Principles, Historiography, Future Directions

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Scribes at Work, Scribes at Play: Challenges for Editors of the *ars subtilior**

This study examines how editing might utilize an understanding of underlying paradigms or epistemes of systems of knowledge in its critical approach to past sources of notated music.[1] For the most part, the focus here is the Western European polyphonic song repertoire evident in the quarter-century either side of the year 1400 commonly called the *ars subtilior*. Scholars define this repertoire according to technologies of music writing (notational innovation) and elements of musical style such as polymensurality, advanced proportionality, and an expanded relative-pitch field.[2] Investigating both past and more recent epistemologies of music and music writing presents an opportunity to throw present editing's critical approaches into stark contrast with past concepts. Awareness of the differences between past and present approaches to musical writing and to the musical performance must inform music editing. The reasons for this statement will become apparent during this discussion. For now, I begin with a brief overview of recent paradigm shifts in communication and their immediate effects on music technologies.

At present most musically literate computer users are in the midst of a paradigm shift that promises a new process for the transmission of musical notation similar to the advent

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1 The role of paradigmatic change in scientific knowledge is discussed in Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1970). Michel Foucault introduced the term episteme to describe the epistemological field in which knowledge is grounded in *Les Mots et les choses* (Paris: Gallimard, 1966); English edition: *The Order of Things: The Archaeology of Human Sciences* (London and New York: Tavistock, 1989), xxiii.

2 Ursula Günther, "Das Ende der *ars nova*," *Die Musikforschung* 16 (1963): 105–21; Anne Stone, "Che cosa c'è di più sottile riguardo l'*ars subtilior*?" *Rivista italiana di musicologia* 31 (1996): 3–32.

of the printing press in the second half of the fifteenth century.[3] The first phase of this shift occurred with the development of desktop computer music editing software enabling almost anyone reasonably literate in Western music notation to produce musical scores equivalent in appearance to expensive professional engraving. In close conjunction with the refinement of these tools, the commodification of the World Wide Web and other protocols that eventually came to be called "The Internet" in the 1990s revolutionized electronic communications and media. This all occurred in the wake of the successful adoption of the personal computer from the late 1970s, especially in the 1980s. These developments have resulted in entirely new ways of exchanging information on a scale and reach unprecedented in human history.[4]

The last decade has seen yet another consequence for the dispersal of notated music using electronic communication technologies: online editions and freely distributed browser-based tools for the display of musical notation.[5] These technologies offer several advantages over older, print-based editions. But advantages such as ease of correcting or updating data, or flexible user-determined modes of presentation pose fundamental questions about the assumptions behind editorial endeavor. Now largely removed from the editorial equation, or substantially lessened, are old world pragmatics of traditional hardcopy print publishing. The physical and economic limits necessarily imposed upon the production of a printed book no longer restrict online editions. Instead the amount of available server space, limits of computer memory, and data delivery speeds figure among the electronic editor's or electronic publisher's considerations. On-screen presentation does not need to operate according to the physical properties of the printed page (with options like on-screen scrolling), although certain print metaphors are retained since most musicians need hardcopies on standard paper sizes for performance and even study. Rather, the technologies of the personal computer (for example sound playback software and hardware) and web browser (for example hyperlinking) are central in interface design and edition presentation.

3 See, however, the essay by Karl Kügle in this volume for a slightly different view on the effects of the introduction of printing in Europe.

4 For the history of the development of the internet and the World Wide Web, see Janet Abbate, *Inventing the Internet* (Cambridge, MA: MIT Press, 1999), 181–220; James Gillies and Robert Cailliau, *How the Web was Won: The Story of the World Wide Web* (Oxford: Oxford University Press, 2000), 172–309.

5 See for example Theodor Dumitrescu's Computerized Mensural Music Editing (CMME) Project, accessed December 8, 2008, http://www.cmme.org/; Theodor Dumitrescu, "*Corpus Mensurabilis Musice 'Electronicum'*: Toward a Flexible Electronic Representation of Music in Mensural Notation," in *The Virtual Score: Representation, Retrieval, Restoration,* ed. Walter B. Hewlett and Eleanor Selfridge-Field, Computing in Musicology 12 (Cambridge, MA: MIT Press, 2001), 3–18. See also the contribution of Alexander Silbiger to the present volume.

New technologies offer more flexible and content-rich online editions of music unlike anything hitherto economically or materially possible in the printed edition. This, however, is not an invitation for music editors to adopt a *laissez-faire* approach. Thoughtful, well-designed and critically based editions serve performers, researchers, and students of music better, leading them to a more complete and *recherché* appreciation of a work's nature and history. The advent of online editions of music offers the opportunity to reflect on the influence of this technology upon editorial endeavor. Seizing this opportunity, I ask how new technologies might offer a way out of the philological maze presented by selected examples from the *ars subtilior*. In order to highlight the conflict that exists between today's editorial approaches and past systems of musical knowledge and practice, I embark upon a discussion of various paradigms and their related ideologies that arguably affect past conceptions of music and music notation.

The role of an abstract conceptualization of musical transmission is evident at an early stage in European society. A well-known account of Charlemagne's response upon hearing the chant of Rome when in that city hints at the longevity of this abstraction:[6]

> Charlemagne … was struck when in Rome by the discordance between Roman and Gallican singing, when the Franks in their precocity argued that their chant was corrupted by our [Roman] chanters with some poor melodies; ours probably showed the authentic antiphoner. On that occasion, so the story goes, Charlemagne asked whether the stream or the source carries the clearest water. When they [the Franks] answered "the source," he added wisely, "Then we, too, who until now drank from the troubled waters of the stream, must go back to the clarity of the source."

Although this account by John the Deacon from the years 873–75 contrasts markedly with Notker Balbulus's account ten years later concerning the introduction of Roman chant in

6 Paul the Deacon, *Sancti Gregorii magni vita*, ed. J.-P. Migne, Patrologia Latina 75 (Paris: Migne, 1849; repr. 1977); id., *Vita sancti Gregorii Magni*, ed. Sabina Tuzzo (Pisa: Scuola Normale Superiore, 2002). Translation appears in Stephen J. P. van Dijk, "Papal Schola *versus* Charlemagne," in *Organicae voces: Festschrift Joseph Smits van Waesberghe,* ed. Pieter Fischer (Amsterdam: Instituut voor Middeleeuwse Muziekwetenschap, 1963), 21–30 at 23–24. A translation of Notker's account appears on 27. Also see Leo Treitler, "Homer and Gregory: The Transmission of Epic Poetry and Plainchant," *The Musical Quarterly* 60 (1974): 333–72 at 338–40; Theodore Karp, *Aspects of Orality and Formularity in Gregorian Chant* (Evanston: Northwestern University Press, 1998), 32.

Frankish lands (in which the faultiness of Frankish singers is attributed to the deceit of Roman singers) and Franco-Roman chant was an oral tradition at that time, my interest rests in the writer's use of the metaphor of spring and stream to describe musical transmission and creative intentionality.

John's views are not terribly different to those held by literary classical philologists of the nineteenth century, nor perhaps those of their earlier predecessors at Alexandria or Byzantium, or the humanists of the fourteenth to sixteenth centuries, all of whom were concerned with the maintaining and preserving the literary works of Greek and Latin Antiquity. Several recent publications have already rehearsed overviews of classical philology in relation to music editing; thus I describe only the essence of its methods here.[7] The object of classical philology was to produce a *recensio*, a substantiative reading considered the most accurate and correct representation of the intentions of the work's author or creator. When multiple sources of a work survive, all readings are compared, their relationship to each other determined by shared common errors, where present, and "worthless" witnesses eliminated.[8] Common errors represent one category of separative readings used to align groups of sources and separate them from readings that lack a particular error. Another type of separative reading is the plausible reading.[9] However, as already stated, philologists generally maintain that this type of separative reading is not useful for filiating sources.

