

Contrapuntal Ingenuity in the Motets of Machaut

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This essay develops a framework for interpreting the interactions of contrapuntal lines and their influence upon isorhythmic organization in the motets of Guillaume de Machaut (c. 1300–1377). The first part reviews a simple approach to treating chant tenors in fourteenth century French polyphony, as testified in the coeval theoretical literature, from which contrapuntal ingenuity emerges as significant. In the second part is presented a descriptive scheme for categorizing various treatments of a tenor in the abstract, informed by recent work on multimedia and approaches to medieval intertextuality. Finally, this framework guides an interpretation of Machaut's motet practice, with a focus on the isorhythmic preparation of chant for use as a tenor and its relationships to other voices within the polyphonic setting.¹

Part I: Historical Background

In the *Ars nova* motet, the polyphony may be grouped into two entities: the borrowed tenor and the newly-composed upper voices. It was stylistic of the genre that added voices be composed in relation to and so amplify the tenor voice, the contrapuntal authority of which derives from its source in chant.² That the tenor

¹ I am grateful to Robert Hatten, Kyle Adams, and Anne Walters Robertson for their instructive criticism at various stages of this study. An early introduction to this study was presented at the 45th International Congress on Medieval Studies at a session sponsored by the International Machaut Society, 15 May 2010.

² Among many references, see Grocheo's analogy of the tenor as architectural foundation in *De musica* (ca. 1300), quoted in Berger 2005, 221. Fuller 1990, 214, locates the tenor's contrapuntal leadership in its lowest position among the voices. Leech-Wilkinson 1989, 180, finds that "one area in which the upper voices have no choice but to relate closely to the lower is, of course, that of harmony." Bent 1972, 76, confirms that "the tenor should take priority for the application of melodic rules; its melodic integrity should be preserved even if other voices have to compromise theirs as a result. The lowest voice takes priority where harmonic considerations are concerned, and the other voices have to conform to it."

was the locus of medieval polyphony is evident when the other voices were named in relation to their joining it: the contratenor (most conspicuously) and the duplum, triplum, and quadruplum for the order in which they were counterpointed against the *vox principalis* in earlier organum settings. Vertical sonorities and points of formal articulation were conventionally derived from the tenor, yet the relationship between the tenor and upper-voice pair in fourteenth-century French motets, if stylistically predisposed, was not fixed. Newly-composed voices had much recourse to affect the foundational voice, as well. In all of Machaut's motets, the upper-voice pair is not exclusively reactive but occasionally proactive with respect to the tenor's role in guiding counterpoint and form, ranging across a spectrum from close solidarity to total independence from the tenor. As will be shown, each of the voices has the power to shape the implications of the others and so, from moment to moment, determine harmonic identity, larger pitch centrality and directedness, and formal flow.

This study owes a great deal to the foundational work of Sarah Fuller, whose astute analysis of sonority and contrapuntal motion in the *Ars nova* are drawn upon in my formalization of categories to guide an interpretation of Machaut's treatment of chant in the motets. Because it takes the chant tenor as a unit, my analysis is organized around and guided by complete melodic statements in the tenor voice (the *color*) rather than a sequence of rhythmic groups (the *talea*), as is Fuller's and others'. Building upon her work, I will suggest correlations between Machaut's musical and textual counterpoint and consider further how contrapuntal ingenuity interacts with tenor periodicity.

Ægidius de Murino's fourteenth-century treatise on motet composition advises the nascent composer to begin by choosing a tenor whose words concord with the matter of which they wish to make a motet.³ If chant is the *musical* matter of which the polyphonist wishes to make a motet, this dictum might also have been applied to the composition of upper voices, which should concord (i.e. make appropriate counterpoint) with it. The

³ *Primo accipe tenorem... et debent verba concordare cum materia de qua vis facere motetum.* See Leech-Wilkinson 1989, 18–23, for the text and a translation.

possibilities of *Ars nova* style support a range of musical responses to chant. Historical support for the innovative handling of an adopted cantus firmus may be found in the medieval preoccupation with glossing classical learning. Indeed, the fourteenth-century motet seems ideally suited for this purpose in text and music simultaneously. Robert W. Hanning describes glossing as commentary that manipulates rather than explains its subject text.⁴ He notes that “the production and compilation of glosses was no mere act of philological or archeological piety toward inherited classics, designed to elucidate their original meanings; on the contrary, it was frequently an exertion of mastery over such works, a focusing of intellect or belief to reclaim and domesticate alien institutions or perceptions.”⁵ This seems an apt description of the medieval motet genre, which uniquely provided the opportunity for glossing both text and music by grafting new poetry and vocal lines onto canonical ones. Jacques Boogaart commented specifically upon Machaut’s transformative adoption of text, stressing his modification and subversion of borrowed text so as to voice his own ideas through another poet’s words, while retaining enough of his source to make it recognizable.⁶ And Machaut himself, presenting a cohesive overlook of his complete work in the *Prologue*, explicitly invites his audience to draw connections through which new meanings may emerge. Machaut writes that “meaning [*sens*] will shape for your imagination whatever you might wish to bring into harmony.”⁷ Taking up this opportunity, the present study will elucidate the composer-poet’s transformative musical commentary on plainsong (i.e. polyphony) as a parallel to his textual glossing of scripture.

In addition to the *Ars nova* motet, the conditions for non-textual glossing were present in some medieval visual art as well. The triptych potentially glosses a central image with two others that

⁴ Hanning 1987, 29. See the entire essay for a useful introduction to the important and wide-ranging subject of “textual harassment.” The practice was most contentious and even illicit when it involved scripture, as do most of Machaut’s motets, since glosses can corrupt as well as explicate.

⁵ Ibid.

⁶ Boogaart 2001, 77.

⁷ Translation from Robertson 2007 [2002], 6.

may amplify, modify, or wholly transform it. The artist thus guides a particular interpretation of a foundational image through recontextualization.⁸ As with motets, particularly those with bilingual polytextuality like many of Machaut's, triptychs invite cognitive labor in their reception, charging the observer with bringing into relation several distinct parts and synthesizing a coherent whole.

The medieval motet's capacity for multiple interpretations is balanced by a similarly multiple practice in its creation. Thirteenth-century motets were open compositions with an accretion of voices combined and recombined in varying arrangements, which could be the unattributed work of one to several composers and poets individually responsible for the text or music of one or more of its voices.⁹ Thus, a definitive meaning or even physical text of a motet was not fixed on either end of the work, conception or reception. In her monograph on the power of reception and Machaut's concerted efforts to guide or constrain it, Deborah McGrady notes that "inventive readers approach a text as a malleable entity that can express their own literary and artistic intentions. Exhibiting little concern for the integrity of the master text, they dismantle and recycle words, forms, and ideas to create new works. Through this process of appropriation, they assume the status of authors in their own right."¹⁰ This observation, referring to Machaut's poetry, seems no less than a formula for his motet composition. In his motets, Machaut adopts a musical text, then, through isorhythmic proportioning and transformative polyphonic setting, reinvents it according to his own design.

Part II: Interpretive Approach

To ground my construal of control among distinct contrapuntal entities, I have adopted Nicholas Cook's categories

⁸ The layout of medieval motets on the page is suggestively more like that of the triptych, side-by-side, than of our modern score notation with each part underlaid.

⁹ See Huot 1997 on the structure and interpretation of the century of motets preceding Machaut's style.

¹⁰ McGrady 2006, 149.

conformance and *contest* from *Analyzing Musical Multimedia*.¹¹ In Cook's view, differing media (e.g. visual and audio) contend to control the message of commercials and music videos, among other multimedia formats. Those media that are mutually supportive—that is, received as expressing a single concept—are said to *conform*. The opening of Beethoven's "Pastoral" Symphony juxtaposed with images of the countryside, for example, *conform* in their evocation of the pleasures of idyllic life. The same music and images of explosive violence, on the other hand, seem oppositional. Through interpretation of media that *contest* each other, an integrated multimedia message can emerge. For Cook, "the term 'contest' is intended to emphasize the sense in which different media are, so to speak, vying for the same terrain, each attempting to impose its own characteristics upon the other. One might develop the analogy by saying that each medium strives to deconstruct the other, and so create space for itself."¹² Cook's concepts seem well-suited to identify the problems and possibilities that come with the admixture of materials in the *Ars nova* motet.¹³

In my analysis of Machaut's motets, I will use the concepts of *conformance* and *contest* to describe the fluid relationship between his newly-composed upper voices and the borrowed tenor voice. If not considered different media, the relatively verbose and sprightly upper-voice pair clearly diverges in style from the solemn procession of a chant tenor.¹⁴ Insofar as Machaut's contrapuntal entities are conceived and handled differently, yet coexist as players

¹¹ See Cook 2001, 98–106, esp. 103. A third category, *complementation*, will not be borrowed here. In his formulation, Cook stresses contest as the generator of emergent multimedia meanings and deemphasizes conformance as "hardly a model of multimedia at all" (106). My inquiry into emergent meaning in Machaut's counterpoint is similarly focused on *contest*.

¹² Ibid.

¹³ Of course Machaut could have and did craft his own ideal tenors in perfect accord with polyphonic desires, but this is the style of his chansons.

¹⁴ In the sense that Cook defines "medium" as any "dimension of variance" having some autonomy (264), the two contrapuntal players in Machaut's motets do qualify as distinct media. Of course, any texted music is multimedia. Furthermore, Cook promotes the application of *conformance* and *contest* (and *complementation*) in the analysis of absolute music (264). His theoretical categories, then, can apply as much within a medium as between media.

in the expression of one work, Cook's theoretical categories are apt. When the upper-voice pair of a motet *conforms* with its tenor, they amplify it through polyphonization. In *contest*, on the other hand, the adopted chant is recontextualized by the upper voices' setting of it, and new implications can emerge from their interaction. In Cook's words, "conformance begins with ordinary meaning... *contest*, on the other hand, ends in meaning."¹⁵ However, I will illustrate that *conformance*, too, though the usual stance of the upper-voice pair in Machaut's motets, can be showcased as a meaningful choice and not a mechanical generator of polyphony.

An analogy with modern dance will provide a final model of contrapuntal *contest*. Before a partner dance begins, one person (the analog of the tenor) is designated to lead the steps. Conceived in a subordinate role, the partner follows—harmonizes, one might say—suppressing any independent desires so as not to upset the balance of the whole. As with motets, some measure of a dance's success hinges upon the fidelity of the follower. However begun, nothing prevents the leader and partner from switching roles mid-dance, so long as the former leader quickly assumes subordinate responsibilities. The titular leader, that is, must adapt to the *de facto* leader if the pair is to continue the dance in harmony. Not an ungainly stepping on toes, occasions of contrapuntal *contest* in Machaut's motets may be likened to fluid and calculated exchanges of roles between leader and partner as a dance progresses.

Contrapuntal *Conformance*: The Amplification of Chant

The enjoinder of contrapuntal fidelity to a cantus firmus in the theoretical literature was a fundamental and lasting theme from the *enchiridias* tradition of the ninth century, in which "the chant of the liturgy lies at the center of all musical reflection,"¹⁶ through to Zarlino in the sixteenth.¹⁷ Deviation from this role—what I call

¹⁵ Ibid., 103.

¹⁶ Bower 2002, 155.

