KEYBOARD THINKING:

INTERSECTIONS OF NOTATION, COMPOSITION, IMPROVISATION, AND INTABULATION IN SIXTEENTH-CENTURY ITALY

by

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ABBREVIATIONS

PRINTED VOLUMES

ANTICO 1518(17?) Antico, Andrea. *Frottole intabulate da sonare organi*

BERTOLDO 1591a Bertoldo, Spirinidio. *Canzoni francese intavolate per sonar d'organo* (1591)

BERTOLDO 1591b Bertoldo, Spirindio. *Toccate, Ricercari et Canzoni francese intavolate per sonar d'organo.*

BUSS 1549 Buus, Jacques. *Intabolatura d'organo di Recercari.*

CAVAZZONI M 1523 Cavazzoni, Marc'Antonio. 1523. *Recercari, Motetti, Canzoni, Libro Primo*

CAVAZZONI G 1543 Cavazzoni, Girolamo. *Intavolautra cioè recercari, Canzoni Himni, Magnificat [.....] Libro primo*.

GABRIELI 1596 Gabrieli, Andrea. *Il terzo libro de ricercari [...] insieme uno Motetto, Dui Madrigaletti, & uno Capriccio sopra il Pass'è mezo Antico, In cinque modi variati & Tabulati per ogni sorte di Stromenti da Tasti* (Venice, 1596)

GABRIELI 1605a Gabrieli, Andrea. *Canzoni alla Francese et Ricercari Ariosi, tabulate per sonar sopra istromenti da tasti [....] Libro Quinto.*

GABRIELI 1605b Gabrieli, Andrea. *Canzoni alla Francese et Ricercari Ariosi, per sonar sopra istromenti da tasti [....] Con uno madrigale nel fine & uno Capriccio a imitatione beliss. Libro Sesto & ultimo.*

MAYONE 1603 Mayone, Ascanio. *Primo libro di diversi Capricci per sonare.*

MAYONE 1609 Mayone, Ascanio. *Secondo libro di diversi Capricci per sonare.*

MERULO 1592 Merulo, Claudio. *Canzoni d'intavolatura d'organo di Claudio Merulo da Correggio a quattro voci , fatte alla francese… libro primo*. (A. Gardano, Venice, 1592

MERULO 1606 Merulo, Claudio. *Libro secondo di canzoni d'intavolatura d'organo a4 voci, fatte alla francese.*

MERULO 1611 Merulo, Claudio. *Terzo libro de canzoni d'intabolatura d'organo di Claudio Merulo di Correggio. A cinque voci fatte alle francese*

TRABACI 1603 Trabaci, Giovanni Maria. *Ricercate, Canzone francese, Capricci, Canti fermi, Gagliarde, Partite diverse, Toccate, Durezze, Ligature, Consonanze stravaganti Et un Madrigale passaggiato nel fine. Opere tutte da sonare a quattro voci. Libro primo *

TRABACI 1615 Trabaci, Giovanni Maria. *Il secondo libro de Ricercate et altri varij Capricci, con Cento Versi sopra li Otto finali Ecclesiastici per rispondere a tutti I Divini Officij et in ogni altra sorte d'occasione.*

VALENTE 1576. Valente, Antonio. *Intavolatura de Cimbalo, Ricercate, Fantasie et Canzoni francese desminuite con alcuni Tenor, Balli et varie sorte de contraponti, libro ptimo.*

MANUSCRIPTS

Ba: I-Fmba Florence, Museo Bardini Ms. 967 ("Bardini Manuscript")

Ca: I-CARcc Castell'Arquato, Archivio della Chiesa collegiata ("Castell Arquato")

Fa: GB-Lcm, Library of the Royal College of Music, London, 2088 ("Facoli Manuscript")

La: I-Fl Florence, Biblioteca Medicea Laurenziana Ms. Acquisti e Doni 641 ("Layolle Manuscript")

Na: I-Nc Naples, Biblioteca del Conservatorio di Musica S. Pietro a Majella, Ms. Mus. str. 48 ("Naples 48")

Pf: D-Mbs Munich, Bayerische Staatsbibliothek, Musikabteilung, Mus Ms. 9437 (*Intabolatura d'Organo di Canzon et de Mottetti Ms.r Pietro Franceze. Scritto da me.* -- "Pietro Francese Manuscript")

Tr: I-Trmp Trent, Museo provinciale d'arte, Biblioteca musicale L. Feininger, n.s ("Feininger Codex")

Ve: I-Vnm Venice, Biblioteca Nazionale Marciana, Ms. It. IV 1227 ("Venice 1227")

Introduction:

Keyboard Thinking and Notating the Unwritten Tradition

Italian Keyboard Tablature: Intabulation as an Embodiment of Manual Action

Ever since Richard Taruskin's well-known (and, in some circles, notorious) *Text and Act,* it has been common to assert that Historically Informed Performance (HIP) is at its core a modernist (or postmodernist) movement.[1] Undoubtedly a cultural product of its era, HIP has, since the publication of Taruskin's collection of essays, increasingly become a substream of classical music's main current, adopting general mentalities and attitudes of the larger culture in the process. The assimilation is symbolically represented by the creation of Juilliard's early music program – with this, HIP has finally cracked classical music's highest training institution. Along with this, HIP's pedagogical aims and methods have become increasingly normative; present-day students of an early-music instrument are arguably more likely to learn by receiving established tradition, rather than going through a process grounded in engagement with primary sources.[2] Gaps between established modern HIP practice and these primary sources are common, and seen in polemics that have arisen from clashes between modern practice and information from historic source material.[3]

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[1] Richard Taruskin, *Text and Act* (New York and Oxford: Oxford University Press, 1995). Regarding controversy over this text in HIP circles, my evidence is anecdotal: it generated strong – and largely negative – opinions among my Oberlin Conservatory classmates in the late 1990s.

[2] As John Butt points out, building upon a point made by Michelle Dulak; John Butt, *Playing with History* (Cambridge: Cambridge University Press, 2002), 129.

[3] See, for example, the "Basel school" of continuo playing as represented by Jesper Bøje Christensen and his followers, the proponents of singing Bach one-on-a-part, and moves towards adopting all-gut/equal-tension set-ups on string instruments, led by groups such as The King's Noyse in the 1990s, and, more recently, by the Monteverdi String Band in the U.K. All represent small sub-movements within HIP that stick to the letter of the evidence, but are nonetheless considered outliers and even (in some cases) as pariahs by the mainstream of the movement.

In many respects historic notation makes a good symbol of the disconnect between the two. Despite the rapidly increasing accessibility of historical prints and manuscript facsimiles through Internet media such as the Petrucci library, a harpsichordist or Baroque violinist today often seems to prefer a modern edition over a historic one. The primary reason for this certainly lies in difficulties with reading historical notational formats, many of which fail to conform to modern standards.[4] To be fair, HIP favors good editions: scholarly, *Urtext*-style ones over the heavily edited volumes of the nineteenth and early twentieth centuries. However, while the benefits go without saying, potentially problematic aspects of these editions are also worth noting. Take, for example, Bach works such as the French Suites for keyboard or the Sonatas and Partitas for violin. Here, the music exists in multiple manuscript copies; the editors, although certainly working in a thorough and positivistic manner, must of necessity create a hierarchy of their sources (based upon factors such as the potential proximity of a given source to the hand of the composer) in order to create an "authoritative" text – one which, ironically, has no conceptual basis in the historical era from which the music comes.[5] In addition, notational irregularities are often tidied up, as the score must conform to modern notational standards. This also comes at a cost, as historical notation can often been seen to transmit performance data through its very irregularities.[6]

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[4] http://imslp.org/ is the URL for the Petrucci library. As every working HIP musician knows, this seems to be constantly expanding, particularly with regard to its collection of facsimiles of original prints and manuscripts. Accessed February 16, 2018.

[5] Of course, this meets the need for editions that are ultimately easy to engage with and readable for the performer. For an example of a scholarly edition that goes in the other direction – providing more information than what may be technically needed for performance – see Bärenreiter's edition of the complete keyboard works of Froberger. In the third volume, edited by Siegbert Rampe, scores are littered with charts of textual variants. The result is an edition that, while certainly informative, is not immediately accessible for performance. Johann Jacob Froberger, *Neue Ausgabe sämtlicher Werke III: Clavier- und Orgelwerke abschriftlicher Überlieferung, Partiten und Partitensätze, Teil 1,* ed. Siegbert Rampe (Kassel: Bärenreiter, 1993).

[6] See David Schulenberg, "Some Problems of Text, Attribution, and Performance in Early Italian Baroque Keyboard Music," *The Journal of Seventeenth-Century Music* 4 (1998), accessed online: http://zb5lh7ed7a.search.serialssolutions.com.libproxy2.usc.edu/?genre=article&issn=1089747X&title=Journal%20

This is particularly the case for the notation that forms the primary object of study in the present dissertation, the one used by Italian scribes and publishers of keyboard music in the sixteenth and seventeenth centuries. This notation, simply called *intavolatura* by its original users, and Italian keyboard (or organ) tablature by contemporary scholars (I will from henceforth adopt the abbreviation IKT) appears, at first glance, as some sort of primitive form of modern keyboard notation.[7] The music is presented on two staves and uses the signs of mensural notation; the modern player is pleased to discover bar lines and rests – after gaining some familiarity with archaic typographical features, these prints are quite readable. Once getting past the similarities, however, the modern player begins to encounter difficulties. She is less pleased to discover, for example, the additional ledger lines and multiple clefs. And, scratching further beneath the surface, she discovers that some of the editorial standards are rather removed from those of present-day editors.

Beyond surface features, such as the lack of beams for faster-moving notes (a "limitation" of the printing technology used by the publisher),[8] a closer examination reveals even more unusual features, many of which work to disguise the contour of the polyphony. Take the motive that forms the basis of the imitative point in **Example 0.1**: it appears throughout the music in the excerpt (and, interestingly enough, it is readily *heard* when the excerpt is played) but the notational practices obscure it. For example, in the second measure it appears in both the tenor and bass entrances in stretto, but one might not register this as notated. Luckily, Merulo's

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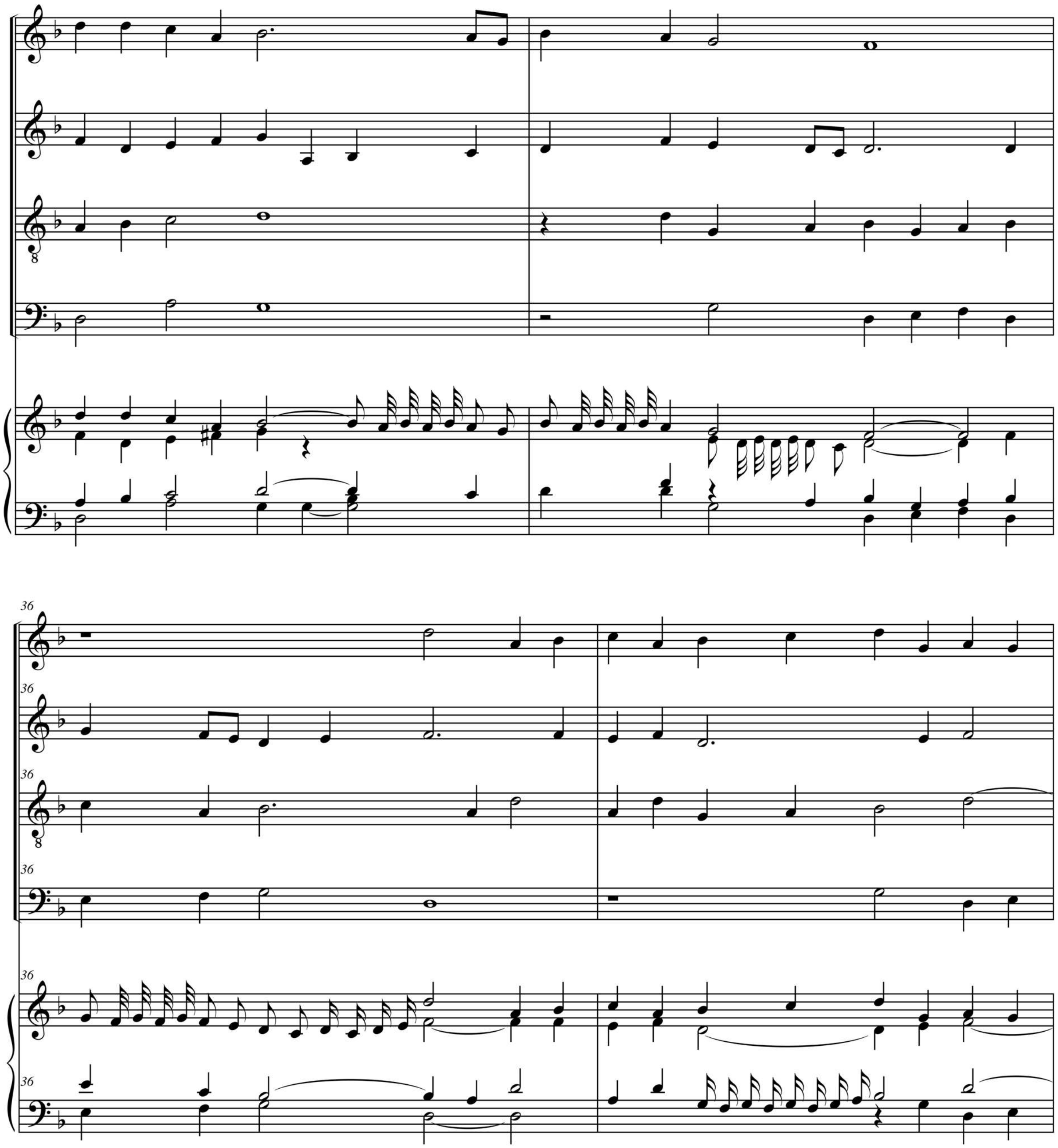
of%20seventeenth-century%20music&volume=4&issue=1&date=19980101&atitle=Some%20problems%20of%20text%2C%20attribution%2C%20and%20performance%20in%20early%20Italian%20Baroque%20keyboard%20music&spage=&pages=&sid=EBSCO:RILM%20Abstracts%20of%20Music%20Literature%20with%20Full%20Text&au=Schulenberg,%20David, Feb. 2, 2018.

[7] As IKT is frequently discussed here alongside Italian lute tablature as well as German and Spanish organ tablatures, it is important to distinguish it with its full title, which is abbreviated to save space.

[8] The presence of beams in contemporary manuscripts and later engraved editions suggest that, if they had the technology, publishing houses would have used them.

Example 0.1 Claudio Merulo, *LA RADIVILA,* mm. 34-37, from MERULO 1606 (bottoms staves); part-book version (top staves) adapted from Charles M. McDermott,“The *Canzoni d’Intavolatura d’Organo* of Claudio Merulo: A Guide to Improvised Ornamentation” (PhD diss., University of California, Berkeley, 1979), 2:80-81.



intabulation is of a polyphonic work (his own instrumental canzona) for which the original version exists. Example 0.1 also shows the intabulation along with the model. A brief comparison between the two reveals the true extent to which the intabulation hides polyphonic detail. For example, the second note of the motive in the tenor in the second measure, which forms a unison with the bass, is omitted in the keyboard intabulation; in fact, the bass part as seen in the intabulation is not the "real" bass part – that is, the one from the model – but a composite formed of the model's tenor and bass parts. If we didn't have recourse to the model, much of the model's polyphony would need to be inferred.

Having access to both model and intabulation is indeed helpful; here, a quick comparison between the two illuminates precisely how the polyphony is obscured, through what could be described as a set of notational quirks. As it turns out, these quirks actually help to define IKT as its own notational system with its own functional parameters and unwritten rules. Many of these quirks – or rather, conventions – have been highlighted by scholars of early keyboard music, although curiously their examinations have been not of intabulations but rather of "free" or abstract (that is, model-less) keyboard compositions.[9] A comparative analytical model – comprised of an intabulation and its model – facilitates a clear view of these notational conventions: Merulo's canzona will continue to serve that purpose here.

To begin, IKT's staves represent the two hands of the player, and therefore dictate which notes are to be playing by which hand. This is clearly indicated by Diruta, whose treatise is the only guide to intabulating in IKT, and is seen easily in the music.[10] Note Merulo's tendency to isolate his ornamental figures for the right hand: they are easier to play that way. IKT's stem direction practice is unusual, too. The stem direction of any given note is determined by its vertical position: lowest notes always take downward stems and vice versa. In the instance pointed out above, the Tenor *a* appears to be part of the tablature's bass part because its stem points downward, and its stem points downwards because it is the lowest note at that instance – therefore, this practice is directly responsible for the obscuration of voice leading.[11] IKT's treatment of unisons between parts also obscure voice leading; for example, the unison between the Tenor and the Bass immediately prior to the *a* is not notated in the intabulation, but is replaced with a rest in the tablature's tenor part. Modern editorial practice would use a double stem. In general, modern practice would seek to preserve the contour of the voices; the intabulation almost seeks intentionally to hide them.

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[9] For earlier scholarship on IKT and its notational functioning, see Alexander Silbiger, "Is the Italian keyboard 'intavolatura' a tablature?" *Recercare* 3 (1991): 81-103; Giuseppe Clericetti, "Criteri per un'edizione moderna della musica per strumenti a tastiera di Andrea Gabrieli," in *Andrea Gabrieli e il suo tempo,* ed. Francesco Degrada, vol. 11 of *Studi di musica veneta* (Florence: Leo S. Olschki, 1987). Paul Anthony Luke Boncella, "The Classical Venetian Organ Toccata (1591-1604): An ecclesiastical genre shaped by printing technologies and editorial policies" (PhD diss., Rutgers University, 1991), 122-41.

[10] Girolamo Diruta, *Il Transilvano: Dialogo sopra il vero modo di sonar organi, e i stromenti da penna* (Venice: Giacomo Vincenti, 1593); facsimile ed. Bologna: Forni, 1969). The section on intabulation is found in the second volume of the treatise, which was published as the *Seconda parte.* Note that the "seconda parte" is divided into four "books," each with its own pagination; this will be reflected in my citation practice.

IKT's other notational conventions support this contention. For example, rests in IKT don't have much to do with polyphonic logic; rests in the model are typically left out, whereas new rests, not found in the model, are added. This can be seen in Merulo's canzona: a rest is added in the right hand in the first measure of the example, and none of the rests in the original polyphony make their way into the intabulation. Long notes are routinely divided into shorter ones, usually with added ties. As these conventions work together in tandem, voice crossings are completely obscured. As I will demonstrate in Chapter 1, the conventions – and the misleading voice leading they create – form a set of new voices, partly based on the original ones but in

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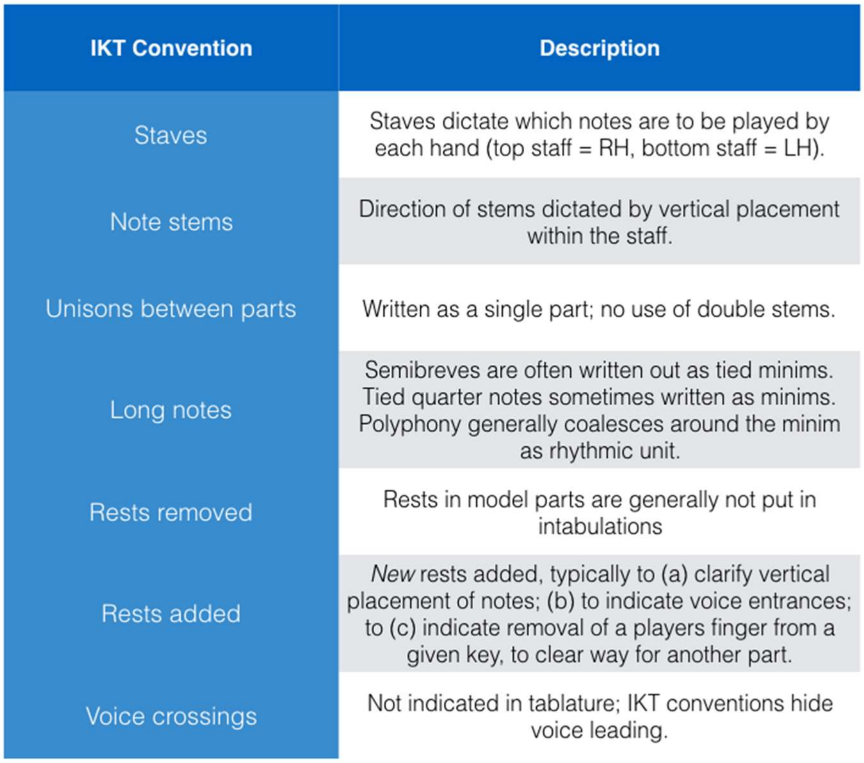
Diruta clearly states that the staves dictate which notes should be taken by the left or right hand, respectively, in the first part of the treatise; see vol. 1, 4, in the section entitled "Modo d'intender la Intavolatura."

