo-Odo treatise as a guide to the reconstruction of a neumed version added to another eleventh-century Anglo-Saxon copy of the *De consolazione philosophiae* (OX Auct. F. 3. 6): Christopher Page, "The Boethian Metrum 'Bella bis quinis': A New Song from Saxon Canterbury," in *Boethius: His Life, Thought and Influence*, ed. Margaret T. Gibson (Oxford: Blackwell, 1981): 306–11.

²⁸ Margaret T. Gibson, Michael Lapidge, and Christopher Page, "Neumed Boethian *metra* from Canterbury: A Newly Recovered Leaf of Cambridge, University Library, Gg. 5. 35 (the 'Cambridge Songs' Manuscript)," *Anglo-Saxon England* 12 (1983): 141–52.

EXAMPLE 1a. Tone 2 in 10th–13th-century sources

1. Be - a - ti qui ser - u - tan - tur tes - ti - a - mo - ni - a e - ius in to - to cor - de ex - qui - runt e - um

2. Glo - ri - a et nunc et sem - per et in se - cul - a se - cu - lo - rum. A - men

3. Qua - re fre - mu - e - runt gen - tes et po - pu - li... sunt i - na - ni - a

4. Be - ne - dic - tus do - mi - nus de - us Is - ra - el qui - a vi - si - ta - vit ple - bis su - ae

1. Office Psalm: *Commemoratio brevis* (s. x in), no. 40
2. Office Gospel Canticle doxology: *Commemoratio brevis*, no. 22 (adapted)
3. Introit Psalm Verse: PROV 12 (s. xii, Chartres), fol. 13^{r-v}
4. Canticle: WOR 160 (s. xiii), p. 441

EXAMPLE 1b. Realization of *Carmina qui quondam* (I:1) in CA Gg. 5. 35
after tone 2

1 Car- mi- na qui quon- dam stu- di- o flo- ren- te per e- gi

3 Ec- ce mi- hi la- ce- rae dic- tant scri- ben- da ca- me- nae

5 Has sal- tem nul- lus po- tu- it per- vin- ce- re ter- ror

7 Glo- ri- a fe- li- cis o- lim vi- ri- dis- que iu- ven- tae



2. Fle- bi- lis he- u mes- tos co- gor i- ni- re mo- dos

4. Et ve- ris e- le- gi fle- ti- bus o- ra ri- gant

6. Ne nos- trum co- mi- tes pro- se- que- ren- tur i- ter

8. So- lan- tur mes- ti {ac} me- a fa{c} ta se- nis



Note: The wavy sign indicates an *oriscus*, which is found on repeated pitches and is commonly interpreted as an emphasis. The falling curved sign indicates liquescence, which is usually performed by singing a note lower on the liquescent syllable.

technical features of the poems rather than their content. In all probability the *metra* for books IV and V originally followed on the next leaf, which is now lost.

The scribe of this leaf also copied large portions of the manuscript, including the entirety of the immediately prior Cambridge Songs collection, sometime in the mid-eleventh century and in all probability at St. Augustine's, Canterbury.²⁹ The leaf was evidently originally part of the Cambridge Songs collection: the *metra* were thus integral to a rich collection of poems compiled in the Rhineland shortly after 1039, the date of the death of Conrad II, for whom a lament is included.³⁰ Internal references to six German emperors from the Ottonians to Henry III, as well as archbishops of Mainz, Trier, and Cologne, suggest a repertory emanating from the Middle or Lower Rhine region, perhaps the imperial court of Henry III, which was often resident at Cologne.³¹ The English neumes are consistent with the mid-eleventh-century dating of the script and, with the exception of the marginal notation, were added by a single notator. The additional marginal text and neumes were added at a slightly later date, most likely toward the end of the eleventh century. Although melodies cannot be reconstructed directly from the notations on the leaf, strategies of setting and stylistic models can be discerned. Three notated *metra* from the first book of *De consolatione philosophiae* demonstrate the range of techniques used.

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Carmina qui quondam (I:1)

The work opens with Boethius's impassioned lament for the state into which he has fallen. In eleven elegiac couplets (dactylic hexameters followed by pentameters) he compares his sorrowful songs of old age to the songs of his contented youth, blaming the wiles of Fortune for his downfall. Notation was added to the opening eight lines in the Cambridge leaf, which are copied in hexameter and pentameter lines divided by a fixed caesura after two and a half feet.

²⁹ The leaf was written by scribe A, whose work on the manuscript is identified in Arthur G. Rigg and Gernot R. Wieland, "A Canterbury Classbook of the Mid-Eleventh Century (the 'Cambridge Songs' Manuscript)," *Anglo-Saxon England* 4 (1975): 113–30, at 114–15.

³⁰ *Qui habet vocem serenam*, Jan Ziolkowski, ed. and trans., *The Cambridge Songs (Carmina Cantabrigiensia)* (New York: Garland, 1994, repr. Tempe, AZ: Medieval & Renaissance Texts & Studies, 1998), 108–11.

³¹ Walther Bulst, "Zur Vorgeschichte der Cambridger und anderer Sammlungen," *Historische Vierteljahrsschrift* 27 (1932): 827–31, at 830. On the likelihood that the Cambridge Songs collection was brought to Anglo-Saxon England by Bishop Ealdred of Worcester, who travelled to Cologne in 1054 as an envoy of King Edward the Confessor, brother-in-law of Henry III, to negotiate the return of Edward the Exiled, see Peter Dronke, Michael Lapidge, and Peter Stotz, "Die unveröffentlichten Gedichte der Cambridger Liederhandschrift (CUL Gg. 5. 35)," *Mittelaltinisches Jahrbuch* 17 (1982): 54–95, at 58–59.

As may be seen from the neumes alone in figure 1, at the beginning of each line there is an initial rise followed by a flexibly applied pattern of ascents and descents that ends in a single tone at the caesura. Fixed accent patterns toward the end of the line correspond with a more stable melodic cadence. This setting brings to mind principles of recitation used in psalm tones. A formula for tone 2 is given in example 1a by way of illustration. The first two versions are taken from the treatise *Commemoratio brevis de tonis et psalmis modulandis* (A Brief Review of the Modes and of Psalm Singing), which dates from the late ninth century and is concerned with Office psalmody.³² The following two versions are taken from later sources from which pitches can be securely recovered: a twelfth-century Gradual from Chartres (PROV 12) and the thirteenth-century Worcester Antiphoner (WOR 160). The selection of sources given here is restricted since psalm tones were rarely written out in full, especially at an early date. A key Carolingian treatise (the opening of which survives in a late tenth-century version copied at Christ Church, Canterbury),³³ a northern French source, and the earliest insular tonary from which pitches can be reliably recovered afford the best possible representation of a tone 2 formula under the circumstances.³⁴

It is clear from example 1a that variations occurred in practice at intonation, mediation, and cadence. Differences in realization can be ascribed in part to regional variation and in part to functional differences, insofar as elaboration was generally linked to the status of the sung item; a daily Office psalm would be sung with less elaboration than the psalm to an Introit antiphon in the Mass, for example. Even so, an underlying pattern evidently held for tone 2: an intonation that spans a fourth, rising by a tone and then minor third (decorated or otherwise) to a recitation tone; a medial cadence that rises to d' at the penultimate (in most cases) and ultimate accent; a second intonation that rises from a to c', on occasion reaching the high d' for an accented syllable; and a cadence that outlines c'-b-g-a.