Only when the headwaters are identified and sufficiently cleansed of impurities according to the editor's *critical* understanding of the work (*examinatio*) is a putative archetype achieved. Yet as a rule, this reconstructed reading reached by a classical philologist—the archetype—never existed during a work's reception. An example of this situation occurs for the large editorial project of the monks at Solesmes to produce a new edition of Franco-Roman Gradual at the end of the nineteenth century using the principles of classical philology. While on one hand this editorial project was pragmatic (the intention was to provide the church with a new

7 See for example Margaret Bent, "Some Criteria for Establishing Relationships Between Sources of Late-Medieval Polyphony," in *Music in Medieval and Early Modern Europe: Patronage, Sources and Texts,* ed. Iain Fenlon (Cambridge: Cambridge University Press, 1981), 295–317; Philip Brett, "Text, Context, and the Early Music Editor," in *Authenticity and Early Music: A Symposium,* ed. Nicholas Kenyon (Oxford: Oxford University Press, 1988), 83–114; James Grier, *The Critical Editing of Music: History, Method and Practice* (Cambridge: Cambridge University Press, 1996).

8 Paul Maas, *Textual Criticism*, transl. Barbara Flower (Oxford: Clarendon Press, 1958), 2–9. Also see Martin L. West, *Textual Criticism and Editorial Technique: Applicable to Greek and Latin Texts* (Stuttgart: Teubner, 1973), 47–53; and Grier, *The Critical Editing of Music*, 62–95, esp. 64.

9 West, *Textual Criticism*, 49.

edition of the ancient Benedictine musical rite), it was ideological in the sense that the aim of its editors was to recover the earliest form of Franco-Roman chant and remove subsequent accretions and local traditions.[10] Yet, as scholars like Emma Hornby and Alejandro Planchart show, for example, the earliest Franco-Roman repertoire exhibits several musical traditions well before its writing down.[11] The present Solesmes edition represents just a portion of these traditions and usually never provides a precise historical witness of any one tradition. This apparent lack of historical verisimilitude, and the related ideologies briefly discussed below, provided the basis for re-evaluating classical philology's editorial method and approaches.

The Frenchman Joseph Bédier was critical of recension as well as the methodological limits of filiation. In its place he proposed what is today known as the "best-text" method. This method identifies one source of a work containing the readings judged to be most correct; it also permits contingencies such as local orthographies.[12] Hans Aarsleff argues that Bédier reacted to the ideology of German Romanticism and the modernist dialectic principle that permeated classical philology.[13] David Hult identifies related socio-political motives in Bédier's response.[14] In light of these socio-political motives a telling and interesting feature of Bédier's scholarship is his boldness in situating ideological criticism at the center of his anti-Romantic debate. Such a preoccupation with ideology has usually been the task of more recent disciplinary and methodological critiques from the pens of postmodernists in the last half of the twentieth century.[15]

10 Katherine Bergeron, *Decadent Enchantments: The Revival of Gregorian Chant at Solesmes* (Berkeley: University of California Press, 1998), 145. Bergeron also discusses the influence of ideologies of writing upon Solesmes, ibid., 100–104.

11 Emma Hornby, "The Transmission History of the Proper Chant for St Gregory: The Eighth-Mode Tract *Beatus vir*," *Plainsong and Medieval Music* 12 (2003): 97–127; Alejandro Enrique Planchart, "The Geography of the Martinmas," in *Western Plainchant in the First Millennium: Studies in the Medieval Liturgy and its Music*, ed. Sean Gallagher, James Haar, John Nádas, and Timothy Striplin (Aldershot: Ashgate, 2003), 119–56.

12 For Bédier, this included retaining the Anglo-Norman orthographies and grammatical variance from the Oxford transmission of the *Chanson de Roland*: see *Le Chanson de Roland*, ed. Joseph Bédier (Paris: Piazza, 1937), ii–iii.

13 Hans Aarsleff, "Scholarship and Ideology: Joseph Bédier's Critique of Romantic Medievalism," in *Historical Studies and Literary Criticism*, ed. Jerome J. McGann (Madison: University of Wisconsin Press, 1985), 93–113. Also see John Haines, "The First Musical Edition of the Troubadours: On Applying the Critical Method to Medieval Monophony," *Music and Letters* 83 (2002): 351–70. On the role of German Romantic ideology in shaping the discipline of Musicology, see Gary Tomlinson, "Musicology, Anthropology, History," in *The Cultural Study of Music: A Critical Introduction*, ed. Martin Clayton, Trevor Herbert, and Richard Middleton (New York and London: Routledge, 2003), 31–44.

14 David F. Hult, "Reading it Right: The Ideology of Text Editing," in *The New Medievalism*, ed. Marina S. Brownlee, Kevin Brownlee, and Stephen G. Nichols (Baltimore and London: Johns Hopkins University Press, 1991), 113–30.

15 For a recent informative account of the history of postmodernism and its challenges to the writing of history in gen-

My interest in the editing principles of classical philologists and Bédier does not extend to passing judgment upon their ideologies, however. Rather, an awareness of ideology brings an awareness of values and beliefs that shape my own editorial response to the musical artifacts of the *ars subtilior*. Views like those expressed by Jerome McGann, and adapted to music editing by James Grier in his *The Critical Editing of Music*, inform this approach.[16] McGann argues that textual criticism needs to complement the largely linguistic approach of classical philology. Textual criticism encompasses a range of hermeneutic and performative skills necessary for the continued understanding of meaning in, and reproduction of, a work.[17] Termed the socialization of texts because this approach requires an understanding of the collaborations and social contingencies in a work's creation and ongoing production, McGann's approach offers a point of departure for what I consider a philosophy of editing sensitive to the cultural contexts of music and musical practice.[18] This approach requires a healthy mix of cultural studies, ethnomusicology, and anthropology, a situation thankfully not unusual in today's musicology.

A foremost consideration is the cultural context of each musical and musically related artifact. Coupled with this is the relative importance of preserving elements from that artifact contributing to my understanding of its context, purpose, and meaning. Faced with multiple transmissions of a musical work, some readers may perceive a tension between authorial intention, and local and temporal contingencies. Context is essential to a work's meaning and significance both during a composer's lifetime and also during its subsequent transmission, adaptation, and performance. For McGann, for example, the focus of editors on authorial intention fails to foreground collaborative elements often central to textual meaning.[19] Indeed, as McGann illustrates, using multiple examples from the literary canon, the intention of an author or poet is frequently blurred by revision and changes in their understanding of their

eral, see Ernst Breisach, *On the Future of History: The Postmodernist Challenge and its Aftermath* (Chicago and London: University of Chicago Press, 2003).

16 Grier, *The Critical Editing of Music*, 16.

17 Jerome J. McGann, *A Critique of Modern Textual Criticism* (Chicago: University of Chicago Press, 1983); id., "The Monks and the Giants: Textual and Bibliographical Studies and the Interpretation of Literary Works," in *The Beauty of Inflections: Literary Investigations in Historical Method and Theory* (Oxford: Clarendon Press, 1985), 76–79.

18 This approach is not unfamiliar to classical philology. Despite the continued emphasis on *recensio*, Martin West states that textual criticism can also foster "the interest and value that the study of such matters as the proclivities of scribes, and the processes governing the spread of texts at different periods, has in its own right." *Textual Criticism*, 8–9.