¹⁷ Because Zarlino's instructions echo so specifically my claims of *conformance* as the basic approach to fourteenth-century sacred counterpoint and with my various

contest—is not a sort of decorative dissonance, but a reinterpretation of the tenor that penetrates to the structural level.¹⁸ As a specimen of highly *conformant* tenor realization, which seems more prevalent in the century before Machaut than in the *Ars nova*, a sketch of the anonymous French motet *O Mitissima / Virgo / HAEC DIES*, dating from the second half of the thirteenth century, is offered as Example 1 below.¹⁹ The vertical sonorities shown in the reduction below capture the attack of every tenor breve, set exclusively with perfect consonance and often given agogic accent in all voices, across both statements of the borrowed chant tenor. The polyphonist's fidelity to the tenor here is absolute. The tenor is always the lowest-sounding voice and foundation of the harmony, and there is no inconsistency in polyphonic setting across its repeat.

manners of *contest*, they are worth quoting at length. "It is necessary to choose a tenor from any plain chant to be the subject of the composition or counterpoint. This tenor must then be scrutinized to determine its mode and from it the proper allocation of the cadences, which will indicate the character of the composition. For, if the cadences happen to be incorrectly placed and of more than one mode, the end of the composition will not agree with the beginning and the middle.... If a passage, such as a cadence, occurs to him that is not suitable at the moment, he should reserve it for another more appropriate place. This he will do whenever the phrase or period of the text is not ended, for he must always wait until these are finished [to make a cadence]. Similarly he will see that it is on a tone required by the mode of the composition" (*The Art of Counterpoint: Part Three of Le Istitutioni Harmoniche, 1558*. Guy A. Marco and Claude V. Palisca, trans. New York: Norton, 1968: pp. 85–8).

¹⁸ My *contest* carries no negative implication as an "attack" on the tenor. Variety, artistic license, caprice, and careful manipulation are all possible impulses for creativity with borrowed material. If my accounts of Machaut's counterpoint lean towards the dramatic, this must be ascribed to my enthusiasm and not the sure intent of the composer.

¹⁹ The manuscript source for this well-known motet is the "Bamberg Codex" (D-Bas Lit. 115), 60–60v. A modern transcription may be found in *The Norton Scores: An Anthology for Listening* 5th ed., Vol. I. Roger Kamien, Ed. New York: W. W. Norton & Company, 1990 [1968].

Example 1. Rigorous conformance in a thirteenth-century motet

The image displays two identical musical staves, labeled 'statement A' and 'statement B'. Each staff consists of a vocal line (treble clef) and a lute line (bass clef). The vocal line features a sequence of chords and a melodic line that maintains a 2-1 melodic termination invariant across out-of-phase repetitions. The lute line provides a harmonic accompaniment. The notation is in a medieval style, with square notes and a simple rhythmic structure.

At times, Machaut evidently took great care that his polyphony should clearly project the tenor's centrality. Sarah Fuller, citing Eggebrecht, has demonstrated how the eight-note *talea* of motet 9 (*Fons totius superbie / O livoris feritas / FERA PESSIMA*) segments its twelve-note *color* in such a way as to hold the tenor's 2–1 melodic termination invariant across out-of-phase repetitions.²⁰ In addition to the conscientious tailoring of chant for an isorhythmic setting, Machaut's polyphony is largely constrained to the tenor. Daniel Leech-Wilkinson finds Machaut's polyphonic of the two tenor *colores* of motet 21 (*Christe qui lux es / Veni creator spiritus / TRIBULATIO*) largely identical, calling this condition "isoharmony."²¹ In a motet from the Ivrea codex, an important source of fourteenth-century French polyphony, Leech-Wilkinson observes that "each *color* [of IV73] has essentially the same harmonization despite the fact that it falls over a different sequence of rhythms.... Thus although corresponding chord progressions are neater in some *taleae* than in others the basic sequence of chords remains unchanged from one *color* to the next."²² This example portrays the motet composer laboring to achieve

²⁰ Fuller 1990, 204. Her diagram and discussion of isoharmony are drawn from Eggebrecht 1968, 178. The rhythmic disposition of motet 17's cantus firmus is similarly found by Fuller to emphasize the chant's tonal goal (216).

²¹ Leech-Wilkinson 1989, 115.

²² *Ibid.*, 204.

conformance despite building rhythmic obstacles to it into the form. Leech-Wilkinson judges this repetition of a harmonic plan a significant means of motet organization, perhaps one more important than isorhythm. He infers that Machaut “must, in other words, have believed that the progression of chords on which a piece was based could be given a form of its own which was harmonic in nature and intrinsic to itself, not dependent upon its setting within a formal or rhythmic scheme.”²³

A comparative cadence map across all of Machaut’s three-voice motets with a repeating tenor (see Appendix 1) suggests that isoharmony across *colores* was a deliberate concern.²⁴ Tenor pitches that participate in only one cadence despite melodic repetition total 31, or 28% of the whole 110 cadences in the collection. It is significant that most of these cadences occur in M1, which is aberrational in its eight singletons (M10 alone is next with three). On average, then, Machaut’s motets are “isoharmonic” as to cadence placement across repeats of the chant tenor about 75% of the time.²⁵

Contrapuntal *Contest*: The Repurposing of Chant

Given the customary “frame of reverence” for the tenor’s role as harmonic and isorhythmic foundation, the occasional contrapuntal revision of a tenor seems purposeful. Attentiveness to the subtle give-and-take between contrapuntal lines in the motets of Machaut at once dispels a unidirectional interpretation of harmonic influence. Rather, the medieval polyphonist can

²³ Ibid., 121–2.

²⁴ What is meant by “cadence” in this study will be clarified presently.

²⁵ Panisorhythm and *Grosstalea*, where the strophic organization of Machaut’s poetry cues motivic (rhythmic and contour) parallelism in the upper voices across two or three statements of the tenor’s *talea*, can further contribute to a sense of polyphonic relatedness among isorhythmic *colores*. Isomelic motets, wherein the *talea* repetitions do not divide evenly into those of the *color* (e.g. are in 3:2 proportion), which also include periodic organization in the upper voices demand a sophisticated balance of melodic and harmonic control. The discussion of motet 8 below will reveal how Machaut strives to maintain isoharmony even in these challenging designs.

foreground or obscure the imported proclivities of a chant as he wishes. James Haar has noted that “the new importance accorded the words in recent work on the motet is changing our view of the composer, now seen as a much more active reader, rereader, or ‘misreader’ of the texts chosen.”²⁶ My framework of *contest* takes a similar view of the composer with regard to the music chosen, as an active reader, rereader, and misreader of the chant in the meta-analysis that is composing polyphony around it. As will be shown in Part III of this study, the composer-poet Machaut not only recontextualized his imported texts but also “remusicalized” his imported music.

Sarah Fuller has made important contributions to this polyphonic outlook, finding that tonality in Machaut’s motets is guided more by the individual characteristics of each borrowed tenor and the possibilities it offers than by any *a priori* conventions of pitch relationships such as crystalized in later common practice tonal music.²⁷ She further recognizes that the upper voices may at times realize the tenor’s pitch material creatively and references the capability of the upper-voice pair to shape the tenor.²⁸ In one analysis, Fuller discusses how the upper-voice setting of motet 17 shapes the tonal structure of the two chant statements, but does so in a way that magnifies rather than adds to, obscures, or supplants its C–G relationship.²⁹ Her detailed study on Machaut’s play with tendency and resolution (called *directed progressions*) in his polyphony—“a significant artistic resource through which tonal orientation can be defined or shifted”—served as the spark for

²⁶ In Pesce, ed. 1998, 13. The comment comes from the prefatory “Conference Introductory Remarks.”

²⁷ Fuller 1990, 213.

²⁸ *Ibid.*, 214. Fuller’s analysis mainly involves the tonal potential afforded by a particular rhythmic segmentation of a chant, as brought out by comparison of *taleae*. Her study is less dedicated to varying and aberrational settings of tenors by the upper-voice pair than my own, and her article does not draw connections with the texts. Fuller does report a secondary emphasis on G in Machaut’s motet 17 that is “to some extent manufactured in the polyphony” (222) by voice crossing and harmonic reinterpretation of the tenor as a fifth, as in Example 2 below.

²⁹ *Ibid.*, 222. For Fuller, directed progressions can shape a temporary “tonal structure” by providing provisory points of reference. See Fuller 1986, 55–6. A more detailed review of directed progressions is provided below.

further development and the methodical application of what I call *contest* here.³⁰ Anne Walters Robertson has also suggested the importance of this kind of play with pitch centrality, noting that one of three important purposes the cantus firmus serves is to establish a “modal framework that is then elaborated in the upper lines.”³¹ The present study details how Machaut’s upper lines can elaborate but moreover reroute and even undermine the harmony, centrality, and form of a tenor line.

In her dissertation, Alice V. Clark documents the not infrequent pre-polyphonic changes Machaut made to chant.³² These changes were often slight, most commonly filling in a third leap, repeating a pitch, or omitting a repeated one in the source. Clark argues that, because in a manuscript culture documents often accumulated alterations through inexact transmission,³³ composers may have felt free to alter musical content for their specific needs. The *Roman de Fauvel* (1314) even interpolates newly-composed chant in the Gregorian style; appropriate in a book that satirizes courtly abuses and perversions.³⁴ Susan Rankin has traced how closely the *Fauvel* composer imitated that style and how sensitively and clearly he was prepared to deviate from it.³⁵

My use of the term *contest* will refer to any of three creative manners of handling a borrowed tenor as manifest in Machaut’s motets, and all can be in play simultaneously. The first opportunity for *contest* lies in the preparation of a selected chant for use as a cantus firmus in a polyphonic motet, the second in deviation from

³⁰ Fuller 1992, 252.

³¹ Robertson 1997, 74–5.

³² Clark 1996, *passim*. Changes to the tenor are also supposed by Fuller 1990, 215 n. 36, and Sanders 1998, 563 n. 287. Pesce 1998, 29, suggests alterations to the chant on account of also importing a motetus in a late-thirteenth-century motet. Berger 2005, 249 and *passim*, notes that a medieval composer would “begin by picking a tenor from his mental inventory of chant;” an imperfect repository for exact reproduction.

³³ Robertson 1997, 60–1, gives an example of twelve different local versions of the same chant.

³⁴ Rankin 1994, see esp. 210ff.

³⁵ *Ibid.*, 224.

isoharmony across *color* repeats, and the third in the free use of directed progressions.

A textual correspondence for the first manner may be found in how Machaut often extracted his tenors from the middle of a musical phrase, just as he excerpted their texts from the middle of a literary phrase.³⁶ Through extraction, Machaut could strategically weaken or negate the modal context bearing on those selected notes of the chant, especially by arranging a terminal pitch for his cantus firmus different from the chant's native one. Thus a motet's tenor foundation, and so the polyphony arisen from it, may not bear witness to the mode of its source.

Like the extraction of a cantus firmus from a chant, the breaking up of its melody into discrete pitch and rhythm sequences provides another opportunity to negate and/or add phrase markers to a chant, with ramifications for centrality across the full motet.³⁷ As Fuller has found, neither Johannes Boen nor Ægidius, two commentators roughly contemporaneous with Machaut, consider how the segmentation and rhythmic arrangement of a chant tenor might affect pitch relationships in the polyphonic motet raised from it.³⁸ Yet exerting a kind of authorial control that strips the

³⁶ See Clark 1996, Appendix 1, for comparisons of local chant to Machaut's cantus firmi. Peraino 2011 likens the extraction of chant, and the motets they sire, to sampling in modern popular music, where some existing segment is isolated and recontextualized in a new piece. Through such manipulation, the "extracted parts, or samples, acquire an independent existence, sometimes spawning a whole lineage of songs" (216).