[11] As will be demonstrated shortly, this creates a composite bass line in the style of a *basso seguente* part in early accompaniment practice. *Basso seguente* involved the creation of a composite bass line made up of the lowest-sounding notes in the texture; the organist would fill in chords based on its motion. Like the "parts" seen in Merulo's intabulation, *basso seguente* parts are essentially unrelated to the voice leading of the original piece. Also of note is the way that the new bass line in Merulo's intabulation highlights the implied V-I motion, which exists in the overall texture of the model but not in a single part.

essence ontologically distinct. I call these "tablature voices," and I argue that they constitute the musical reality that existed in the minds of *cinquecento* keyboardists.[12] In addition, the overall emphasis on vertical positioning leads to a fragmentation of the music; the stem direction of a given note is dictated by its *momentary* vertical placement, its temporary function within a small and clearly defined rhythmic space. This segmenting of the polyphony is also seen in the way IKT continuously breaks long notes into tied short ones – another defining IKT convention. As with tablature voices, this verticalization and segmentation of the musical texture, dissolving the linearity of the polyphony in the process, is reflective of a mental reality that exists only in the keyboardist's head. **Table 1** presents a complete list of IKT's conventions.



IKT Convention	**Description**
Staves	Staves dictate which notes are to be played by each hand (top staff = RH, bottom staff = LH).
Note stems	Direction of stems dictated by vertical placement within the staff.
Unisons between parts	Written as a single part; no use of double stems.
Long notes	Semibreves are often written out as tied minims. Tied quarter notes sometimes written as minims. Polyphony generally coalesces around the minim as rhythmic unit.
Rests removed	Rests in model parts are generally not put in intabulations
Rests added	*New* rests added, typically to (a) clarify vertical placement of notes; (b) to indicate voice entrances; to (c) indicate removal of a players finger from a given key, to clear way for another part.
Voice crossings	Not indicated in tablature; IKT conventions hide voice leading.

Table 0.1

While it is clear that a comparative analysis between an intabulation and its model is very useful for examining IKT conventions, it is less clear if these conventions work in exactly the same way in abstract music, that is, music without polyphonic models. The fact that intabulations are not "free" but based on pre-existing polyphonic models means that they must, on some level, be taken as separate phenomena, in that the arranger surely followed rules that differed from those used to compose a toccata, ricercar, or an *intonazione.*[13] On the other hand, much late sixteenth-century keyboard music was polyphonic in its orientation, and the notational conventions brought to the fore in examining the intabulation process are readily seen in the abstract or "free" keyboard music as well; this is clearly demonstrated in studies by Alexander Silbiger and Stephen Boncella, who see the very same obscuration of polyphonic detail through notational convention that I've just highlighted in Merulo's intabulation.[14] If this overlap between abstract keyboard music and intabulations exists – as is implied by the repertoire and inferred by other scholars – intabulations become a very useful tool in examining issues of notation in the repertoire at large, not just in intabulation. Moreover, the presence of these conventions in intabulations and free music implies similar generative processes for both.

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[12] See Chapter 1, 67-77.

IKT's notational conventions have been addressed previously. Alexander Silbiger in particular has drawn attention to the differences between IKT and modern notation, although he questioned whether IKT should be viewed as a tablature notation at all, given its use of mensural notation over the figures of lute tablature and German and Spanish organ tablatures.[15] (This question will be addressed directly in Chapter 1.) All of these studies show, in various capacities, that IKT was geared towards representing performance – that is, the physical motions, or the audible product of those physical motions – rather than polyphonic detail. As Silbiger puts it,

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[13] After all, intabulations involve translating music – to adopt the language of Victor Coelho – from one medium into another, whereas abstract keyboard composition is surely a freer and more creative process. In addition, scholarship in early keyboard music has not traditionally viewed the two as being on equal footing, revealing long-standing biases against intabulations (and, for that matter, against arrangements and transcriptions more generally) as being "derivative" and essentially inferior in terms of work-ontology. And lastly, to put it in even more simple and mechanical terms: abstract keyboard works don't have models.

[14] Silbiger, "Tablature?"; Boncella, "Organ Toccata," 122-41.

[15] Silbiger, "Tablature?"

> One way of characterizing tablature notation is to say that it provides no information beyond what is required to realize a piece of music physically; or to put it less kindly: tablature addresses the fingers of the players rather than their musical understanding – their bodies rather than their minds.[16]

This mentality is clearly on display in Merulo's canzona above; the notation in left hand in the first example simply mimics the motions that the player would go through to accommodate the unison between the alto and bass (in fact, Diruta indicates that this is exactly how one should execute the music in such a situation.)[17] The intabulation as a whole makes perfect sense if viewed in this light; it represents the *manual performance actions* of the player executing the canzona on the keyboard, rather than the canzona itself.

The fact that IKT's notational conventions are clearly seen in both intabulations and in free keyboard pieces indicates that an "intabulation" process may be embedded within the functional logic of the notation itself. Our only description of such a process is the one found in Girolamo Diruta's treatise *Il Transilvano,* and his treatment clearly links the notational conventions just highlighted with the process of intabulation.[18] Therefore, the notational conventions are a reflection of an intabulation process that is part of IKT's very being as a notational format, as clearly demonstrated by the fact that IKT's notational conventions appear almost uniformly throughout music notated in the format. Differences in the degree to which IKT conventions appear are largely dependent upon a given source – the habits of a particular scribe or publishing house or composer – rather than on generic convention. It's also important to note that intabulations are *arrangements*, and intabulators demonstrate considerable freedom in altering their models in order to adapt them to the idiomatic landscape of the keyboard. Intabulation therefore involves activities that might be called compositional: alterations to the model's polyphony typically include elements, such as the addition of complicated (and even polyphonically-conceived) ornamental structures, and the reworking of polyphony that doesn't sit well on the keyboard, that stray into the grey area between the two. Of course, without having access to a comparative model like the one I just made for Merulo's canzona, we can't be sure of the *exact* procedure that results in IKT's notational conventions in any given case, but the consistency of their application suggests that notating a piece of music in IKT involves intabulating. That is, intabulating and writing a piece down in IKT are essentially the same thing.

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[16] Ibid., 93.
[17] See Diruta's description of intabulating unisons; Diruta, *Transilvano,* vol. 2, bk. 1, 2.
[18] This issue is covered thoroughly in Chapter 1.

If we accept this, IKT's intabulation process – the very one described by Diruta, although this would presumably be conducted in a much more automatic way by a professional keyboardist – is an essential condition to notating a work in the format. In this view, the process of intabulation is not at all separated from notating, and the steps taken in intabulating are analogous to the mundane acts of notating such as filling in a note head. Extending this idea a bit further, the process of intabulating operates in an algorithmic fashion, *automatically translating* polyphony into a keyboard style. IKT's conventions both reflect and actualize the intabulation process.

If this is the case, it would give the intabulation process itself agency that we would not normally consider to be held by a notational format; the act of notating a piece in IKT – whether this is a vocal work in part-books or an abstract "piece" that exists in the mind of a keyboard composer – would require it to be altered in an intabulatory process. This process involves what we would call recomposition – the substantial alteration of the actual notes on the page – and writing down, or intabulating, a piece of music in IKT automatically requires the recomposition of the work to sit idiomatically at the keyboard. IKT therefore embodies idiomatic-stylistic elements that one would not normally consider to be notational, but rather compositional. This notation – as an embodiment of both the intabulatory and notational acts used to create an intabulation – has an agency over elements that we would normally attribute to the composer.

In addition, this means that IKT *requires* music notated in it to conform to certain stylistic criteria – more specifically, to certain idiomatic textures. IKT's algorithmic application of these textures – its notational conventions as well as the rules that form the intabulation process – are facilitated from a practical standpoint as well as from stylistic ones. From a practical standpoint, IKT's processes have to be undertaken to make the music sit idiomatically on the keyboard. In this sense, IKT graphically "mirrors" the keyboard. But IKT also mirrors something else: the *style* of *cinquecento* keyboard playing. Its algorithmic stylistic alterations force the music – especially music that is conceived contrapuntally in a more abstract sense – into a keyboardistic mold. It is for this reason that abstract music in IKT – from highly polyphonic imitative ricercars to lighter *balli* – shows a general tendency to adopt similar textures.

Notational Objections: Problems with Using Written-Down Music to Study Unwritten Traditions

If IKT alters the music it transmits due to an imbedded, algorithmic intabulation process, this would in turn mean that even "free" compositions would have an intabuatlory model – IKT must be algorithimically altering *something.* In the case of a ricercar or toccata, does this model essential equate to an improvisation, to a version of a piece developed in the mind of the improvising keyboard-composer? Or, if the music is conceived on more abstract terms, is the model a version that is worked out contrapuntally, either on paper (in a full score or in parts), or mentally? In both cases, the "model" is processed by IKT's algorithms just as the model in an intabulation, resulting in a score that conforms to IKT conventions. The latter view in particular is supported by the implied contrapuntal structures that are hidden by IKT's conventions, such as those seen in the Merulo canzona at the beginning of this chapter, or the ones highlighted by Silbiger and Boncella.[19]

In abstract keyboard music, however, would a composer simply not attempt to capture a version of what he or she played? The conceptual overlap between notating a piece and performing it has already been noted by scholars of sixteenth-century music.[20] Written-down keyboard pieces, in some instances, could be seen as instantiations of a "piece" of music that existed, in an unfixed state, in the mind of the composer.[21] In this view, even an intabulation could be viewed not as a methodically worked-out transcription, but likewise a product of improvisatory processes: simply a "transcription" of an extemporaneously conceived improvisation based on a vocal model. This becomes a key question when examining the virtuosic and highly *artificioso* intabulations by prominent keyboard-composers such as Andrea Gabrieli or Claudio Merulo: are these pieces best described as improvised glosses – entirely akin to a parody fantasia based on a vocal model – that are captured through IKT notation as instantiations of an ongoing improvisatory process, or are they the product of a notational process (as described by Diruta in his treatise)? After all, intabulation is by definition a notational practice, and its conventions are clearly visible as a by-product of the process described by Diruta.

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[19] See Note 14 above.

[20] See, for example, Stanley Boorman, "Early Music Printing: Working for a Specialized Market," in *Studies in the Printing, Publishing and Performance of Music in the 16th Century* (Burlington, VT: Ashgate, 2005), 230.

[21] The idea of written-down works being instantiations of continually existing works in the mind of the composer has currency in concordances between different keyboard works or versions of works from composers such as Bach (see for example alternate versions of the Prelude in the Prelude and Fugue in A Minor for organ, BWV 543). More recent thinking about the pedagogical function of written-down keyboard works by composers such as Buxtehude would fit this idea as well: see Kerala Synder, *Dieterich Buxtehude: Organist in Lübeck,* rev. ed. (Rochester, NY: Rochester University Press, 2007), 229. David Schulenberg has described the possible use of formulae in the works of Bach – basic gestures and ideas, such as opening gestures. Reliance on these improvisational formulae could produce different versions of the same work; Schulenberg cites alternate versions of the little Prelude in C BWV 924. David Schulenberg, "Improvisation and Composition in the School of J.S. Bach," in *Bach Perspectives 1,* ed. Russell Stinson (Lincoln: University of Nebraska Press, 1995), 21.

Another complicating factor lies in the relationship between intabulation and composition. If we accept that intabulation is part of IKT's very essence as a notational format, intabulation process becomes a key component of the compositional processes for music written down in the format. Analyzing intabulations is therefore a key window onto the compositional process in *cinquecento* keyboard music; it heightens the importance of intabulation process for understanding this music overall.

The issues raised here also speak to the obvious need to attempt to untangle intabulation, composition, notational convention, and improvisatory practices, all of which seem to be at danger of being conflated. And, underlying all of these is a fundamental problem inherent to using notation as a means to study what were primarily unwritten traditions. The entire idea of IKT as being algorithmic speaks to it: isn't the apparent agency held by the notation actually a mere reflection of the true agent, the player? IKT is a mirror of keyboard playing, its notational conventions reflective of the way that players extemporized music or spontaneously adopted vocal or instrumental polyphony on the keyboard. If we take a given piece of abstract music notated in IKT as the central object of the inquiry – one reflective of music that would normally be improvised, say a ricercar or an intonazione – the argument reveals itself to be circular: are works notated in IKT in a keyboard style because of IKT's agency, or does IKT merely reflect the style itself? Boiled down, this is the same type of circular reasoning that arises in any study that is forced to use evidence in the form of written-down music to study improvised practices: if we take a written-down text as evidence of lost improvisational practices, are we not at danger of defining those lost practices by the evidence itself?[22]

Keyboard Thinking: IKT as the Mindset of an Unwritten Tradition

As a means to circumvent this sort of logical problems such as these, I adopt a historically grounded analytical mode that I call "keyboard thinking." Keyboard thinking considers facets such as musical style and notation to be not only interrelated but interdependent; it also encompasses both the attempt to approach the *mindset* of *cinquecento* keyboard improvisers as well as the analytical stance adopted towards musical texts that constitute the evidence of that mindset. In a sense, it seeks to unify analyzer and the music under analysis, by attempting to reconstruct the thought processes and musical conceptions as well as the actual practices of historic keyboardists. That is, the analyst attempts to situate him- or herself within a reconstructed framework – similar to that of the subject – in an archeological process. At its core keyboard thinking is holistic, in both its practical application, its theoretical construction, and in that it considers elements of *cinqucento* keyboard playing – from technical elements to creative ones, from improvisational elements to compositional ones – as united.

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[22] This becomes an issue in several studies, many of which seem to tacitly accept the existence of a universal "improvised" style, and by extension, the notion that the presence of its features indicate improvisation. In his study of sixteenth-century instrumental music, for instance, Richard Murphy establishes musical-stylistic criteria that he describes as fundamentally linked to improvisation, and then proceeds to examine the literature for evidence of this style. Richard Murphy, "Fantasia and Ricercare in the Sixteenth Century" (PhD diss., Yale University, 1954); 1-21. That such an approach – which potentially, by logical extension, could cut wide swaths across national borders, time periods, and distinct cultural traditions – is problematic seems obvious. Still the idea of universal stylistic signifiers in improvised music is rather common. Bruno Nettl alludes to some common "improvisational" musical features on the "microcompositional level," although he points out that these occur in "composed" music in certain cultures. Nettl, "Thoughts on Improvisation: A Comparative Approach," *The Musical Quarterly* 60 (1974): 10-11.

Richard Andrews notes the circular reasoning problem in his study on the *commedia dell'arte*, a study that – like those cited above – examines written-down (scripted) comedies as evidence of improvised practices: "In particular we have to decide empirically, not logically, what can rank in any dramatic script as 'evidence' of non-scripted performing practice; and that decision will depend largely on our having perceived features which we have decided, in advance, constitute the 'evidence' which we are seeking. The argument is circular, but unavoidable: we can comfort ourselves with the observation that most of the judgements we have to make in real life, as opposed to scholarship, are taken on the same unsatisfactory a priori basis." Richard Andrews, *Scripts and Scenarios: The Performance of Comedy in Renaissance Italy* (Cambridge: Cambridge University Press, 1993), 174. Andrews seems to suggest that the problem may be solved by a partial abandonment of the positivist approach that has traditionally characterized historical musicology. In other words, the more flexible approach suggested by keyboard thinking may allow for insights that a purely positivistic undertaking might not.

Keyboard thinking has parallels in recent scholarship. For example, Roger Moseley has recently explored the "ludomusical" aspects of keyboard playing, taking the keyboard itself as a *space* for musical play; in a more general sense, there are parallels here in that I consider the keyboard – and IKT-as-reflection-of-keyboard – as a conceptual space of creation, one separate from vocal and "paper"-based musical-creative spaces alike.[23] Keyboard space entails its own reality, its own laws and creative parameters. Much closer to the present study, Leon Chisholm has recently conducted an examination of the subjectively experienced actions of keyboard playing – what he variously describes as the haptic or sensorimotor experiences of keyboard playing – as an agent of change in music around 1600.[24]

While there are obvious similarities between aspects of the studies of Moseley and Chisholm and keyboard thinking, differences between these approaches and my own can be found in two key areas: (a) keyboard thinking is primarily an analytical technique, intended to facilitate the analysis of historic keyboard music by adopting (to the extent possible) a historic mindset as an analytical construct; and (b) keyboard thinking purposely unifies primary-source material with the application of experiential data acquired through performance. In both senses, keyboard thinking attempts to collapse the analyst and the analyzed through an archeological process that incorporates experiential evidence in the form of playing. The object of study is ultimately conceived holistically as well, encompassing precisely those improvisational techniques used by the historic improvising subject, the mindset of the subject, and the written evidence it produced.[25]

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[23] Roger Moseley, "Digital Analogies: The Keyboard as Field of Musical Play," *Journal of the American Musicological Society* 68 (2015): 151-227.

[24] Leon Chisholm, "Keyboard Playing and the Mechanization of Polyphony, Circa 1600" (PhD diss., University of California, Berkeley, 2015). See especially Chapter 1, 20-70.

The holistic approach taken by keyboard thinking is useful in addressing the problems already cited with untangling improvisation, composition, notational convention, and intabulation. It also helps to address the lack of extant historical evidence describing specific techniques of improvisation in *cinquecento* keyboard music. A lack of evidence outside of the musical text itself is of course not uncommon for studies of early-modern improvisation. Specifically lacking here are any theoretical or didactic *musica prattica* treatises that thoroughly and explicitly treat improvisation. The small number of *cinquecento* keyboard treatises, such as those of Adriano Banchieri and Girolamo Diruta, do not treat improvisation directly; in addition, they are chronologically far removed from much of the repertoire examined here, in some cases by almost a century.[26]

This leaves a situation in which musical text is often the primary material available in a search for improvisation, at least if such a search is undertaken on a strictly positivistic basis. This isn't to say that written-down music can't be of use in searching for lost unwritten traditions; nor is it to suggest that studies that focus on an examination of musical text haven't been successfully undertaken.[27] The search for evidence is aided by establishing a context formed from evidence of what a possible improvisation *might* have sounded like, through an examination of theoretical sources, historical descriptions, or functional context.

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[25] This "holistic" approach is reflected in theoretical sources as well; in his tenth "conclusion" on organ playing, Adriano Banchieri cites three qualifications necessary before being able to play: "1) To be able to sing securely with regard to the tactus. 2) To have experience playing the keyboard with both hands. 3) To have knowledge of the cadences and to have good ears." ("1) Cantore sicuro, per interesse della Battuta. 2) Pratica della Tastatura in amendui le mani. 3) Cognitione, delle cadenza, & attentione d'orechie.") Adriano Banchieri, *Conclusioni nell suono dell'Organo…* (Bologna: gli Heredi di Gio. Rossi, 1609), 24. See facsimile ed. (Bologna: Forni Editore, 1968).