19 Jerome J. McGann, *The Textual Condition* (Princeton: Princeton University Press, 1991), 60. Categories of textual moments, which include collaborative, material, and critical elements, are discussed in McGann, "The Monks and the Giants," 81–84.

own works over time.[20] From this viewpoint, classical philology's elimination of later accretions in pursuit of a putative archetype damages the project of an editor wishing to produce an edition useful for the cultural study of music. The goal of recovering an authorial text remains a valid activity from the perspective of offering a particular contextual reading. However, in the case of the *ars subtilior*, this is rarely achievable in light of a source situation both temporally and geographically removed from a putative context of a composition's creation. There is, furthermore, an unanswered question concerning the status of a musical composition in this period, its stability being contingent upon several factors (in addition to those relevant for literary texts) such as performance practice and the training of musicians. Before discussing some of these, I would like to return to the category of separative readings used by classical philology. Unfortunately, without the available space to explore alternative terms, the following paragraphs will continue to employ terms from classical philology.

Where plausible readings exist that offer good musical sense (insofar as I can determine through a set of critical skills relative to the music in question and indeed to music in general), as well as errors that possibly contain significant evidence for a work's transmission, what can justify eliminating them in favor of an abstract archetype and at the expense of the loss of a potential understanding of a work's local context? To answer this question, I could turn to the literature on the role of the work-concept in the formation of classical philology's ideals. Yet, the debate about the chronological limits of the work-concept between the likes of Lydia Goehr and Reinhard Strohm (with the most recent contribution by Leeman Perkins) has not provided concrete evidence indicating that it was central to musical production earlier than the 1470s.[21] Instead of engaging in the philosophical and chronological strain of this argu-

20 McGann, *The Textual Condition*, 62–68.

21 Lydia Goehr, *The Imaginary Museum of Musical Works* (Oxford: Clarendon Press, 1992); Reinhard Strohm, "Looking Back at Ourselves: The Problem with the Musical Work Concept," in *The Musical Work: Reality or Invention,* ed. Michael Talbot (Liverpool: Liverpool University Press, 2000), 128–52. Also for the response to Strohm's criticism of her dating of the work-concept to after 1800, see Lydia Goehr, "'On the Problems of Dating' or 'Looking Backward and Forward with Strohm,'" in *The Musical Work*, ed. Talbot, 231–46. Leeman L. Perkins, although not addressing the specifics of the epistemological argument raised by Strohm, supports the view that the work-concept was already evident by the end of the fifteenth century in "Concerning the Ontological Status of the Notated Musical Work in the Fifteenth and Sixteenth Centuries," *Current Musicology* 75 (2003): 15–49. David Fallows argues for the existence of song "*Urtexts*" as early as 1430 in "Embellishment and *Urtext* in the Fifteenth-Century Song Repertoires," *Basler Jahrbuch für Historische Musikpraxis* 14 (1990): 59–85. It is, however, difficult to see why the concept of "*Urtext*" is privileged over any other possibilities, especially when Fallows also advocates a greater the role for orality than literacy in musical transmission in this period (73).

ment, I ask whether a late fourteenth-century song might have existed as an autonomous text (a central precept of the work-concept) from another direction, namely the interface between orality and literacy in medieval culture.

The problematized status of plausible readings in multiple transmissions of a musical work, whether substantiative or contingent, highlights a paradigmatic assumption in classical philology when applied to the editing and study of medieval music. This assumption rests upon what Leo Treitler has termed the "paradigm of literacy."[22] Central to the paradigm of literacy is the assumed centrality of writing in the transmission process. In terms of musical notation, purely literate transmission consists of a scribe copying from a written page what he/she sees (or thinks he/she sees in some cases). That a poem need not be recited nor a song sung to copy it largely removes the performative act from the transmission process: a scribe need only copy the signs representing the sounds of words or music. But it is apparent that medieval scribes do not always operate according to a purely literate copying procedure. Instead, there is a need to temper the paradigm of literacy by considering other paradigms: the paradigm of orality, or more appropriate for the historical focus of this essay, the paradigm of residual orality within a literate society.

Milman Parry and Albert Lord considered orality and literacy mutually exclusive binary opposites, separated by what Ruth Finnegan has termed the Great Divide.[23] Recognizing that oral processes continue to operate in many cultures alongside literate processes, each often complementing and strengthening the other, recent scholarship has moved beyond this binary pairing.[24] In terms of research on early European music, much investigation of the role of orality in musical transmission and its relationship with literacy has centered on liturgical chant

22 Leo Treitler, "Oral, Written, and Literate Process in the Transmission of Medieval Music," *Speculum* 56 (1981): 471–91 at 490–91; id., "Orality and Literacy in the Music of the Middle Ages," *Parergon*, New Series 2 (1984): 143–74 at 143–48.

23 Albert B. Lord, *The Singer of Tales* (Cambridge, MA: Harvard University Press, 1960); Milman Parry, *The Making of Homeric Verse: The Collected Papers of Milman Parry*, ed. Adam Parry (Oxford: Clarendon Press, 1971); Ruth H. Finnegan, *Literacy and Orality: Studies in the Technology of Communication* (Oxford: Blackwell, 1988), 12–14.

24 Brian Stock, *The Implications of Literacy: Written Language and Models of Interpretation in the Eleventh and Twelfth Centuries* (Princeton: Princeton University Press, 1983), 3–11; Walter J. Ong, "Orality, Literacy, and Medieval Textualization," *New Literary History* 16 (1984): 1–12; Jack Goody, *The Interface Between the Written and the Oral* (Cambridge: Cambridge University Press, 1987); John Miles Foley, "Orality, Textuality and Interpretation," in *Vox Intexta: Orality and Textuality in the Middle Ages,* ed. Alger Nicolaus Doane and Carol Braun Pasternack (Madison: University of Wisconsin Press, 1991), 34–45; Walter J. Ong, *Orality and Literacy* (London: Methuen, 1982; repr. New York: Routledge, 2002).

from the Carolingian period to the high Middle Ages.[25] More recently this investigation has branched into late medieval music. Anna Maria Busse Berger, following in the footsteps of medievalists such as Mary Carruthers, situates memory at the interface between oral process and compositional process in the thirteenth and fourteenth centuries.[26] Naturally, this also entails examining the relationship between orality and literacy.[27] Busse Berger adopts Jack Goody's hypothesis that writing permits the visual analysis of a text, providing a process by which a text can be examined for patterns and inconsistencies, and rationalized according to a finite set of rules or conventions.[28] This in turn influences the choice of strategies employed in transmission. Indeed this technologizing of the tone by musical writing (to paraphrase the phrase "the technologizing of the word" used by M. T. Clanchy and Ong) marks a key turning-point towards the development of the concept of a musical "autonomous text."[29] However, an "autonomous text" is scarcely possible in a manuscript culture where there are no precisely identical states of a text. Rather, manuscripts are susceptible to the pragmatics of copying as well as scribal intervention in texts lacking a canonical status like that which existed for religious texts, or the works of classical authors in the hands of humanists. The source situation around the year 1400 as applicable to the *ars subtilior* points to the continued reception of musical repertoires (or parts thereof) over the course of up to three or four, perhaps even more, decades. Most importantly, the process of manuscript transmission in this timeframe

25 Leo Treitler's series of articles on orality, music writing, and the transmission of medieval music has been conveniently assembled in his *With Voice and Pen: Coming to Know Medieval Song and How It Was Made* (New York: Oxford University Press, 2003). A key contribution to the discussion of orality in early chant in terms of formulaicism is Helmut Hucke, "Toward a New Historical View of Gregorian Chant," *Journal of the American Musicological Society* 33 (1980): 437–67. Treitler's and Hucke's conclusions have not gone unchallenged; see for example David G. Hughes, "Evidence for the Traditional View of the Transmission of Gregorian Chant," *Journal of the American Musicological Society* 40 (1987): 377–404. A recent examination of the continued role of orality in the medievalist literature is Susan Boynton, "Orality, Literacy, and the Early Notation of the Office Hymns," *Journal of the American Musicological Society* 56 (2003): 99-168. Much of the discussion here has benefited from the critical oversight of problems in the oral and written transmission of liturgical chant, and possible solutions offered by the discipline of ethnomusicology, in Peter Jeffery, *Re-Envisioning Past Musical Cultures: Ethnomusicology in the Study of Gregorian Chant* (Chicago: University of Chicago Press, 1992).