The application of procedures used for singing psalm tones to Latin poetry of the first millennium has a precedent in the rendition of the

³² For the text and a translation, see Terence Bailey, ed. and trans., *Commemoratio brevis de tonis et psalmis modulandis: Introduction, Critical Edition, Translation* (Ottawa: The University of Ottawa Press, 1979). For the second listed example from this treatise, a regularized version of the incipit is given: all surviving manuscripts read g-a-a for "Gloria" (see, including further discussion, *ibid.*, 109). The Boethian reconstruction is not dependent on either reading at this point.

³³ The Canterbury source is CA CCC 260, fols. 51v–53v.

³⁴ For a survey of psalm tones in twelfth- to fourteenth-century Italian antiphoners, see Joseph Dyer, "The Singing of Psalms in the Early-Medieval Office," *Speculum* 64 (1989): 535–78, in which an overall transition from solo to choral practice is offered as an explanation for the incomplete synthesis of tones presented in Bailey, ed., *Commemoratio brevis*: *ibid.*, 548, 563.

hexameters of the Pseudo-Augustine Sibylline *Iudicii signum*.³⁵ Hints as to how such a pattern might have been worked out for *Carmina qui quondam* are provided by individual neumatic signs. One sign whose meaning has been previously overlooked provides a clue to pitch level. The sign found at *fletibus* in line 4 and *mesti* in line 8 is unusual in featuring a *virga* with a small dash in the middle on the right-hand side (ex. 1b). The meaning of this sign can be identified through its appearance in another mid-eleventh-century Anglo-Saxon manuscript from Canterbury containing notated Prudentian hymns whose melodies can be securely reconstructed from later sources. The sign occurs in this contemporary manuscript at the pitch *f*, thereby establishing that it indicates *fa* (i.e., the upper pitch of the *mi-fa* semitone).³⁶

It is possible to construct a melody for the notated lines by drawing on a psalmic model of recitation, the neume indicating *fa*, and other hints contained in the notation, such as the differentiated heighting of *virgae* in line 1. A number of decisions still remain, mainly concerning how to extend the recitational principle used for single verses of psalms across a poetic couplet. The proposed melody establishes an *ouvert/clos* relation, with the first line returning to the recitation tone prompted by the use of two *virgae* indicating relatively high tones on the final two syllables. Alternatives are possible in matters of detail, but only within a relatively narrow set of options afforded by the tone 2 recitation and the pitch information provided by the neumes.

Heu quam praecipiti (I:2)

In the next prose passage Philosophy responds to Boethius's opening lament with a stern rebuke, fiercely dismissing the Muses who are goading him to compose sad songs. Her subsequent song laments Boethius's downtrodden state. Each line of the *metrum* is composed of two parts separated by a fixed caesura after the seventh syllable: the first part consists of two-and-a-half dactylic feet (a hemiepes), a familiar pattern from the opening of a dactylic hexameter; the second part features an adonic whose metrical pattern of a dactyl followed by a long and then either

³⁵ Ewald Jammers, "Der Vortrag des lateinischen Hexameters im frühen Mittelalter," *Quadrivium* 2 (1958): 25–31. Liturgical practice was evidently less schematic; see especially Andreas Haug, "Ways of Singing Hexameter in Tenth-Century Europe," in *City, Chant, and the Topography of Early Music*, ed. Michael Scott Cuthbert, Sean Gallagher, and Christoph Wolff (Cambridge, MA: Harvard University Press, 2013), 207–28.

³⁶ The sign is found at the syllable *genitore* in *O crucifer bone* on fol. 3v of OX Auct. F. 3. 6, a copy of Prudentius's *Psychomachia* bequeathed to Exeter Cathedral by Bishop Leofric, who died in 1072. The pitch *f* at this point is confirmed by the melody recorded on a four-line staff in the twelfth-century Beauvias cantatorium (PA na 1064), fol. 20v.

a short or long syllable is routinely found as the final two feet of a dactylic hexameter line.

The neumes added to this *metrum* in the Cambridge leaf indicate a relatively elaborate melody. Consideration of the wider notated tradition proves essential in order to reach an understanding of underlying models. Of particular interest in this case is a technique for reciting dactylic meters recorded in the early twelfth-century Beauvais Circumcision Office and a slightly more elaborate form in the Later Cambridge Songs copied in the late twelfth or early thirteenth century (ex. 2).³⁷ In both cases a minor third is outlined within the dactylic foot, with the higher note on the dactylic ictus followed by either successively lower notes on two following shorter syllables or a single lower note on the following long. Some evidence that this technique was applied to Boethian lyric meters is found in the notations added to *Heu quam praecipiti* in two manuscripts of northern French provenance now held in Berne: BE 455 and 179 (ex. 3a). Single pitches are set to each syllable, and the melodic outline as revealed by the relative heighting of the neumes follows the dactylic minor third recitation principle in the first half of the line. The profile of the melody recorded in BE 455 appears to continue this pattern, although not all the neumes are still visible; the heighting of the neumes in BE 179 departs from the formula at the tenth syllable in the second half of the line. The relative heighting in BE 179 is so clear that a realization may be proposed for the opening line.

A different psalmic model was taken as the point of departure for the same *metrum* in a late ninth- or early tenth-century notation from St. Gall that survives in a manuscript now held in Naples (NA IV. G. 68).³⁸ The profile of the melody recorded in the neumes accords with a solemn tone 3, as recorded in the *Commemoratio brevis* (ex. 3b). The opening rise is articulated by an *episema* indicating a rhythmic hold on the third syllable. Thereafter the only departure from the tone 3 formula occurs immediately before the caesura where the St. Gall notation records a two-note

³⁷ On the Beauvais example see Wulf Arlt, *Ein Festoffizium des Mittelalters aus Beauvais in seiner liturgischen und musikalischen Bedeutung*, 2 vols. (Cologne: Arno Volk Verlag, 1970), 1:46 (where it appears as a trope element within Matins), and (for a discussion of the verse structure) 2:10. On the Later Cambridge Songs recitation, see John Stevens, *The Later Cambridge Songs: An English Song Collection of the Twelfth Century* (New York and Oxford: Oxford University Press, 2005), 144. Silvia Wälli discussed the application of this recitation scheme to Horace's *O fons Bandusiae*: Wälli, *Melodien aus mittelalterlichen Horaz-Handschriften: Edition und Interpretation der Quellen* (Kassel and Basel: Bärenreiter, 2002), 262.

³⁸ On the dating of this manuscript and its notations, see respectively: Bernhard Bischoff, *Katalog der festländischen Handschriften des neunten Jahrhunderts (mit Ausnahme der wisigotischen)*, Teil II: *Laon-Paderborn* (Wiesbaden: Harrassowitz, 2004), no. 3574; and Susan Rankin, "The Song School of St. Gall in the Later Ninth Century," in *Sangallensia in Washington: The Arts and Letters in Medieval and Baroque St. Gall Viewed from the Late Twentieth Century*, ed. James C. King (New York: P. Lang, 1993), 195n11.

EXAMPLE 2. Recitation models for dactylic hexameters

Opening lines of (i) Ovid's *Metamorphosis* and (ii) the *Fables* of Avianus

i)

An-te ma-re et ter-ras et quod te-git om-ni-a ce-lum

Opening trope element to Matins Verse *In principio erat verbum*
Circumcision Office, Beauvais (ed. Wulf Arlt)

ii)

Rus-ti-ca de-flen-ti par-vo iu-ra-ve-rat o-lim

ni-ta-ce at-ra-pi-do quod fo-ret es-ca-lu-po

Section of a two-part troped *Benedicamus Domino*,
Later Cambridge Songs (CA Ff. i. 17), fol. 8^r

rise. The selection of a tone 3 formula for delivering the text seems to have been retained in the Cambridge leaf, albeit in a more elaborate style: the melodic profile of the opening of the first line resembles tone 3 Responsory Verses. The alignment between the profile of the notated melody for *Heu quam praecipiti* in the Cambridge leaf and the Responsory Verse tone is particularly close in the first half of the line (ex. 3c).