[26] Adriano Banchieri, *L'Organo suonarino,* 1st ed. (Venice: Ricciardo Amadino, 1605; facsimile ed. with preface by Giulio Cattin, Bologna: Forni, 1969). Banchieri's treatise was reprinted three times, in 1611, 1622, and 1638; the 1611 and 1622 editions contain substantial alterations and a great amount of added material. The facsimile edition by A. Forni reproduces the original 1605 edition in its entirety, along with the most substantial pieces of new material from the 1611 and 1622 editions (the 1638 edition is identical to the 1622 edition).

Keyboard thinking adopts this sort of framework through its holistic approach; at its core, it is an attempt to reconstruct the thought patterns, mechanical processes, and musical conceptions of sixteenth-century keyboardists: to approach the *idiomatic* playing of *cinquecento* keyboardists. By using the word "idiomatic," I am specifically referring to the role of improvisation within larger musical cultures. As described by Derek Bailey, idiomatic improvisation is distinct from "free" improvisation, which largely continues to inform present-day conceptions in Western art music; it is "the expression of an idiom – such as jazz, flamenco or baroque – and takes its identity and motivation from that idiom."[28] Rather than an ontologically distinct activity, improvisation in this case is a simply an element of performance – often a highly important one, but not a defining one – within a specific musical culture. The current state of knowledge strongly supports a view of *cinquecento* keyboardists as "idiomatic" improvisers: organists learned through apprenticeship, their pedagogy and art was transmitted largely without the use of written text, and they were trained to play a specific instrument with specific technical demands and techniques, for use in a narrowly defined functional context.[29]

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[27] To cite two well-known ones: James Haar examines early Renaissance vocal music for traces of practices involving improvised poetry and the recitation of poetry to formulae, and in a similar analytical vein, David Schulenberg has explored the written-down keyboard music of Bach and composers in his circle, for evidence of improvisational techniques. James Haar, "Improvvisatori and Their Relationship to Sixteenth-Century Music," in *Essays on Italian Poetry and Music in the Renaissance, 1350-1600* (Berkeley: University of California Press, 1986), 76-99.
David Schulenberg, "Improvisation and Composition," 1-42.

[28] Derek Bailey, *Musical Improvisation: Its Nature and Practice in Music* (Englewood Cliffs, N.J.: Prentice-Hall, 1980), 4-5.

[29] For more on a specific case involving *cinquecento* organ pedagogy, see Gary Towne, "Music and Liturgy in Sixteenth-Century Italy: The Bergamo Organ Book and Its Liturgical Implications," *Journal of Musicology* 6 (1988): 484-87. The few Italian keyboard treatises that treat keyboard improvisation do so indirectly; they all date from the end of the century. Their significance will be covered shortly.

All of this would partially separate them from "mainstream" Renaissance musical training.[30] They were idiomatic improvisers precisely in the way a "tenorist" was, or an improviser of descant.[31]

Keyboard thinking's holistic approach links it directly to the mindset of idiomatic improvisors. Idiomatic keyboard playing encompassed mechanical aspects, such as fingering and hand position; improvisation, which, within early modern practices, was certainly best described as a kind of "real-time" composition; and the orally transmitted pedagogical traditions of keyboard players. All of these would influence musical style, in both extemporized and written-down keyboard music, and a holistic approach, one that considers all of the aspects above, is therefore useful, especially when written-down music is the primary form of evidence at hand.[32]

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[30] That is, separate from the standard view of the singer-composer as exemplified by figures such as Dufay and Josquin.

[31] Bruno Nettl, Rob C. Wegman, et al., "Improvisation," *Grove Music Online, Oxford Music Online*, accessed November 16, 2016, http://www.oxfordmusiconline.com.libproxy1.usc.edu/subscriber/article/grove/music/13738pg2

[32] A model for this type of approach can be seen in the work of Massimiliano Guido.[32] In analyzing Diruta's treatment of improvised counterpoint, Guido ties two apparently disparate elements, fingering and counterpoint, pointing to Diruta's fingering and division practices as the "missing link" in his seemingly fragmentary counterpoint method (Diruta appears to jump from simple species-style bicinia to complex four-part ricercars). Rather than viewing elements such as playing technique and composition as separate, Guido sees them as part of a holistic method to keyboard playing; therefore, improvising diminution (an element of embellishment) and internalizing the sensorimotor patterns of playing scales with paired fingerings (a technical element), were used to improvised counterpoint (a compositional/improvisational element). Massimiliano Guido, "Counterpoint in the Fingers: A Practical Approach to Girolamo Diruta's Breve & Facile Regola di Contrappunto," Philomusica on-line 12 (2012): 64-76.

“Improvisation” in the Renaissance: An Inside-Out View of the the Problem of the “Unwritten” Text

Through its holistic approach, keyboard thinking is intended to partially circumvent the problems associated with using written evidence to reconstruct unwritten practices. However, on a purely philosophical level the problem of the unwritten text will always remain: ontologically, every piece of written-down or published keyboard music, regardless of transmission, function, or genesis, is by definition a composition, even if we accept various degrees of “composedness.” To what degree can a given written text be seen as reflective of improvisation?[33]

In the case of sixteenth-century keyboard music, however, anxiety over the fallacy of the unwritten text may be unmerited. Rob Wegman describes the need for the contemporary scholar of improvisational practices to distinguish between “etic” and “emic” analytical approaches; that is: does the scholar view improvisation from an “outsider’s” vantage-point, or from one within the culture under examination?[34] In the case of *cinquecento* keyboard music, an “emic” view of improvisation would position it as largely conflated with composition, rather than a distinct activity that is precisely defined as either a departure from a written text or by the lack of notation. Wegman goes on to specifically cite sixteenth-century keyboard genres as being, like discant, neither “improvised” or “composed,” as the distinction simply didn’t exist.[35] This is also a defining factor in “idiomatic” improvisation, as Wegman points out elsewhere, again suggesting that sixteenth-century keyboardists were idiomatic improvisers.[36] As noted above, in idiomatic improvisation there generally isn't a term used by the improvising musician to distinguish "improvisation" as a distinct activity. Therefore, improvising discant is not known, by medieval thinkers, as "improvising" – it is simply singing discant. In the same way, all of the musical activities of the *cinquecento* keyboardist simply fell under the rubric of "keyboard playing."

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[33] Some studies of improvisation in early music have directly addressed the problem: James Haar, for instance, begins his study on the *improvvisatori* by describing two basic investigative approaches: the first involves collecting as much information as possible on musicians who improvised (and, by extension, their cultural environments, career activities, and so forth), while the second, “somewhat risky but possibly more rewarding, is to search for clues in written music of the material, perhaps even the style, of the improvisatory tradition.” Haar goes on to conclude that, “such clues exist… and they tell us a good deal, though nothing like the whole story.” Haar, “Improvvisatori,” 78.

[34] Nettl, Wegman, “Improvisation.”

[35] Ibid.

In fact, there doesn't appear to be a separate term used to delineate improvised keyboard playing until the end of the sixteenth century, suggesting that *cinquecento* keyboardists wouldn't make a sharp conceptual distinction between composing a ricercar, playing a ricercar from a tablature, and improvising one. As Robert Judd points out, many of the players praised in contemporary sources did not publish many keyboard works, suggesting that their fame derived from playing rather than publishing composed works.[37] The word "ricercar," similar to "toccata," implies improvisation, in that it is derived from a verb – an action, not a thing. At the same time, it is notable that the Italian term that does emerge by the end of the century to describe improvising as a distinct activity in keyboard music – namely, *sonare a fantasia* – is one that Italian keyboardists used less frequently as a genre name, indicating that we may have to be careful in assuming that a ricercar (as a *res facta*) was a direct result of "*sonare a ricerca*" (as an action).[38] Indeed, a passage from Ercole Bottrigari's *Il desiderio* (1594) describes the ricercars of

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[36] Wegman,"From Maker to Composer: Improvisation and Musical Authorship in the Low Countries, 1450-1500," *Journal of the American Musicological Society* 49 (1996): 431-32. Wegman points out that fifteenth-century counterpoint was an oral practice; therefore, "written" would be the necessary qualifying adjective, not "improvised." He also ties this to Bailey's notion of idiomatic improvisers (see 431-32n64).

[37] Robert Judd, "The Use of Notational Formats at the Keyboard" 2 vols. (D.Phil dissertation, Oxford University, 1989), vol. 2, appendix, 99-100.

[38] However, it should be noted that there was considerable overlap between the ricercar and fantasia in lute music. See Christopher D. S. Field, et al. "Fantasia." *Grove Music Online, Oxford Music Online*, accessed November 12, 2016, http://www.oxfordmusiconline.com.libproxy1.usc.edu/subscriber/article/grove/music/40048.

Annibale Padovano as “fantasias printed in his first book of *ricercari*,”[39] therefore implying a distinction between *fantasia* and ricercar, and in a way that directly indicates *fantasia* as a musical action, and ricercar as a *res facta.* It must be noted, however, that Bottrigari's book was published at the end of the century; the lack of evidence from the first half of the century might imply that there was no distinction between improvisation and composition at all.

If improvisation and composition were not formally distinct for early sixteenth-century keyboardists, this means that written-down music by these keyboardists can be understood, on some level, as written-down improvisations. The notion is supported by the fact that many of the extant keyboard pieces were written for functions for which organists would normally improvise. A short organ verset based on plainchant may have been published for organists who couldn’t improvise themselves, and can therefore be considered to be at least stylistically comparable to the improvised version.[40] Likewise, a short verset in manuscript could be a student’s on-paper exercise in extemporaneous *alternatim* service playing, or it could be a pedagogical model composed by a teacher.[41] All of these would, from a modern (or “etic”) perspective, be “written-

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As Judd points out, the term “sonare a fantasia” is more clearly articulated in Spanish sources, but used by both Banchieri and Diruta. Judd, "Notational Formats," 1:8.

[39] “…fantasia stampata nel suo primo libro de Ricercari." Ercole Bottrigari, *Il desiderio, overo de' concerti di varii strumenti musicali* (Venice: Amadino, 1594), 21.

[40] See, for example, the “very easy” short versets published in the *Intavolatura d’organo facilissima* (Vincenti: 1598).

[41] Like Banchieri’s *L’organo suonarino,* Bottazzi’s *Choro et organo* is published explicitly for pedagogical reasons; the music contained therein may therefore be taken to be pedagogical models. See Bernardino Bottazzi, *Choro et organo* (Venice: Vincenti, 1614). Bottazzi explains in his preface how his volume was intended to be used: “In which with an easy manner one may learn, in a short time, a sure way to play Masses, Antiphons, and Hymns on the organ, based on any kind of cantus firmus; and which treats, in the best order, several rules for intavolatura, and gives several essential notices and examples useful for the true and perfect organist; newly discovered, and published for the benefit of those who claim the art of the real organist..” (“In cui con facil modo s’apprende in poco tempo un sicuro methodo di sonar su’l Organo Messe, Antifone, & Hinni sopra ogni maniera di canto fermo, Et Si trattano con ottimo ordine alcune regole di Intavolatura, & si danno alcuni necessarij avvertimenti, & essempi pertinenti al vero, & perfetto organista, Nuovamente trovato, e posto in luce à beneficio di chi professa l’arte dell’Organista reale..”). Cited in Judd, “Notational Formats,” Appendix A, 124; trans. Judd, ibid.

out" improvisations, in that they would deliberately attempt to recreate the style of an improvisation for practical or pedagogical reasons.

Composing at the Keyboard and Composing in the Mind: Synergetic Threads of Renaissance Improvisation

All of this leads to a collapse of the distinctions between improvising and composition. In fact, the only distinction between the two becomes a temporal one, and there is no reason to suggest that processes used were not essentially the same in both – only in improvisation, these processes are executed spontaneously. One might also note that the *preparatory* actions in both would be exactly the same in this scenario. Even when improvisation becomes to be seen as a distinct activity – for Wegman, this emerges around the time that Tinctoris makes his famous distinction between *res facta* and *cantare super librum* – composition and improvisation can still be viewed as fundamentally related, each one occupying a point on a continuum of shared practices, methods, and traditions.[42] In the case of early keyboard music, many scholars have pointed out that *sonare in fantasia* was basically comparable to composition, in that both were based on what are commonly understood today as compositional procedure.[43] While we might have to take a

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[42] Nettl, Wegman, "Improvisation."

[43] This is can be seen in Santa María's lengthy organ treatise. Tomás de Santa María, *Libro llamado arte de tañer fantasia* (Valladolid: Francisco Fernandez de Córdova, 1565), vol 2, 12. Accessible on imslp.org: http://imslp.org/wiki/Arte_de_Ta%C3%B1er_Fantasia_(Santamar%C3%ADa,_Tom%C3%A1s). Accessed May 25, 2017. For an English translation, see Tomás de Santa María, *The Art of Playing the Fantasia (Libro Llamado El Arte de Tañer Fantasia [Valladolid, 1565]*, translated and edited by Almonte C. Howell, Jr. and Warren E. Hultberg (Pittsburgh: Latin American Literary Review Press, 1991).

Miguel Roig-Francoli points out that, while the goal of Santa Maria's encyclopedic treatise is playing in *fantasia,* his rules easily conflate with compositional procedure: "Even though the final result, which we – and other composers of the time – call fantasia, is actually an accomplished composition, Santa Maria always sees it as a living process of improvisation. His 'improvisation,' however, is completely bound by four hundred and twenty-eight pages of 'universal rules' and detailed prescriptions that refer to everything from the tonal system to minute details of counterpoint, various compositional techniques, and formal growth. What Santa Maria sees as an improvisational process is in no way different from what we see as a compositional process. This allows us to look at the finished product as a carefully structured and crafted composition." Miguel Roig-Francoli, "Compositional leap of faith to assume that a keyboard improvisation by Marco Antonio Cavazzoni sounded *exactly* the same as the music in his 1523 print, they certainly share a common generative process. Intabulating a ricercar in IKT is essentially similar to improvising it, and therefore, analyzing a written-down ricercar for compositional process is akin to analyzing it for improvisational practice.

It is important to stress that early-modern keyboard improvising would not have been "free" but systematic, like composition, best described in the famous phrase "composing in the mind," after the theorist Vincentino.[44] A precise understanding of the nature of improvisation during the early modern period has been greatly aided by an emergent body of recent research on improvised counterpoint in the fifteenth and sixteenth centuries. The new research positions improvisation as essentially similar to composition. In fact, it has significantly expanded our understanding of exactly how complex and structured early-modern improvisation could be. Many of the most pertinent studies, recent developments, and implications are summarized in short articles by Julie Cumming[45] and Kate van Orden.[46] Cumming provides a brief

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Theory and Practice in Mid-Sixteenth-Century Spanish Instrumental Music: The 'Arte de tañer fantasia" by Tomás de Santa María and the Music of Antonio de Cabezön" (PhD diss., Indiana University, 1990), 38.

[44] "Comporre alla mente." See, for example, the title of Chapter 24 in Nicola Vincentino's *L'antica musica ridotta alla moderna prattica,* Book IV. This well-known phrase, found often in secondary literature, may have been observed for the first time by Ernest T. Ferand, "Improvised Vocal Counterpoint in the Late Renaissance and Early Baroque," *Annales musicologiques* 4 (1956): 147-48. Ferand points out the seeming contradiction in Vincentino's title. For a scanned copy of Vicentino's treatise, see http://imslp.org/wiki/L'antica_musica_ridotta_alla_moderna_prattica_(Vicentino%2C_Nicola), accessed March 1, 2017.

Ferand also points out that "The most widely accepted term, however, by which the entire practice of improvised counterpoint became known, especially in Italy, was *contrappuno a mente,* or *alla mente,* and its Latin version, *contrapunctus ex mente,* literally "mental counterpoint." Ferand, "Improvised Vocal Counterpoint," 140-41.

[45] Julie Cumming, "Renaissance Improvisation and Musicology," *Music Theory Online* 19 (2013), no. 2, http://mtosmt.org/issues/mto.13.19.2/mto.13.19.2.cumming.html, accessed November 18, 2016. Much of this study has taken place at McGill University, Montreal, and they demonstrate a notable tendency to incorporate practical approaches that include experimentation through performance; many of them are also geared towards developing modern-day pedagogical techniques grounded in Renaissance practices.

[46] Elizabeth Eva Leach, David Fallows, and Kate Van Orden, "Recent Trends in the Study of Music of the Fourteenth, Fifteenth, and Sixteenth Centuries," *Renaissance Quarterly* 68 (2015): 187-227. Van Orden's segment – on sixteenth-century practices – can be found between pp. 207 and 221.

historiographical overview, especially highlighting the increasingly prominent role that improvised counterpoint is seen as holding in early-modern musical culture.[47] In fact, improvising counterpoint is now seen as being the most common way it was done, and, as a result, treatises are being seen in a new light; when unspecified, the de facto position should not be that they address *written* counterpoint, but rather unwritten counterpoint.[48] Also notable is the role that active musical experimentation has played in the field, in, for example, in conferences such as Phillipe Canguilhem's FABRICA, Masimilliano Guido's *Con la mente e con le mani*, and in the workshops conducted by Peter Schubert at McGill University, echoing and supporting keyboard thinking's archeological approach.[49] The new research is leading to profoundly different ways of looking at musical texts and their relationship to unwritten traditions. As Van Orden writes:

> What all of this means is that we can now look for specific, improvisable contrapuntal structures in a whole stratum of secular polyphony that many of us have always believed is close to the so-called unwritten tradition. Indeed, it raises a question of genuine historiographic significance: is the work before you a composition or just a *transcription of a common practice?* [emphasis mine]. Motets and masses are implicated here as well, for it only takes a perspectival shift to see how compositional commonplaces, such as stretto fugues, standard imitative techniques, and canons, related to the improvisatory abilities composers would have brought to their imagining of relationships among voices.[50]

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[47] Cumming, "Renaissance Improvisation and Musicology." Cumming provides a brief historiography of the study of Renaissance improvised counterpoint; she doesn't mention Ferand's important article, however, which in many respects foreshadowed many of the more recent pieces of scholarship; see Ernst Ferand, "Improvised Vocal Counterpoint."

[48] See Peter Schubert, "Counterpoint Pedagogy in the Renaissance," in *The Cambridge History of Western Theory* (Cambridge: Cambridge University Press, 2002), 503.

Although I describe this as a view that is increasingly accepted in recent scholarship, Ernst Ferand pointed out that "from Tinctoris we know that *contrapunctus* without qualifying adjective was taken as indicating improvised counterpoint"; although, as he points out, terminology remained somewhat ambiguous. Ferand, "Improvised Vocal Counterpoint," 142.

[49] See, for example, Schubert's McGill project videos, "Improvisation in Classical Music Education: Rethinking our Future by Learning our Past." https://www.youtube.com/watch?v=_4VPh9mRDZw.

[50] Kate Van Orden, "Recent Trends," 212.