³⁷ Fuller 1990 details these sorts of manipulations, though with particular focus on how Machaut's rhythmic segmentation of the cantus firmus is meant to highlight the chant's original tonal center with support from the polyphony; that is, *conformance*. Bloxam 1992 details the changes Jacob Obrecht made in the adoption of a local chant version in his *Missa de Sancto Donatiano* (1487), where "the tune of the responsory is subjected to a range of treatments extending from utmost fidelity to the chant model to the freest paraphrase" (151). Her study does not concern the polyphonic treatment of chant, only the pre-polyphonic tailoring of it for use as a cantus firmus.

³⁸ Fuller 1990, 200. Hartt 2010 follows Fuller in such an investigation. He concludes, for instance, that the curious four-note remainder in the *talea* segmentation of motet 3 was the byproduct of Machaut's dividing the tenor in such a way as to avail himself of the most descending steps possible at the end of each *talea* with which to form cadences. Machaut's capacity to render novel

original author of the modern privilege of fixing his work's reception was a common flexibility in medieval manuscript culture. Grocheo notes that "in motets and organa the tenor is put together from an old and previously composed chant, *but it is determined by the artist* through *modus* and the correct measurement."³⁹ Grocheo's sensitivity to the role of the polyphonist in determining the identity of the chant is supportive of the ultimate agency attributed to Machaut in my approach. Dolores Pesce documents such an approach in the century prior to Machaut, when some motet composers approached chant as a raw material that could be manipulated to different tonal ends, altering and adding notes to craft a desired tenor.⁴⁰ Though as only the first manner of *contest* is engaged in such cases, any ambiguity in the motet's centrality would have arisen faithfully from ambiguity of its parent chant.

Aside from the pre-polyphonic tailoring of a *cantus firmus*, Machaut also made excises within motets in progress. The *cantus firmus* of motet 22 (*Tu qui gregem / Plange, regni respública! / APPREHENDE ARMA ET SCUTUM ET EXURGE*) begins on F and ends on D. However, in the final restatement, the composer abbreviates his *color* so as to end the work on F. Machaut may have wanted to end on the sonority with which he began, but this was not a central concern in most of his polyphony.⁴¹ Whatever the

cadence points on any tenor pitch approached stepwise from above is inherent in his diagramming (by *taleae*), but Hartt's investigation is into *conformance* after a tenor's pre-polyphonic segmentation into isorhythmic groups. We can, for example, "compare various possible segmentations in order to assess the degree to which the *color*'s potential for articulating [the strongest] progressions at *talea* endings could be realized" (77). That these groupings may produce strongly directed arrivals novel to the chant's mode or other statements (see his Examples 8 and 13) and that the upper voice pair may cadence without respect to isorhythmic articulation derived from the tenor is not explicitly dealt with by Hartt.

³⁹ From *De musica* (ca. 1300), as quoted in Berger 2005, 222, with my emphasis added.

⁴⁰ Pesce 1998, 37.

⁴¹ Bain 2008, 198, reveals that only 36% of Machaut's polyphonic secular songs begin and end on the same pitch. Ten out of twenty-three of his motets do this, two of which were taken whole from secular chansons (M16 and M20) and not subject to extraction.

reasoning, the change reveals a composer at ease in manipulating the centricity of a chant.

The second manner of *contest* occurs as a polyphonic motet unfolds across formal units. When a composer chooses to set a tenor inconsistently across *colores*, actualizing various centricities latent in the same pitch sequence over time, there arise *contesting* realizations of the same foundation. As will be shown, through inconsistency (i.e. the rejection of isoharmony) Machaut can create formal shapes spanning greater than the length of the *color* and manipulate tonal expectations across repeats, fulfilling and frustrating them to expressive effect. The second manner of *contest*, then, allows a composer to inflect and even transcend the tenor's isorhythmic plan. Appendix 1 schematizes Machaut's cadential consistencies and inconsistencies across all of the three-voice motets with a repeating tenor, representative examples of which shall be explicated below.

The third and final manner of *contest* is found in the play of directed progressions.⁴² Sarah Fuller's prevalent conception of the directed progression describes a goal-oriented drive from imperfect towards perfect harmony according to voice leading norms of fourteenth-century polyphony. Because the action of directed progressions is so pertinent, a brief review will be useful.⁴³ Although the term comes from Fuller, the concept that imperfect intervals seek perfection, given their relative harmonic stability, was theorized during the time of Machaut by Marchetto of Padua in the *Lucidarium* of 1317/8 (where he alleges it of Boethius),⁴⁴ Petrus frater dictus Palma oiosa in the *Ars compendium de discantu mensurabili* of 1336, Johannes Boen in his *Musica* of 1357, and by the

⁴² See Bain 2005 and Brothers 1997a, 88ff, for a thorough examination of how melodic chromatic inflections contribute to shaping the form of a work, as found in some of Machaut's polyphonic chansons.

⁴³ For a richer exposition, see Fuller 1992. The modern concept originated in Fuller 1986. For a representative adaptation, see Leach 2000. For the situation of medieval directed progressions in a broader, even philosophical study of harmonic directedness in music from Aristoxenus to Rameau, see Cohen 2001.

⁴⁴ Brothers 1997b, 502–3, compares Marchetto's modern reimagining with the original text, in which dissonance, like consonance, is also considered a stable unit not seeking directed resolution.

anonymous author of the fourteenth-century treatise “Cum notum sit.”⁴⁵ Fuller’s directed progressions are composed of two parts: 1) an imperfect harmonic interval⁴⁶ and 2) its stepwise resolution in contrary motion to a perfect consonance. While the goal-oriented expansions of a major sixth to a perfect octave, the contraction of a minor third to a perfect unison (its inversion), or a major third to a perfect fifth drive the counterpoint forward, they are not always cadential, just as not every V to I is automatically cadential in eighteenth-century music. Nevertheless, alone or as part of a larger vertical harmony, imperfect intervals readily advance towards perfection. Indeed, the perfect interval represented a destination by its lack of forward impetus.⁴⁷ In the present study, the term “cadence” will describe the arrival points of directed progressions that combine with other elements of closure, such as agogic accent, alignment with text closure, alignment with isorhythmic segmentation, the omission of imperfect intervals in the arrival sonority, and being followed by rest.⁴⁸

⁴⁵ Jacques de Liège’s introduction of the term *cadentia* in the *Speculum Musicae* (Book IV) of the early 1320s, though formerly a common reference for directed progressions, has been shown by Maw 2010 (and 2006, 270) to be a concept unrelated to notions of formulaic directed musical motion which arose later in Jacques’ own century, from which comes the modern understanding. For Jacques, imperfect sonorities were tolerated or redeemed by their proximity to perfect ones. The prescription of musical motion from one to the other is incidental and often unlike Fuller’s now-classic model. Bent 1972, 93, seems to follow Jacques under her heading “rules for harmonic adjustment,” stipulating that “if the interval cannot itself be made more perfect by chromatic inflection of either or both of the written pitches, then it can acquire some ‘virtue’ from being as close as possible to the interval which follows it, and if that is already perfect, so much the better.”

⁴⁶ The *doubly*-imperfect sonority, which combines the major third and major sixth, is unnecessary for cadential arrival but stronger, as evidenced by its vast predominance at the conclusion of works for three or more voices.

⁴⁷ For this reason, compositions typically did not end with imperfect consonances, as that would indicate some degree of incomplete resolution and foster an expectation of music to come.

⁴⁸ Moll 1998, 32 (Table 1), includes a number of intuitive musical and textual cues in weighing cadences in French mass settings of the fourteenth century (though equally valid for much Western music), for lack of explicit guidance in contemporaneous manuals. These include the respective concurrences of texts and melodic periods, rhythmic placement within the pulse, agogic accent, and

In the third manner of *contest*, then, the upper voice counterpoint reinterprets the tenor, creating points of arrival that are foreign to the borrowed chant and/or to other statements of the motet's polyphony (i.e. a break in isoharmony).⁴⁹ It also describes those instances where the upper-voice pair cadences without respect to the tenor at all—whether resting or not participating in a directed progression—or veers off towards a cadential goal different from that which the full polyphony prepared. The third manner of *contest* is a polyphonic choice independent from the pre-polyphonic segmentation of chant into repeating *taleae*, which can occasion the first manner of *contest* because *taleae* boundaries are often articulated with a cadence. It is also distinct from the second manner in isomelic motets,⁵⁰ where *taleae* divisions out of phase with the *color* can motivate varying points of arrival across repeats.⁵¹ Finally, the third manner of *contest* describes situations when added voices recontextualize the harmonic role of the tenor through voice crossing. The motetus, the lower of the two upper voices, sometimes sounds below the tenor and at those moments determines the local vertical sonority.⁵² When crossing voices at arrival points or sonorities with

directed progressions. This study follows his approach. Moll's table is also reproduced and adopted by Bain 2003a, 329.

⁴⁹ The latter, of course, is often the agent in the second manner of *contest*. The simple omission of a previous cadence, rather than creation of an aberrational one, and the case of motets without repeat of the *color* (e.g. M13 and M15) distinguish the third manner of *contest* from the second.

⁵⁰ Bent 2008 describes the inadequacy of the term “isorhythm” to describe the full range of periodic organizations found in medieval motets, including unequal segmentation. In Machaut's tenors, for example, rhythm is sometimes not the parameter that is “iso,” while the melody (if it repeats) always is.

⁵¹ In his isomelic motet 8, for example, Machaut may have arranged directed progressions at mm. 10 and 46 (of *colores* A and B, respectively) in order to *conform* with the *talea*-induced cadence of m. 82 (of *color* C). The same may be supposed of the cadences at mm. 20 and 92 (*colores* A and C), which had to be added in order to *conform* with the *talea*-induced cadence of m. 56 in *color* B. Machaut thus counteracts the eventuality of second-manner *contest*, produced by his own isomelic plan, by employing the third manner, employing local *contest* in the service of larger *conformance* across the complete work.

⁵² Zayaruznaya 2009, 208–9, highlights voice crossing as a device which can bring a new voice to prominence as the highest in the texture. The motetus thus serves

strong agogic accent, Machaut often locates the tenor a fifth above the lowest sounding voice. In Example 2 below, from motet 17, notice how the tenor's D of mm. 34–6 (of *color* A) acts in the doubly imperfect sonority D/B/F# (i.e. containing two imperfect intervals up from the tenor), strongly directed to C/C/G in mm. 39–40. In the motet's other *color* statement, the same tenor D (m. 100) now acts as the fifth of an arrival G/D/G that resolves the upper voices' directed A/F# dyad. Both the second and third manners of *contest* are active here; Machaut arranges for polyphonic inconsistency across *colores* through the free directed progression of the upper voices (mm. 98–100) during the tenor's rest and through voice crossing. In moments of *contest*, then, it is not the cantus firmus that provides direction or structure to the newly-added voices, but the reverse.