Formulaic phrases used in the Responds of mode 3 Responsories as identified by Walter Frere in the Sarum repertory provide further guidance for realizing the remainder of the melody as shown in example 4.³⁹ Decisions as to which responsorial phrases to follow were guided not only by proximity in profile but also by customary sequences of phrases in the

³⁹ Walter H. Frere, *Antiphonale Sarisburiense: A Reproduction in Facsimile of a Manuscript of the Thirteenth Century, with a Dissertation and Analytical Index*, 3 vols. (London: Plainsong and Mediaeval Music Society Publication, 1901–15), 1:29–32. The phrases used are marked in the upper staves: Ps1 and Ps2 refer to the first and second halves of the psalm tone used for the doxology; Oa, e2, and a1 refer to standard phrases used in Responsory Responds as identified by Frere, where they occur in the given order, i.e., Oa as an opening phrase followed by phrase ending on e (the second variant is used here), then a phrase ending on a (the first variant is used). The tone used in the Sarum repertory for the doxology of the Responsory, which provides coordinates for the reconstruction of the first two lines, accords closely with Responsory Verse tone 3 in the early twelfth-century Antiphoner of Saint Maur-des-Fossés (PA 12044), as reproduced in Peter Wagner, *Einführung in die gregorianischen Melodien III: Gregorianische Formenlehre* (Leipzig: Breitkopf & Härtel, 1921), 192.


EXAMPLE 3. Models for *Heu quam praecipiti* (I:2)

1 2 3 4 5 6 7 8 9 10 11 12
 - ~ - - ~ - | - ~ - - x

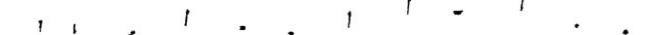
a)
 Recitation
 formula



BE 455



BE 179



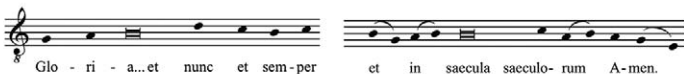
1 He- u quam prae -ci- pi- ti mer- sa pro- fun- do

BE 179 Realised



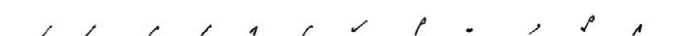
He - u quam prae - ci - pi - ti mer - sa pro - fun - do

b)
 Tone 3
 solemn, CB



Glo - ri - a...et nunc et sem-per et in saecula saeculo- rum A-men.

NA IV.G.68




1 He- u quam prae -ci- pi- ti mer- sa pro- fun- do

NA Realised



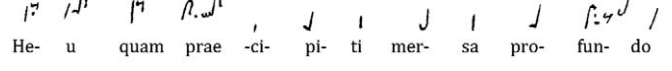
He - u quam prae - ci - pi - ti mer - sa pro - fun - do

c)
 Responsory
 Verse Tone 3
 CA Gg.V.35



1 He- u quam prae -ci- pi- ti mer- sa pro- fun- do

CA Realised



He - u quam prae - ci - pi - ti mer - sa pro - fun - do

repertory. Further information provided by the neumatic notation also acted as a guide, especially patterns of repetition; for example, from line 4 *quotiens* to the end echoes line 1 *praecipiti* into line 2. Another important criterion in guiding realization was melodic grammar: in addition to following characteristic procedures, local decisions were made to match the pitches of cadences to punctuation according to degrees of melodic closure and textual punctuation.⁴⁰ A recitation tone of b for tone 3 is found in the *Commemoratio brevis* and manuscripts from St. Gall and Benevento, but most sources use c', which is adopted here since recitation on b probably reflected an earlier practice.⁴¹

The three layers traced in the notated tradition for *Heu quam praecipiti* correspond with wider patterns observed in the melodic tradition for Boethian *metra*: i) simple settings that appear to be "workings up" of metrical renditions that are found as early as the late ninth century in northern France, many of which remain within the tradition in this area; ii) more elaborate melodies at individual centers, notably at St. Gall as early as the late ninth or early tenth century; and iii) a separate East Frankish tradition that comes into focus from ca. 950 onwards. In this case, the melodic tradition recorded in the Cambridge Songs leaf is matched closely by a German neumatic notation found in a manuscript of Tegernsee provenance.⁴² This pattern of transmission mirrors what is known of the spread of new liturgical song traditions—a melodic tradition apparently created in northern France that spread across the Carolingian kingdoms in the ninth century, followed by specialization at individual centers toward the end of the same century, and then a split into East and West traditions in the tenth century with extension in England.⁴³ The simplest historical explanation is that both traditions were spread by movement of individuals between institutions as either cantors or Masters.

⁴⁰ It proved particularly important, for example, to distinguish the ends of lines 2 and 5, which follow a similar melodic outline: line 5 is the end of the strophe, which implies a full close with the close of the *sententia*, whereas line 2 continues grammatically into line 3. Two proximate models were available among the phrases compiled by Frere, i.e., the second half of the doxology (Ps2) and Oa, which allowed cadences on the third degree of the scale and final, respectively.

⁴¹ See, principally in relation to St. Gall manuscripts, Eugène Cardine, "La corde recitative du 3^e ton psalmodique," *Études Grégoriennes* 1 (1954): 47–52; and, for a wider context, Joseph Gajard, "Les réceptions modales des 3^e et 4^e modes et les manuscrits Bénéventains et Aquitains," *Études Grégoriennes* 1 (1954): 9–45.

⁴² MU 18765. See Barrett, *The Melodic Tradition* 2:196.

⁴³ On distinct regional traditions within the transmission of trope melodies in this period, see Wulf Arlt, "Schichten und Wege in der Überlieferung der älteren Tropen zum Introitus 'Nunc Scio Vere' des Petrus-Festes," in *Recherches nouvelles sur les tropes liturgiques*, ed. Arlt and Gunilla Björkvall (Stockholm: Almqvist & Wiksell International, 1993), 13–93, esp. 87–93 ("Einordnungen und Ausblick").

EXAMPLE 4. Reconstruction of *Heu quam praecipiti* in CA Gg. 5. 35 after mode 3 responsory formulas

Ps1
1. He - u quam prae - - ci - pi - ti mer - sa pro - fun - do

Ps2
Oa
2. Sal -
Mens he - bet et pro - pri - a lu - ce re - lic - ta

e2
3. mag - ne et mi - ra - - bi - - lis
Ten - dit in ex - ter - nas i - re te - ne - bras

a1
Ps1
4. bap - ti - za - to do - mi - no
Ter - re - nis quo - ti - ens fla - ti - bus auc - - ta

Oa
5. Cres - - cit in - im - men - sum no - xi - a cu - ra

Quisquis composito (I:4)

The fourth *metrum* is sung by Philosophy, who encourages Boethius to master his emotions in order to return to philosophical reflection. Its eighteen lines are composed of hendecasyllables, which may be described metrically as the equivalent of the first half of a dactylic

hexameter line followed by two iambs and a last syllable of variable length.⁴⁴

The notation added to the Cambridge leaf is remarkable for its syllabic setting and use of two means of indicating pitch height. The first is through *virgae* that are aligned horizontally at their base but whose highest point varies according to relative pitch. It is evident from this feature alone that the four-line setting includes patterns of melodic return organized around the half line that may be broadly summarized as *ab*, *cb'*, *c'd*, *c''d'*. The second means of indicating pitch is the use of a *virga* sign that resembles an "r" whose final stroke is extended at a right diagonal, as found at 2.7 *egit* and 3.6 *potuit*. This sign, found in other eleventh-century English manuscripts such as for the monophonic chants in the Winchester Troper, indicates the upper side of the *mi-fa* semitone, or more simply *fa*.⁴⁵ Its use has two interesting features: it is employed within repeated melodic segments, and the second sign at 3.6 appears to have been initially drawn as a regular *virga* to which a right diagonal stroke was added. Both features suggest a clarifying function for the sign, possibly indicating differences from melodic expectations at these points.