This research casts new light on the nature of improvisation in the sixteenth century. In a sense, it is cementing what has been an evolving definition of "oral composition," a notion of musical creation in the early modern period that is more accurate than the modern conception of improvisation, which, as Lydia Goehr pointed out, is formulated against the notion of the work-concept.[51] The construct of "composing in the mind" not only positions improvisation and composition as being manifestations of the same generative processes, it also means that improvisation could sound more like composition, and composition more like improvisation. For example, evidence shows that improvising musicians were able to produce music of a complexity traditionally associated with composition, not improvisation, and that these improvised performances could be done by groups of singers. The appendix of Phillipe Canguilhem's recent study on Vicente Lusitano presents a list of tests given to the candidate for *maestro de capilla* in Toledo; they show that the successful candidate was expected to demonstrate incredible skill, in some instances improvising polyphony *super librum* while dictating other singers's parts through the Guidonian hand.[52] Present-day experimentation, in real time, has begun to replicate these feats.[53] And, at the same time, written-down *works* – published or in manuscript alike – could conceivably sound more like improvisations. As Van Orden notes, contrapuntal structures seen commonly in sixteenth-century composition – and traditionally deemed by scholars to reflect composition exclusively – could actually be improvised.[54]

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[51] Lydia Goehr, *The Imaginary Museum of Musical Works: An Essay in the Philosophy of Music,* rev. ed. (New York: Oxford University Press, 2007), 244.

[52] Phillipe Canguilhem, "Singing Upon the Book According to Vicente Lusitano," *Early Music History* 30 (2011): 102-3.

[53] See, for example, the McGill videos cited above; in addition, see videos by Peter Schubert showing how to improvise canon, based on techniques described in treatises such as Lusitano's: https://www.youtube.com/watch?v=n01J393WpKk

[54] Or, as she puts it, "compositional commonplaces" (see above).

Needless to say, this has caused a profound shift in the way that scholars are viewing and approaching the analysis of Renaissance music. Van Orden writes the following regarding Canguilhem's FABRICA conference in Toulouse, although her statements apply equally to the field as a whole:

> FABRICA's results are profoundly destabilizing, for they illuminate the gray area between written composition and oral improvisation, showing that the extemporaneous polyphonic inventions of musicians rivaled the most valued compositions of the day: practices such as "singing on the book" and "mental counterpoint" might range widely from simple ornamentation *a 2* or the rote addition of voices to contrapuntally exquisite elaborations of a chant melody in four parts.[55]

In addition to redefining composition and improvisation, these studies also highlight the role of counterpoint as a "living process," taught and practiced extemporaneously. While counterpoint was primarily an *improvisational* activity, not a compositional one, it was, at the same time, used as the foundation for *composed* polyphony. Therefore, counterpoint functioned as the foundation for both improvised performance and for composed music, but was at the same time ontologically distinct from both.[56] The precise positioning of counterpoint is important to the present argument. It is essential to the hypothetical reconstructed techniques described in Chapter 2, for instance, which I argue also functioned as a phenomenon distinct from improvising and composing – a set of underlying techniques used in both written-down and improvised keyboard music. These techniques are posited as the basic steps in "composing *alla mente*" at the keyboard, *cinquecento*-style.

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[55] Van Orden, "Recent Trends," 211.

[56] Wegman "Maker to Composer," 440. "The noun *contrapunctus,* covering both, can be an overarching term by virtue of being, not an object, but an *ars,* a knowledge of the rules for making and doing."

The Systematic Nature of "Free" Improvisation

Keyboard thinking also incorporates experiential data: that is, actually trying out historical techniques in order to evaluate them. This enterprise is also made more feasible by the new counterpoint research and the evolving view of "composing in the mind." Once the thought patterns and mindsets of *cinquecento* keyboard improvisers are partially reconstructed, keyboard thinking melds these with written evidence and experiential data to potentially reconstruct *lost* techniques. The current understanding of the nature of Renaissance improvisation points to systematic conceptions, in that rather than being "free," keyboard improvisation – like the rules of written counterpoint – was conducted as a series of rules and formulae. While sources relevant to specific techniques will be treated in due course, I will here give a demonstration of what I mean by using the word "systems" when speaking of early-modern musical thinking.

In the short article cited earlier, Julie Cumming gives a short example of how singers could improvise a two-voice canon.[57] The technique works through limitation: rather than freely creating a melody, the guide singer has to create a melody (or paraphrase a plainchant melody) that can only move by certain intervals. The specific intervals that are allowed are dependent upon pre-established features of the canon, such as the temporal gap between entrances and the interval of imitation. Memorizing and following these rules, singers would be able to improvise a canon without great difficulty.

Improvising a canon in this manner was only one technique used to improvise counterpoint. In a recent article, Peter Schubert provides a list drawn from historic sources;[58] discussing four of these techniques in detail: *contraponto fugato* in two parts, invertible counterpoint in two parts, adding two lines in canon to a CF, and stretto fuga in two to three parts. For two-part stretto fuga, Schubert demonstrates that the theorist Vicente Lusitano provides a method that involves the memorization of a stockpile of melodic motions; the student would internalize these in order to possess a "thesaurus" of figures to form a short two-part canon at any given point against a plainchant CF. Particularly noteworthy is the use of the individual melodic intervals in the CF as *loci;* that is, the CF is processed as a chain of intervals, atomized musical scenarios to which specific memorized fragments could be applied. As Schubert points out, once the puzzle pieces of counterpoint are memorized, all that remains is figuring out how to extemporaneously tie the fragments together.[59]

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[57] Cumming, "Improvisation and Musicology."
[58] Peter Schubert, "From Improvisation to Composition," in *Improvising Early Music* (Ghent: Leuven University Press, 2014), 96.

Underlying all of the techniques explored by Schubert, including Lusitano's canon technique and the two-voice improvised canon described above, are common traits: a reliance on the memorization of stock figures (as seen in Lusitano's technique), or rules that constrict interval choice (seen in the two-voice canon). Therefore, this type of improvisation is based upon *process*: the systematic memorization and execution of rules or formulae. This way of working is clearly seen in the overall structure and layout in Santa María's *Arte de tañer fantasia,* which is essentially a method for playing in *fantasia* based upon a long and complex series of rules that were to be studied and memorized.[60] The nature of these rules again implies that they are part of an overall system of thought: the use of processes that apply to specific musical scenarios, rules that limit musical choice, and the memorization and application of figures to specific melodic intervals.

A thorough study of the fundamental *nature* of these methods – not just their specific prescriptions – provides a context in which to establish plausible hypothetical ones. For example, viewing a long CF as a chain, made up of pairs of melodic intervals, is a common feature in improvised counterpoint; interval pairs were a part of Lusitano's method for improvising canon, as mentioned above. Melodic intervals were, of course, often used as *loci* in instrumental diminution treatises as well; the player would memorize a vocabulary of stereotyped diminution figures that could be applied to specific intervals. This type of thinking explains why the intabulators whose work is examined in Chapters 1 and 3 seem to consider their models as a chain of steady chordal motion – each pair of chords a *locus* for diminution figures that could be applied to any part of the texture – and the abstract ricercars examined in Chapter 2 show evidence of the same way of thinking.

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[59] As Schubert writes, "That is, given any 2-note CF motion, Lusitano has at least one solution. (Sometimes, when it is impossible to connect, a rest is used.) By memorizing them, the singer is equipped with a *thesaurus* of response to any CF motion – the adventure is in connecting them." Peter Schubert, "From Improvisation to Composition," 105.

[60] Santa Maria, *Arte de Tañer.*

Entirely within this systematic line of thinking is the important role of memory: specifically for *cinquecento* keyboard improvisation, the idea that players had stockpiles of "licks" or formulae – for example, particular diminution patterns – that were committed to memory and used as building blocks in the process of playing extemporaneously on the keyboard. This can clearly be seen in the intabulations of Gabrieli, for example (see Chapter 3). Specific to the keyboard, many of these building blocks are conceived vertically, not linearly – that is, as small yet intact units with pre-formed movement of parts.

Keyboard-Centered Practices of Renaissance Improvisation: A Chordal Foundation

Beyond general similarities in techniques and methodology – for example, in the adoption of *systems* of improvisation – keyboard improvisation probably borrowed many of the same precise techniques as used in vocal Renaissance counterpoint. Peter Schubert has highlighted some specific instances (particularly in Santa María's treatise), and, as I demonstrate in Chapter 2, many of the early *cinquecento* ricercars, such as those found in the Castell'Arquato manuscript collection, show evidence of the same improvisational techniques.[61] However, at the same time, there were certainly some important distinctions as well, and it is for this reason that keyboard thinking deliberately views keyboard improvisation as a parallel yet distinct current in *cinquecento* musical practices. The biggest evidence to support a distinction lies in the style of the repertoire itself, which shows a strong tendency towards the use of chords and chordal structures, used in a manner that is obviously distinct from vocal counterpoint. This chordal style permeates much of the keyboard music of the *cinquecento*. It is most obvious in the earlier music of the century – that of the Cavazzoni and in the music in the Castell'Arquato manuscripts, for instance – but it is also seen in the latter *toccate* and *intonazione* of the Gabrieli. It also can be observed in intabulations of polyphony, which, as I demonstrate in Chapter 1, favor a skeletal *sounding* treble-bass structure over inner parts. And lastly, it is seen in IKT's functioning itself, in its conventions and unwritten rules.

The importance of this chord-driven style, and the musical conceptions it implies, continues to be underappreciated in scholarship on the subject. This is largely due to the persistence of an underlying assumption that instrumental practices always followed vocal ones in the Renaissance. Scholars have traditionally focused on the influence of vocal polyphonic practices on instrumental ones, and the aesthetic goals and techniques of the latter were seen as fundamentally grounded in those of the former. This attitude is for the most part reflected in Keith Polk and Victor Coelho's recently published monograph *Instrumentalists and Renaissance*

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[61] Peter Schubert, "From Voice to Keyboard Improvised Techniques in the Renaissance," *Philomusica on-line* 11 (2012): 11-22.

Culture, 1420-1600.[62] The authors situate instrumentalists outside the mainstream of vocal music, portraying them as often being unable to read or write in notation, but largely dependent upon vocal practices nonetheless.[63] This point is reiterated several times by the authors, even as they argue that scholars have chronically ignored the role of instrumentalists in Renaissance culture.[64]

In a general sense, this stance is supported by evidence from treatises, and, to a degree, it is valid for much of the keyboard music from the *cinquecento*.[65] In fact, the repertoire itself does suggest that keyboard style became increasingly vocal-oriented as the century progressed. *Cinquecento* keyboard improvisation also seems to have become increasingly like vocal polyphony around the middle of the century, a phenomenon reflected in the stylistic shift of the keyboard ricercar from the preludial type to the imitative type. Richard Murphy cites the famous

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[62] Victor Coelho and Keith Polk, *Instrumentalists and Renaissance Culture, 1420-1600: Players of Function and Fancy* (Cambridge: Cambridge University Press, 2016).

[63] "More importantly, it is clear from documentation as well as from the extant sources of fifteenth-century instrumental music – Faenza, Buxheim, Pesaro, even Casanatense – that instrumentalists followed exactly the same contrapuntal or decorative procedures that were applied to the composition of vocal music, whether they were worked out in notation or rendered through improvisation." Ibid., 193.

[64] It is also important to point out that the topic of this section is fifteenth-century practice; at the same time, the authors argue that the same "fundamental approach to composition was similar to the previous century…" Ibid., 209.

In fact, if anything, these particular authors go on to stress that sixteenth-century instrumentalists – particularly lute players – improvised less. This is perhaps a somewhat outdated attitude, as it would seem that the expanding world of research on improvised *vocal* counterpoint in the sixteenth century may have implications for our view of instrumental improvisation. That being said, the extant written evidence – from treatises and printed repertory – would broadly support this view, even as intuition may suggest otherwise. See Ibid., 208-12.

[65] Polk and Coelho cite Durán and Paumann as demonstrating that, at least in the fifteenth century, the rules of improvised vocal counterpoint were equally applicable to instrumentalists. Ibid., 198-99. Polk and Coelho also point out the similarity between Tinctoris' famous method – written for vocalists – and the *fundamenta* in organ tablature volumes.

A few studies have begun to explore sixteenth-century keyboard improvisation as distinct from vocal traditions. To cite two: Massimiliano Guido, "Counterpoint in the Fingers"; and Peter Schubert, "From Voice to Keyboard." Massimilliano Guido's focus is on counterpoint, which was basically vocal in its orientation, but highlights ways in which Diruta's technical playing guide, including elements such as fingering, can be linked to his counterpoint method.   Peter Schubert writes of some ways in vocal counterpoint was transferable to the keyboard. At the same time, he highlights a few ways – related to the practical experience of performing on a keyboard – in which keyboard polyphony differed from vocal polyphony. For example, he cites the lack of voice crossings in counterpoint in Santa María's *Arte de tañer fantasia*. Schubert, "From Voice to Keyboard," 20.

San Marco *prove*, which demanded an improvised performance by the very nature of the "test" – the candidate was given a melody chosen randomly from a service book – but required that the improvisation take on the imitative quality of vocal counterpoint.[66] While these studies do stress some keyboardistic aspects, the implication is that the basic criteria of vocal counterpoint improvisation were applicable to keyboard playing in the sixteenth century.

The universal application of this established premise to the entirety of sixteenth-century keyboard practices is, at the least, challenged by much of the music itself. It certainly seems clear that one must draw a distinction between an idiomatic keyboard style and a vocal-oriented one in early *cinquecento* keyboard music, and the less contrapuntally oriented works imply generative processes separate from those used in vocal counterpoint. As vocal style became more dominant in Italian instrumental music as the sixteenth century progressed, the idiomatic chordal style never completely died out: the chord-driven style persists in late sixteenth-century genres: the *intonazione,* the Venetian toccata, the *balli* repertoire*,* and so forth. It is therefore obvious that the genres that largely adopted the musical language of vocal counterpoint, such as the ricercar and the canzona, only represent one aspect of Italian keyboard music, and that vocal counterpoint, while a major component to the *cinquecento* organist's toolbox, was definitely not the only one.

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[66] See Murphy, 42-43. That this is the case can be seen in the stipulation to "sonar di fantasia regolatamente, non confondendo le parti, come che Quattro cantori cantassero." Cited in Francescio Caffi, *Storia della Musica Sacra nella già Capella Ducale di S. Marco in Venezia* (Venice: Antonelli Ed. 1854; reprint Milan: Bollettino Bibliografico Musicale, 1931), 28.

Spanish sources, such as the treatises of Juan Bermudo and Tomás de Santa María, also imply that keyboard improvisation was ideally like vocal polyphony. Describing Santa María's treatise, Murphy declares that "there is no real separation of 'paper' composition and / or improvisation at the keyboard," and that Santa María's steps were equally applicable to *fantasia* (the preferred term for improvisation by Spanish theorists) or to composition. Murphy, "Fantasia," 45. Roig-Francoli echoes this, concluding that Santa María's improvisational method was essentially the same as composition. Roig-Francoli, "Compositional Theory," 38.

Cinquecento Keyboard Style and Keyboard Treatises: Reflections of an Unwritten Keyboard Mode of Improvisation

The few extant Italian keyboard treatises from the sixteenth century lack complete descriptions of improvisational methods, at least nothing as detailed as a source like Santa Maria's 1565 treatise, *Arte de tañer fantasia,* offers for sixteenth-century Spanish music; moreover, they do not shed much light on keyboard-specific techniques related to improvisation.[67] Nonetheless, reading these sources within the context of the stylistic currents of *cinquecento* keyboard music – in particular, the earlier, chord-driven style – supports the view of keyboard-specific generative processes. For example, Diruta's well-known division of counterpoint between *contrapunto osservato* and *contrapunto commune,* although explicitly tied to compositional practices related to the *seconda prattica* by Adriano Banchieri in the *Cartella musicale* (specifically, to the inclusion of the faster-moving figures, derived from diminution practice, in compositions), certainly indicates keyboard-specific practices – at least as originally formulated by Diruta.[68] While *contrapunto osservato* is deemed to be more beautiful, due to the fact that it is more restricted (in the sense that it must be done in accordance with the rules of counterpoint),

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[67] Santa Maria, *Arte de Tañer.*

[68] Banchieri ties *contrapunto commune* to the "rhetorical" approach of the seconda prattica, mirroring Monteverdi's famous statement regarding text being mistress of the music. Banchieri writes: "Thus it is required of a modern composer of music in the setting of a madrigal, motet, or any other words, that he must attempt to imitate with the harmony the affects of the text, so that in the singing, not only the composer himself can take delight, but equally the singers and the listeners. Deny it who will, music (with respect to the harmony) should be subject to the text, for it is the words which express the meaning." ("Così ricercasi al moderno compositore di Musiche nell'esprimere un Madrigale Motetto ò quali sieno altre parole, deve operare imitando con l'armonia gl'afetti dell'Oratione, accio che nel cantare habbino diletto non solo il proprio compositore, ma parimente gli Cantori & audienti; Tacia pur chi vuole; che la Musica (quanto all'armonia) deve essere sogieta all'Oratione…"). Adriano Banchieri, *Cartella musicale nel canto figurato, fermo, & contrapunto*, 3rd ed. (Venice: Vincenti, 1614), 166, accessible on imslp: http://imslp.org/wiki/Cartella_Musicale_%28Banchieri%2C_Adriano%29, accessed March 1, 2017; English translation by Clifford Alan Cranna, Jr., "Andriano Banchieri's 'Cartella Musicale' (1614): Translation and Commentary" (PhD diss., Stanford University, 1981), 349. Banchieri later goes on to tie *contrapunto commune* to the new figures being used by modern composers, many of which were related to diminution practice – specifically the use of faster note values. Banchieri. *Cartella,* 167.

contrapunto commune entails only that the player must be careful not to play parallel perfect intervals. Even this point Diruta seems to partially concede, commenting:

> Some say that one can move in this way. They affirm that it has to be done in rare cases and ask for tolerable movements. I maintain that in no way must you use them in strict counterpoint. You can use them in free counterpoint, but only now and then. The reason is that hidden fifths and octaves arise from the leap of a fifth. Do you wish to see it clearly? Here is the example of the interval from ut to sol and sol to ut filled stepwise with short-valued notes from which consecutive fifths and octaves arise. [69]

The typical ricercar of the early *cinquecento* is rife with parallel fifths and octaves, indicating a common thread between earlier practices and Diruta's *contrapunto commune,* despite the time that separates them; at the very least, both are ultimately rooted in *cinquecento* keyboard playing. Strongly implied is the idea that *contrapunto commune* is associated with improvisation: asked by his Transilvanian student-interlocutor as to whether the rules of counterpoint need apply when improvising, Diruta states that

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[69] "Vogliono alcuni, che se gli possa andare, & gli dimandano movimenti sopportabili; & dicono che se debbiano usare rare volte; io dico, che nel Contrapunto oservato in nuin modo li dovete usare. Nel Contrapunto commune potresti, mi di rado. La ragione è questa, che in quel salto di Quinta nasce il suspetto di due Quinte, & di due Ottave. Volete-lo veder chiaro? Eccovi l'essempio dell'intervalllo di grado, di note negre dal ut, & dal sol al ut; nelli quali nascono due Quinte, & due Ottave." Diruta, *Transilvano,* vol. 2, bk. 2, 3; English translation by Bradshaw and Soehnlen, *Transylvanian,* 2:36.