To give a summary illustration of *contest* in composition, Example 3 below presents an invented chant along with a structural plan for a nascent motet. The first stage, from chant (the first staff) to cantus firmus (the second), involves the extraction of a desired melodic portion. The motet composer may here already negate the mode of his inspiration. Next, an isorhythmic plan of *colores* is laid out (aligned vertically in Example 3). Among the four successive polyphonic realizations, several internal phrases are demarcated via their cadences (marked by half notes). Here again the composer may choose to project or reject the chant's natural phrasing and modality. Notice in my example that none of the *color* statements are faithful to the modality of the borrowed chant and that all of them *contest* not only with the original, but also with each other. This chaotic example is meant only as a demonstration of the possibilities of *contest* and is not representative of Machaut's refined hand in the motets, to which we shall turn presently.

as the locus of meaning in motets 12 and 15. See also Huot 1994, 233–5. Zayaruznaya does not make claims concerning tonal control of the musical counterpoint.

Example 2. Contest by voice crossing and inclusion of the tenor as fifth in motet 17

The image displays two systems of musical notation, labeled A and B, for a motet. Each system consists of a vocal line (soprano and tenor parts) and a lute tablature line. The lyrics are written below the vocal lines.

System A (Measures 32-40):

- 32: ju - re -
- 33: e Fait qu'elle a
- 34: li
- 35: ta
- 36: Non sot - tri -
- 37: ti e Par
- 38: tu si par-faitte as -
- 39: - seun - ble -
- 40: e rann,

System B (Measures 98-106):

- 98: gra - ta,
- 99: Par mult du - re ha
- 100: Mi - chi
- 101: -
- 102: que e,
- 103: N'en doit
- 104: du estre
- 105: - a-mour blas-me -
- 106: e, rann,

The lute tablature in system A includes a 'b' (flat) sign and a 'C' (C-clef) sign. The tablature in system B includes a 'G' (G-clef) sign and a '3X' (triple repeat) sign. Various musical ornaments and accidentals (sharps, flats, and a double sharp) are present throughout the score.

Example 3. Contest in the abstract, an invented example

The image displays a musical score for six staves. The top two staves are labeled 'original chant' and 'cantus firmus', both in bass clef and featuring a single melodic line of quarter notes. The bottom four staves are labeled 'color A', 'color B', 'color C', and 'color D', also in bass clef. Each color variation maintains the original chant's melodic contour but introduces polyphonic textures through various harmonic and rhythmic treatments, including chords, rests, and accidentals.

In the following analysis, close account will be taken of what voice is directing the counterpoint and how melodic/harmonic decisions can reconfigure an isorhythmic plan. It will further be suggested that Machaut strikes a balance between tenor and added voices in a way suggestive of the courtly hierarchy that figures in the poetic narratives they voice. Just as the deferent lover grooms himself for acceptance by the venerated dame of Machaut’s poems, so too does his polyphony defer to a revered chant in pursuing harmonious relationship with it. But this is not the only possibility. Harmony, as opposed to dominance, is a symbiotic relationship, and the descriptive categories of *conformance* and *contest* help capture the fluid discourse of influence, allowances, deviations, and accommodations melodic lines can make when brought together in counterpoint.

Analytical Methodology

The reconstruction of a background *contrapunctus* is central to the medieval analyses of Fuller, in which the freely lyrical surface of the motet may be understood to decorate the essential harmonies

as grounded by a borrowed tenor.⁵³ This approach has some medieval precedent. In his *Ars compendium de discantu mensurabili* of 1336, Petrus frater dictus Palma ociosa describes contrapuntal diminution in a way that may authorize reductive analysis: “Flowers of measured music [*flores musice mensurabilis*] are so called when several pitches or notes, which is the same thing, notated variously according to one and the same quality, may be reduced to a single pitch or simple note containing the full quantity of those pitches in just proportion.”⁵⁴ Daniel Leech-Wilkinson has made repeated claims that fourteenth-century motets feature one “essential” harmony per tenor pitch⁵⁵ and has argued that motet composers consciously elaborated a simple underlying *contrapunctus*.⁵⁶ Medieval *contrapunctus* teaching, Leech-Wilkinson pursues in a recent study, “explains compositions as decorated contrapuntal structures. From there it is only a small step to seeing finished compositions as reducible back to a *contrapunctus*.”⁵⁷ Considering the all-consonant, note-against-note counterpoint teaching prevalent throughout the fourteenth century, analytical reduction is a historically-minded approach.⁵⁸

It is with appeal to a fourteenth-century perspective, admittedly conditioned by Schenker’s approach to tonal music, that

⁵³ As representative of many sources, see Fuller 1986, 1987, and 2002. The *contrapunctus* was a pedagogical term that described the elementary subject of writing consonant note-against-note polyphony. This stage served as the foundation for composing florid *cantus fractabilis* (1986, 38).

⁵⁴ Leech-Wilkinson 1985.

⁵⁵ Leech-Wilkinson 1989, 44 (referring to Vitry’s motets), and 1985, pages unnumbered.

⁵⁶ Leech-Wilkinson 1985.

⁵⁷ Leech-Wilkinson 2003, 250. Exactly this also occurs to Brown 1987, 93ff., concerning the music of Trebor, in the generation following Machaut. Fuller 1986, 47, cautions that “From the start, it must be recognized that this procedure does not pretend to track the compositional process in reverse, but is a patent act of analysis.”

⁵⁸ That the *Berkeley Manuscript* of about 1375 still regards full polyphony as an elaboration of a simple two-part *contrapunctus* may be taken as evidence that the practice was current throughout Machaut’s composition of the motets. See the translation in Ellsworth 1984, 118–21.

the analytical reductions of this study were made.⁵⁹ In the form diagrams to follow, each statement of the tenor's *color* comprises one system, labeled alphabetically and underlaid vertically for comparison. Bar lines are used to distinguish *talea* segmentation, labeled with roman numerals, within each *color*. While not the central focus of comparative analysis here, these metric boundaries are marked for attention insofar as they are often important pitch markers as well. The cantus firmus is given in bass clef with Machaut's polyphonic setting of it summarized in the treble above. The primary interpretive decision in these reductions is the exclusion of decorative melodic tones, those which pass to/from or neighbor perfect fifths and octaves above the tenor. Because of their evident stability in medieval motet practice, related to their simple mathematical proportions in the theoretical treatises, the perfect fifth and octave can be confidently implied above a tenor pitch in the infrequent event they are not expressly stated by some upper voice. The intervallic expansions and contractions of directed progressions are marked with slurs, whether cadential or not. Rhythm in the reductions represents relative harmonic stability and melodic weight. Half notes signify cadences. Quarter notes are stable intervals above the tenor (sometimes admitting of thirds when they do not function in a directed progression) afforded some rhythmic and/or melodic salience, but are not necessarily (or as strongly) cadential as those emphasized with half notes. Finally, unstemmed note heads show imperfect intervals on their way towards resolution in perfection. Accidentals apply only to the notes they immediately inflect. Measures of interest are numbered above the staves for comparison, in accordance with Schrade's accessible edition.

⁵⁹ For a stricter Schenkerian perspective on tonal function in medieval polyphony, see Salzer 1967 and Schachter 1970, esp. 181–6. Leech-Wilkinson 1985 makes clear that “I don't wish to seek an *Ursatz*. I doubt that a universal fundamental structure exists in medieval music.” He does, however, find deep “middleground” descending patterns that seem to be a part of polyphonic chanson style. Schulenberg 1985–6 surveys the potential pitfalls in extending Schenkerian techniques—developed in response to 18th- and 19th-century tonality—to the analysis of “modal” and some post-tonal music. The melodic composing-out of harmonies, he finds, is largely barred by the “unintegrated nature of modal musical space” (310).

Vertical sonorities at arrival points are labeled according to the key below. Doubly perfect sonorities are considered more stable than those that lack either the octave/unison or fifth, given the preponderance of the former at final cadences. Categorically weaker are those sonorities that include imperfect intervals.⁶⁰ In addition to the relative stability lent by harmonic structure, arrivals with the lowest voice (tenor or otherwise) resolving down by step is a stronger approach in Machaut's sacred style than any other motion. Because the essential voice-leading and harmonic identity of arrival points is not disturbed by upper voices arriving slightly before or after the tenor—a common case variously called “Phasendifferenz,” “staggered phrasing,” or “phrase overlap”—they appear aligned in the reductions.⁶¹

P8/5: perfect octave plus perfect fifth (unison may substitute for octave)

P8 or P1: no fifth

P5: no octave or unison

I8/3: perfect octave (or unison) plus imperfect third

I5/3: perfect fifth plus imperfect third

[]: arrival pitch weakened, rhythmically and/or melodically

(): arrival pitch implied, as by a resolution tendency

⁶⁰ Bain 2003a, 327–8, makes the same claims of relative cadential strength based upon degree of harmonic perfection. On the admittance of imperfect intervals into (relatively weaker) cadential goals, a position shared by this study, see pp. 343–9.

⁶¹ The terms come from Reichert 1956, Sanders 1973, and Leech-Wilkinson 1989, respectively.

Part III: Case Studies

Didactic *conformance*: Machaut's Motet 2 (*Tous corps qui de bien amer / De souspirant cuer dolent / SUSPIRO*)

Machaut's chant-based tenors provide only a few words (three, on average) to impart a general affect or subject to inspire the ruminations of his lyrical upper voices. For the text of motet 2's cantus firmus, Machaut extracted the word *suspiro* from Job 3:24.⁶² The affect of sighing in motet 2 may easily be associated with the *fin'amors* poetry of Machaut's upper-voice pair, by means of which he explicates the foundational text. Following courtly love convention, Machaut's lover is positioned subordinately in the relationship, from whence he languishes verbosely (in two voice parts) for succor from a virtuous lady above his station. The source of goodness for both the *amant* and Job is also the source of their suffering: the *dame* and God, respectively. This poetic narrative, if the tenor's cue from Job is recognized, forges an allegorical link elevating the burning of romantic passion to yearning for spiritual completion, where both entail submission to a revered idol.⁶³ The *conformant* contrapuntal treatment of the tenor, shown in Example 4 below, parallels this textual sentiment. A complete translation of Machaut's poetry for motet 2 is given in Appendix 2, and a few quotes will serve here. Machaut's lover feels his conventional responsibility to "show true obedience" to his dame, which obligation causes him much suffering despite the fact that he has "done no wrong and committed no fault." Through his faithfulness, the submissive lover hopes that he "may well receive mercy according to how well I have served her." "His right path"

⁶² The Latin Vulgate has it in the following context: "antequam comedam *suspiro* et quasi inundantes aquae sic rugitus meus" (for my *sighing* cometh before I eat, and my roarings are poured out like the waters). Huot 1994, 223–7, deals more thoroughly with Machaut's commentary on the book of Job in motet 2 via analogy with the faithful courtly lover's underserved suffering at the hands of his dame.

⁶³ For a recent study of the ubiquitous cross pollination between Marian devotion and worldly love in polyphony of the 13th–15th centuries, see Rothenberg 2011. The author suggests that the acoustical concord of musical lines whose various texts represent high (sacred) and low (secular) registers concretized the allegory for the medieval mind steeped in symbolic modes of thought (pp. 10–1).

may also be assumed of the triplum which voiced it, whose melodic fate is similarly dependent upon another. Even though the *amant* has “taken courage to tell of my great suffering,” he represses his own will. He is “confined to looking” and must “keep silent;” that is, he must remain subservient if he would exist in harmony with the *dame*. No less must the music of the upper voices suppress their own will to exist in harmony with the tenor.