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The syllabic setting implies a hymnic style, but there are no clear parallels in terms of melodic contour with hendecasyllable hymns edited by Bruno Stäblein. *Squalent arva soli* shows a similar design in terms of repetition, with a first half repeated three times and a second repeated twice: *ab*, *ab*, *ac*, *dc*; although this hymn was cited by Bede, it is not clear that its melody was known in England at a later date.⁴⁶ In the absence of a specific model for reconstruction, the minor third recitation technique detected as a background pattern for *Heu quam praecipiti* was employed, in part because there is a near systematic association between metrical longs and higher pitches in the melodic contour, as indicated by the neumes. Accordingly *f*'s are placed on all accented syllables in the first line and low *d*'s for the signs indicated by a relatively low horizontal stroke (ex. 5). Beginning line 2 on *f* and following the indicated contour by step serves to align *fa* with the extended r-shaped *virga* after the caesura. Opening

⁴⁴ The tradition of understanding lyric meters as composed of elements of the dactylic hexameter and iambic trimeter is discussed in Jürgen Leonhardt, "Die beiden metrischen Systeme des Altertums," *Hermes* 117 (1989), 43–61, with particular reference to the Phalaecean hendecasyllable at 44.

⁴⁵ The sign is found in both CA CCC 473 and OX Bodley 775. Susan Rankin, *The Winchester Troper: Facsimile Edition and Introduction* (London: Stainer and Bell, 2007), 29–30.

⁴⁶ Bruno Stäblein, ed., *Hymnen: Die mittellaterlichen Hymnenmelodien des Abendlandes* (Kassel and Basel: Bärenreiter, 1956), no. 1023; Bede, *De arte metrica*, ch. 19, in *Grammatici Latini*. 8 vols., ed. Heinrich Keil (Leipzig: Teubner, 1855–80), 7:255. The hymn does not appear in the New Hymnal as confirmed in Helmut Gneuss, *Hymnar und Hymnen im englischen Mittelalter* (Tübingen: Max Niemeyer, 1968), 40.

EXAMPLE 5. Reconstruction of *Quisquis composito* (I:4) in CA Gg. 5. 35 after hymnic models

Quis - quis com - po - si - to se - re - nus ae - vo
 fa - tum sub pe - di - bus e - git su - per - bum
 for - tu - nam - que tu - ens u - tram - que rec - tus
 in - vic - tum po - tu - it te - ne - re vul - tum,

after the caesura in line 2 in this way puts the melody one step higher within the modal scale than in the previous line; drawing attention to this difference may have been the purpose of the special sign. Repeating the first half of line 2 in the third line leads the second half to return to a minor third axis, falling to an open cadence on the subfinal at the end of the line. The fourth line opens with another repeated profile, albeit adapted to accord with the indication of the *fa* step by the extended *virga* at the tone before the caesura, thereby defeating the expected cadence on *mi*, as in the previous two lines. The final half line returns to the minor third axis, with short syllables receiving low d's and long syllables placed on f.

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Reconstruction and Creative Practice

Collaboration with *Sequentia* began with Bagby in the autumn of 2014, followed by further experimentation with two additional members in concentrated periods of activity spread over three years (2015–17). Initially we were joined by the singer and harpist Hanna Marti for an extended period, and finally by the flautist Norbert Rodenkirchen.⁴⁷ A full account of the collaboration with *Sequentia* is not given, mainly because individual suggestions emerged in dialogue and were subsequently refined in ways that resist simple documentation: even a preliminary attempt to clarify moments when we were working collaboratively would represent a major undertaking, as at times we were conversing from within the perspectives of our disciplines, at times crossing over, and at times working independently. The summary that follows concentrates on melodic reconstruction

⁴⁷ The series of collaborative events is briefly described in Bagby's liner notes to *Boethius: Songs of Consolation*, 20–21.

and instrumental participation, with a focus on how hypotheses were formed and the status of the resulting knowledge.

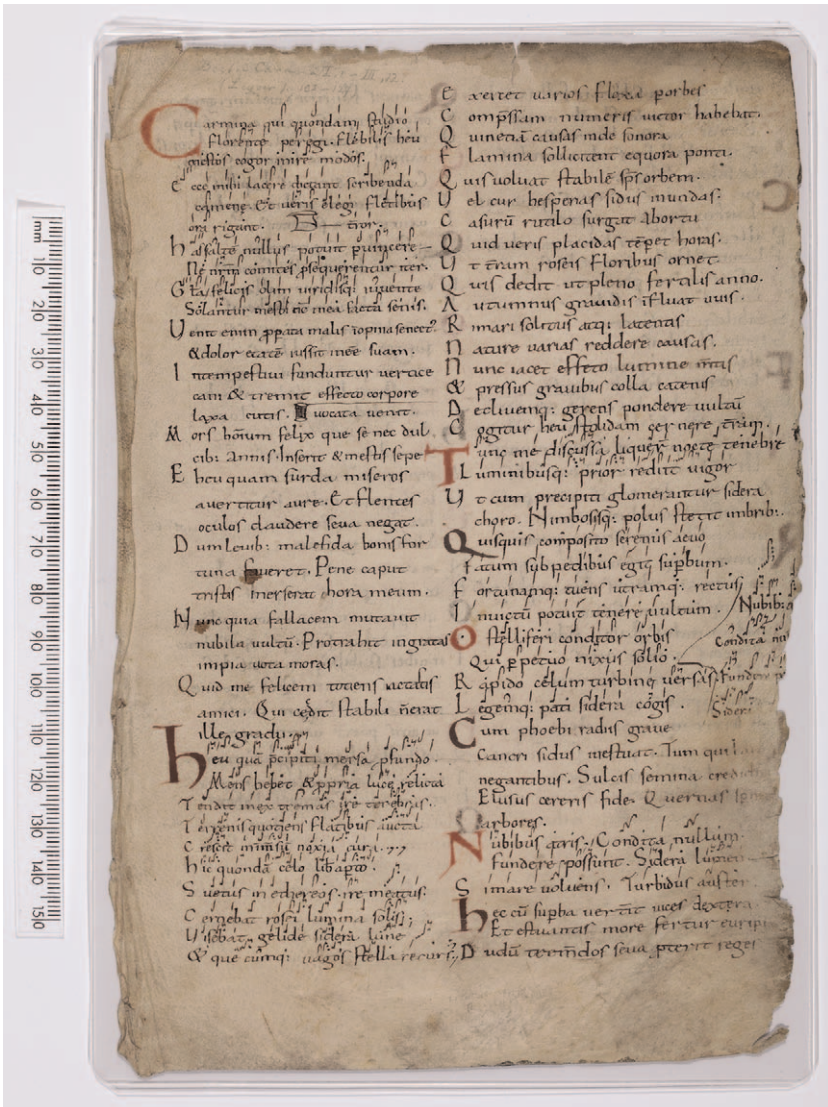
Reconstruction required finding practical answers to a range of questions, many of which are standard for early song repertoires, including how the minimal information provided for the opening lines of poems should be applied to the remainder of the stichic texts, how texts should be delivered with respect to meter and accent, and what voices and rhetorical registers would best suit the delivery of the text. When tackling the specific question of melodic reconstruction we proceeded in a heuristic fashion, exploring provisional hypotheses through trial and error with the aim of coming to pragmatic solutions. The reason for working in this way was to draw on the knowledge of musical procedures gained by performing musicians through decades of memorizing parallel song repertoires, allowing a vast number of possible realizations to be reduced to a number of more likely solutions that could be systematically investigated.