26 Anna Maria Busse Berger, *Medieval Music and the Art of Memory* (Berkeley: University of California Press, 2005); Mary Carruthers, *The Book of Memory: A Study of Memory in Medieval Culture* (Cambridge: Cambridge University Press, 1990).

27 Berger, *Medieval Music and the Art of Memory*, 81–84.

28 Goody, *The Interface*, 77 and passim. Cf. Ong, *Orality and Literacy*, 145.

29 M.T. Clanchy, *From Memory to Written Record: England, 1066–1307* (Cambridge: Harvard University Press, 1979), 88–115; Ong, *Orality and Literacy*, 80.

(and most of the Middle Ages) relies upon active scribes subjecting their text to varying degrees of criticism and careful evaluation.

It is from this viewpoint regarding the investigation of local (or localized) scribal process that my interest in the plausible reading stems. This category of reading remains musically viable but its value in the stemmatic process is usually relegated to a status lower than errors.[30] However, as evidence of the ongoing cultivation and practice of a piece of music, the value of this category of reading far exceeds that of the error for a cultural historian of music. Closely related to the plausible reading are varying scribal notational practices that seem to stem from the desire to update or recast (completely or in part) the notation of older compositions. Because these types of readings seldom change the intrinsic semantic state of the music but result in representational shifts at the notational level, this type of variant is sometimes referred to as the semiotic variant. As such, this process often entails the scribe taking pre-existing notation and reconceptualizing music's representation using more familiar forms of music writing. This sometimes introduces new elements into the composition due to performative demands or instrumentation.[31] This type of scribal intervention indicates several things: commonly it signals the presence of local traditions and/or evolving notational concepts or musical practices. Often these seismic shifts result from the geographical displacement of compositions, that is, their transmission into other regions; they also betray a continuing interest by scribes in communicating (changes in) musical practice through musical notation.

The relationship between music writing and music performance *c.* 1400 relies on a mutually sustaining orality-literacy interface. The well-known dictum by the anonymous author of the *Tractatus figurarum*, that it would be inconvenient if that which could be sung could not be written down ("Quia esset multum inconveniens quod illud quod potest pronuntiari non posset scribi"),[32] led Anne Stone to propose that some examples of notation of the *ars subtilior* are attempts to record musical improvisation.[33] Unfortunately, improvisation can be a vague

30 Grier, *The Critical Editing of Music*, 79.

31 Performative demands are evident in the song intabulations found in the Faenza Codex and Buxheim Organ Book. On the tablature of Guillaume Du Fay's *Par le regart* in the Buxheim Organ Book reflecting the instrumental medium, see Fallows, "Embellishment and *Urtext*," 80. On the instrumental music of the Faenza Codex, see Pedro L. Memelsdorff, "The Filiation and Transmission of Instrumental Polyphony in Late Medieval Italy: The Codex Faenza 117" (Ph.D. diss., Universiteit Utrecht, 2010).

32 *Tractatus Figurarum*, ed. Philip Schreur, Greek and Latin Music Theory 6 (Lincoln and London: University of Nebraska Press, 1989), 72.

33 Anne Stone, "Glimpses of the Unwritten Tradition in Some *ars subtilior* Works," *Musica Disciplina* 50 (1996): 59–93.

term and Stone does not clarify the relationship of musical performance, improvisation, and composition.[34] Stone presents the reader with terms like "unwritten performance" and "unwritten tradition" that betray an exclusively literate conception of musical transmission. It is unclear whether performance and tradition can ever be "written," despite the likelihood that written evidence might indicate their existence.

Then there is Stone's statement that "the practice of diminished counterpoint conceptually preceded and motivated the invention of new notational symbols that could provide a written record of it."[35] Rather than seeing the notation of the *ars subtilior* as a unidirectional progression from improvisation to notation, I offer an alternative hypothesis positing the continued interaction of oral-literate processes in this music. Fourteenth-century mensural notation afforded new opportunities for organizing music. But the interface between musical practice and music notation remains complex and multifaceted. Counterpoint treatises provide a set of convenient rules for embellishing a pre-existent melody with one or more contrapuntal lines. Several authors, to whom I refer the reader, have discussed the practice of *cantare super librum* or embellishing on an existing melody.[36] Certainly these treatises provide insight into creative processes in late medieval music; as a literate interface they also provide glimpses into oral process in music. In terms of the notational process of the *ars subtilior*, variation within the transmissions of single works and a group of works by the same composer indicates at least two things. The first consists of a set of notational principles, many of which are undocumented or can only be inferred from texts, connecting the process of musical writing to basic mathematical relationships and involving a rationalization of musical space in a way that is typical of this period.[37] The second is the evidence that scribes reconceptualize

34 On improvisation in the Middle Ages, see chapters 1 and 2 in Treitler, *With Voice and Pen*, 1–67.

35 Stone, "Glimpses of the Unwritten Tradition," 76.

36 Margaret Bent, "*Resfacta* and *Cantare Super Librum*," *Journal of the American Musicological Society* 36 (1983): 371–91; Stone, "Glimpses of the Unwritten Tradition," 64–73; Rob C. Wegman, "From Maker to Composer: Improvisation and Musical Authorship in the Low Countries, 1450-1500," *Journal of the American Musicological Society* 49 (1996): 409–79; Berger, *Medieval Music and the Art of Memory*, 198–210. The conclusions of Wegman and Berger concerning conceptual tools employed in improvisation differ greatly. Busse Berger argues that visualization of musical notation played an important role in this process, contrary to Wegman who concludes that writing had a minor role in this process. Discussions of memory tend to favor a visual model analogous with the tabular or visual/architectural model of the *ars memorativa*; on the latter, see Carruthers, *The Book of Memory*, 71–79.

37 For the role of rationality in late medieval theoretical formulations of music, see in particular the recent discussion in Elizabeth Eva Leach, *Sung Birds: Music, Nature and Poetry in the later Middle Ages* (Ithaca: Cornell University Press, 2007), 1-54.

complex notational practices according to different processes of musical writing from place to place. In particular, special note shapes (henceforth: special notes) provide insight into various approaches to representing music. It is from this perspective that I explore how best to treat plausible readings in surviving transmissions of this music. In order to do this, I must first review the basic concepts behind these notes.

The following is a brief overview of the processes behind the writing of special notes of the *ars subtilior*. Elsewhere, I have provided details of the notational process of all special notes in this repertoire.[38] This overview provides the following discussion with some basic concepts in the notational process around the year 1400 that suggest the participation of memory in notational innovation and musical creation. By looking into the workings of musical writing, I hope to offer a glimpse of one interface between the oral and the literate in the music of this period. This does not deny the literate nature of this music; rather I make a special plea for the oral-literate interface in this music's creative and notational process. Some of the notational principles described here also apply to examples of late Trecento notation.