Diruta's text immediately preceding the allowance for parallels reads "Strict counterpoint is much more beautiful and pleasant than free counterpoint, and its beauty and pleasantness arise from these observations that I shall now make. In free counterpoint, there are not so many restrictions, such as moving from a sixth to an octave by a semitone, and likewise from a sixth to a fifth, from a third to a unison, as well as from a third to a fifth. We can even move from one perfect consonances to another without contrary motion – and what I say for the primary consonances applies equally to their compounds. The main observations are these: do not have two fifths or two octaves one after another; do not observe contrary motion from one perfect consonance to another. Next, regarding the use of two thirds or two sixths, major and minor one after the other, either by step or by leap, they can move freely without regard for correct rules. You will either understand this better later on, when I shall give you some instructions and illustrations of free and strict counterpoint." ("Il Contrapunto osservarto è più bello e più vago assai, che non è il Contrapunto osservato, e la sua bellezza, & vaghezza nasce da queste osservationi, che già vi vado spiegando. Nel Contrapunto commune non vi vanno tante osservationi, come andar dalla Sesta all'Ottava con il Semituono, & similmente di Sesta in Quinta, & dalla Terza all'Unisono; si come anco dalla Terza alla Quinta. Di và anco dalla perfetta all'altra senza moto contrario; & quel che dico delle consonanze principali, intendo anco delle replicate. Le maggior osservanze sono queste, di non far due Quinte, nè due Ottave un appresso l'altro; nè anco si osserva il moto contrario da una perfetta all'altra. Circa poi il far due Terze, & due Seste maggiori, & minori una appresso l'altra di grado over di salto, fanno come lor pare senza haver riguardo alle buone regole, come meglio intenderete al suo luogo, quando vi darò gl'avertimenti, & quando vi dimostrarò il Contrapunto commune, & osservato." Diruta, Transilvano, vol. 2, bk. 2, 3; English translation by Bradshaw and Soehnlen, Transylvanian, 2:36.

> I do not wish to restrain you with these rules while you are improvising. But the more strictly you play in written or improvised counterpoint, the better it will be.[70]

Diruta stresses that, when playing in *fantasia,* one should *strive* towards proper counterpoint, but seems to forgive a looser application of the rules at the same time. Unfortunately, Diruta is not forthcoming about any precise methods associated with *contrapunto commune,* instead relying on examples to demonstrate practices. Banchieri explains that, at the time of publication of the third edition of the *Cartella musicale* (1614), a complete description of *contrapunto commune* had yet to be written.[71]

Another Banchieri treatise, *L'Organo suonarino,* might allude to keyboardistic elements of improvisation as well, although again in indirect fashion. Banchieri uses the recent technological innovation of continuo notation to aid organists in playing *alternatim* in the liturgy. The innovative nature of the system is highlighted by Banchieri's unique system of figured bass: accidentals placed *under* a note indicate raised or lowered sixths, and accidentals placed above a note indicate the normal alteration of the third. Banchieri's bass lines – fragmentary *figurato* basses drawn from plainchant melodies – are to be used as a foundation for extemporaneous *alternatim* versets. He explains that "…all organists have some knowledge (some more, some less) of the *canto figurato,* but may the truth be valid, very few of them known about the *canto*

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[70] "A questa osservanza no vi voglio astringere sonando di fantasia; si bene nel far Contrapunto scritto, ò alla mente, a più osservato che Sonarete, meglio sarà." Diruta, *Transilvano,* vol. 2, bk. 2, 3. Translation by Bradshaw and Soehnlen, *Transylvanian,* 2:36. Diruta reduces his counterpoint rules to four principal *movimenti.*

[71] Banchieri, *Cartella,* 165. Diruta only provides two brief examples of "contrapunto commune"; these *a2* fragments consist of a line comprised of mixed note values – in the soprano in the first example, in the bass in the second – against a slower-moving CF-style "soggetto." The examples do demonstrate "looser" counterpoint, particular with regard to the treatment of parallel perfect intervals. See Diruta, *Transilvano,* vol. 2, bk. 2, 15.

fermo,"[72] indicating that Banchieri expects even second-rate organists to be able to improvise over a basso continuo part; the hard part, apparently, is figuring out where to play in the liturgy, and how to play *alternatim* with the choir.

Banchieri suggests quite clearly that the effect of playing from his bass lines should be that of imitative polyphony. In the preface, he indicates that his method is suitable for all sorts of organists, which he describes as two types:

> Primarily for those play solidly, seeing before them florid melodies produced from the *canti fermi,* they will be able to unfold their learned improvisations. Secondly, for those playing without knowledge of the cantus firmus, having a bass as a secure guide and the places for beginning, and by employing the cadences and their chorale *finales* to the eight ecclesiastical tones, assuredly will be able, with the practice of them, to succeed.[73]

That imitative counterpoint is the "ideal" texture for the improvised versets is also indicated by Banchieri's use of multiple clefs and implied imitative entrances (in the later 1611 edition, these entrances are accompanied with the word "fughe"), as well as by the general nature of other published versets from the late sixteenth century.[74] At the same time, the excerpt above may imply that, beyond lacking knowledge of the "canto fermo," the second class of organists is equally unable to *sonare fantasia* in an imitative texture. This notion is supported by a passage further on in the treatise:

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[72] "… tutti gl'Organistsi hanno, (chi più, & chi manco) cognitione del Canto figurato, ma vaglia il vero pochissimi del Canto fermo.." Adriano Banchieri, *L'organo suonarino*, 70. Translation by Donald E. Marcase, "Adriano Banchieri, *L'organo suonarino*. Translation, Transcription, and Commentary" (PhD diss. Indiana University, 1970), 159.

[73] "Primieramente a quelli che suonano fondatamente, vedendosi avanti le fughe reali prodotte da gli Canti fermi, potranno sopra quelle spiegare la loro dotta fantasia. Secondariamente, a quelli che suonano senza possesso di Canto fermo, havendo un Basso per sicuramente guida, gli lonchi [sic] di principiare, usar le Cadenza, & sue finali coriste a gli otto Tuoni Ecclesiastici, potranno con la pratica loro, sicuramente riuscire." Adriano Banchieri, *L'organo suonarino*, 1; translation adapted from Marcase, "*L'Organo*," 111-12.

[74] As Belotti points out, this makes Banchieri's print the first example of keyboard *partimento.* Edoardo Belotti, "Counterpoint and Improvisation in Italian Sources from Gabrieli to Pasquini" *Philomusica on-line* 12 (2012): 51. Of course, Banchieri's "technology" is not the ideal; later on he seems to lament the new basso continuo and praises those who can play in four-part counterpoint, advising organists to continue to study ricercars. Banchieri, *L'organo suonarino,*1622 edition, 217. These opinions are stated in even stronger fashion in a well-known passage from the tenth "conclusion" in *Conclusioni nel suono dell'organo;* see Banchieri, *Conclusioni,* 24-25.

> Wishing that this *Art of Organ Playing* may be clear to all, I will advise those organists *who do not have much knowledge of the middle parts* [emphasis mine], that the sharps and flats will be placed from time to time [*accidentalmente*] in three ways.[75]

Banchieri implies that his second "class" of organists lacked *cognitione* ("knowledge") of the the inner parts. While it could be that Banchieri is referring to organists who lacked knowledge of continuo notation, it seems more likely that he is referring to those who were unable to improvise polyphony "properly" over the basses without his figuring; Banchieri's unique system not only tells the player whether a given sonority has a major or minor third, but whether it should be a 5/3 or 6/3 triad as well, encroaching upon the domain of counterpoint rather than simple chordal accompaniment. And although Banchieri might have seen his second class of organists as simply unskilled, a more objective view might see them as simply removed from the practices of vocal polyphony: that is, part of a keyboardistic tradition that was rooted in playing rather than the practical or theoretical rules of counterpoint. These organists were "axemen," not *musici.*[76]

Both Diruta and Banchieri seem to refer indirectly to keyboardistic techniques of improvising, even as they clearly favor the aesthetic ideals of vocal polyphony. Diruta clearly favors "proper" counterpoint techniques; at the same time, his remarks on *contrapunto commune* do allow for the possibility of a *looser* counterpoint, one reflective of a keyboardistic style, rooted in improvisational practices. Banchieri particularly gears his instruction for organists who were unskilled in improvising contrapuntally, but who were trained to play in a more informal (chord-based?) manner. A less restricted style of counterpoint can be observed in much of the keyboard repertoire of sixteenth-century Italy; even the "classical" Venetian works of Andrea Gabrieli feature dissonance well outside the acceptable boundaries of vocal counterpoint.[77] And, of course, the repertory of the early *cinquecento* is famous for instances of rather extreme dissonance (**Example 0.2).** It seems logical to assume that this type of dissonance can be tied directly to keyboard-native traditions of playing, rather than to counterpoint.

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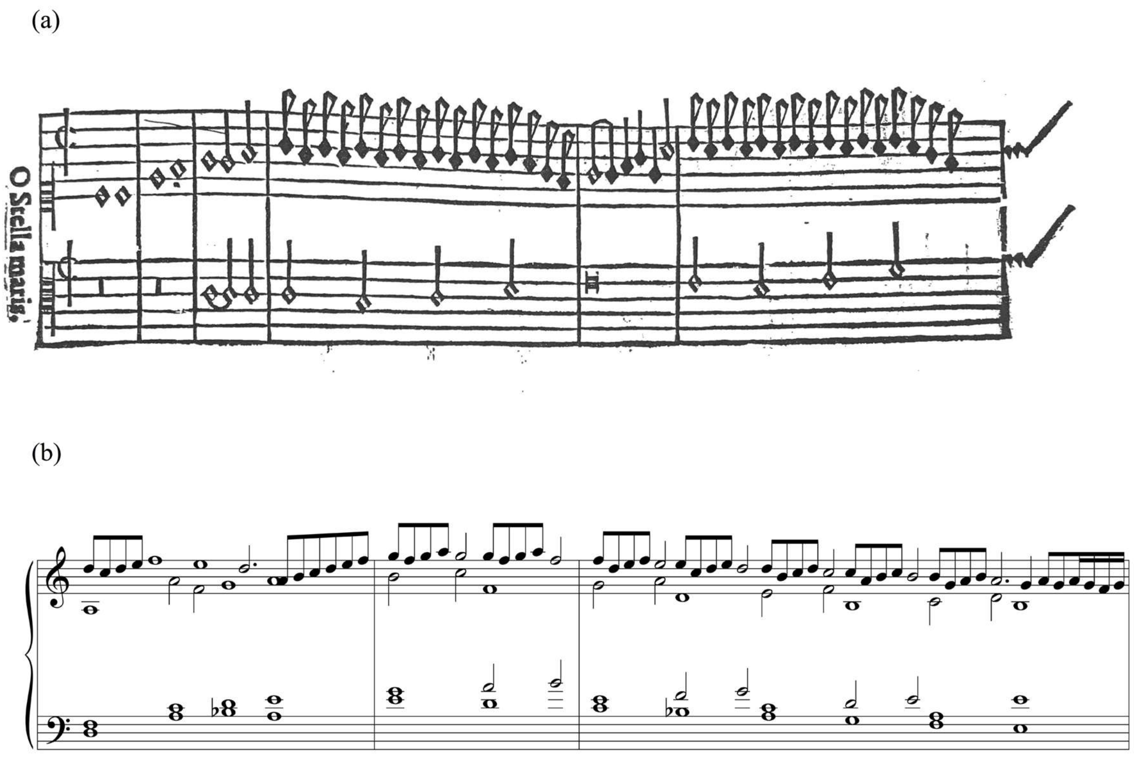
[75] "Volendo che questo Organo Suonarino sia chiaro à tutti, dirò per quelli Organisti che non hanno molta cognitione alle parti mezo haverano per avertimento, che gli diesis, & b. molli saranno posti accidentalmente il tre modi." Banchieri, *L'organo suonarino,* 2; translation by Marcase, "L'Organo," 114.

[76] One is reminded of the theorist Giovanni Battista Doni's criticism of Frescobaldi: "so that one can say he has all his knowledge at the end of his fingers." Cited in Frederick Hammond, *Girolamo Frescobaldi* (Cambridge, MA: Harvard University Press, 1983), 85

Example 0.2 (a) M. A. Cavazzoni, *O stella maris,* from CAVAZZONI M 1523, opening. (b) Claudio Veggio, *Recercada per b quadro del primo tono,* from Ca, fascicle 5, 20r.



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[77] Diruta implicitly seem to acknowledge the role of diminution in creating dissonances (and, more explicitly, the fact that they don't follow the counterpoint rules regarding "good" and "bad" intervals), but excuses them on account of their velocity. Elsewhere, however, Diruta is clearly interested in preserving contrapuntal structure when applying diminutions (see Chapter 1 of the present dissertation). Diruta, *Il Transilvano,* 1:35v.

Also supporting the existence of such traditions is Banchieri's implied classification of organists based on their level of ability in the art of *sonare fantasia*. As Arnaldo Morelli points out, organists were routinely classified in this area, typically in terms of their *style* of playing.[78] The theorist and organist Biagio Rossetti describes *three* classes of organists: those who could respond well to the choir, those who could play improvised *preambuli,* and those who could improvise polyphony on plainchant themes.[79] Morelli shows that documentation of organists' *prove* often supports these basic classifications. Taken with Banchieri's classification system, it seems clear that organists existed who excelled in playing in an idiomatic manner – again, perhaps chordally – as opposed to a polyphonic one.

Reading these treatises within the context of early *cinquecento* keyboard style suggests that there was a separate *mode* of improvising on the keyboard, somewhat but not entirely removed from the mainstream of improvised vocal counterpoint. However, in spite of the freedom implied in Diruta's *contrapunto commune,* we shouldn't take this to mean that *cinquecento* keyboard improvisers worked outside of a systematic framework. Such as a view is not supported by a reading of early keyboard treatises from other national traditions, nor by the general characteristics of improvised counterpoint in the sixteenth century. Any kind of non-written musical practice would have been grounded in *methods* comprised of codified rules, just as composition was – "composing at the keyboard," in other words.[80] And like keyboard thinking, that concept can be extended – in an analytical way – to *reconstruct* precise methods that were not explicitly described in treatises or accounts.

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[78] Arnaldo Morelli, "Concorsi organistici a San Marco e in area Veneta nel Cinquecento," in *La cappella musicale di San Marco nell'età moderna,* vol. 2, ser. III, B of *Studi musicologici*. (Venice: Fondazione Ugo e Olga Levi, 1998), 259-78.
[79] Cited in Morelli, "Concorsi," 251.
[80] With obvious echoes to Vincentino's formulation of "composing at the mind," "composing at the keyboard" is a term proposed by Edoard Belotti as "a term much more pertinent to that [Banchieri's] historical environment than the modern and often misleading term 'improvisation." Belotti, "Counterpoint and Improvisation," 51.

Nuts and Bolts: Reconstructing Four Primary Elements of Keyboard Thinking

The theoretical premise of keyboard thinking permits the reconstruction of techniques that *might* reasonably have existed (such as the technique I call *sonare a consonanze,* discussed at length in Chapter 2); here, however, I will describe four general aspects of keyboard thinking. While these aspects are not specific enough to be identified as specific techniques like *sonare a consonanze,* they go beyond abstract theory to include musical aspects of improvisational keyboard playing, existing somewhere between the two so as to describe systematic elements. They are, in other words, creative elements of composing at the keyboard. These primary elements are relevant to analyses in all three chapters, relating to aspects of improvisation, notational conventions, compositional processes, and intabulation. They are also demonstrative of keyboard thinking as a mode of analysis, in that they are conceived holistically, grounded in the multiple aspects of keyboard thinking described earlier: they encompass the systematic nature of Renaissance improvisation, the specific elements that define these systems, an archeological consideration of the underlying thought patterns and general mindset of *cinquecento* improvising, and experiential data gained through trying techniques out on the keyboard.

1. A Two-Part Framework in *Cinquecento* Keyboard Improvisation

Cinquecento keyboard music often demonstrates a contrapuntal framework composed of two elements, such as a *bicinium*, or a texture in which one hand plays chords and the other *passaggi*. In addition, contrapuntal works sometimes reveal an obvious reliance on one or two principal parts. This makes sense – while four or more truly independent parts can be conceived abstractly on paper, in keyboard improvising there is actually a limitation as to how many truly independent voices can be realized at any given instance.[81] Of course, this isn't to say that keyboardists couldn't improvise fugues or ricercars, but rather that such improvisations had an inherent constraint in the independence of their voice leading, with voices taking turns serving as either prominent melodic material or as harmonic accompaniment.[82]

This limitation in playing independent parts does not mean that keyboardists could not *simulate* the effect of truly independent voices – in fact, this effect is exactly one of the *prove* listed in the San Marco document mentioned earlier. The later tradition of *partimento* fugue shows just how the careful elaboration of chordal structures might lead to the illusion of complex counterpoint. In this scenario, the improvising keyboardist may only be considering two truly independent sections of the texture at a given moment – namely, a bass line and a right-hand chordal accompaniment – but the "automatic" application of clichéd ornamental figuration, accomplished quasi-unconsciously, could give the aural illusion of complex counterpoint, in a way almost analogous with *di sotto in su* illusions in Renaissance ceiling decorations. In the case of *partimento* fugue, the movement of the chords is dictated by rules learned in advance: as every beginning player learns, one of the fundamental rules of continuo playing is that right-hand chords should move in contrary motion to the bass, especially when it moves by step. If the individual notes of successive chords are imagined as independent parts, however, a framework is created by which the motion of parts is dictated in an automatic, unconscious way. The analogy between *cinquecento* keyboard playing and continuo practice is, of course, highly relevant – the chordal style of early *cinquecento* keyboard music clearly foreshadows the development of continuo notation. And, in a more general sense, the automatic movement of parts through chord playing has echoes with the consonant tables of Renaissance theory treatises from Pietro Aron onwards.[83] It could even be compared to the virtuosic improvisation of vocal counterpoint, such as that mentioned above in the trials at the Cathedral in Toledo, in that the motion of a fundamental part dictates the behavior of other parts automatically through a series of rules.[84]

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[81] This notion would match those proposed by studies on cognitive perception of polyphony. These suggest that there are limits in this perception, and that these limits in turn helped shape common rules of voice leading and harmony. See William Forde Thompson and E. Glenn Schellenberg, "Cognitive Constraints on Music Listening," in *The New Handbook of Research on Music Teaching and Learning,* ed. Richard Colwell and Carol Richardson (Oxford: Oxford University Press, 2014), 475-77.

[82] The idea that polyphony is ultimately grounded in harmonic frameworks is, of course, a commonplace of Baroque counterpoint.

In *cinquecento* keyboard music, the music itself suggests that keyboardists typically worked with a framework of two parts or elements. In freer, less contrapuntal genres – such as the preludial ricercar, the later Venetian organ toccata, the *intonazione,* and in *balli* – it is typical to see a texture in which *passaggi* in one hand are accompanied by a more or less chordal accompaniment in the other. This texture is also generated by IKT conventions, by IKT's alogrithmic translation process; in intabulations *passaggi* are often isolated in one hand, while the other voices are arranged to make accompanying chords in the other.

The two-part limitation is also seen at work in contrapuntally conceived keyboard composition, in abstract genres such as imitative ricercars. In this case, it is common to see textures in which one can typically discern a hierarchy of voices based on relationships between melodic material and the *soggetto.* In fact, a hierarchy of voices can be discerned at any given moment, in that one or two voices will hold material that is melodic in nature while the other two or three essentially serve as harmonic filler. Although in a general sense this could be described as a commonplace for much sixteenth-century counterpoint – surely "pure" polyphonic independence remains an ideal – many of these take on a particularly keyboardistic flavor. This can be seen clearly in **Example 0.3.**

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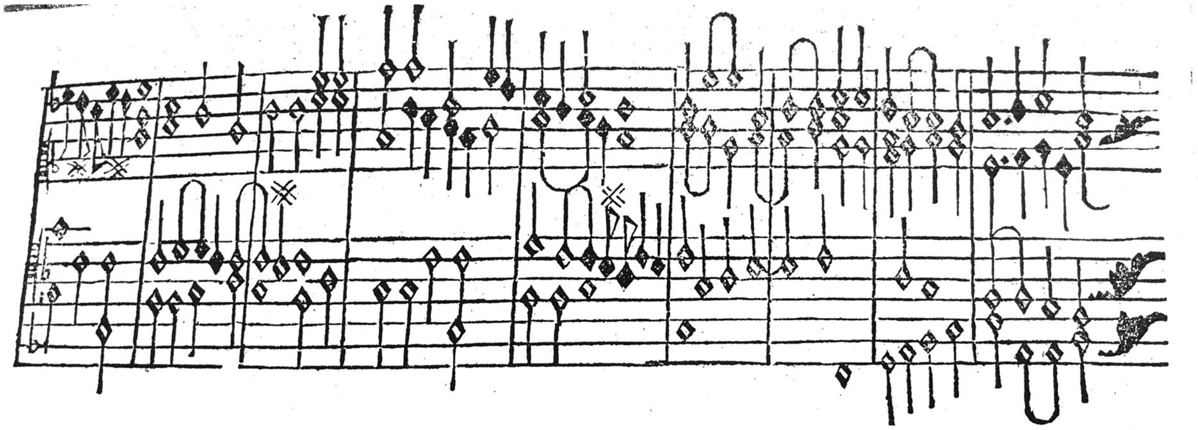
[83] For more on consonance tables in Renaissance theory treatises, see Bonnie J. Blackburn, "On Compositional Process in the Fifteenth Century" *Journal of the American Musicological Society* 40 (1987): 217-19.