The notation for *Heu quam praecipiti* from the Cambridge Songs leaf may be taken as an example of the working process. As presented in the previous section, deductions about the underlying mode proceeded from observation of the wider tradition of notation, especially the St. Gall notation, leading to recognition of the Cambridge notation as a highly elaborate version of mode 3. In practice, however, formation of the initial working hypothesis of mode 3 for the Cambridge Songs notation led to reconsideration of the preceding tradition in a more experimental manner. The first step in forming a working hypothesis was to look at the Cambridge Songs notation for hints of mode. The second line, repeated in the seventh, proved the most suggestive: the unusual repeated two-note rise at the opening of the line (*Mens* and *Suetus*; fig. 1) brought to mind a standard intonation formula (G-A-G-C). That both lines appear to proceed with a flexibly adapted pattern using elements of recitation lent weight to this possibility. The cadence on *relicta*, expanded in the repeat at *meatus*, is similarly unusual in shape, recalling for the vocalists of *Sequentia* parallel cases such as *succurrite vitae* (G-A-E-E), as found in a late ninth- or early tenth-century liturgical song from St. Gall, Ratpert's *Ardua spes mundi*.⁴⁸ The use of a vocal figure called a quilisma in the Cambridge Songs notation at this point served as a further guide to realization, since the interval most commonly covered by a quilisma is a minor third.

With such hints in mind, two kinds of further exploration took place. Marti turned to experimental solutions for parallel notations. The less ornate melody recorded in the neumes of BE 179 (whose opening line appears in ex. 3a) was particularly instructive, since its relative heighting

⁴⁸ For the melody, see Stäblein, *Hymnen*, no. 1019.

FIGURE 1. Cambridge, University Library, Gg. 5. 35, fol. 442*r
(recovered leaf) Reproduced by kind permission of the
Syndics of Cambridge University Library



EXAMPLE 6. First reconstruction of *Heu quam praecipiti* in CA Gg. 5. 35

Heu quam praeci - pi - ti mer - sa pro - fun - do

He - u quam

Mens he - bet et pro - pri - a lu - ce re - lic - ta

Ten - dit in ex - ter - nas i - re te - ne - bras etc.

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Upper version	BE 179, fol. 3 ^r
Lower version	CA Gg. 5. 35, fol. 442* ^r

provides further hints about melodic contour. Reading this notation with mode 3 in mind proved relatively unproblematic and in turn provided a framework for reconstructing the Cambridge Songs notation as a mode 3 melody (ex. 6). A parallel scholarly checking of historical sources supported the mode 3 hypothesis. As already seen in example 4, the contour of the earlier version from St. Gall in the Naples manuscript accords with a tone 3 pattern of intonation, elaboration around a recitation tone, and cadence. The elaborate opening of *Heu quam praecipiti* in the Cambridge Songs leaf was subsequently found to correspond closely with the highly decorated Responsory Verse tone 3 as recorded in thirteenth-century Sarum sources (ex. 4).

This combination of collaborative and independent working was also employed in tackling the question of the role of instruments, although in this case investigation began with documentary evidence and extended into evidence drawn from multiple disciplines, including iconographic, archaeological, and theoretical sources as well as experimental creative practice. Preliminary evidence for instrumental participation in performances of songs from the Cambridge Songs collection is provided in an often cited passage by Sextus Amarcius, who lived in

Speyer during the reign of Henry III. In a satire written around the middle of the eleventh century, he describes the singing of four poems to the accompaniment of a *chelys*, which may be translated as a lyre or a harp:⁴⁹

Ergo ubi disposita venit mercede iocator
 Taurinaque chelin cepit deducere theca,
 Omnibus ex vicis populi currunt plateisque,
 Affixisque notant oculis et murmure leni
 Eminulis mimum digitis percurrere cordas,
 Quas de vervecum madidis aptaverat extis,
 Nuncque ipsas tenuem, nunc raucum promere bombum . . .
 Ille fides aptans crebro diapente canoras,
 Straverit ut grandem pastoris funda Goliath,
 Ut simili argutus uxorem Suevulus arte
 Luserit, utque sagax nudaverit octo tenores
 Cantus Pythagoras, et quam mera vox philomenę,
 Perstrepsit.

A minstrel was brought in, his fee arranged;
 He took his *chelys* out of a leather case,
 And people rushed in from the streets and courtyards.
 Watching intently, murmuring admiration,
 They see the artist run his fingers over
 The strings (made of dyed sheep-gut), trying out
 The notes, now delicately, now clanging them.
 Harmonizing the tuneful strings in fifths,
 He sang of how the shepherd with his sling
 Laid great Goliath low; of how the little
 Swabian cuckold tricked his wife in turn;
 How wise Pythagoras discovered octaves;
 And how the nightingale sings with flawless voice.

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Although this fictional scene is set in an inn, the four learned Latin poems in this passage that have been identified as present in the Cambridge Songs collection would seem more suited to performance at an episcopal court, such as that at Speyer or even the imperial court at Cologne.⁵⁰ Indeed the account of a performance of songs for a patron

⁴⁹ Text reproduced from Ziolkowski, *The Cambridge Songs*, xlv. The translation follows Peter Dronke, *The Medieval Lyric* (Cambridge: D. S. Brewer, 3rd ed., 1996), 28, although *chelys* is retained in place of “harp” since the precise meaning of the term remains uncertain; see Christopher Page, *Voices and Instruments of the Middle Ages: Instrumental Practice and Songs in France, 1100–1300* (London and Melbourne: J. M. Dent & Sons Ltd., 1987), 226 (no. 8). For further discussion of this passage, see Ziolkowski, *The Cambridge Songs*, xlii–liii.

⁵⁰ It was realized as early as the mid-nineteenth century that some of the songs alluded to in this passage are found in the Cambridge Songs: see Karl Strecker, ed., *Die Cambridger Lieder*, MGH *Scriptores rerum Germanicarum in usum scholarum separatim*

after dinner by a professional musician recalls tales of singing to instrumental accompaniment at feasts. A typically colorful account of such an occasion is provided by Notker Balbulus of St. Gall (d. 912), who describes how an unnamed bishop, “desiring to show still more plainly his magnificence and glory, ordered masters most skilled in singing to come forward, with all kinds of musical instruments, the sound of whose voices could soften the hardest hearts or turn to ice the swiftly flowing waters of the Rhine.”⁵¹ Notker does not specify the musical instruments, but a range of possibilities is provided by the author of the *Commemoratio brevis*.⁵²

Citharedae et tibicines et reliqui musicorum vasa ferentes vel etiam cantores et cantrices seculares omni student conatu, quod canitur sive citharizatur, ad delectandos audientes artis ratione temperare.