Throughout the fourteenth century, theorists identify five basic notes, the *maxima* (), the long (), the breve (), the semibreve (◆), and the minim (◆). Each note, shown here from the largest to the smallest duration, was divisible into three or two of the immediately smaller duration. The second, third, and fourth notes were already available in the thirteenth century. The first and last notes are inventions of the French *ars nova*. Their very names represent a conceptual leap beyond the qualitative names of thirteenth-century notes and denote respectively the longest duration and the shortest duration available in the quantitative *ars nova* mensural system. However, unlike the *maxima*, the duration of the minim in the French system was equivalent over all basic mensurations (a feature not shared by the Italian system). Bent suggests that the need to circumvent minim equivalence in *ars nova* notation contributed to the innovations and experiments in musical writing of the late fourteenth and fifteenth cen-

38 Jason Stoessel, "Symbolic Innovation: The Notation of Jacob de Senleches," *Acta Musicologica* 71 (1999): 136–64; id., "The Captive Scribe: The Context and Culture of Scribal and Notational Process in the Music of the *ars subtilior*" (Ph.D. diss., University of New England, 2002), 1:184–238. Also see a useful catalogue of note shapes in I-MOe α.M.5.24, though without a discussion of the notational processes behind them, in Anne Stone, "Writing Rhythm in Late Medieval Italy: Notation and Musical Style in the Manuscript, Biblioteca estense, alpha.M.5.24" (Ph.D. diss., Harvard University, 1994), 72-106.

turies.[39] These innovations and experiments include special notes, that is, note shapes beyond the five standard notes codified by *ars nova* theorists.

Special notes of the late fourteenth century operate according to two rhythmic processes: the proportional and the arithmetic. Proportional notes exhibit two categories of graphical behavior. The first consists of coloration (using different ink colors for, or voiding of, a note's body), and the second of stems, flags, loops, or *virgulae* (small hooked stems) added to the top or bottom of existing notes. Arithmetic notes exhibit two graphical behaviors. The first consists of the combining of two notes (they may be the same note) to form a new, compound note. The duration of the combined note is the sum of the durations of each of its composite notes. The second behavior of arithmetic notes occurs where part of the body of a note is not drawn in order to indicate a corresponding reduction of the duration of the normal note. For example, removal of a quarter of the body of a note results in a duration three-quarters the unaltered note. Several graphical behaviors may be combined in the one special note.

Here I focus on selected notational processes directly relevant to the ensuing discussion of specific readings. The process of adding a stem (sometimes called a tail or *cauda*) above or below a note was recognized by several theorists either side of the year 1400.[40] At the beginning of the fifteenth century, when most notational innovations related to special notes had already occurred, Prosdocimus de Beldemandis explains that the stem added to the top of a note diminishes while the stem added below a note—by virtue of being the opposite the former—augments.[41] Although the verbs *diminuere* and *augmentare* suggest proportional concepts, Prosdocimus does not clarify. But earlier (around 1375), the Berkeley Anonymous states that the stem added above a note sometimes "lightens" by a half (*alleviat aliquando pro medietate*), while the stem added below a note makes the duration "heavier" by a half (*pro medietate per oppositum aggravari*), concluding in language resembling that found in Prosdocimus: "if it [the stem] reduces when above, below in the opposite fashion it ought to augment."[42] Here, the proportional significance of these notes is clear.

39 Margaret Bent, "Notation, §3, 3: Polyphonic mensural notation c. 1260-1500," in *The New Grove Dictionary of Music and Musicians,* 2nd ed., ed. Stanley Sadie (London: Macmillan-Grove, 2001), 18:136.

40 Stoessel, "The Captive Scribe," 208–11.

41 Prosdocimus de Beldemandis, *Opera 1: Expositiones tractatus practice cantus mensurabilis magistris Johannis de Muris*, ed. F. Alberto Gallo, Antiquae Musicae Italicae Scriptores 3 (Bologna: Università degli Studi, 1966), cap. 61, sent. 52.

42 *The Berkeley Manuscript: University of California Music Library, MS. 744 (olim Phillipps 4450)*, ed. Oliver B. Ellsworth, Greek and Latin Music Theory 2 (Lincoln and London: University of Nebraska Press, 1984), 126.21–128.2. Also see Stoessel, "Symbolic Innovation," 152.

The use of categories of opposites gives a glimpse into the intellectual basis of music theory's discussion of these notes, an epistemology that I believe extends to the actual pragmatics of music writing insofar as it concerns literate music scribes. Categories of opposites reveal the presence of fundamental Aristotelian thought. This is not significant in itself. More telling, however, is Prosdocimus's categorization of notational process according to intrinsic and extrinsic modes of signification. This approach signals the influence of Aristotle's metaphysics and reflects their centrality in late medieval formulations of metalanguage, including the theory of mensural notation. Prosdocimus employs Aristotelian concepts to provide insight into notational process, in turn nurturing our awareness of the role of medieval systems of knowledge in artistic productions.[43]

To return to the argument at hand, that the Berkeley Anonymous qualifies the meaning of stems above and below notes with the adverb "sometimes" (*aliquando*) is significant for anyone who has worked with the notation of the *ars subtilior* and late Trecento repertoires. While the rules provided by the Berkeley Anonymous apply in a majority of cases, there are exceptions. It is most common to find, for example, the double-tailed minim (variously called the *dragma*, *fusa*, *fusiel*, or *minima caudata seorsum et deorsum* by theorists) in major prolation (that is, when the semibreve is divided into three minims) where two dragmas are sung in the space of three minims, resulting in a 2:3 proportion (*subsesquialtera*). However, this is not the only rhythmic significance of this note in pieces from around 1400. A small number of pieces use the black or red dragma to indicate a duration equivalent to the minim.[44] As will be seen below, this exceptional significance may have resulted in variant readings in transmissions of the same work. In several pieces, the dragma indicates a duration equivalent to two minims. Here the dragma is formed arithmetically by combining two minims according to the process of arithmetic notes described below.[45]

43 For further discussion of intrinsic and extrinsic modes of signification in music theory and music notation *c.* 1400, see Jason Stoessel, "The Interpretation of Unusual Mensuration Signs in the *ars subtilior*," in *A Late Medieval Songbook and its Context: New Perspectives on the Chantilly Codex (Bibliothèque du Château de Chantilly, Ms. 564)*, ed. Yolanda Plumley and Anne Stone (Turnhout: Brepols, 2009), 179–202 at 182–83. Further evidence of the influence of Aristotelianism upon music theory occurs in the use of the concept of Aristotelian formal *telos* to describe contrapuntal relations in music of the fourteenth century; see David Cohen, "'The Imperfect Seeks its Perfection': Harmonic Progression, Directed Motion, and Aristotelian Physics," *Music Theory Spectrum* 23 (2001): 139–69.

44 These are: Guido's *Dieux gart* (F-CH 564, no. 27), *Or voit tout* (F-CH 564, no. 28) and the anonymous *Je ne puis avoir plaisir* (F-CH 564, no. 25; I-MOe α.M.5.24, no. 36). Both sources of *Je ne puis* employ a red dragma to indicate a duration equivalent to a minim.

The anonymous *Tractatus figurarum* provides the most succinct and systematic overview of the process of arithmetic notes. Using a set of simple notes, the *Tractatus* derives the set of special notes shown in table 1.