Example 4. Form diagram of motet 2⁶⁴

The image shows a musical score for motet 2, divided into two systems, A and B. System A covers measures 16 to 88, and System B covers measures 97 to 134. Below the staves are form diagrams for each system. System A's diagram is divided into four sections: I (measures 16-25), II (measures 25-40), III (measures 40-61), and IV (measures 61-88). System B's diagram is divided into four sections: V (measures 97-104), VI (measures 104-114), VII (measures 114-122), and VIII (measures 122-134). The diagrams use Roman numerals and harmonic notations (e.g., P1/5, I8/3, P8/5, I8/3, [I8/3]) to indicate the harmonic structure of each section. Measure numbers are placed above the staves at intervals of 5 or 10 measures.

As can be seen in the form diagram, Machaut’s polyphonic settings of the first *talea* of each *color* in motet 2 (i.e. mm. 1–16 and 97–105) are not identical, but in their essentials they *conform* with the tenor and each other. And while the motetus does cross under the tenor on their approach to C in m. 16, the new arrangement does not change the goal tone. The second *talea* of each statement (i.e. II and VI) commences with a prominent F sonority and proceeds to arrival on G (m. 40 /115), a subordinate pitch in the chant that cues future closure a step down on the final. Machaut’s cadential sonorities on G are not identical (the former includes an imperfect tenth, the latter a perfect fifth) and their approaches differ (the former resolves a major sixth, the latter a major third), yet they still *conform* with the tenor in that their difference does not

⁶⁴ All score diagrams and examples are from Schrade’s edition. When alternative *ficta* choices are germane, I mention how they would affect the interpretation. I have passed over the interesting issue of manuscript variants—usually accepting Schrade’s version as “the piece”—in order to focus on a general typology of contrapuntal interactions and a method for interpreting them. The wide application of that approach renders impossible here an exhaustive examination of every variant and interpretive possibility in the motets.

undermine its contrapuntal leadership or isorhythmic plan. The weak continuation through that G to F, opening the next *taleae* in mm. 49/117, betokens the strong close that ends each *color*.

There are instances in Machaut’s motets when the usual procedure of *conformance* is emphasized, and is thus foregrounded as a deliberate rather than automatic choice. In *talea* III of motet 2, Machaut creates the potential for *contest*, but leaves it unfulfilled. The upper-voice pair in mm. 67–9 (see Example 5 below) sets the tenor’s E from m. 64 so as to drive it strongly towards resolution on D via the directed sonority E/C#/G#. But the chant afforded no such arrival and Machaut cannot follow through with the implication of his upper voices. Thus he seems to present the possibility of infidelity to the chant in order to reject it. His *amant*, after all, has “done no wrong and committed no fault.” In the polyphony that follows (mm. 70–3), the triplum’s G# resolves locally to A, but the following melodic gesture effects a return to G-natural (m. 72). The motetus’s C# arguably resolves to D (across mm. 67–73), but does so only as part of a G sonority.

Example 5. Negation of a move towards D in motet 2, mm. 67–73

The musical score for Example 5 consists of three staves. The top staff is in treble clef, the middle in alto clef, and the bottom in bass clef. The music is in 6/8 time and G major. The lyrics are: "Lan - guir, Quant voy re-mi-rant La dou - ce (Re)-fus, qui ne me". Measure numbers 67 through 73 are indicated above the staves. The score shows a complex contrapuntal texture with various rhythmic values and accidentals.

The *conformant* musical setting here may be didactic when considered with the texts it sets. Machaut the composer-poet models the proper behavior of a chivalric *amant* (and allegorical Christian supplicant), maintaining fidelity to a higher power *in spite of temptation*, thus uniting music and narrative protagonist in their shared strategy. The *conformant* triplum, like the lover it voices, must “in reason submit himself, in regard to what is best for him.” Thus Machaut rejects manipulation of his cantus firmus here, but the

suppression of unbound creative freedom to its dictates was undertaken willingly as the first step of an aesthetic pilgrimage.

In motet 4 may be read a similar message—ingenuity repressed and a return to submission—on a larger scale. A reduction of *color* A alone, given as Example 6 below, will suffice to demonstrate how, through the third manner of *contest*, Machaut repeatedly establishes the penultimate pitch G as an arrival point in a chant based in F. Through 5–6 exchange, the proposed final of G is undercut to land more conclusively on the chant’s final a step below. Further note how, in mm. 35–9, the goal tone F is enriched by extended application of the same technique, from A through G to F. A multilevel abstraction of 5–6 exchange, an important means of propulsion in *Ars nova* voice leading, is coupled as Example 7.

There is in motet 2 only a single instance of significant polyphonic *contest*. It is perhaps illustrative of the potentially fatal hardships of sustaining utter fidelity to the pitiless lady of the poetry that Machaut suffers a degree of *contest* in an otherwise *conformant* motet. A strong cadence on the tenor’s G of m. 61 (Example 8a) is not repeated in the second *color* (compare m. 122 of Example 8b). Not only do the halved rhythmic values in this *color* render the formerly cadential G a short and metrically weak candidate for tonal articulation, Machaut’s counterpoint treats it as the middle of a chain of sixths propelling the phrase down towards a *conformant* Phrygian cadence.

Example 6. Form diagram of motet 4 (*color* A only)

The musical score for Example 6 consists of two systems, I and II. System I includes measures 17, 25, and 28. System II includes measures 35, 39, 41, and 51. The bass line is annotated with chord symbols: I, P8/5, P8/5, P8/5, II, P8/5, P8/5, and I8/3. Above the bass line, there are melodic lines with notes and rests, and a sequence of intervals: 5-6, 5-6, 5-6, 5-6, 5-6, 5-6, 5-6, and 5-6.

Example 7. Abstract of 5–6 exchange from G to F

Musical notation for Example 7. The top staff shows a melodic line with a slur over two notes, labeled with '2' and '1' above them. The bottom staff shows a harmonic accompaniment with a slur over two chords, labeled with '5' and '6' below them.

Example 8a. Cadence on G in color A of motet 2, mm. 58–61

Musical notation for Example 8a. The score includes three staves: vocal line, piano accompaniment, and a lower staff. The lyrics are: "mal que j'en du - re, (regar) - dant, Et pour ce".

Example 8b. No cadence on the same G of color B, mm. 121–5

Musical notation for Example 8b. The score includes three staves: vocal line, piano accompaniment, and a lower staff. The lyrics are: "A ce m'as-se - u - re. Et de - bon - nai - re,".

Contest by Addition: Machaut's Motet 7 (*J'ai tant mon cuer / Lasse! / EGO MORIAR PRO TE*)

Through Machaut's remarkable casting of motet 7's *fin'amors* poetry in a feminine voice, we learn that the usual deferring obedience of the *amant* has been lost. This fracture is especially unfortunate in motet 7, where the *dame* confesses a mutual affection for him yet now finds herself in his conventional position, mourning the deserts paid to faithful devotion (and contrapuntal *conformance?*). A musical setting featuring disjunction between the upper-voice pair and the tenor therefore seems a fitting setting of Machaut's textual narrative. Complete translations of the poetry are provided in Appendix 2.⁶⁵

Though typically mute,⁶⁶ the guilty *dame* names her pride as the source of rupture. Through disunion with his cantus firmus, Machaut's music depicts the repercussions of the sin with which he has befouled the amorous relationship of motet 7, which may also be read allegorically as the loss of salvation through disloyalty to Christ.⁶⁷ In both motets 2 and 7, then, Machaut, a canon of the Church, subtly configures his work to serve as a righteous exemplum for connoisseurs, just as a priest sermonizes the allegories of scripture for the betterment of his congregation. A

⁶⁵ Brownlee 2002 interprets the triplum and motetus to be the appropriately-dual voice of Echo, who pines hopelessly for the love of Narcissus. His essay notes the manifold reversals involved in motet 7. Machaut, a male poet, composes a female voice who plays the typical role of a courtly male. Rather than being the subject of painful yearning, the lady comes to experience it.

⁶⁶ For a brief discussion of the construction of the *dame's* identity and, indeed, very reality through reference by the traditionally masculine voice of *fin'amors*, see Hoffman 1989. Remarkably, the motetus of motet 7 depicts the *dame* as constructing her identity through her relationship to a silent suitor.

⁶⁷ In response to a version of this interpretation presented at the International Medieval Congress in Kalamazoo (May 2010), Anne Walters Robertson argued that the upper-voice texts represent the soul of the masculine *amant*, an agency that was feminized in some medieval French theology. She prefers this interpretation because it does not switch the typically male gender role of the upper voices. Robertson reads Christ (*m*) hating the soul (*f*) in its unfit state this early (motet 7) along the path of salvation, which in her reading spans motets 1–17.

form diagram of motet 7, with its several striking moments of *contest*, follows as Example 9.⁶⁸

In mm. 38, 76, and 114 of motet 7, interpolated music for the upper voice pair cadences without participation by the tenor. Example 10a–c provides the music for these three similar passages in motet 7.

The counterpoint of Examples 10a and 10c may be read as weak directed progressions to the dyad C/G. While the imperfect interval A/F# of mm. 37 and 113 is apparently directed to an octave on G, Machaut realizes this motion in neither case here. Compare this gambit with the identical setup in m. 75 (Example 10b), which does resolve to G/G, an arrival immediately ratified by the tenor's reemergence. While the A/F# dyad going in is the very same, the difference in target sonorities in the first and last passage prompts consideration of alternative (if ambiguous) resolution strategies. My reading of escape tones in Examples 10a and 10c further supplement Machaut's agogic accent on C by valuing the B that leads to them across the decorating A.⁶⁹ While the virtual parallel fifths of this reading (B/F# to C/G) themselves are not directed towards resolution, they may function as the delegates of the strongest cadence type by the theoretical provision of a "fundamental tenor" D–C beneath them, completing the usual doubly imperfect sonority (D/)B/F# that would indeed progress strongly to (C/)C/G. Example 11 below sketches such a reading of the counterpoint in Example 10c. This passage suggests motion to C more strongly than Example 10a because the tenor here provides a D for the coming directed progression before resting.

⁶⁸ The "discant reduction" in Fuller 1990, 227, presents an alternate reading of the first half of this motet. She intends to show how Machaut's polyphony highlights the D final of the borrowed chant and, to a lesser degree, the subordinate emphasis on A (e.g. mm. 19 and 95). While our approaches differ, my analysis is not in conflict with her conclusions.

⁶⁹ This view differs from that of Hartt 2010, 210, who reads here the nonproximate cadence of Bain 2003a, 333–6.

Example 9. Form diagram of motet 7

The musical score is organized into four main sections, A through D, each containing multiple parts. Section A (measures 5-57) includes Part I (measures 5-33) and Part II (measures 38-57). Section B (measures 62-114) includes Part I (measures 62-76), Part II (measures 77-95), and Part III (measures 100-114). Section C (measures 115-143) includes Part IV (measures 115-124) and Part V (measures 126-143). Section D (measures 145-169) includes Part VI (measures 145-162) and Part VII (measures 164-169). The score features various musical notations, including notes, rests, and ornaments, and is annotated with form diagram symbols such as [P1/5], [P5], P8, and ET. Measure numbers are indicated at the beginning of each line of music.