Players of the cithara, flute, and other musical instruments, and secular singers, men, and women, all take special care to obey rules of their art, so that what they sing or play is pleasing to their audience.

This passage could not be bettered both as a general orientation for performing early medieval music outside of the liturgical round and as a specific model for the collaborative work undertaken with *Sequentia*. String and wind players, as well as male and female vocalists, pursued their art in a manner that was both highly disciplined and aware of the need to satisfy an audience. The threefold formulation of “cithara, flute, and other musical instruments” was earlier used by Boethius himself to describe instrumental accompaniment of song.⁵³

Circumstantial evidence for instrumental participation in the performance of Boethian *metra* in Anglo-Saxon England can also be found in the form of the skills and experiences of one individual. Widely

editi 40 (Berlin: Weidmann, 1926), xv, lines 11–12. On the identification of the fourth song mentioning David and Goliath following recovery of the Cambridge leaf, see Dronke, Lapidge, and Stotz, “Die unveröffentlichten Gedichte,” 57.

⁵¹ “ut eis magnificentiam suam et gloriam manifestius ostenderet, iussit procedere peritissimos cantandi magistros cum omnibus organis musicorum, de quorum vocibus et sonitu fortissima corda mollescerent et liquidissima Rheni fluentia durescerent,” *Gesta Karoli magni imperatoris*, MGH Scriptores rerum Germanicarum, n.s. 12, I. 18, ed. Hans F. Haefele (Berlin: Wiedmann, 1962), 24; translation from David Ganz, trans., *Einhard and Notker the Stammerer: Two Lives of Charlemagne* (London: Penguin, 2008), 69.

⁵² Bailey, ed., *Commemoratio brevis*, ch. 1; for the translation, see 27. Text from Hans Schmid, ed., *Musica et scolica enchiriadis una cum aliquibus tractatulis adiunctis* (Munich: C. H. Beck, 1981), 157.

⁵³ “Sunt autem tria. Et prima quidem mundana est, secunda vero humana, tertia, quae in quibusdam constituta est instrumentis, ut in cithara vel tibiis ceterisque, quae cantilenae famulantur.” *De institutione musica* I. 2, ed. Friedlein, *Anicii Manlii Torquati Severini Boetii* 187. “There are three [kinds of music]: the first is cosmic, whereas the second is human; the third is that which rests in certain instruments, such as the cithara or flutes or other instruments, which serve songs.” Translation adapted from Bower, *Fundamentals of Music*, 9.

considered the most influential prelate of tenth-century England, Dunstan, who ended his career as Archbishop of Canterbury (960–88), was also a noted musician. In his youth he had been a harpist and singer; indeed he was dismissed from the court of King Athelstan (r. 924–39) for singing what his enemies termed “the vain songs of ancestral heathenism” and “frivolous incantations of fables,” references in all likelihood to epic narratives in the vernacular.⁵⁴ At Glastonbury, where he was appointed abbot sometime between 940 and 946 and evidently took particular care in educating pupils,⁵⁵ he cultivated his harp playing; his *hearpa* became itself a vehicle for angelic singing.⁵⁶ It was also while at Glastonbury that he annotated a manuscript that contained at least one notated Boethian *metrum*.⁵⁷ Dunstan was thus not only a learned man who read the *De consolatione philosophiae*, but also a noted harpist who sang repertories that extended from the vernacular to the liturgical. The likelihood that at some point he sang Boethian *metra* to the harp would seem high, perhaps even later in his life at St. Augustine’s, Canterbury, where he continued to dedicate himself to teaching.⁵⁸

⁵⁴ “sed avitae gentilitatis vanissima didicisse carmina et histriarum frivoleas coluisse incantationes,” *Vita S. Dunstani* 6.2, in *The Early Lives of St Dunstan*, ed. and trans. Michael Winterbottom and Michael Lapidge (Oxford: Clarendon Press, 2012), 20. The translation is my own. The term *histriarum* is evidently corrupt, as noted by Winterbottom and Lapidge; an accidental conflation of two terms may have occurred. Perhaps the most likely reference in conjunction with “songs of ancestral heathenism” is to *historiae* (i.e., as a contraction of *historiarum*), which may be understood in this context as fables or tales. The term *histrio*, which was used from the ninth century onwards in insular sources to refer to entertainers, including musicians, may also have influenced the corruption: see David R. Howlett, ed., *Dictionary of Medieval Latin from British Sources: Fascicle IV, F-G-H*, (New York and Oxford: Oxford University Press, 1989), 1161–62.

⁵⁵ For a passing reference to Dunstan’s pupils at Glastonbury, see *Vita S. Dunstani* 11.1, 36–37. Further references to Dunstan as a teacher may be found in *Vita S. Dunstani*, 1.7, 15.2–3, 18.2, and 22.3.

⁵⁶ *Vita S. Dunstani* 12, 40–43; cf. *Lectioes in depositione S. Dunstani* 9, 134–35. For identification of the chants mentioned, see David Hiley, “What St Dunstan Heard the Angels Sing: Notes of a Pre-Conquest Historia,” in *Laborare fratres in unum: Festschrift László Doboszay zum 60. Geburtstag*, ed. Janka Szendrei and David Hiley (Hildesheim: Weidmann, ca. 1995), 105–15.

⁵⁷ The notated manuscript is VAT 3363, which contains Dunstan’s hand among glosses added in the mid-tenth century; the neumes added to *O stelliferi conditor orbis* on fol. 36 predate Dunstan’s glosses. His hand is elsewhere found in this period in manuscripts of presumed Glastonbury provenance: for a summary introduction, see Winterbottom and Lapidge, *The Early Lives*, lvii–lx. Dunstan’s additions to VAT 3363, which compare readings with other manuscripts, are in accordance with his reported custom to correct “faulty books as soon as there was light to do so in the morning.” See also R. W. Hunt, ed., *Saint Dunstan’s Classbook from Glastonbury: Codex Biblioth. Bodleianae Oxon. Auct. F. 4. 32* (Amsterdam: North Holland Pub. Co., 1951), xiv.

⁵⁸ Dunstan rededicated the monastery of SS Peter and Paul in Canterbury, after which it was known as St. Augustine’s, and it was there that he had a vision of virgins singing and dancing to a late antique *versus*, i.e., Caelius Sedulius’s *Cantemus, socii, Domino*. A general account of Dunstan’s daily occupations in later life, including instruction, follows

The question of what instrumentalists might have played was approached inductively, drawing on a wide range of evidence to establish general principles. The instruments themselves provided a material starting point. Throughout the reconstruction process Bagby played a six-string harp based on remnants of an instrument excavated from the grave of a seventh-century nobleman near the town of Oberflacht (south of Stuttgart).⁵⁹ This Germanic harp (often referred to as a lyre) was the basic design known throughout northern Europe in the early Middle Ages, as attested by similar finds at Trossingen, Sutton Hoo, and Taplow, among others.⁶⁰ Its use in Anglo-Saxon England is debated, since archaeological finds and iconographic evidence do not extend beyond the ninth century. The continued use of the Germanic harp on the continent suggests that on the balance of probabilities the lyre and the triangular harp co-existed throughout the Anglo-Saxon period, with the latter assuming pre-eminence toward the end of the tenth century.⁶¹

The reconstructed instrument affords certain possibilities in performance: as Bagby says in interview, it is “an instrument of pattern, of inversion even of percussive technique.”⁶² Sextus Amarcus hints at this range of technique when he describes the *iocator* as “trying out / The notes, now delicately, now clanging them.” The satirist goes on to mention “harmonizing the tuneful strings in fifths,” which has implications for tuning. The one attested six-string harp tuning from the period could barely support this practice, as it contains only two adjacent perfect fifths: c-d-e-f-g-a.⁶³ To maximize the potential for organal solutions in line with contemporary theory, Bagby’s chosen tuning for the six strings was (at modern pitch) G-B^b-c-d-f-g, which allows for an expanded set of options, comprising one octave, three possible perfect fifths, and three fourths. The pentatonic matrix also allows few possibilities for jarring notes, giving the singer maximum freedom to concentrate on responding to the complexities of the metrical text.

in the next chapter: see *Vita S. Dunstani*, 36, 37; and Winterbottom and Lapidge, *The Early Lives*, 100–103.