Table 1: Special notes in the *Tractatus figurarum*

Note	Derivation	Duration (◆ = 1) and proportion
1. ◆	4:3 (by flagged stem?)	³⁄₄ (4:3)
2. ◇ & o	²⁄₃ of ◆ (by coloration)	¹⁄₂ (2:1)
3. ◆·	◆(3) + ◇ (¹⁄₂) + · (1)	4 ¹⁄₂ (2:9; 2:3 ◆)
4. ◆	◆(1) + ◆ (1)	2 (2:2, 3:2 Sbr)
5. ◇	◇ (²⁄₃) + ◇ (²⁄₃)	1 ¹⁄₃ (3:4)
6. ◆	◆(1) + ◆(³⁄₄)	1 ³⁄₄ (4:7)
7. ◆ o	◆(1) + ◆ (³⁄₄) + o (¹⁄₂)	2 ¹⁄₄ (4:9)
8. ◆	◆(1) + ◇ (¹⁄₂)	1 ¹⁄₂ (2:3)

Using the first two notes (1 and 2) shown in the table and the two shortest basic notes (semibreve and minim), the author of the *Tractatus figurarum* derives another six special notes or *figurae* (3–8). The process of adding two notes together graphically involves flipping one note horizontally (mirror effect) and combining both notes into one body. Despite the comprehensiveness of this system, only one extant composition, namely Bartholomeus de Bolonia's *Que pena major* (I-MOe α.M.5.24, no. 73),[46] uses one of the notes (8) proposed by the author of the *Tractatus*. This is largely because the note used by the author of the *Tractatus* to indicate a *minima imperfecta* (1) is more often used in extant sources to indicate a semiminim (that is, half a minim).[47] Even in Bartholomeus's *Que pena*, right-flagged black semiminims appear instead of the void note proposed by the *Tractatus*. Yet, internally consistent usage of arithmetic notes occurs in the notated compositions of Matheus de Perusio and, as detailed below, even a

45 Exceptional uses of *caudatae* and dragmas in a proportional sense occur in the compositions of Philipoctus de Caserta. See Stoessel, "The Captive Scribe," 220–22.

46 Facsimile edition: *Il codice α.M.5.24 (ModA)*, ed. Anne Stone (Lucca: LIM, 2003).

47 Red flagged semiminims are found in F-CH 564, no. 42 and I-MOe α.M.5.24, no. 29. For the variety of notes used to represent a duration equivalent to a semiminim, see Stoessel, "Symbolic Innovation," 147–48.

composition by the late Trecento composer Paolo Tenorista da Firenze. Examples of arithmetic notes found in Matheus's works in I-MOe α.M.5.24 are notable because they include both additive and subtractive notes (see table 2). Slight differences are apparent in the formation of additive notes in the sources of Matheus's music, although their principles (though not precise forms) concur with those in the *Tractatus*.

Table 2: Arithmetic notes in works of Matheus de Perusio

Note	Derivation	Duration (♦ = 1)	Implied Proportion	Item number(s) in Mod A*
	+	2 1/2	2:5	28: [3,2]; 65, 90: [2,3]
	+	1 1/2	2:3	14, 46, 59, 65, 75, 85, 90: [2,3]; 28, 73, 77: [3,2]; 87: [2,2]; 62: [2,3], erasure, Ct only
	+	1 1/2 (65) or 1 1/3 (43)	2:3 or 3:4	43: [2,2], (= 2/3) 65: [2,3], (= 3/4)
	+ (2/3)	1 2/3	3:5	43: [2,2]
	+	1 2/3	3:5	14: [2,3], error?
	+	1 2/3	3:5	97: [2,3], white portion is red in ms.
	+	1 2/3	3:5	102: [2,3]
	− 1/4	3/4	4:3	77: [3,2]
	− 1/2	1/4	4:1	91, 95: [2,3]
	− 1/2	1/6	6:1	95: [2,3]. (=)
	− 1/2	1/6	6:1	102: [2,3]

* The mensuration of the piece is shown in square brackets using the standard notation found in W. Apel, *The Notation of Polyphonic Music 900-1600* (Cambridge, MA, 1953).

The process of writing and reading special notes reduces to a simple set of rules or conventions. These can be easily retained, facilitating the interaction of memory and notational principles in the act of musical reading and writing. In some cases, notes are without precedent, but by understanding the process behind their formation, the reader is quickly able to "decipher"

these unfamiliar signs. Yet the relationship between music writing/reading and music performance relies to a large extent on the parallel oral tradition of musical practice. Through a set of consensual codes, each acts to reinforce the other at the interface between orality and literacy. In his recent polemic on early music performance practice, Bruce Haynes encapsulates this process with the following general statement:[48]

> The reason that musical writing succeeds is because, alongside the notational system, there is a parallel oral tradition. The oral element is necessary to decipher the musical symbols, and everybody who reads music has learnt it.

Because mensural notation was still relatively new and dynamic in the decades around 1400, the interaction between oral performance tradition and musical notation is all the more salient.

Learning from Ancient "Editors"

Fortunately, there are a small number of compositions where we can observe scribes at work, or in some cases, scribes at play, experimenting with musical writing. These contain clear evidence of scribal (both primary and secondary) editorial activity. I offer the following selected examples both as evidence of the interaction between oral and literate process and also as examples of plausible readings that deserve to be retained in new editions. In each case, scribes are not simply engaged in the replication of the written musical sign; they are arguably responding to an aural/oral process by means of its dynamic relationship with innovative musical writing. In the last example discussed, the role of an oral tradition of counterpoint informs scribes in their revision of the notational record.

Amor da po' che tu ti maravigli

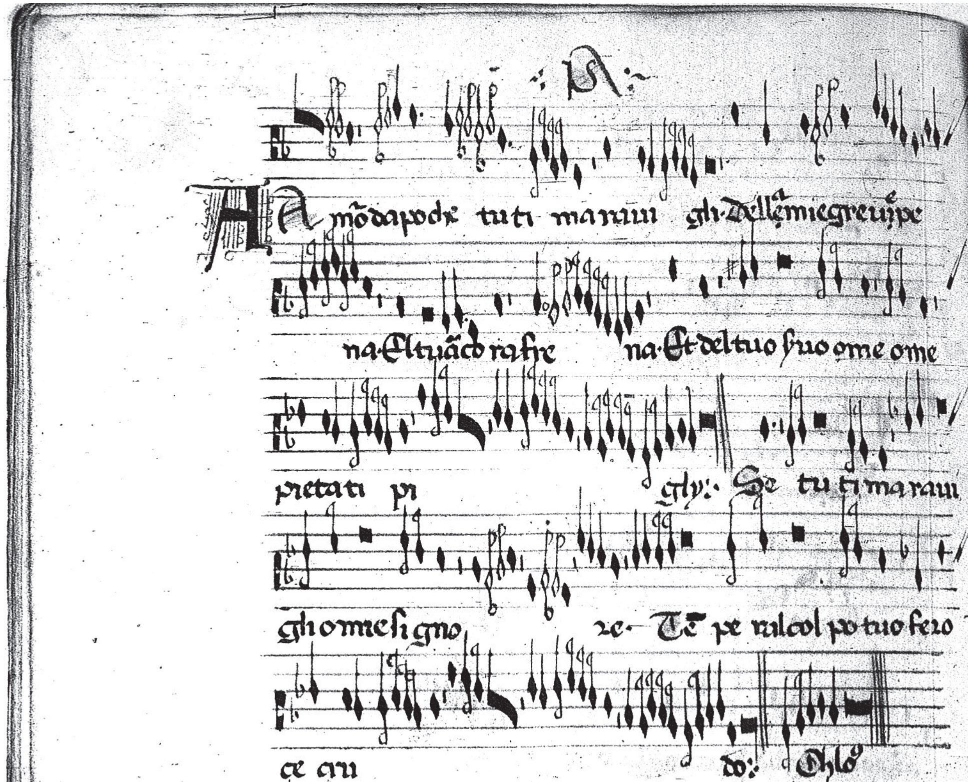
The first example of a scribe at work is not, strictly speaking, from the *ars subtilior* repertoire. It occurs in *Amor da po' che tu ti maravigli* by the late Trecento composer Paolo Tenorista da Firenze, transmitted as an unicum in F-Pn it. 568.[49] When I inspected this manuscript in winter 2001, I was surprised to discover that most of the void double-stemmed notes had been altered after their initial copying. Residual evidence of this can be seen in example 1 in the form

48 Bruce Haynes, *The End of Early Music: A Period Performer's History of Music for the 21st Century* (New York: Oxford University Press, 2007), 105.