[84] See Canguilhem, "Singing upon the Book."

Example 0.3 Girolamo Cavazzoni, *Recercar IIII* (sic) CAVAZZONI G 1543. Facsimile copy supplied by the *Museo internazionale e biblioteca della musica.*



Notable here is the tendency for the accompanying counterpoint to coalesce around the motion of the subject. The texture is therefore dominated by this motion, which reduces the overall rhythmic independence of the other parts. The IKT convention of writing semibreves as tied minims (note that this is not done uniformly in this ricercar) contributes to this effect on a visual level, leading to a segmentation of the entire texture mentioned earlier; in fact, intabulation in IKT typically show a tendency for polyphony to coalesce around regular motion. It is easy to imagine this section being improvised: Cavazzoni would primarily think of his *soggetto* and extemporize a chordal framework around it; indeed, it is notable how easily the subject here slots into the surrounding chords. In addition, the filler can be enlivened with diminution, leading to the *impression* of counterpoint that might be more complex than it actually is. The two-part limitation would affect an improvising keyboardist on a moment-by-moment basis; the quick swapping of melodic parts in the texture, the clever application of ornamentation, the use of an overall chordal framework, and the use of figures – quasi-contrapuntal *schemata* committed to memory (see below) – could create the *illusion* of truly independent counterpoint.

The two-part limitation can also be tied more generally with the bicinium. Bicinia served as a fundamental part of counterpoint practice,[85] and prominent *a due* sections can be found in the complex ricercars of composers such as Padovano and Buus. It would seem commonsensical that improvising bicinia was a fundamental part of *cinquecento* keyboard playing as well. As is demonstrated in Chapter 2, the extemporaneous playing of chords – so fundamental to the musical language of this repertoire – can be conceptualized as the "filling" in a of a treble-bass skeleton, which is, of course, a bicinium as well. This in turn is reflected by the tendency of intabulations to favor the sounding outer parts of their models over the integrity of the inner voice leading (see Chapter 1 and below).

2. Building Blocks: The Use of Formulae in *Cinquecento* Keyboard Playing

Many studies of improvised musics have postulated that players rely on vocabularies of formulae: short figures that could be applied in the course of playing extemporaneously.[86] An examination of extant *cinquecento* keyboard repertoire shows evidence of a similar practice. The keyboard ricercars of Marco Antonio Cavazzoni, for example, share common figuration, as do ricercars and liturgical music in the Castell'Arquato collection (see Chapter 2). Figuration used by Jacopo Fogliano appears in the later part-book ricercars by his student Giulio Segni (Giulio da Modena), published in the 1540 *Musica nova* collection.[87]

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[85] See Peter Schubert's chart above in Figure 1.

[86] Many of these are described in some detail below. Notable examples include the corpus of scholarship on centonization in the development of plainchant and Medieval melodies; a similar body exists for jazz improvisation. This latter field has been criticized by George Lewis; see George Lewis, "Improvised Music after 1950: Afrological and Eurological Perspectives," *Black Music Research Journal* 22 (2002), esp. 230-33.

[87] Paper from the author, forthcoming.

Evidence also appears in music published at the end of the century, for example, in the cadential figuration used by composers such as Andrea Gabrieli and Claudio Merulo. Particularly in the case of the latter, the figuration is applied consistently enough to form what might be called signature cadences, that is, ones unique to the composer. This is particularly the case for the works of Claudio Merulo.[88] It is interesting to note that it is not only the figuration in the top voice that identifies Merulo's cadences; the behavior of the lower voices – particularly the *re-ut-re* motion in the tenor – is also consistent. In intabulations these "Merulo cadences" are applied over a variety of contrapuntal structures in their models, whereas the cadence structure in the intabulation remains the same. I would argue that these cadences quite possibly represent figures that were memorized and stockpiled in Merulo's mind. Moreover, the consistency of the behavior of their voices suggest that they were developed and memorized as complete polyphonic *units*, each voice moving automatically (or mechanically) in clock-like fashion. Although on surface they appear as polyphonic in their conception, the very fact that they were conceived as pre-formed units would remove the independence of their voice leading; that is, they would have been played quasi-unconsciously, through the automatic motion of the player's muscle memory.

Of course, the art of melodic diminution also played a fundamental role in *cinquecento* keyboard playing. In general, diminutions appear not so much as polyphonic units but as common melodic patterns: at the same time, the consistency of application and the recurrence of common shapes suggests a formulaic conception, although more in the sense of being archetypical patterns that were subject to variation. For example, Andrea Gabrieli often uses a figure that begins with a short arch and then falls away **(Example 0.4)**. The shape is somewhat

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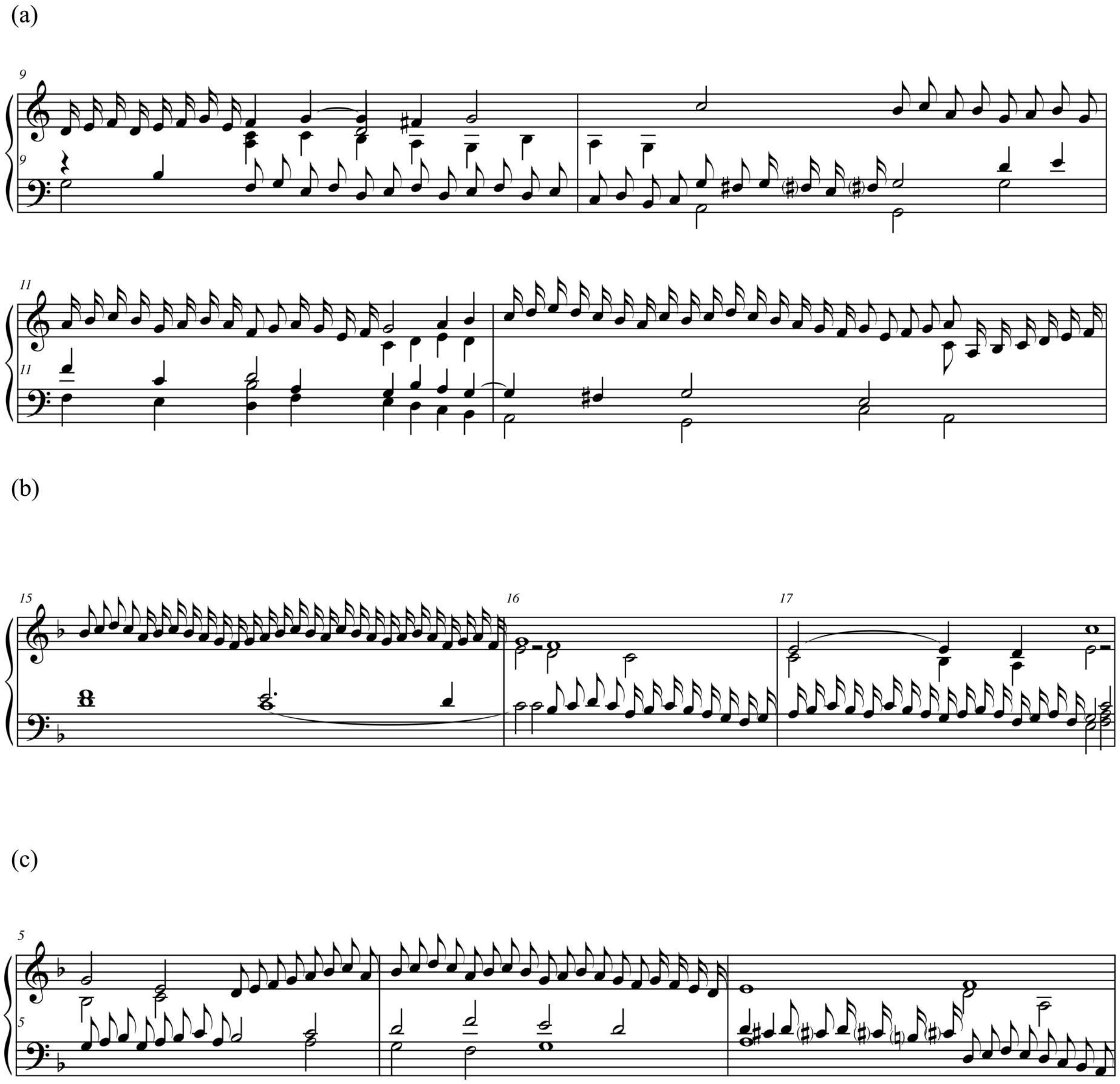
[88] See Chapter 3, p. 56.

Example 0.4 Examples of similar figuration in intabulations from GABRIELI 1605b. Note the 4-note "circolo mezzo" figure (either ending on the note it began upon or the note above), and the ascending / falling figure (this usually begins with a three-note ascent and then falls away). (a) *Canzon Francese deta Ung gai berger. Di Crequillon A Quatro voci*; 9-12 (b) *Canzon Francese detta Petit Jacquet A Quatro voci*; 5-7; (c) *Canzon Francese detta Je prens en gre*; 17-20.



malleable, flexible enough to accommodate diverse intervallic *loci*. Also notable is Gabrieli's frequent failure to connect these figures smoothly within the larger ornamental line; he generally doesn't begin and end his figures on the same note, as recommended by Diruta and writers of other diminution treatises, and his lines often include awkward leaps.[89] This implies that these figures were applied extemporaneously, in an almost mechanical or automatic fashion.

Based on my description so far, it would seem that we might infer two basic categories of formulae in *cinquecento* keyboard music: a "three-dimensional" polyphonic unit, in which the voice leading of the independent parts is largely pre-set, moving automatically in clock-like fashion, and linear, "two-dimensional" archetypical diminution figures. However, the two types do not fall into ready categories: the polyphonic units can be subject to slight alterations (in particular, it often appears as if they are molded to accommodate specific situations), and instances can be found in which repeated melodic diminution figures are applied fairly consistently, suggesting a conception as pre-formed units. It would be seem that both belong to the generalized vocabulary of formulae used by improvising *cinquecento* keyboardists. As will be demonstrated shortly, in intabulations these units were often applied to segments of polyphony as links in a chain, in a way completely analogous to the way that intervals serve as *loci* in diminution treatises.

In his study of improvisation in the Bach circle, David Schulenberg points to a similar use of formulae.[90] In doing so, he attempts to draw comparisons with other established theories, specifically to the Parry-Lord theory of oral-formulatic composition, and to the galant *schemata* as described by Robert Gjerdingen.[91]Schulenberg ultimately sees the greatest similarities between Bach's figures and schemata, and, from a purely musical perspective, comparisons with *galant* schemata are possible here, too, although these are defined more broadly than the contrapuntal units seen in *cinquecento* repertoire, which are clearly identifiable short units – specific patches within the quilt. To draw analogies with aspects of Renaissance thought, one could also point to the commonplace book, a link that would tie keyboard improvising to humanist contexts.[92] In the present case, however, this might too strongly imply a *writing-dependent* system; the altogether flexible conception and application suggest that keyboard figures were developed organically through playing. Aspects of their use, from their application in the course of improvising to their very development, might have been facilitated in a quasi-unconscious manner. In this, the *galant* schemata again suggest themselves for a comparison. Perhaps a better comparison would be with the memorized *lazzi* and stock dialogue of *commedia dell'arte* troupes. Gjerdingen also draw a comparison between schemata and the *commedia*; in fact, the word used to describe a "music student's notebook of exercises and rules" in the eighteenth century, *zibaldone,* was also used for a collection of stock elements – including *lazzi* and dialogue – used by *commedia* actors.[93] The formulae and units in *cinquecento* keyboard music seem to suggest a sort of organist's *zibaldone* as well – whether this existed physically or only in the mind of players.

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[89] Although most writers of diminution treatises recommended starting and beginning a passaggio on the same note, in order to preserve the contrapuntal structure of the work, exceptions were fairly common. In fact, Ganassi's approach – also typical – involved treating the semibreve as the basic unit of ornamentation, allowing the player to skip over intervening notes in the original line. See Howard Mayer Brown, *Embellishing Sixteenth-Century Music* (London: Oxford University Press, 1976), 23. Diruta seems to favor the strict approach, which he calls "il diminuire osservato," as it preserves the structure of the composition in addition to avoiding parallels. See Diruta, *Transilvano,* vol. 2, bk. 2, 14.

[90] Schulenberg, "Improvisation in the Bach Circle," 26-28.

[91] See Robert Gjerdingen, *Music in the Galant Style* (Oxford: Oxford University Press, 2007). For Gjerdingen's definition of a schemata, see 10-16; especially relevant to *cinquecento* keyboard music is the notion of "organic" development – that the schemata come from repeated use and recognition.

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[92] Scholars have generally applied the concept to music in the Renaissance with great care. In the case of keyboard music, a "commonplace" would imply certain musical figures, such as specific cadence formulations, that may have been "collected" and developed in the mind, and used in performance by improvising keyboardists. While there be some basis to draw an analogy with humanist commonplace traditions, I do not intend to draw a specific comparison. For more on Renaissance music and commonplaces, see Peter Schubert, "Musical Commonplaces in the Renaissance," in *Music Education in the Middle Ages and the Renaissance,* ed. Russell Eugene Murray, Susan Forscher Weiss, and Cynthia J. Cyrus (Bloomington: Indiana University Press, 2010), 161-92.

[93] Gjerdingen, *Music in the Galant Style,* 10.

3. Chains of Chunks: Segmentation and the Visceral Experience of Keyboard Playing

Both intabulations and the abstract music examined in Chapter 2 demonstrate a musical conception that is grounded in a segmentation of the music into short, regular units; in this conception, a longer melody such as a cantus firmus – or, for that matter, an entire polyphonic complex – is viewed as a series of units, each one linked to the next as in a chain. This mode of thinking is also seen in both Renaissance counterpoint treatises and in instrumental diminution treatises. In the case of the latter, the student is taught to memorize figuration to apply to individual intervalic *loci*; a longer melody is considered as a series of *loci* over which stockpiled figuration can be applied.[94]

Leon Chisholm describes a similar phenomenon in intabulations, which he links to the psychological theory of "chunking."[95]Chisholm describes a keyboard-driven musical conception of rhythmic division, one grounded in the haptic perception of playing, that differs from the normal tactus that governs vocal polyphony. For Chisholm, the physical motion of the player's hands divides the music into "hierarchical units," or, as he calls them, chunks:

> the haptic node of the downward motion of the hands onto the keyboard that serves as a visceral anchor for chunking. Moreover, the chunks themselves as temporal units tend to be global in nature: they comprise the motions of all the fingers and both hands, and all the musical material they play within a short stretch of time.[96]

These chunks are to be seen as embodied by the player – viscerally experienced through the act of playing on the keyboard – as opposed to conceived abstractly or as a force dictated from outside.

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[94] For general introductions, see the classic text Brown, *Embellishing Sixteenth-Century Music,* as well as Bruce Dickey's "Ornamentation in Early Seventeenth-Century Italian Music," in *A Performer's Guide to Seventeenth-Century Music,* 2nd ed., ed. Stewart Carter, rev. and ed. Jeffery Kite-Powell (Bloomington and Indianapolis: Indiana University Press, 2012), 293-316.

[95] Chisholm, "Mechanization," 63-68.

[96] Ibid., 68.

Chisholm's formulation is particularly useful in its global conception, comprising "the motion of all the fingers and both hands." This helps explain the tendency of voices to coalesce around rhythmic centers, seen in Cavazzoni's ricercar above, as well as in intabulations in IKT generally. However, Chisholm's theory is slightly in danger of removing *cinquecento* keyboard playing from broader historical contexts. After all, *cinquecento* keyboardists worked as part of an overall culture of music-making, within larger systems of that entailed shared musical conceptions. In fact, the segmentation seen in keyboard music is not at odds with larger trends towards segmenting larger musical structures; I have already mentioned the tendency as seen in diminution treatises as well as in counterpoint treatises. The chunking theory therefore adds the subjective *experiences* of keyboard playing to this larger paradigm, creating a musical conception that encompasses the mechanical techniques that were taught to improvising keyboardists in addition to broader mindsets and musical conceptions.

4. Towards A Structural Model of Ornamentation in *Cinquecento* Keyboard Playing: Improvising on a Model

Intabulations in IKT can range from being largely undecorated – simple transcriptions of their polyphonic models – to highly elaborate adaptions that incorporate extensive ornamentation. In addition, the application of this ornamentation often merits the substantial reworking or recomposition of the model's polyphony; intabulations like this might justifiably be labeled as *imitatio* works as opposed to "simple" transcriptions. In addition, some intabulations are distinguished by the fact that they ignore the formal structures of their models. These are best described as fantasias that incorporate motives, melodic material, or even particular contrapuntal complexes from their models but are essentially free *fantasie*: this description best fits the intabulations of the Cavazzoni as well as Andrea Gabrieli's parody ricercars on vocal models. Through his use of the term *ricercar* to identify these works, Gabrieli indicates that these are generically distinct from intabulations. In fact, they immediately follow "traditional" intabulations in his prints, and indeed, they are essentially imitative ricercars, each new imitative point based on a motive drawn from the model. The intabulations of the Cavazzoni are not labeled as anything but as the title of the model – standard practice for intabulations – but they are actually free *fantasie* based on the model's material, which is usually referred to loosely and infrequently. In addition, they essentially ignore the music's formal structures.[97]

The complexity of this situation invites a more holisitically conceived approach. Leon Chisholm has recently questioned whether fidelity to the vocal model in an intabulation is even important, although it seems unnecessarily reductive to ignore the categorical distinction implied by the existence of intabulations that generally follow their models' structures and those that don't.[98] The holistic approach suggested by keyboard thinking may unify the two in a more practical way, however, by simply suggesting that the *creative* process may be the same for both, reducing the importance of fidelity but not eliminating it. This is especially the case if the creative process is considered to be essentially improvisational in nature. A keyboard-composer improvising a gloss on a vocal model – without having the model on paper in front of him but rather in his head – would certainly rely on the same processes used to improvise a ricercar or toccata: the use of an internalized vocabulary of figuration as building blocks, the conceptual reduction of the model to a chain, and so forth.

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[97] A similar situation exists in lute music. Scholars have pointed to the influence of vocal models on "free" fantasie. See, for example, Stefano Mengozzi, "Is this Fantasia a Parody? Vocal models in the Free Compositions of Francesco da Milano," *Journal of the Lute Society of America* 23 (1990): 7-17. For a general brief introduction to this field of research see, Victor Coehlo, "Revisiting the Workshop of Howard Mayer Brown: [Josquin's] *Obsecro te domina* and the Context of Arrangement," in *'La musique, de tous les passetemps le plus beau...': Hommage à Jean-Michel Vaccaro,* vol 1. of *Domaine musicologique: Collection d'études* 19 (Paris: Klincksieck, 1998), 47-65.