⁵⁹ On this harp and its possible tuning systems, see Bagby, “*Beowulf*, the *Edda* and the Performance of Medieval Epic,” 188–91.

⁶⁰ For an introduction to surviving evidence with a focus on Anglo-Saxon survivals, see Graeme Lawson, “An Anglo-Saxon Harp and Lyre of the 9th Century,” in *Music and Tradition: Essays on Asian and Other Musics Presented to Laurence Picken*, ed. D. R. Widdess and R. F. Wolpert (Cambridge: Cambridge University Press, 1981), 229–44.

⁶¹ *Ibid.*, 242.

⁶² The quotation is taken from 2:28 in an interview conducted with Bagby, which can be found on the project website: <https://boethius.mus.cam.ac.uk/benjamin-bagby>.

⁶³ Christopher Page, “Instruments and Instrumental Music Before 1300,” in *The New Oxford History of Music, vol. II: The Early Middle Ages to 1300*, 2nd ed., ed. Richard Crocker and David Hiley (Oxford: Oxford University Press, 1990), 458.

Instrumental amplification of the reconstructed melody through use of fourths and fifths, especially at cadences, was also explored by the flautist Rodenkirchen. Whether transverse flutes, as opposed to duct flutes or recorders, would have been used for Boethian songs is open to some doubt, given that the earliest European illustrations of such an instrument date from the twelfth century. A case can nevertheless be made, as the transverse flute is depicted in sources from the edges of Europe from the tenth century onwards and is later illustrated in manuscripts of sophisticated song repertories such as the *Cantigas de Santa Maria* and Middle High German Minnesang.⁶⁴ The question of affordance was handled in interviews in a nuanced manner. Rodenkirchen emphasized the role of the modern musician in developing a certain sound, drawing on the physical capacity of the instrument, his decision to employ Pythagorean tuning, and his understanding of the term *symphonia* as described in theory treatises. He had developed over many years of exploration a strong sound with prominent overtones, allowing sympathetic tuning with other musicians and resonant fourths, fifths, and octaves in particular.⁶⁵

Marti played a diatonically tuned fifteen-stringed triangular harp modeled on an illustration in the twelfth-century insular Hunterian Psalter.⁶⁶ The triangular harp appears to have been known in Anglo-Saxon England since at least the ninth century; a strikingly detailed illustration of a twelve-string instrument in the hands of Jubal in the eleventh-century Junius manuscript points strongly to practical use.⁶⁷ Marti's playing exploits the potential of the triangular frame harp to fill out different regions of the mode, providing in particular an additional low sub-final beneath Bagby's harp and in general a form of textural

⁶⁴ Jeremy Montagu, Howard Mayer Brown, Jaap Frank, and Ardal Powell, "Flute II. The Western Transverse Flute 4. History (i) to 1500," *Grove Music Online*, accessed 9 February 2019, <http://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000040569#omo-9781561592630-e-0000040569-div1-0000040569.2>

⁶⁵ "The instruments themselves don't tell us how they sounded. It very much depends on the player. . . . I am convinced that for medieval music, especially earlier medieval music, it is essential to concentrate on resonance, which means a slightly stronger style of playing . . . trying to manage with a singer and to have overtones to overlap. . . . So what I have been trying to create for many years is a style of modal playing which is very much on the more strong side to go along with other instruments and to create something that I think is essential, which is what the medieval theorists call a *symphonia*, the effect of resonance creating a harmony in Pythagorean tuning." Norbert Rodenkirchen, in discussion with the author, 10 August 2018.

⁶⁶ GL 229 (U.3.2), fol. 21v.

⁶⁷ Lawson, "An Anglo-Saxon Harp." The Jubal illustration is found on p. 54 of OX Junius 11, a digital image of which may be consulted via the website "Early Manuscripts at Oxford University" (<https://digital.bodleian.ox.ac.uk/inquire/p/774f863d-de50-4c69-a1fd-60c254dedf9b>).

contrast through the capability of the instrument to deliver fast-paced motivic patterns.⁶⁸

Although a certain amount of information can be recovered from the affordances of reconstructed instruments, it might still be objected that there is no primary evidence for which instruments were played. Yet the notion of what constitutes primary evidence is itself debatable: there is no *a priori* reason why the notation of melody above a text should be understood to relate only to vocal practice as opposed to a musical record interpreted according to convention by both vocalists and instrumentalists. The reconstructed melodies may themselves be read as a rich resource for modal and melodic elaboration following conventions recovered from theoretical treatises. The poetry may also be read in conjunction with the reconstructed melodies for hints about song genre, sounding pattern, and overall mood, providing a stimulus for instrumental work in terms of register, density of figuration, and rhythmic character. When placed alongside evidence from accounts of the uses of instruments in song repertoires, documentary accounts of performance practice, iconography, sculpture, and archaeological survivals, a rich vein of evidence about instrumental practice results.

The opening couplet of *Carmina qui quondam*, based on a reconstruction of the neumes in another eleventh-century insular manuscript (GEN 175), serves as a useful example of applied creative practice, especially since a short video made to promote the project in April 2016 captures an early experiment that may be compared to the CD recording made in the summer of 2017 and a second video recorded in August 2018.⁶⁹ Bagby clarified in an interview that the melodic reconstruction is treated not as a melody or tune, but as a “vehicle which allows... me to sing the text always in a slightly different way.”⁷⁰

A single moment may be taken by way of demonstration. The word *heu* (alas) in the second line functions as an interjection: in the 2016 video, the word is emphasized through a vocal sigh (by emphasizing the upper note, then falling away on the lower note), during which Bagby takes his hand away from his harp, spreading his fingers as a dramatic extension of the instrumental silence. On the CD and in the 2018 video, Rodenkirchen amplifies the vocal line at *heu* through lower fourths followed immediately by a pause from all instrumentalists that marks the

⁶⁸ Details of specific decisions about individual songs are provided in the interviews with participating members of *Sequentia* on the project website: <https://boethius.mus.cam.ac.uk/>.

⁶⁹ Both videos can be viewed on the project website. The reconstructed melody in each case is from GEN 175, not the Cambridge Songs manuscript.

⁷⁰ Benjamin Bagby, Ensemble *Sequentia* video, 4:08, at <https://boethius.mus.cam.ac.uk/ensemble-sequentia>.

verbal punctuation. The instruments thus do not provide accompaniment but amplify the text as delivered by the voice. Elsewhere this is done through passages inserted before, within, and after the first couplet that respectively set the mode or mood, provide continuity as the singer breathes, and articulate the verbal pause after the first period. In the introduction, Rodenkirchen and Bagby respond to each other in varied call-and-response patterns, exploring the mode as divided into structurally equivalent lower and upper fourths (d-f-g, g-b \flat -c' at sounding pitch).⁷¹ During the delivery of the text, the instrumentalists underscore the structure and semantics of the poetry, collectively underscoring the final two syllables of each line and moments such as *flebilis* (sorrowful) at the beginning of the second line, each of whose syllables receives separate emphasis. Three means of instrumental amplification are used. Rodenkirchen traces the melody in lower fourths, holds a note in the tetrachord below the melody, or comes together with the melody from lower fourths into unison at cadences. All these practices are in agreement with organal principles laid down in Guido of Arezzo's *Micrologus*.⁷² The instrumentalists also articulate primary and secondary poles in the melodic line (at sounding pitch, G-d-g and F-c-f). Marti, in particular, exploits the wider compass of her instrument to mark these sonorities at points of verbal articulation; elsewhere she provides textural support, echoing Bagby's phrases to sustain modal color, especially under Rodenkirchen's more fluid melodic lines.