49 Most scholars will know this composition from Willi Apel, *The Notation of Polyphonic Music, 900-1600* (Cambridge, MA: The Mediaeval Academy of America, 1953), 394.

of gaps in staff lines produced by the erasing of the older, left-hand flag on descending stems of void notes (see, for instance, the first three notes with descending stems on the first staff).

☾ Example 1: Detail of *Amor da po' che tu ti maravigli*, F-Pn it. 568, fo. 79v. Bibliothèque nationale de France



At the same time, there is evidence that the scribe has reversed the direction of the flag on the ascending stems of void semiminims and added a right-hand flag to ascending stems of double-stemmed notes. In their original form, void semiminims (valued here at a third of a minim) were void versions of the black semiminims (the latter valued at half a minim). Signs of erasure are especially clear at the pair of void semiminims in the middle of the second staff of the cantus. Also of great interest is the hollow dot in the middle of the second staff that adds a third to the duration of the preceding minim. A comparison of the first sixteen breves of a reconstructed old reading and the present (new) reading in *Amor da po' che tu ti maravigli* is shown in example 2.

Example 2: Old and new readings in *Amor da po' che tu ti maravigli* (mm. 1–16)

What therefore is the significance of these changes in *Amor da po' che tu ti maravigli*? Firstly, the older reading may reflect the model from which this piece was copied. This raises more questions when we consider the privileged role accorded to the scribe of this and other pieces by Paolo Tenorista in F-Pn it. 568. John Nádas suggests that access to Paolo Tenorista's compositions was tightly regulated in the early fifteenth century, a conclusion that gains significance in light of the absence of Paolo's pieces (despite space being left for them) from the late anthology I-Fl 87 (the Squarcialupi Codex).[50] Might the scribe of *Amor da po' che tu ti maravigli* have been

50 John Nádas, "The Songs of Don Paolo Tenorista: The Manuscript Tradition," in *In cantu et in sermone: A Nino Pirrotta nel suo 80° compleanno*, ed. Fabrizio Della Seta and Franco Piperno (Florence: Olschki, 1989), 41–64 at 60. Facsimile edition: *Il codice Squarcialupi: Ms. Mediceo Palatino 87, Biblioteca medicea laurenziana di Firenze*, ed. Franco A. Gallo (Florence: Giunti Barbèra, 1992).

authorized to make the changes which are observed here? Are they the composer's revisions? These are essential questions, but they are difficult to answer. Of more concrete significance is the nature of these changes. The old and new notes betray a shift in their conceptual bases that renders the void notes more consistent with the arithmetic notational process behind the black notes. The black double-stemmed notes with a left-hand flag on the descending stem rely on the additive process of music writing discussed above. The meaning of the older void notes is ambiguous: the void double-stemmed notes may represent either a doubling or a tripling of the void left-hand flagged semiminim depending on whether there are three or four of this last note in proportion to each semibreve. This in turn may indicate that the hollow dot in the second staff of the cantus is also a scribal alteration. The newer void notes are consistent with the notational processes apparent in the special black notes, whereas the older ones are not. The duration of the new void double-stemmed note comes from adding two void black, right-hand flagged, triplet semiminims together. The reversal of the void semiminim's flag is the most significant indication of the 3:2 proportion with the black semiminims. Void coloration is not absolutely necessary in the newer notes, but ensures that diminution, rather than augmentation, occurs.[51]

Belle, bonne, sage

I now turn to two examples of renotation in the Chantilly Codex (F-CH 564), one of the principal sources of the *ars subtilior*.[52] Some years ago I proposed that, after the Cordier pieces had been added (perhaps in the place of a lost gathering), an editor-scribe changed several readings in this manuscript.[53] Here I revisit erasures in Cordier's *Belle, bonne, sage* (F-CH 564, no. 1) and

51 Margaret Bent has noted similar instances of scribal revision in Bologna, Museo Internazionale e Biblioteca della Musica, MS Q15 where flagged semiminims are replaced by void (flagless) semiminims. This indicates the continued experimentation of scribes with these categories of special notes into the third decade of the fifteenth century. See Margaret Bent, "Continuity and Transformation of Repertory and Transmission in Early 15th-Century Italy: The Two Cultures," in *Kontinuität und Transformation in der italienischen Vokalmusik zwischen Due- und Quattrocento*, ed. Sandra Dieckmann, Oliver Huck, Signe Rotter-Broman, Alba Scotti, Elfriede Baranowski, and Janine Droese (Hildesheim: Olms, 2007), 225–46 at 235.

52 Facsimile edition: *Codex Chantilly: Bibliothèque du Château de Chantilly, Ms. 564*, ed. Yolanda Plumley and Anne Stone (Turnhout: Brepols, 2008).

53 Jason Stoessel, "A Fifteenth-Century Response to a Musical Text: The Editor-Scribe in Chantilly, Bibliothèque du Musée Condé, ms. 564 (Codex Chantilly)," in *Music Research: New Directions for a New Century. Proceedings of the 25th National Conference of the Musicological Society of Australia,* ed. Michael Ewans, Rosalind Halton, and John A. Phillips (London: Cambridge Scholars, 2004), 384–95. Anne Stone and Yolanda Plumley provide evidence that the parch-

provide further details about erasures and transmission of Goscalch's *En nul estat* in F-CH 564 and the Codex Reina (F-Pn nouv. acq. fr. 6771).

Example 3 is a detail showing erasures in *Belle, bonne, sage*. These erasures occur in a passage of void coloration after a section in triple proportion (the latter indicated by the numeral 3). The present reading in example 3 consists of the following sequence of notes in void notation: five semibreves, three breves, and a semibreve. All durations in this reading need to be sung in a 4:3 proportion relative to the preceding triple proportion. However, the reading prior to its modification by the editor-scribe consisted of five minims, three semibreves, and a final minim, also read as a 4:3 proportion relative not to the preceding triple proportion but to the earlier mensuration sign denoting imperfect time and major prolation (see example 3).

◖ Example 3: Erasures in *Belle, bonne, sage*, F-CH 564, fo. 11v (digitally enhanced). Photo DIAMM, © Bibliothèque et archives du Château de Chantilly

While the present reading makes perfect sense from the perspective of proportional notation of the early fifteenth century, the earlier reading is similar in its notational process to other pieces in the *ars subtilior*. Proportion signs or mensuration signs are closely aligned with passages differentiated by coloration, for example, the anonymous *En Albion de fluus environee*

ment containing the two Cordier pieces and an index of the original corpus were prepared together. They argue that the Cordier songs were added at the beginning of the surviving old corpus as "a kind of frontispiece, an iconic symbol of the music contained therein," perhaps when the book was gifted to Francesco d'Altobianco degli Alberti; see Yolanda Plumley and Anne Stone, "Cordier's Picture-Songs and the Relationship between the Song Repertories of the Chantilly Codex and Oxford 213," in *A Late Medieval Songbook*, ed. Plumley and Stone, 303–28 at 304–6.