[98] See Chisholm's analyses of Marcantonio Cavazzoni's intabulation of Josquin's *Plusieurs regretz* and Andrea Gabrieli's intabulation of Willaert's *Qui la dira.* Chisholm, "Mechanization," 27-47. Chisholm criticizes Martin Picker's analysis of the first intabulation for relying too heavily on textual considerations; in addition, Chisholm minimizes the fact that Gabrieli's intabulation relies on its model's formal structure whereas Cavazzoni's essentially ignores it. Instead, he focuses on the fact that both dissolve key structure features within the counterpoint, specifically the use of canonic structures in both chansons.

Seeing intabulating as a process akin not to composition but rather to improvisation would explain why some intabulations rely on the model's structure and why some don't. For example, the use of formulae and other improvisational techniques could diminish any reliance on the model's structure. That these figures were used is supported by the written-down evidence: identical figuration is seen, for example, in both free works and intabulations.[99] In the case of the Cavazzoni, the application of these figures is typically used to create long sequences. These sequences could easily distort the model, and, if taken to an extreme, their application – in the course of playing extemporaneously – could result in a lack of fidelity to its structure. Even in the later intabulations of Gabrieli and Merulo, for example, one sees minor instances in which the logical follow-through of a figuration temporarily distorts the structure of the model. As I argue in Chapter 3, the eventual conceptual distinction between the intabulations that faithful to the model's structure and those that aren't has more to do with a shift in the musical activities of the keyboard-composer; it reflects the growing influence of a *writing*-based intabulation process, which in turn is concomitant to a desire on the part of the intabulator-composer to demonstrate a specific type of musical knowledge to a particular reading public.

It is once again important to stress that, in keyboard playing, these stockpiled formulae are not conceived linearly, but polyphonically – short units that comprise certain contrapuntal (or quasi-contrapuntal) motions that tend to be integrated. This view in turn helps establish a model for analyzing the role of ornamentation and improvisation in *cinquecento* keyboard music. Traditional views of instrumental music in the Renaissance and early Baroque have tended to delineate layers of ornamental material: in general one talks about the underlying structure of a piece, a layer (or various layers) of surface embellishment, and so forth.[100] However, a careful analysis of a complex intabulation – such as those by Merulo and Gabrieli – shows that activity in the two layers affect each other, in that activity in one voice necessitates the reworking of material in other voices; that is, longer notes on the "structural" layer are often altered due to the influence of notes on the embellished level. In addition, it is also typical to see faster-moving notes in the model – part of what might be called the model's ornamental layer – reduced to a skeleton to be used to generate new keyboard ornamentation. This suggests a double-column model of layers, one that includes structural and ornamental layers for both model and intabulation, and allows for influence to flow in multiple directions (see **Figure 1**). As both the *fantasia sopra*-style works and intabulations often keep elements of the *ornamental* layer of the model, or even use elements thereof for development, this layer remains an important part of the model. Adding further complexity to this are the role of the polyphonic formulae, which encompass elements of both structural and ornamental keyboard layers; therefore, when these figures are superimposed upon the polyphony of the model, they force the alteration of notes on both the model's structural and keyboard layers. In this conceptual model of ornamental layers,

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[99] Silbiger has already pointed out the strong relationships between abstract works such as the toccata and intabulations. Alexander Silbiger, "From Madrigal to Toccata: Frescobaldi and the *seconda prattica,*" in *Critica musica: Essays in honor of Paul Brainard, Musicology* 18 (Amsterdam: Gordon and Breach, 1996), 403-28. Silbiger cites Diruta's famous quote, "le Toccate sono tutte Diminutioni." Ibid., 406.

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[100] This way of thinking is rooted in traditions such as counterpoint, in its division between simple and florid types, and in embellishment manuals, which typically teach the student to "reduce" their model to an underlying skeleton. See the description of Ganassi's method in Note 93 above.

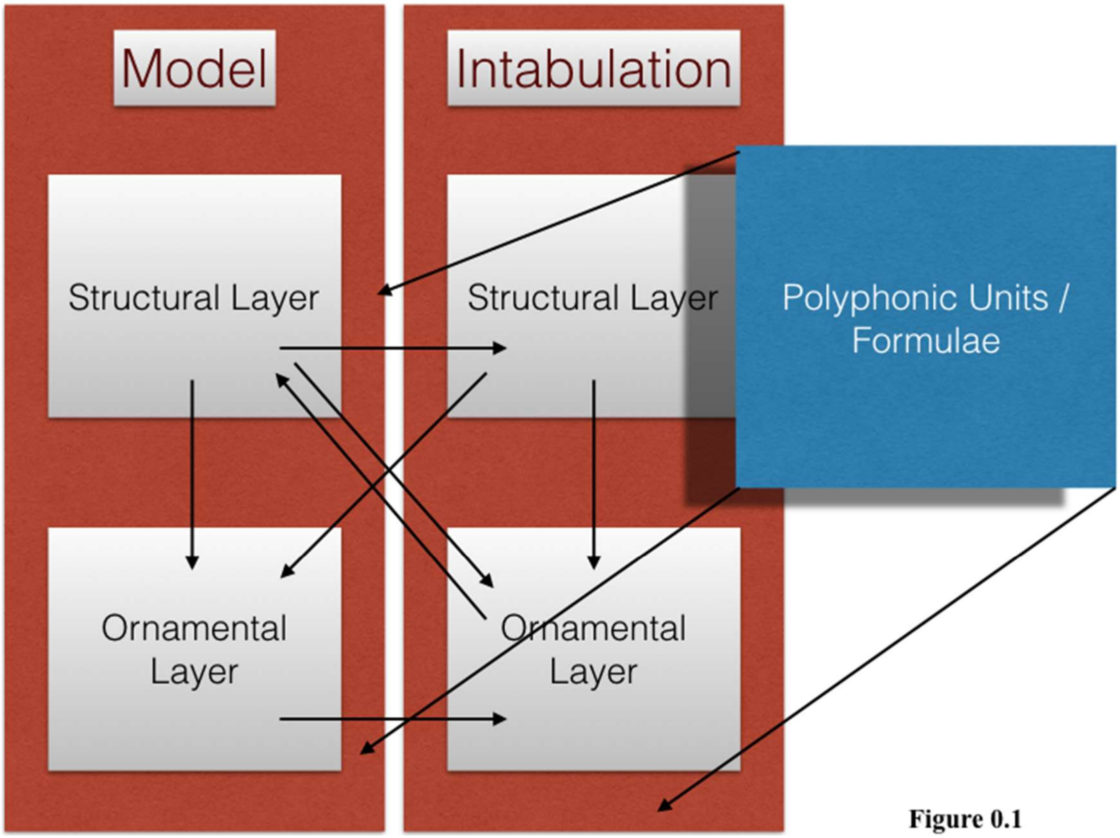
Model
Intabulation
Structural Layer
Structural Layer
Polyphonic Units / Formulae
Ornamental Layer
Ornamental Layer

Figure 0.1

all layers or elements have the ability to affect each other, although of course the general flow remains from model to intabulation; however, if intabulations are viewed as instantiations of continuously existing improvisations in the head of the player, it is easy to conceive of things flowing in the other direction as well. Although an abstraction, the model works to explain many of the musical phenomena seen in intabulations as well as free pieces based on vocal works. In fact, it may help explain the two as ultimately deriving from the same generative processes.

Scope and Limitations of the Present Study

The conceptual core of the present study lies in the analysis of the extant body of intabulations in IKT with models. The examination of these intabulations is used to formulate broader thoughts on notation, improvisation, and composition, and on connections between all three. In particular, these analyses are used to offer new perspectives on IKT's functioning as a notational system;

these in turn largely shape the remainder of the study. The use of intabulations to study notational functioning sets this study apart from prior examinations of IKT, in that these focused on IKT more generally, and, in terms of analytical focus, tended to gravitate towards abstract works as opposed to intabulations.[101] Intabulations with models are adopted here for several practical reasons as well. For one, they offer a precisely defined corpus of music that limits the scope of the study, in a way that facilitates a thorough examination. In addition, the particular mode of analysis – comparing intabulation and model – allows for a precise observation of IKT functioning.[102]

While the chronological scope of the study generally encompasses the entire extant body of music notated in IKT, a few limitations are applied. First, I end my survey around 1620. This is because intabulations of vocal and instrumental polyphony become less prominent in the early Baroque.[103] Secondly, whereas in Chapter 1 and 3 the focus is on intabulations, in Chapter 2 I examine abstract keyboard music as a *locus* for the development of IKT's conventions, chiefly the ricercar and liturgical music in the ricercar style found in prints and manuscripts to about 1550. The reason for this particular cut-off date is (a) to limit the scope of the chapter, and (b) because I argue that it is precisely in this early-to-mid-*cinquecento* repertoire that the origins of IKT conventions are to be found. The adoption of this date is also supported by the repertoire, in the shift in the keyboard ricercar as a largely chordally conceived genre to one largely based upon the language of imitative polyphony. This shift in the keyboard ricercar occurs alongside the development of the so-called instrumental part-book ricercar in the 1540s, a genre also largely based on imitative polyphony.[104]

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[101] This is especially the case for Silbiger ("Tablature") and Boncella ("Classical Venetian Organ Toccata").

[102] As mentioned earlier, although certain caveats must remain, especially with regard to important generic differences between intabulations and abstract works, the shared presence of IKT conventions suggest that the intabulation process is relevant to both intabulations and free works, and, indeed, to all music notated in the format.

[103] Alexander Silbiger, *Italian Manuscript Sources of Seventeenth Century Keyboard Music* (Ann Arbor, MI: UMI Research Press), 38.

The dissertation is structured in the following way: in Chapter 1, I examine the conventions that define IKT as a notional convention, demonstrating that in a broad sense they function as a uniform system in extant prints and manuscripts, although small distinctions remain from source to source. In general, IKT behavior remains consistent within any given source, demonstrating that printing houses and scribes follow general tendencies. The purpose of Chapter 1 is to establish IKT's functioning as a notational format, with a focus on its notational conventions, and to make the case for the format as a "mechanical" notation, directly tied to the instrument and the act of playing it. This latter point is important, as scholars have questioned its classification as a tablature notation at all.[105] The function of this chapter in the dissertation as a whole is largely to establish a groundwork for subsequent chapters: therefore, Chapter 2, which argues that IKT's history was rooted in improvisation, builds upon observations of IKT's nature in Chapter 1. The central thesis of Chapter 3 – that Italian keyboard-composers and publishers practiced a sort of "self-fashioning" by exploiting IKT's notational conventions – is also rooted in the parameters established in the first chapter. The fact that IKT's notational conventions are irregular has been well established by prior scholars, most directly by Silbiger, Clericetti, and

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[104] The first book of instrumental part-book ricercars, Pozzo's 1540 collection *Musica nova,* is quickly followed by Girolamo Cavazzoni's first book of intabulated keyboard music (1543), which contains four imitative ricercars. *Musica nova accommodata per cantar et sonar sopra organi et altri strumenti /composta per diversi eccellentissimi musici* (Venice: Pozzo, 1540). For a modern edition, see *Musica nova: ricercari*, ed. Liuwe Tamminga, *Tasture* 3 (Colledara: Andromeda Editrice, 2001). Girolamo Cavazzoni, *Intavolatura cioe. recercari canzoni himni..libro primo* (Venice: B.V. 1543); facsimile copy provided by the Museo Internazionale e Biblioteca della Musica di Bologna.
[105] IKT's basic similarity to modern keyboard notation, and to contemporaneous French and English systems, led authors such as Willi Apel to express skepticism about *cinquecento* use of the word "tablature." Willi Apel, *The Notation of Polyphonic Music 900-1600,* 5th edition (Cambridge, MA: Medieval Academy of America, 1953), 14-15.

Boncella.[106] Many of these writers – especially Alexander Silbiger – question whether IKT is really a tablature notational at all.[107] A precise definition of IKT and its nature is therefore paramount; indeed, it is the central argument of this chapter.

As described above, IKT uses mensural notation but demonstrates conventions that are conceptually similar to those in other tablature notations. It is precisely this conceptual dissonance that has led to an ambiguous understanding of IKT's nature. I situate the notation squarely in the latter category, arguing that it was conceived by sixteenth-century musicians and publishing houses as a tablature notation, in that it represents physical aspects of the keyboard; in fact, conceptually speaking, it is a graphical reflection of the keyboard, just as the lines in lute tablature are graphical reflections of the instrument's strings. Therefore IKT is mimetic, but on multiple levels. On the one hand it represents the keyboard as a physical object; on the other hand, it also represents a performance on a keyboard. In this latter conception, the player of a piece in IKT becomes the mechanical means by which an encoded performance is realized, or recreated.[108] Intabulations are, as Victor Coehlo said (paraphrasing Howard Mayer Brown), "the closest things to Renaissance performances 'frozen' in time, revealing how music in the sixteenth century actually sounded, as opposed to how it looked on paper."[109] On another level, tablature can function on a purely visual level as well, displaying the *image* of an idealized performance, therefore serving as a visual "recording" of a performance. An understanding of tablature in this sense can be discerned in Vincenzo Galilei's well-known lute treatise *Fronimo:* musical examples in tablature are often presented as "sounding images," appearing immediately after an interlocutor announces that he will play an example. The tablatures are to be understood aurally, as performance.[110]

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[106] Silbiger, "Tablature?"; Clericetti,"Criteria"; Boncella,"The Classical Venetian Organ Toccata."

[107] Noting that "to our mind Italian keyboard notation does provides [sic] a better representation of the music than lute tablatures or German keyboard tablatures, and furthermore, the characteristic tablature features were gradually replaced by a more polyphonic notation," Silbiger writes, "Maybe we should just say that Italian intavolatura is in certain respects more tablaturish than later keyboard notation." Silbiger, "Tablature": 93-94.

[108] In this sense, I would argue that the notation was perhaps close to being *prescriptive* rather than descriptive; one could even argue that tablature notations are unique in early-music notation for having this quality, although one must obviously be cautious in how far one would apply this argument. See Bruce Haynes, *The End of Early Music* (Oxford: Oxford University Press, 2007): 103-104.

Nikolaus Harnoncourt makes a distinction between "work" notation and "performance" notation as basic principles of notation, noting that tablatures are an early example of "performance" notation. Harnoncourt, *Baroque Music Today: Music as Speech,* trans. Mary O'Neill (Portland, OR: Amadeus Press, 1995), 29.

[109] Victor Coehlo, "Revisiting," 51.

In Chapter 1, I also attempt to establish the degree to which IKT's notational conventions can be taken as standard practice in extant printed volumes and manuscript sources notated in IKT. The purpose of this is to (1) address the degree to which IKT was an implicitly understood "system" of notation, by scribes and publishing houses alike; (2) to examine the degree to which IKT should be understood as a product of printing technologies and conventions; and (3) the degree to which its conventions can be used to formulate a larger theory describing its relationship to keyboard playing. The first point is important as prior scholarship on IKT has gravitated towards printed volumes, not manuscripts. A greater understanding in this area is of particular interest as the relationship between print and manuscript cultures in the Renaissance – on both practical and cultural grounds – is broader than might be assumed. For example, many scholars have argued that early-modern print culture was akin to manuscript culture, particularly in areas of reception and function, but also in matters of production.[111] The relationship between print and manuscript cultures in the Renaissance is also a key question for this study; it is important to establish whether IKT should be viewed largely as a *product* of print technology, or as an extension of common scribal practices.[112]

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[110] Vincenzo Galilei, *Il Fronimo* (Venice: Scotto, 1584). It is almost as if Galilei was searching, on some level, for the technological means to have an image play upon clicking it, as if it were a web page with embedded audio files.

[111] This is a common theme in the work on Renaissance music publishing by Stanley Boorman; for example, see the essays "Petrucci's Type-Setters and the Process of Stemmatics" and "Printed Music Books of the Italian Renaissance from the Point of View of Manuscript Study," in the volume *Studies in the Printing, Publishing, and Performance of Music in the 16th Century* (Burlington, VT: Ashgate Publishing, 2005).

Also see Jane Bernstein's *Print Culture and Music in Sixteenth-Century Venice* (Oxford and New York: Oxford University Press, 2001); especially pp. 31 and 74.

In the second chapter I build upon the connection between IKT and keyboard playing demonstrated in Chapter 1. Specifically, I attempt to locate the origins of IKT as a notational system within the unwritten tradition, arguing for a direct link between the particular conventions of IKT and *cinquecento* techniques of organ improvisation. The music investigated in this chapter is limited to the first half of the sixteenth century, roughly half of which is found in manuscript.[113] The purview of the study includes a thorough examination of organ pieces and fragments in the well-known Castell'Arquato manuscripts, in addition to music from printed volumes by Marco Antonio and Girolamo Cavazzoni. Focusing primarily on liturgical pieces based on plainchant melodies, I propose a hypothetical chord-based method of harmonizing plainchant as an underlying framework for *alternatim* versets and other music for the liturgy. While the small amount of material from Italian treatises that deal with organ improvisation does not directly support the existence of such a method, my thesis does draw support from evidence in three areas: (1) Spanish keyboard treatises (primarily Sancta María's *Arte de tañer fantasia*), (2) recent research on improvised counterpoint, and (3) a thorough analysis of Italian liturgical keyboard music in both manuscript and print sources.

As part of his encyclopedic treatise on "playing in fantasia," the Spanish theorist Sancta María describes a method of harmonizing short motives ("passos") with "consonances"; a motive harmonized in this way produces a series of triads, in what we would today call root position or first inversion, in a *falsobordone*-like homophonic texture.[114] This is very similar to textures commonly observed in *cinquecento* liturgical organ music, opening the door of possibility to the existence of a method like Sancta María's being used by Italian organists. In addition, Sancta María's treatise can now be contextualized within the exciting new field of research on improvised vocal counterpoint described earlier. Treatises that had been traditionally been viewed as describing written counterpoint are now seen as equally relevant to improvised counterpoint, allowing for the reconstruction of several *methods* of historical improvisation. This allows for a fruitful comparative analysis between Sancta María's method – and the hypothesized Italian version of it – and the systems of improvised vocal counterpoint in the Renaissance.

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[112] These two areas may overlap considerably. In Venice, the nature of print culture led to a treatment of prints as manuscripts; this is fundamental to my reading of volumes of intabulation and self-fashioning in Chapter 3, as the notion of a "performance identity" being established through notation relies on the reception of these volumes in an intimate and tight-knit musical culture. For example, Claudio Merulo dedicated a reprint of Verdelot's first and second books of madrigals to a patron, in a way perhaps suggestive of a presentation manuscript. See Bernstein, *Music Printing,* 74.

[113] This music makes for its own distinct school, with its more characteristic genre being the so-called preludial ricercar.

Together, this all provides a contextual framework for a careful analysis of the music itself. A thorough comparative analysis of sixteenth-century Italian chant-based liturgical music reveals some notable similarities. Analysis of this music suggests the possibility of an underlying chord-driven *system* of harmonization, which could be used as scaffolding for more complicated textures and contrapuntal structures. Again, this hypothetical system can be plausibly reconstructed through comparison to known systems of improvisation in Renaissance counterpoint, many of which have been recently reconstructed and practically demonstrated.[115]

In Chapter 3, I argue that, based on the tendency of some intabulations to favor fidelity to their polyphonic models, and others to allow the rules of IKT to hide detail, intabulations can demonstrate a type of musical "self-fashioning." Due to its "hybrid" nature – IKT used mensural notation signs but conventions similar to lute tablature – IKT allowed arrangers to subvert its notational conventions to show details of polyphonic structure that were ordinarily hidden through the intabulation process. Naturally, this tendency could extend into elements of arrangement, such as the recomposition or revoicing of brief passages, or the application of ornamentation: the intabulations that don't transmit polyphonic detail are more prone to feature the rearrangement (or the recomposition) of polyphonic structures in their models, whereas the intabulations that strive to preserve the original polyphonic structures tend to avoid recomposition, even preserving structures that are wholly unidiomatic for the keyboard. The argument is grounded in the notion that, essentially, IKT strove to represent graphically both the act and aural effect of performance; it was, in a sense, mimetic, and can even be read as an attempt at capturing a keyboard performance through the technology of printing. The player of the tablature would in essence replicate the performance mechanically, through the precise execution of the notation. In this way, one could "hear" a virtuosic organist such as Claudio Merulo "play" through the print. At the same time, IKT functioned as music for the eye as well: instances in which intabulators attempt to preserve polyphony demonstrated to the player/reader that the intabulator understood the musical structure of the model, specifically the art of counterpoint and composition. I establish these two tendencies as two basic categories of intabulations: sounding images and *dotte partiture.*

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[114] "Playing in consonances" occupies a major part of Santa María's second book; Santa María, *Arte de tañer fantasia.*
[115] See the YouTube videos of workshops led by Peter Schubert cited above.