Example 10a–c. Three linking passages explore independence from the tenor in motet 7

33 34 35 36 37 # 38 39

a Et de la tres grant joi-e re-pe-u Dont je lan-gui.

Qui son cuer tant en-or-guil-li,

71 72 73 74 75 # 76 77

b Qui li-e-ment en-ot-tri-ant mer-ci L'a-re-ce-u.

Ne dein-gna de E-cho, qui pour li

109 110 111 112 113 # 114 115

c Pour mon or-gueil qui trop m'a fait fi-er En ma fo-lour;

Son ombre et li pri-a mer-ci,

II

III

C IV

Example 11. Projected resolution on C at the end of a linking passage in motet 7

107 109 114

P(8)/5

While the tenor rests during these particular instances of *contest* in motet 7, many cases across the genre verify that the tenor's absence is not necessarily a license for autonomy in the upper voices. Sometimes they seem to arrange a directed progression to welcome the return of their harmonic superior (as in Example 10b on G). In

Example 12, from Machaut's motet 4, the upper voices prepare for the tenor's A by arranging a harmonic environment (A/F#/C#) conducive to its prearranged continuation to G. During the tenor's subsequent rest in m. 27, furthermore, the upper voices similarly lubricate its continuation down to F through 5–6 exchange (from triplum to motetus).

Example 12. Conformance during rests in Machaut's motet 4, mm. 23–8

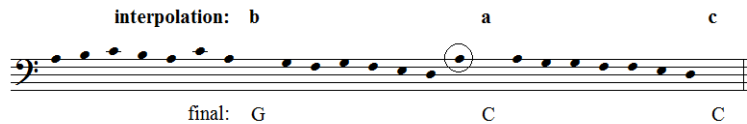
The image shows a musical score for three voices (treble, alto, and bass) from Machaut's motet 4, measures 23 to 28. The lyrics are: "plus ai-gre-ment sus cou ru; Car quant De-sirs plus flo - rir Pi - tes,". The score includes a key signature of one sharp (F#) and a common time signature. Below the bass staff, a diagram shows a G note in measure 26 with an arrow pointing to an F note in measure 27, labeled "5" and "6" respectively, indicating a 5-6 exchange.

To return to the upper-voice interpolations of motet 7, notice how the melodic integrity of the *cantus firmus* is further fractured. Compare the reduction of motet 7 (Example 9) with Example 13 below, which illuminates a subtle form of *contest* by mapping all three links onto one statement of the *color*.⁷⁰ The cadence point of each interpolation is labeled below by modal final. Notice how Machaut's first upper-voice interpolation (recall Example 10b) breaks up the borrowed chant's phrase. The added material is not likely to have followed a cadence in that place because the tenor does not descend by step (leaping C–A). Nor does Machaut make strict use of the tenor's A to G stepwise descent immediately following his interposed cadence on G, providing his own acting lowest voice rather than deferring to the tenor's provisions. The second interpolation (recall Example 10a) divides the chant more awkwardly, effectively ousting the pitch A (circled in the example below) from the phrase it begins and sequestering it as an odd

⁷⁰ Machaut's interpolations occur at the end of each of the first three *taleae*, but not in alphabetical order in my example because of the motet's isomelic design (the *talea* is 2/3 the length of the *color*).

suffix to the previous one, undermining its prior conclusion on the Dorian final. In other *colores*, Machaut bonds the tenor's two consecutive As through 5–6 exchange (A/E→A/F[♯]), driving the counterpoint forward as appropriate to the beginning of a phrase. The third interpolation (recall Example 10c) is most striking in how it does not break up the chant, but occurs after its conclusion.

Example 13. Cadential interpolations to the tenor of motet 7



There is another kind of *contest* in Machaut's melodic reading of the borrowed chant in motet 7. In all of its *colores* there is a cadence on the sixth pitch, C (see mm. 15, 69, 122, and 149, vertically aligned in the form diagram). Each time, Machaut transforms the prior tenor pitch (A) into a decorative escape tone, thus leading B to C. This careful directed resolution, shown with a slur in the reduction, operates beneath the surface counterpoint. By these four cadences on C, then, Machaut creatively misreads fourteenth-century style into the timeless music of the Church, updating it to reflect his own cadential idiom rather than attenuating his polyphony as decoration of a fixed song.⁷¹ Furthermore, the second of these escape tones (the A of m. 68, seen best in the form diagram) is on the surface promoted by its own directed progression, nestled within a larger motion from B to C (m. 69). It is remarkable that having chosen/fashioned a Dorian chant, Machaut should exact as many as eight cadences on C.⁷² When the contrapuntal disunion of *contest* is correlated with the narrative of

⁷¹ The same procedure is also found elsewhere. See for example motet 10, mm. 59–62, and 12, to be discussed later.

⁷² Fuller 1990, 223, compares the tenor of motet 7 with a possible source chant that continues beyond its use here to terminate on G! Whether this was indeed Machaut's model is not known. If it is, he has amended the first half somewhat in addition to suppressing its natural final.

fractured lovers in motet 7, neither the upper-voice pair nor the lost *amant* seem to require an external entity—a holy tenor nor a noble *dame*—to provide direction or meaning.

While the increased number of *color* statements in this motet—four compared to two in the largely *conformant* motet 2—may be considered an occasion for a proportional increase in *contest*, there appears no such correlation. Motets 9 and 16, for instance, each have six statements of their tenors and feature almost no *contest*.⁷³

Contest and Musical Form

In this final section, the potential of contrapuntal *contest* to articulate formal shapes will be examined. In motet 12 (*Helas! / Corde mesto / LIBERA ME*), the tenor's incipit frames Machaut's poetry as a cry for freedom, in which he depicts a suitor exhausted by the abuse of his faithfulness. The motetus, in secular Latin against the triplum's Middle French, voices the *aman's* wistfully subservient posture: "Always do I wait [upon you], / in service I waste away... and with hostile / misfortune am I repaid." Complete translations of the poetry in motet 12 are provided in Appendix 2.

The tenor's cry to "free me" may authorize some freedom in the realization of the chant melody, rather than endorsing total polyphonic submission to it. As motet 12 advances through section after section of discrete isorhythmic units, it is given dramatic shape by Machaut on two levels. Locally, the successive *taleae* segments within each *color* statement exhibit an increasingly goal-oriented setting of the chant, creating a sense of driving towards conclusion. At the scale of the complete work, contrapuntal ingenuity across *colores* drives towards total attainment of the tenor's goal only at the end.

⁷³ The *colores* of the isomelic motet 9 are *conformant* across repeats when considered in groups of two, so as to align also their *taleae* repetitions (in 2:3 proportion), essentially representing the work as isorhythmic. Schrade's use of capital letters in his labeling of formal segments in this motet pairs the *colores* in just this way. Motet 16 is based upon a tenor extracted from a polyphonic virelai. To point out only its first cadence, see the regular *conformance* at mm. 13/37/79/103/121/145.

Example 14. Form diagram of motet 12

The musical score is organized into three main sections, A, B, and C, each with a bracketed group of staves. Section A (measures 16-52) features three phrases: I (measures 16-22), II (measures 29-34), and III (measures 37-43). Section B (measures 55-106) features four phrases: IV (measures 55-70), V (measures 73-76), VI (measures 83-88), and VII (measures 91-94). Section C (measures 109-160) features five phrases: VIII (measures 109-124), IX (measures 127-130), X (measures 137-142), XI (measures 145-150), and XII (measures 154-160). Harmonic labels such as [P8/5], P8/[5], EI, and P8 are placed below the staves to indicate the underlying harmony. Intervallic relationships like 5-6 are also marked. The score is written in mensural notation with a treble clef and a common time signature.

The first segment in each *color* (i.e. *taleae* I, IV, and VII) features a series of relatively long, stable vertical sonorities, modestly adorned and with no directed resolutions until the weak (inverted) cadence at its end. As seen in the form diagram below, Machaut's three settings of the first *talea* are simple and much the same.

The middle *taleae* (II, V, and VIII) feature an increase in directed counterpoint. Notice, as found in motet 7, how Machaut implies an escape tone decoration in the chant by writing a directed progression across one of its notes (see leading into mm. 29, 83, and 137 of the form diagram above). In other words, through a creative misreading of the tenor Machaut arranges for stepwise decent to cadence where he will. Example 15 provides the score of the first such setting in motet 12, where the doubly imperfect sonority G/E/B resolves essentially to F/F/C.

Example 15. Polyphony making a decoration
of the tenor in motet 12, mm. 25–9

The musical score consists of three staves: soprano, alto, and tenor. The soprano staff has a treble clef and a soprano 8. The alto staff has a treble clef and an alto 8. The tenor staff has a bass clef and a tenor 5. The lyrics are: 'me vost en-ri-chir / Tant que j'e-usse un espoir de jo-ir, / sto-ge-stu-to-tus te-ror'. The tenor part has a circled note 'ET' in measure 28, with an arrow pointing to 'F' below it.

As the motet progresses through *colores*, Machaut increasingly weakens the isorhythmic boundary at the end of the middle *talea* until it becomes a passage to the final one. Whereas the cadence in m. 34 neatly closes off *talea* II, the corresponding place at the end of *talea* V (m. 88) is less conclusive. The motetus's C (a fifth with the tenor's F) is superseded by the triplum's termination on D in the following measure (m. 89), thus effecting a 5–6 exchange that seems to drive the tenor's final F through to the opening E of *talea* VI (see Example 16).

Example 16. Motion across a *talea* boundary in motet 12, mm. 86–91

86 87 88 89 90 ET 91

si la serf de cuer en tel cre - mour Que nul le

5 6 Tol - (lis)

VI

→ E

The closing *taleae* of motet 12 are markedly different in each *color*. The last *talea* (XII) is a virtuoso adaptation of a cantus firmus, all the more striking as the culmination of a *color* begun so routinely. A brief review of the contrapuntal narrative so far will provide a vantage point from which to appreciate the motet's conclusion. In *color* A, *talea* I was a place of harmonic stasis, *talea* II a succession of cadences, and *talea* III featured a sweeping contrapuntal expansion of F progressing to E (mm. 40–7). Example 17 below sketches how Machaut's mandate of E in m. 47 is effected through voice exchange across some seven measures.⁷⁴ A reduction of *color* B is included at the bottom of the example for later comparison. In my reading of the motetus, the E of m. 43 acts as a passing tone between the essential D (m. 42) and F (m. 46), which I have beamed in the example. Within that motion, the G of mm. 44–5 acts as an incomplete upper neighbor, a decorative pitch that is itself decorated by the neighbor pair F/A (marked LN and UN in m. 45). The system below, labeled "essential counterpoint," elucidates this elaborate surface.