(F-CH 564, no. 75) and *De tous les moys* (F-CH 564, no. 76); Suzoy's *Pictagoras, Jabol et Orpheus* (I-Tn 2, fos. 4v–5r only;[54] F-CH 564, no. 39 uses a canon with simple notes), or they are construed relative to an overriding mensuration like, for example, Anthonellus de Caserta's *Amour m'a le cuer mis en tel martire* (I-MOe α.M.5.24, no. 63). In these examples, the proportion or mensuration change is localized and canceled by a return to normative notation, usually black notes. The modifications produced by the editor-scribe reside in an understanding of notational process that differs from that of the original scribe. For this reason alone (but there are other reasons), I have concluded that the editor-scribe was involved in the copying of neither the original corpus nor the Cordier inserts in F-CH 564.

En nul estat

By way of a final example of a challenging set of readings from the *ars subtilior*, I turn to Goscalch's *En nul estat* (or *Car nul estat* as in F-Pn nouv. acq. fr. 6771). The surviving copies in the Chantilly Codex (F-CH 564, fo. 39v) and in the Reina Codex (F-Pn nouv. acq. fr. 6771, fo. 79v) transmit a number of notable variants. The relationship between both transmissions is made even more complex by the intervention of the editor-scribe in F-CH 564 whereby many of the readings reflected by F-Pn nouv. acq. fr. 6771 have been erased and rewritten in F-CH 564. One of the most interesting features of the F-CH 564 reading is the modification of the first passage governed by the 2/2 mensuration sign in the cantus. In F-Pn nouv. acq. fr. 6771 this passage begins at the end of the first staff and continues onto the second staff as shown in example 4. The present reading in F-CH 564 occurs in the middle of the second staff as shown in example 5. Notably, the different reading in F-CH 564 resulted from the editor-scribe modifying the original reading that was for the most part identical with that found in F-Pn nouv. acq. fr. 6771.

54 Facsimile edition: *Il codice T.III.2: Torino, Biblioteca nazionale universitaria = The Codex T.III.2*, ed. Agostino Ziino (Lucca: LIM, 1994).

Example 4: *Car nul estat* in F-Pn nouv. acq. fr. 6771. Bibliothèque nationale de France

Example 5: *En nul estat* in F-CH 564. Image by DIAMM, © Bibliothèque et archives du Château de Chantilly

Example 6: Parallel readings of contratenors of *En nul estat*, mm. 6–11

What then can be made of this situation? As I have also discussed elsewhere,[55] the present reading in F-CH 564 relies on reading the 2/2 mensuration sign as imperfect time, minor prolation with minim/semibreve equivalence between it and the preceding mensuration. The older reading, erased in F-CH 564 but still found in F-Pn nouv. acq. fr. 6771, relies on a 4:3 proportion at the minim/semibreve level. Furthermore, the counterpoint in F-Pn nouv. acq. fr. 6771 is problematic in this passage, whereas is it slightly better in F-CH 564. This led me to conclude that the newer reading in F-CH 564 simply consists of the editor-scribe attempting to improve the old, poorer counterpoint. Based upon my preceding argument, I would suggest that this occurred by means of an oral tradition of improvised counterpoint. Plumley and Stone attribute the revised reading in F-CH 564 to the presence of more than one exemplar.[56] However, it would seem that, in the absence of such an exemplar, the role of oral process in producing the newer reading in F-CH 564 needs to be considered.

En nul estat is a difficult piece with several other ambiguities in its notation. Modus, for example, is perfect in perfect time with minor prolation, requiring that the alteration rule be

55 My observation in 2001, while at the Musée du château de Chantilly and at Oxford, of the erasures in the Chantilly reading of *En nul estat* was facilitated by access to images produced by DIAMM. My early findings were presented in "A Fifteenth-Century Response," 388–90. Plumley and Stone briefly discuss this and a small number of other revisions in F-CH 564 in *Codex Chantilly*, ed. Plumley and Stone, 2:144–46. Their account fails to recognize several key instances of what I have called editorial activity in items 1, 22, 48, 60, 67 and 68. Nor is it recognized that the Cordier pieces were already in place when editorial activity commenced in this source.

56 *Codex Chantilly*, ed. Plumley and Stone, 2:146.

applied to pairs of breves before longs. Then there are dragmas, the duration of which appears to change according to the mensuration and whether diminution applies. Transcriptions, such as Nors Josephson's landmark reading, interpret dragmas in a 4:3 proportion in relation to minims in both diminished and undiminished passages of notation and in every mensuration. This may be correct for the F-CH 564 reading, but in F-Pn nouv. acq. fr. 6771 there are obvious problems, for example, in the passage in the contratenor shown in example 6.

In the contratenor in F-Pn nouv. acq. fr. 6771 (marked as Ct [R]), dragmas are read as diminished minims but with a division of the breve that relates to the previous pair of *semibreves caudatae*. The omission of the pair of *caudatae* in F-CH 564 suggests that medieval musicians and scribes encountered difficulties interpreting dragma passages in this piece. I have already highlighted the necessity of recognizing which system of musical writing is used in the notation of a work employing special note shapes. The two transmissions of *En nul estat* illustrate what can happen when the understanding of the meaning of the written symbol varies from scribe to scribe (or from musician to musician). What is interesting is that the counterpoint is sound in each contratenor in example 6, suggesting that contrapuntal considerations were instrumental in the formation of both readings. Furthermore, both readings *are* plausible, leaving the editor lost as to which reading should take priority over the other. The simplest, indeed the most elegant solution if possible, is to retain both readings as options for performance.

For performers who rely on editions of this music, editors need to ensure the survival of plausible readings like those discussed here in future editions of the *ars subtilior*. The present situation that exists for discovering variant plausible readings in editions of the music from around the year 1400—insofar as it concerns French, Italian, and Latin polyphonic songs in *ars subtilior* style that circulated in Western Europe—is that scholars must plow through several monumental editions while negotiating their various critical apparatus that often leave much to be desired in terms of the accessibility and ease of use. The actual critical apparatus in many cases consists of a tangled string of letters and abbreviations that requires time and application in deciphering. As such, the critical apparatus of these and other monumental editions seem too closely modelled on textual apparatus accompanying editions of classical texts and, as a consequence, result in the omission of precious details of the musical notation like those discussed above. The irony of replacing one code (musical notation) with another (a

textual critical apparatus) is not lost on students of musicology whom I regularly see struggle with or simply ignore this quasi-scientific notation.[57] While acknowledging that critical notes are subject to all sorts of external factors such as financial constraints and physical limitations of printed media, would it not better serve the purposes of both scholars, students, and performers of this and related musical repertoires (including those serious enough to use a facsimile of a particular source for performance), if several readings and editorial layers were subsumed simultaneously into the one online "edition" and each layer selected, combined, or modified as needed, with the capacity to compare several readings at once? Rather than signal an end to editorial endeavor, such an edition would elevate the reader to the status of editor, freeing musicologists (this one at least) to get on with more pressing concerns such as writing cultural histories of the music of the Middle Ages. ■

57 See also the discussion of critical apparatus in Theodor Dumitrescu's contribution to this volume.