The method of working and modes of justification outlined here are not without precedent. They have been pursued in the field of medieval song over several decades by groups associated with Schola Cantorum at Basel. Their rationale was most clearly elaborated by Wulf Arlt in his 1989 chapter for a New Grove Handbook on Performance Practice, where he outlined two models for medieval secular monophony.⁷³ Under the first ("Model A"), which corresponds to the expectations of modern practice and is rarely encountered when working with medieval sources, notation captures a prescribed text, whose interpretation and realization in sound requires only an understanding of historical conventions of encoding through notation and reproduction in performance. Under the second ("Model B"), musical conventions are regarded as the primary entities realized by performers as variously recovered through manuscript

⁷¹ Rodenkirchen extends the upper fifth (d') in the 2016 video, but by the summer of 2017 he restricts himself to the upper tetrachord.

⁷² Joseph Smits van Waesberghe, ed., *Guidonis Aretini Micrologus* ([Rome]: American Institute of Musicology, 1955), chs. 18 (for theoretical description) and 19 (with examples).

⁷³ Wulf Arlt, "Secular Monophony," in *Performance Practice: Music before 1600*, ed. Howard Mayer Brown and Stanley Sadie (Basingstoke: Macmillan Press Music Division, 1989), 55–78, at 57–61.

sources, pictorial materials and theoretical texts, instruments and playing techniques, traditional practices, and agreed procedures of communication. The latter model, informed by Arlt's extensive experience of working at the Schola Cantorum in the 1970s and 1980s, has two important implications when applied to historical reconstruction. First, it requires drawing in information from beyond notated sources to inform performance. In this case, the working knowledge brought by members of *Sequentia* proved invaluable in terms of memorized repertory available for rapid comparison and modeling, knowledge and physical experience of instruments, and awareness of improvisatory techniques drawn from theory treatises and decades of practical experiments. Second, the multiplicity of possible realizations implied by Model B necessitates a role for modern performance as a testing ground for hypotheses and the framing of new questions for further scholarly enquiry.

A final distinction may be drawn between the approach taken here and previous approaches to Boethian *metra* sketched at the beginning of this article. For De Coussemaker archaeology provided a model for aligning "monuments" as witnesses to a distant past that remained out of reach. In Bagby's Lost Songs project, processes of memorization fold historical practice and modern performance into a "present past," the creation of a historically informed modern oral tradition seeming to make the past present again while at the same time recognizing it to be lost. In this case the collaboration undertaken with *Sequentia* was in some respects analogous to experimental archaeology, which seeks "within the context of a controllable imitative experiment to replicate past phenomena (from objects to systems) in order to generate and test hypotheses to provide or enhance analogies for archaeological interpretation."⁷⁴ The results of such experiments are necessarily provisional: as summarized by Hans Ole Hansen, one of its earliest practitioners, "That is why I call it an *experiment* in reconstruction. No one is going to catch me saying that I intended to build a Stone Age house as it really had been, but only as it might have been."⁷⁵

⁷⁴ James R. Mathieu, "Introduction," in *Experimental Archaeology: Replicating Past Objects, Behaviors and Processes*, ed. Mathieu (Oxford: Archaeopress, 2002), 1. For the use of techniques of experimental archaeology to reconstruct and assess the musical capabilities of prehistoric artifacts, see Ian Cross, Ezra B. W. Zubrow, and Frank Cowan, "Musical Behaviors and the Archaeological Record: A Preliminary Study," in *ibid.*, 25–33. On the historiography of experimental archaeology in relation to music and its potential to contribute to music archaeology in general, see Arnd Aje Both, "Music Archaeology: Some Methodological and Theoretical Considerations," *Yearbook for Traditional Music* 41 (2009): 1–11, at 7–11. The alignment of multiple disciplines in reconstructing "past musical behaviours and sound" as summarized in the diagram on p. 4 shares many similarities with the way of working outlined here.

⁷⁵ Hans Ole Hansen, *I Built a Stone Age House*, trans. Maurice Michael (London: Phoenix House, 1962), 18.

The formulation “might have been” can be read in two ways: as a familiar claim about our restricted capability to recreate something as it actually was in the past (a present judgment of possibility about the past), or as a claim to recreate something that was in the past a possibility, making no claim as to whether it ever existed (a judgment of possibility at the time). Positioning reconstruction in the realm of the latter, in the world of the historically possible, aids understanding of the status of the collaborative process described here, for it establishes a liminal space for informed practical experiment with possibilities arising from conventional historical and philological methodologies. In so doing, the practical knowledge and expertise of experienced performers is drawn into an open-ended research process that seeks to reconstruct not simply a more or less verifiable object but a field of historical possibilities.⁷⁶

The aim of highlighting affinities between the methods adopted in this study and experimental archaeology is not to suggest that early medieval musicology undergo a disciplinary upheaval. A more modest suggestion is that the discipline might draw inspiration from a range of others in reflecting on performance as an experimental means of research, albeit with the important condition that existing historical and philological disciplines, with their exacting burdens of proof, are maintained. For repertoires lying at the edge of what may be recovered through philological enquiry, creative practice promises one way of proceeding, with all due caution, at the limits of knowledge.

ABSTRACT

This study seeks to reconstruct the music for Boethius’s final and most widely read work, *On the Consolation of Philosophy*. Although a handful of neumations for Boethius’s thirty-nine poems have long been known, the almost complete absence of surviving pitched versions of the melodies has hindered the task of reconstruction. Following a systematic study of neumed manuscripts dating from the ninth to the eleventh centuries and identification of underlying principles of melodic design, it is now possible to attempt informed reconstructions. Even so, the leap from scholarship to modern performance remains substantial, involving a preliminary need to recreate melodies through experimentation.

⁷⁶ On the place of this view within ongoing debates about the relation between performance studies and philological scholarship in medieval musicology, see Sam Barrett, “[Review Article:] Performing Medieval Music,” *Journal of the Royal Musical Association* 130 (2005): 119–35.

Collaboration with members of the ensemble *Sequentia* over a four-year period (2014–17) provided an opportunity to explore ways in which creative practice might supplement scholarly knowledge, whether through posing new research questions, the formation and exploration of hypotheses, or recourse to memorized practices built up through sustained engagement with early medieval repertoires and instruments. Taking a recovered mid eleventh-century leaf of the Cambridge Songs as a focus for investigation, songs from the first book of Boethius's *De consolazione philosophiae* were newly reconstructed. Although debate continues to surround the status of results obtained through creative practice, comparison with the way other disciplines have proceeded under similar conditions reveals acceptance of experimentation as a mode of inquiry. This essay proposes that performance can fruitfully supplement philology in seeking to reconstruct lost songs from notated traces.

Keywords: Boethius, *On the Consolation of Philosophy*, Cambridge Songs, *Sequentia*, reconstruction, medieval song