⁷⁴ Text has been omitted from this example so as to focus on and not clutter the counterpoint. Note that both voices end a line of poetry at their melodic termination (mm. 46/47, respectively), the motetus punctuated by a period. Tr.: *Dont vraiment plus chier ensse / Quant ma dame vi, que je fusse. Mo.: Casu remuneror.*

Example 17. Voice exchange building to cadence in motet 12, mm. 40–8

The image displays a musical score and its analytical reduction for Example 17, focusing on voice exchange building to cadence in motet 12, measures 40–8. The score is presented in four staves, each with a specific label:

- score color A:** Shows the original musical notation for measures 40 through 48. It includes melodic lines for voices and instruments, with some notes marked with 'PT' (pedal point) and 'LN' (long note). Measure numbers 40, 41, 42, 43, 44, 45, 46, 47, and 48 are indicated at the end of each staff.
- essential counterpoint color A:** A reduction of the score, showing only the essential counterpoint. It includes measure numbers 5 and 6.
- reduction color A:** A further reduction of the essential counterpoint, showing the core structure. It includes measure numbers 94 and 97.
- reduction color B:** A final reduction, showing the most simplified version of the counterpoint. It includes measure numbers 100 and 101.

Vertical lines connect corresponding notes across the staves, illustrating the voice exchange and how it is reduced in each subsequent level. The analysis shows how the complex texture of the original score is distilled into its essential counterpoint and then into two levels of reduction, highlighting the structural elements that define the voice exchange.

Given its context near the end of the *color*, the E of m. 47 may be expected to descend to the chant's final at the close of the *color*. It would be surprising, then, that Schrade's edition stages E as the stronger cadence by leaving the counterpoint C/G above uninflected.⁷⁵ Pursuing this realization for the moment, *color* A initiates but does not satisfactorily fulfill a descent from the opening pitch center, F (the Hypodorian reciting tone), to the terminal cadence on D. This situation occurs often in Machaut's *formes fixes*, where an *ouvert* cadence prepares a later *clos* cadence a step below.⁷⁶ Thus, in motet 12, the makings of a single formal trajectory have been laid over conglomerative isorhythmic units.

In *color* B, Machaut weakens the directed progression to E in m. 101, which parallels that in m. 47; compare now the bottom staff of Example 17 above. While he increases the articulation of the poetry (both voices end in a period this time), Machaut's polyphony makes different use of the tenor. As seen in Example 18 below, the E sonority of m. 101 is destabilized by the triplum's introduction of an imperfect third and directed motion to it is weakened by apparent parallel octaves, the ascent of a tone in the tenor (D→E), and by those editors/performers, like Schrade, who inflect the motetus's F.

The cadence on D in m. 100 is latent in the cantus firmus, but not realized by *color* A. Following the promotion of that D in *color* B, a weaker resolution is again rendered where a strong one is most obvious. The chant's concluding D (later, in m. 106) is again approached by an uninflected G/C, rather than the strongly directed G#/C# of the arrival in m. 100, and the anticipation for a more conclusive completion to the *color* is further excited. Termination on the final pitch D is fixed by the chant in every statement, of course, but realizations that do not interpolate its

⁷⁵ The potential inflection C#/G# in m. 51 would drive the tenor's E through to D/D/A as the crucial arrival point, given further salience by its metric position at the beginning of a long. By comparison, the arrival of E in m. 47 was in the middle of a long. The possible significance of notated accidentals in the final cadence of the final *color* alone will be interpreted later.

⁷⁶ Such voice leading resembles the Schenkerian reading of an interruption on 2 in common practice music, where the opening returns to find tonal fulfillment in a completed descent to 1.

leading tones, withholding them for the end, dramatize the relative weight of resolution through careful variation in the polyphony unfolding across multiple repetitions of the same pitch sequence. To summarize *color* B, the long descent to D forecast by *color* A is now completed, but too early (m. 100 rather than 106), causing a disconnect between the polyphony's structural close and that of the isorhythmic plan.

Example 18. Weakened cadence to E in motet 12, mm. 97–102

The musical score for Example 18 consists of three staves. The top staff is a vocal line in G major, with lyrics: "quiert sou-vent Ce qu'on n'a de l'a-voir ta-lent. S'ami". The middle staff is a piano accompaniment in G major, with lyrics: "ab - is cum do - nis." The bottom staff is a basso continuo line in G major. The score is divided into measures 97 through 102. Measure 97 starts with a treble clef and a key signature of one sharp (F#). Measure 98 has a key signature change to two sharps (F# and C#). Measure 99 has a key signature change to three sharps (F#, C#, and G#). Measure 100 has a key signature change to two sharps (F# and C#). Measure 101 has a key signature change to one sharp (F#). Measure 102 has a key signature change to no sharps or flats (C major).

The novel emphasis of E in *color* A (m. 47), if reduced in *color* B, is in *color* C fully subdued as a place of arrival. In mm. 154–156 of Example 19, Machaut proceeds (not progresses) from D to E by parallel octaves and then progresses in the strongest way from E to the proper D final that closes the motet.

In motet 12, Machaut creates a coherent large-scale formal structure which *earns* the final arrival guaranteed by the tenor. E serves to connect the cantus firmus's most important pitches—its reciting tone and final—and Schrade's edition satisfactorily completes the descent only in the last cadence of the piece. It is supportive of this *ficta* decision that Machaut runs his poetry over the isorhythmic breaks at the end of *colores* A and B, withholding the greatest relative closure until the final statement.

Example 19. Parallel succession to E followed by resolution to D to end motet 12

151 militz
152 pleindre
153 ce que j'endu -
154 re,
155
156 Quant j'ain seur tout
157 ce
158 qui n'a de
159 moy
160 cu - ri - a. re.

8 ————— 8

→ D

As Machaut's general practice is to cadence at the close of each *talea*,⁷⁷ the out-of-phase segmentation of isomelic motets like M8 (*Qui es promesses / Ha, Fortune! / ET NON EST QUI ADJUVET*) provide interesting case studies in how formal patterning can shape counterpoint and vice versa. Example 20 shows only the tenor voice aligned by *colores*, to be compared later with the tenor of Machaut's motet 21 (*Christe qui lux es et dies / Veni creator spiritus / TRIBULATIO PROXIMA EST ET NON EST QUI ADJUVET*). Note that this account of M21 begins with the third *talea*, omitting a large portion of the same source chant that Machaut did not utilize in motet 8.

Example 20. Form diagrams comparing M8 and M21

It may be that the cadences at mm. 10 and 46 of M8, occurring in the middle of their respective *taleae*, prefigure the structural one at m. 82 in *color C*, which serves to begin a new phrase (*talea IV*).⁷⁸ The cantus firmus (with F#) permits of a cadence in these places, although a rising semitone in the tenor is weaker and less common in the motet repertoire than a descending tone.⁷⁹ In the same way,

⁷⁷ As mentioned above, *Ars nova* composers likely considered which pitches to stress as *talea* boundaries when grooming a chant for use as a motet tenor.

⁷⁸ While cadencing at the end of *taleae* is so common as to be a useful expectation of the genre, Machaut sometimes highlights their beginnings this way.

⁷⁹ A rising semitone cadence is more common in Machaut's polyphonic chansons and, it follows, his chanson-based motets (numbers 11, 16, and 20). But see also the interior cadences of motets 6 and 8.

the middle cadences at mm. 20/92 may have originated in a desire to *conform* with the structural cadence at m. 56 that begins *talea* III in *color* B. In this case, compare motet 8 with motet 21. There is no cadence at mm. 148 or 218 perhaps because there is no *talea* boundary there in any *color* of the isorhythmic plan. Although the rising semitone is not Machaut's preferred tenor for setting directed progressions, he demonstrated he would take it in mm. 130/209 of the same motet. In motet 8, therefore, Machaut subsumes local *contest* (within *colores*, mm. 10/46 and 20/92) within larger *conformance* across the whole (i.e. across *colores*).

Conclusions

This study attempts to formalize the observation by Fuller and others that the relationship between tenor and upper-voice pair in Machaut's motets is not always fixed, but meaningfully dynamic. When the upper voices follow what seems the will of the tenor—that is, mark out phrases through directed progressions in accordance with that of the cantus firmus and do so consistently with itself across formal repeats (Leech-Wilkinson's normative "isoharmony")—the two contrapuntal parties are said to *conform*. Although this seems the basis for French motet composition in the fourteenth-century, it is not the only way the upper-voice pair can respond to the tenor. When, on the other hand, the upper-voice pair asserts independence from or misreads the tenor by, for instance, setting up imperfect intervals that seek resolution to novel places, they *contest* the harmonic and formal leadership of the tenor. Manipulation of a borrowed chant in the motets of Machaut seems thus a disciplined creative choice, a means of explicative engagement with reverend source material. Motet tenors were, after all, borrowed for the very purpose of recontextualization. Analogous to and contemporaneous with textual glossing, a vital process in fourteenth-century learning that has received much modern scrutiny, the present study hopes to refine current awareness of the equally erudite and transformative glossing of medieval music.

The three manners of *contest* have been laid out to follow these decisions in the composition of a polyphonic motet, in order:

- 1) the extraction of a cantus firmus from a complete chant, crucially determining the final note;
- 2) the planned segmentation of *talea*, presumably before polyphonic composition began, typically but not necessarily to highlight the chant pitches that lie at those boundaries;
- 3) deliberate choices about whether, when, and to what degree the added voices should emphasize, contravene, or add to the pitch foci of the tenor, potentially including refinement of its isorhythmic or -melic form.

My reading of contrapuntal relationships has both informed and been informed by analogy with the conventional allegiance of the personae in Machaut's *fin'amors* motet poetry—the compliant *amant* and his revered *dame*—as a step towards a unified interpretive approach to a multimedia genre under the control of a singular composer-poet. Because the amorous pair is in textual counterpoint with scripture, some medieval audiences may have received the secular lover as allegorical of a spiritual supplicant who also seeks salvific union with his respective savior.⁸⁰ This correlation is fitting in how Machaut's polyphony often embodies the chief virtue extolled by the *amant* and supplicant in medieval devotion, that of submission to a venerated entity. The composer-poet thus executed his job both as court clerk and canon of the church, modeling proper chivalric courtship and spiritual deference in his motets.

Although focused upon a collection of mid-fourteenth century motets by one composer here, this interpretive methodology may be further applicable to other medieval or Renaissance polyphony

⁸⁰ Bowers 2004, 2, places Machaut as resident canon at the cathedral of Reims as a sort of retirement home ca. 1359, some nineteen years after Robertson 2007 [2002]. He thus regards Machaut's almost entirely secular output as properly suited to noble courts and chambers, whereas Robertson's study reads Machaut's love poetry as allegory for higher ideals of the church. Bowers reserves for the last sentence of his essay mention of Machaut's Marian devotion, exemplified in composing the *Messe de Nostre Dame*, as "complementary to his long-standing dedication to the literary *Dame d'Amour*" (46).

relying upon external musical foundation. Not constrained to borrowing in a dedicated voice, the approach developed here may also inform a reading of the complex polyphony of the paraphrase and parody masses of the sixteenth century.

Appendix 1: Table of *Contest*

The isoharmony, or consistent polyphonic setting of a cantus firmus across isorhythmic repetitions, of all of Machaut's three-voice motets containing at least one *color* repeat are shown. Letters above the tenor line designate cadence pitches in that *color*, shown in brackets when weak. *Contest* of the second manner is evident whenever cadence points do not include all *colores*.

The image displays ten staves of music, labeled M1 through M10, representing different motets. Each staff shows a tenor line with notes and rests. Above the notes, letters (A, B, C, D, E, F) indicate cadence pitches. Some letters are enclosed in brackets, indicating weak cadences. The staves are divided into sections labeled with Roman numerals (I, II, III, IV) representing isorhythmic repetitions. For example, M1 has sections I, II, and III. M2 has sections I, II, III, and IV. M3 has sections I, II, III, and IV. M4 has sections I, III, and II. M5 has sections I, II, III, and IV. M6 has sections I, II, III, and IV. M7 has sections I, III, and II. M8 has sections I, IV, III, and II. M9 has sections I, II, and III, with a 'double color' section in III. M10 has sections I, II, and III. The notes are primarily eighth and sixteenth notes, with some rests.

Appendix 2: Translations of Machaut's poetry for select motets**Motet 2****Triplum**

<p>Tous corps qui de bien amer Vuet avoir la cure Doit par raison encliner, Et c'est sa droiture, Là où son cuer esmouvoir Se vuet, quant à bien avoir. Pour ce li miens cure Qui de Nature est formés, Et obeissance assés Vuet faire à Nature Et à celle qui m'apoint De male pointure, Puis que n'a de pité point Dou mal que j'endure, Qui me fait en desirant Languir, quant vois remirant La douce faiture De son tres gracieus vis, Par qui mes cuers est ravis Et mis en ardeure. Et comment qu'Amours m'ait fait Souffrir la morsure De ses griés maus sans meffait Et sans mespresure, Ne lairay ja que secours Ne quiere de mes dolours A ma dame pure, Car bien puis avoir merci Selonc ce que j'ay servi; A ce m'asseüre. Et à ce qu'on dit, pour voir, Miex vient en joie manoir Par proier qu'adès languir Par trop taire et puis morir.</p>	<p>Any mortal who wishes to turn his attention to loving well should in reason submit himself, in regard to what is best for him, in the place where his heart chooses to be touched, and this is his right path. That is why I myself, who have been formed by Nature, so turn my attention and wish to show true obedience both to Nature and to her who pricks me with a wicked wound, for she has no pity for the ills I suffer and makes me languish in desire as I gaze upon the sweet features of her gracious face, for whose sake my heart has been torn from me and set ablaze. And however cruelly Love has made me suffer the sting of the grievous ills she has caused me, although I have done no wrong and committed no fault, I shall never cease to look for relief from my sufferings from my pure lady, for I may well receive mercy according to how well I have served her; I take assurance from that and from what they say, which I hold to be the truth: "It is better to dwell in joy because one has asked for help than to languish continually and finally die because one has kept silent too long."⁸¹</p>
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⁸¹ Translations are by Colleen Donagher, from Robertson 2007 [2002], unless otherwise noted.

Motetus

De souspirant cuer dolent
 Me pleing, et bien le doy faire,
 Car, quant j'ay pris hardement
 De ma grant douleur retraire,
 Lors m'estuet il tout coy taire.
 Si sui pris en regardant,
 Et pour ce que je doubt tant
 Refus, qui ne me doit plaire,
 Et Dangier, mon adversaire,
 Qui me livre estour si grant,
 Que d'Amours m'estuet retraire,
 Ou merci procheinement
 De ma dame debonnaire,
 Ou morir en languissant.

With sighing, suffering heart I make my
 complaint, and it is right that I do so, for
 now that I have taken courage to tell of my
 great suffering I must keep silent. And so
 am I confined to looking, and because I so
 much fear Refusal, who could never
 please me, and Resistance, my enemy,
 who wages such fierce battle against me, I
 must soon receive from Love my sweet
 lady's grace or else die languishing.

Motet 7

Triplum

J'ai tant mon cuer et mon orgueil creü
 Et tenu chier qui m'a deceü
 Et en vilté ce qui m'amoit eü,
 Que j'ay failli
 Aus tres dous biens don't Amours pourveü
 Ha par pitié maint cuer despourveü
 Et de la tres grant joie repeü
 Don't je languis.
 Lasse! ainsi m'a mes felons cuers trahi,
 Car onques jour vers mon loyal ami
 Qui me servoit et amoit plus que li
 N'os cuer meü
 Que de m'amour li feisse l'ottri.
 Or sçay je bien qu'il aime autre que mi
 Qui liement en ottriant merci
 L'a reçeü.
 Si le m'estuet chierement comparer,
 Car je l'aim tant c'on ne puet plus amer.
 Mais c'est trop tart: je ne puis recouvrer
 La soie amour;
 Et s'ay paour, se je li vueil rouver,
 Qu'il ne me deingne oïr ne escouter
 Pour mon orgueil qui trop m'a fait fier
 En ma folour;
 Et se je li vueil celer ma douleur,

I have so trusted in my heart and
 my pride and held dear that
 which has deceived me and
 despised that which loved me
 that I have lost those sweet riches
 which Love in her pity has
 bestowed on many destitute
 hearts, satisfying them with the
 great joy for which I languish.
 Alas! thus has my treacherous
 heart betrayed me, for I had
 never moved it to bestow my love
 on my loyal friend who served
 and loved me more than himself.
 Now I know for certain that he
 loves another, who in granting
 him mercy has joyfully received
 him. Now must I pay dearly for
 my refusal, for I love him as
 much as it is possible to love. But
 it is too late: I cannot regain his
 love; and I fear that if I choose to
 ask it of him, he will not deign to
 hear or listen to me because of
 my pride, which made me trust

Desirs espris d'amoureuse chalour
 Destraint mon corps, et mon cuer en errour
 Met de finer.
 S'aim miex que je li die ma langour,
 Qu'ainsi morir, sans avoir la savour
 De la joie qu'est parfaite douçour
 A savourer;
 Et dou dire ne me doit nulz blamer
 Qu'amours, besoins et desirs d'achever
 Font trespasser mesure et scens outrer.

too much my own folly; and if
 I choose to conceal my suffering
 from him, Desire enflamed with
 the heat of love constrains my
 body and makes my heart long
 for it all to end. And so I had rather
 tell my friend of my suffering
 than to die thus without tasting
 that joy whose taste is perfect
 sweetness; and no one should
 blame me for speaking, for love,
 need and desire for fulfillment
 may cause a person to go beyond
 measure and offend good sense.

Motetus

Lasse! je sui en aventure
 De morir de mort ainsi dure
 Com li biaux Narcisus mori,
 Qui son cuer tant enorguilli,
 Pour ce qu'il avoit biauté pure
 Seur toute humeinne creature,
 Qu'onques entendre le depri
 Ne deingna d'Echo, qui pour li
 Reçut mort amere et obscure.
 Mais bonne Amour d'amour seüre
 Fist qu'il ama et encheri
 Son ombre et li pria merci,
 Tant qu'en priant mori d'ardure.
 Lasse! et je criem morir ainsi,
 Car onques de mon dous ami,
 Quant il m'amoit de cuer, n'os cure.
 Or l'aim et il me het, aymi!
 Telle est des femmes la nature.

Alas! I am in danger of dying as
 harsh a death as fair Narcissus.
 Because he possessed perfect
 beauty beyond that of all other
 human creatures, Narcissus'
 heart grew proud and he never
 deigned to hear the plea of Echo,
 who for his sake received dark
 and bitter death. But then good
 Love caused him to love and
 cherish his own reflection with
 such an immovable love that he
 died of desire as he ardently
 sought its favor. Alas! I fear I
 shall die this way, for I took no
 heed of my sweet friend when he
 loved me with all his heart. Now I
 love him and he, alas, hates
 me! Such is the nature of women.

Motet 12

Triplum

Helas! pour quoy virent onques mi oueil
 Ma chiere dame au tres plaisant accueil,
 Pour qui je vif en tel martire
 Que je ne congnois joie d'ire?
 N'onques Amour ne me vost enrichir
 Tant que j'eüsse un espoir de joir,

Alas, why did my eyes ever
 behold my dear and sweetly
 welcoming lady, for whose sake
 I live in such agony that I cannot
 tell joy from anguish? Love has
 never enriched me with even a

Ne je ne puis encor rien esperer
 Que tout ne soit pour moy desesperer.
 Don't vraiment plus chier eüsse,
 Quant ma dame vi, que je fusse
 Sans yex ou que mes corps tel cuer eüst
 Que ja mais jour dame amer ne peüst
 Qu'en li veoir je conquis mort crueuse
 Et mon vivant vie avoir dolereuse,
 Puis qu'einsi est que pité ne merci
 Ses crueus cuers ne vuet avoir de mi.
 Las! elle het mon preu et ma santé,
 Pour ce que j'aim s'onneur et sa biauté,
 Et si la serf de cuer en tel cremour
 Que nulle riens ne li pri, eins l'aour.
 Et c'est raisons c'on quiert souvent
 Ce qu'on n'a de l'avoir talent.
 S'aim miex einsi ma douleur ednurer
 Qu'elle me fust plus dure par rouver;
 Car s'el savoit qu s'amour souhaidier
 Eüsse osé, ja mai ne m'aroit chier.
 Et se l'aim tant que s'en ce monde avoie
 Un seul souhait, einsi souhaideroie
 Que s'amour fust envers trestous d'un fuer,
 Fors vers celui qui l'aimme de mon cuer.
 Par tel raison suis povres assazés,
 Quant je plus vuël ce dont plus sui grevés:
 Don't ne doit nuls pleindre ce que j'endure,
 Quant j'aim seur tout ce qui n'a de moy cure.

hope of fulfillment, nor can
 I hope for anything but that
 which must lead me to despair.
 So truly I would have been
 happier if, when first I saw my
 lady, I had been without eyes or
 my body had contained such a
 heart as could never love a lady,
 for in seeing her I won myself a
 cruel death and sorrow for as
 long as I live, since her cruel
 heart refuses me all pity or
 mercy. Alas, she hates what is
 good and healthful to me, and
 only because I love her honor
 and her beauty and because I
 serve her with all my heart and
 with such fearful reverence that
 I ask nothing of her but to adore
 her. And it is true that we often
 seek what we do not wish to
 have. I prefer to endure my
 sorrow rather than to make her
 more cruel to me through
 pleading with her; for if she
 knew that I had dared desire her
 love she would never hold me
 dear. And I love her so much
 that if I could have but one wish
 in this world, it would be that
 her love were of equal measure
 towards all but him who loves
 her with my heart. For this
 reason I am a man of little
 wealth: that I most desire what
 does me the greatest harm; and
 so no one should pity what I suffer,
 since I love above all else
 that which cares nothing for me.

Motetus⁸²

Corde mesto	With a sad heart
Cantando conqueror,	I complain in song,
Semper presto	Always do I wait [upon you],
Serviens maceror,	In service I waste away,
Sub honesto	I am bruised all over
Gestu totus teror	From the effects of [your] noble bearing,
Et infesto	And with hostile
Casu remneror.	Misfortune am I repaid.
In derisum	In derision,
Fortuna te ponis.	Fortune, you place yourself.
Das arrisum,	You smile
Expers racionis,	For no reason,
Et obrisum	And give riches
Malis; sed a bonis	To evil [men]; but from good [men]
Tollis risum	You take away laughter,
Et abis cum donis.	And you go away with the gifts.
Spernens cece	Spurning the loathsomeness
Fortune tedia,	Of blind Fortune,
Utor prece	I pray
Cum penitencia	With penitence
Culpe fece	That to me, cleansed
Ut lauto venia	By mercy of the dregs of sin,
Michi nece	Through death
Promatur gloria.	May be proffered glory.

⁸² Latin translation by Anne Walters Robertson 2007 [2002].

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