My thesis is developed in the following manner: I begin by establishing my use of the term self-fashioning, appropriating it from its origins in literary theory and comparing my use with that in other musicological studies that adopt versions of self-fashioning theory for the analysis of Renaissance music.[116] I then establish the social conditions necessary for a theory of self-fashioning among organists in Venice. This primarily involves an examination of the reception of organ prints in Venetian print culture. Building partly upon studies such as Martha Feldman's on print culture and networks of patronage in Venice,[117] I examine data from specific printed volumes (such as dedications) to situate them within networks of patronage or within specific intellectual and social contexts, such as academies,[118] establishing the social and cultural climates in which keyboardists would self-fashion through their published intabulations, as well the specific role of keyboardists and keyboardism within Venetian intellectual circles.[119] This data also includes a survey of biographical material for *cinquecento* keyboardists.

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[116] See, for example, Susan McClary, *Modal Subjectivities: Self-Fashioning in the Italian Madrigal* (Berkeley: University of California Press, 2004).

Having established the social climate for self-fashioning in their immediate Venetian context, I then situate these printed intabulations within a wider context of keyboard music in sixteenth- and early seventeenth-century Italy, examining *partiture* alongside music transmitted in IKT. In particular, I look at the music of the so-called Neapolitan-Roman school (including the keyboard and harp composers Giovanni da Macque, Ascanio Mayone, and Giovanni Maria Trabaci), demonstrating how manuscript pieces (which can be found in both *partitura* and IKT) demonstrate evidence of improvisation, while printed works demonstrate self-fashioning.[120] In particular, the printed volumes of Mayone and Trabaci (notated in *partitura* but with music that demonstrates clear stylistic hallmarks of keyboard playing) exploit the medium of *partitura* to reveal contrapuntal complexity; Trabaci's *Libro secondo* even provides indications in the scores of the ricercars to alert the reader to instances of particular complexity, such as the use of learned devices such as *inganno* and the combination of multiple subjects.[121] Interestingly, these printed volumes do not seem intended to be easily played, with a lack of vertical alignment between parts; in fact, as notated they are difficult if not impossible to play on a keyboard instrument, despite the fact that Trabaci assures the reader that all of his works – even those written for the harp – can be played on harpsichord "con facilità."[122] In addition, the connection to the Roman-Neapolitan school goes beyond notational issues. Scholars have recently examined both *partiture* and musical complexity as hallmarks of a particular social-intellectual milieu, which, following Naomi Barker, I refer to as *musica erudita.* A similar culture existed in Venetian circles, and prints – both in IKT and in *partitura* – can be read as part of similar currents.

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[117] Martha Feldman, *City Culture and the Madrigal at Venice* (Berkeley: University of California Press, 1995). Another methodological model for the present study is Cristle Collins Judd's *Reading Renaissance Music Theory,* particularly Chapter 7, which looks at Zarlino's reception in Venetian print culture.

[118] Bernstein notes the close relationship between printing houses in Venice and academies; see Bernstein, *Music Printing,* 15. In addition, many keyboardist-composers were associated with academies. See, for example, Claudio Veggio's role in Doni's famous *Dialogo;* see Slim, "Puzzling Intabulations," 39.

[119] The San Marco organist Girolamo Parabosco appears frequently in Feldman's study (often in his role as *literato* rather than as composer or keyboardist); Parabosco was a frequent visitor to Venier's academy, along with other Willaert students. See Feldman, *City Culture,* 97.

[120] Another interesting area of inquiry is the potential connections between the Neapolitan printed volumes and the music of Venetian keyboardists. Bernstein shows that Venetian printers had a market presence in Naples, and Trabaci and Mayone's arrangements of Ferrabosco's *Io mi son giovenetta* demonstrate similarities to Andrea Gabrieli's intabulation. See Bernstein, *Music Printing,* 86-88.

It is tempting to establish *partitura* and IKT as a dichotomy; IKT was designed to be played immediately, with voice crossings eliminated by the practice associated with tablature voices described above. The vertical alignment of notes in the score seemed to have been a priority.[123] On the other hand, *partiture* seem as if they were designed to be read as a score by the connoisseur. While their use by an instrumental consort was certainly a possibility, the prints of Trabaci and Mayone are explicitly designated as keyboard music.[124] It is interesting to note that compositional *style* often matches the tendencies of the notational format, with the music in the *partitura* volumes of Trabaci and Mayone being near impossible to play as notated, and intabulated pieces by Venetian composers generally easier to play; one might assume that a keyboardist would have prepared his or her own IKT version of a Trabaci *recercata*. In the same vein, the music in some printed intabulations – the *dotte partiture* – demonstrate a tendency to "break" from the conventions of IKT to show contrapuntal detail, to strive to be *partiture*, while others seem to alter the original polyphony freely. The latter type – "sounding images" – are more concerned with demonstrating the virtuosic playing of the famous keyboardist to whom they are attributed, with a player able to "reproduce" a virtuosic, improvised arrangement of vocal work *through* the tablature. This conception works on a purely visual level too, communicating to someone looking at the tablature rather than playing it: a reader of the sounding image intabulation would observe the brilliance of the improvising keyboardist; on the other hand, a reader of a *dotta partitura* would observe that the intabulator understood the structure of the model.[125]

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[121] Giovanni Maria Trabaci, *Il secondo libro de ricercate et altri varij capricci* (Naples: Carlino, 1615; facsimile edition, Florence: Studio per Edizioni Scelte, 1984).

[122] This indication appears before a set of variations on the "Tenor de Zefiro," which is designated as being composed for harp; nonetheless, Trabaci writes "… having however, that in this present volume there are several pieces indicated for the harp, this should not mean that one overlook the harpsichord, because the harpsichord is Lord of all of the instruments of the world, and on it one can play anything with ease." ("… havertendo però, che se in questo presente libro stà intitolate alcune cose per l'Arpa, non per questo si soprasedisca il Cimbalo, perche il Cimbalo è Signor di tutti l'istromenti del mondo, & in lei si possono sonare ogni cosa con facilità."). Ibid., 117.

[123] See Sillbiger, "Tablature?" 97.

[124] In addition, the notion of score-as-study is supported by one of the earliest printed scores, Gardano's well-known 1577 print of Rore's four-part madrigals. Gardano presents the madrigals in a full *partitura,* untexted, and designates them as being arranged as such to "play on every type of perfect instrument [i.e. lutes and keyboards], and for 'qualunque studioso di contrapunti.") Cipriano de Rore, *Tutti i madrigali di Cipriano di Rore a quattro voci: spartiti*

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et accommodati per sonar d'ogni sorte d'istrumento perfetto, & per qualunque studioso di contrapunti (Venice: Gardano, 1577).

[125] This again echoes Judd's point regarding multiple levels of engagement with a printed score or musical example; especially of note here is Judd's "iconic" function ("we are meant to *see* notation, but not hear it.") Judd, *Reading Renaissance Music Theory,* 9.

Chapter 1

Italian Keyboard Tablature Revisited

If a sixteenth- or seventeenth-century Italian keyboardist wished to write down a composition, she or he had several options when it came to notational format: tablature, part-books, and, to a lesser extent, full score.[1] With tablature, Italian keyboardists worked with a particular type: although called *intavolatura* by the publishers and scribes who produced it, what we now call Italian keyboard tablature was a two-staff, barred, mensural notation – immediately apparent is the disparity between the use of the word "tablature" (which ordinarily implies the use of figures instead of notes), and the use of mensural notation. In fact, IKT not only looks a lot like early keyboard notations used in France, England, and the Netherlands, but also modern keyboard notation.[2] At the same time, it does not quite behave like any of these systems.[3] In fact, IKT is readily identifiable through several notational irregularities, most of which can be at least partly explained by the fact that IKT's purpose was to be easily read by keyboardists, rather than to show polyphonic structure.[4]

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[1] The majority of keyboard *partiture* appear at the end of the sixteenth and the beginning of the seventeenth centuries. See Table 3.3 in Robert Judd, "The Use of Notational Formats at the Keyboard," (PhD diss., Oxford University, 1988), vol. 2, 8.

[2] Following the convention established in the Introduction, I will hereon abbreviate "Italian keyboard tablature" as IKT. Silbiger compared IKT with the keyboard notations used in France, England, the Netherlands, and with modern notation, in an article that in many ways served as the springboard for the present chapter. Alexander Silbiger, "Is the Italian Keyboard 'Intavolatura' a Tablature?" *Recercare* 3 (1991): 81-103.

[3] Interestingly enough, similar conventions and techniques can also be seen in Attaingnant's keyboard prints, making them a potential yet unexplored point of comparison for *intavolatura* and its irregularities; a perusal of Pierre Attaingnant's keyboard volumes indicates many shared conventions with IKT. Daniel Heartz points to links between many of the Italian printers -- including Antico -- with Attaingnant and French publishers. Daniel Heartz, *Pierre Attaingnant Royal Printer of Music: A Historical Study and Bibliographic Catalogue* (Berkeley and Los Angeles: University of California Press, 1969), 40-41.

[4] Alexander Silbiger writes: "One way of characterizing tablature notation is to say that it provides no information beyond what is required to realize a piece of music physically; or to put it less kindly: tablature addresses the fingers of the players rather than their musical understanding -- their bodies rather than their minds." Alexander Silbiger, "Tablature?," 93.

IKT and its notational irregularities have already drawn interest from scholars. The topic was addressed in articles by Giuseppe Clericetti (1987) and Alexander Silbiger (1991), and in a doctoral dissertation by Paul Anthony Boncella (1991).[5] Aptly titled "Is the Italian keyboard *intavolatura* a tablature?," Silbiger's article addressed the disparity between terminology and notational medium most directly, identifying IKT's notational irregularities largely in relation to other historic keyboard notations that used mensural signs on two staves, as well as to modern keyboard notation. He didn't compare IKT to other figure-based lute or keyboard systems, and his study mainly examined printed sources rather than manuscript ones. In the end, Silbiger highlighted a tendency on the part of IKT to favor vertical structure over polyphonic texture, and partly bypassing the question posed by his article's title, wondered if the real issue was the degree to which the notation foreshadowed subsequent developments in musical style.[6]

Clericetti conducted his study as part of his larger editorial project of producing a complete modern edition of Andrea Gabrieli's keyboard music.[7] Approaching IKT from the standpoint of a modern editor, Clericetti argued in favor of preserving notational irregularities in Gabrieli's works (the previous Andrea Gabrieli edition by Pierre Pidoux freely altered features that didn't conform to modern practice).[8] In his article Clericetti was largely concerned with typographical detail, which he addressed throughly and systematically. Much like Silbiger's article, Clericetti's was also an examination of music from printed sources – in this case, by one composer – rather than music in manuscripts. It didn't offer a comparative analysis between Gabrieli's intabulations other printed tablatures, nor did it compare IKT with other tablature systems.

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[5] Alexander Silbiger, "Tablature?" Giuseppe Clericetti, "Criteri per un'edizione moderna della musica per strumenti a tastiera di Andrea Gabrieli," in *Andrea Gabrieli e il suo tempo,* ed. Francesco Degrada, vol. 11 of *Studi di musica veneta* (Florence: Leo S. Olschki, 1987), 353-386. Paul Anthony Luke Boncella, "The Classical Venetian Organ Toccata (1591-1604): An Ecclesiastical Genre Shaped by Printing Technologies and Editorial Policies" (PhD diss., Rutgers University, 1991), 122-41.

[6] Silbiger writes: "…*intovalatura* notation, with its emphasis on the vertical at the expense of the horizontal, reflects an earlier recognition by Italian keyboard players of the rising to the foreground of the harmonic aspects when full-voiced passages are performed on their instruments, and thus, might it have formed a progressive strain in their thinking about music?" Silbiger, "Tablature?," 98-99.

[7] Clericetti, "Criteri," 353-354.

[8] Clericetti points out that Pidoux's edition had a modern preoccupation with polyphonic integrity, and freely altered the IKT irregularities to make polyphonic structures clear (that is, Pidoux's perception of these polyphonic structures; as IKT hides this sort of detail, much of it needs to be inferred). Clericetti points to other errors in Pidoux's edition; see Clericetti, "Criteri," 354-55.

Boncella didn't compare IKT with other keyboard or lute notations; instead, he examined IKT convention as an element of the Venetian organ toccata, which he examines within the context of printing conventions and culture. Boncella has a chapter dedicated to IKT's notational irregularities; because of its particular focus, the repertoire under examination was once again exclusively from print sources, although Boncella did compare Gardano's practices with those in tablatures produced by the rival printing houses of Vincenti and Verovio.[9] Like Silbiger and Clericetti, Boncella pointed to the need to consider IKT's notational irregularities when preparing modern editions.[10]

In a similar vein to the three studies just cited, I will begin my own with a re-examination of IKT's notational irregularities. However, my starting place is slightly different: rather than examining IKT function in free keyboard music ("free" in the sense of not being based on known models), I will instead examine IKT through the *process* of intabulation, comparing polyphonic models to their intabuated versions. In other words, I examine IKT within the contexts of transcription and arrangement. This approach offers some benefits. For example, Silbiger opens his study with a "detabulation" of a Gabrieli toccata, against which he identifies notational irregularities. His detabulation, although entirely convincing, is by nature speculative. In contrast, comparing extant models with their intabulations – in a wide body of examples – casts IKT conventions in greater relief.[11]

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[9] Boncella wrote his study roughly at the same time as Silbiger did his, a point that Boncella acknowledges (see 140n1), although the two studies were conducted independently. Coincidentally, the two scholars examine the same Andrea Gabrieli toccata as starting points for their discussions.

Another focus of Boncella's study was IKT's relationship with print technology. Claudio Merulo's toccatas, published by Simone Verovio, were engraved, whereas most volumes of Venetian keyboard music were printed with movable type. Boncella points out that Verovio's prints are more precise in showing notational detail. Boncella, "Venetian Organ Toccata," 131.

[10] Ibid., 21-22.

In addition, my approach complements those of Silbiger, Boncella, and Clericetti. The fact that intabulations demonstrate the same notational conventions as “free” keyboard music notated in IKT suggests that these conventions were inherent to the notational system; at the same time, they are tied to the intabulation process as well. The precise relationship between the *process* of arranging polyphony in tablature notation and the *conventions* that governed the notational system is key for this study. This is especially the case as the intabulation process often entailed substantial alteration of the model’s voice leading through the transposition and omission of notes in the model. In fact, comparative analysis of intabulations and their polyphonic models supports the notion that the very act of writing music down in IKT entailed an intabulation process. In this view, IKT worked in algorithmic fashion, as IKT conventions and the intabulation process both work to automatically convert vocal or instrumental polyphony into idiomatic keyboard textures.[12]

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The overall purpose of this chapter is to establish concepts that will set up subsequent chapters. Chapter 2 will sketch out a hypothesis of the origins of IKT’s conventions, arguing that they can be seen as products of the improvisational activities of *cinquecento* keyboardists. Of key importance for this hypothesis is IKT's tendency to "verticalize" polyphonic structure, and in this chapter I will establish how IKT's conventions contribute to this phenomenon. The precise functioning of the irregular notational conventions that define IKT as a system are fully established as generally present in the full corpus of examined intabulations (in both print and manuscript sources – see the Appendix). These conventions can be seen as standard practice, even as individual sources demonstrate considerable variation in their application. At a fundamental level scribes and publishers seem to be consistent in their treatment of IKT, its functionality always pointing to a particular ideal. As a necessary preparation for both Chapter 3, I will also establish some basic concepts here with regard to the role of IKT in composition: the potential role of notational practice in affecting stylistic aspects that would normally be considered compositional;[13] the role of notational convention in composition, through an examination of elaborate intabulations; [14] and lastly, a particular by-product of IKT's notational conventions, which I call "tablature voices."[15]

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[11] See Silbiger, “Tablature?”: 81-82. To be fair, Silbiger also examines some intabulations, but his initial, and primary, focus is on “free” keyboard music.

[12] The notion of intabulation as a kind of translation was developed by Victor Coelho, and will be addressed fully further on in this chapter. See Victor Coelho and Keith Polk, *Instrumentalists and Renaissance Culture, 1420-1600: Players of Function and Fancy* (Cambridge: Cambridge University Press, 2016), 213-16.

Lastly, in this chapter I will address the precise nature of IKT, a question raised by previous scholars. In general, tablature notations are decidedly prescriptive, a quality that strongly sets them apart from other forms of early notation.[16] In referring specifically to elements of the mechanical realization of performance (for example, the lines in Italian lute *intavolatura* represent the strings of the instrument, and the numbers represent frets), tablature notations are very close to performance practices.[17] Establishing the degree to which IKT was conceived and functioned like other tablature notations profoundly affects the way we view the music transmitted in it. I will make a case for IKT's irregular notational conventions being directly comparable to the conventions of Italian lute *intavolatura,* arguing that IKT should really be viewed as an attempt to create a keyboard equivalent of lute *intavolatura* with mensural notation, with graphical elements in the score used to represent elements of the keyboard, as well as the physical actions involved with playing it. In this sense, IKT is mimetic, on multiple levels: it represents the keyboard, the actions of an idealized performance, and the sonic realization of that performance.[18]

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[13] For example, IKT practice may actually dictate an alteration of polyphonic structures, as will be demonstrated shortly.

[14] As mentioned in the introduction, there were many links between intabulation and parody composition. See Victor Coelho, "Revisiting the Workshop of Howard Mayer Brown: [Josquin's] *Obsecro te domina* and the Context of Arrangement," in *'La musique, de tous les passetemps le plus beau...': Hommage à Jean-Michel Vaccaro,* vol 1. of *Domaine musicologique: Collection d'études* 19 (Paris: Klincksieck, 1998), 47-65 for an overview.

[15] An initial formal definition of "tablature voices" is given in the Introduction, and they are fully explored further on in the present chapter. They are, at least at first glance, a by-product of IKT's notational irregularities and conventions. Even when a polyphonic model is copied completely faithfully in tablature (that is, it isn't altered to create a texture more suited to keyboard playing), the notational conventions themselves produce the visual effect of *new* voice leading and, in effect, new polyphonic structures, with "new" parts. It is my contention that these "new" tablature parts reflect the way that keyboardists mentally processed and conceived of polyphony: in other words, they embody "keyboard thinking." In the introduction to this dissertation, I partially define "keyboard thinking" as being essentially vertical in its concept of polyphony, and this can be seen in tablature voices and as part of the notational conventions alike.

[16] I use these terms in the way established by Bruce Haynes in *The End of Early Music* (Oxford: Oxford University Press, 2007), 103-04. The concept is appropriated from grammar, and Haynes is not the first person to apply this

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particular formulation to music notation. That said, Haynes directly molds his usage upon Nicholas Harnoncourt's concepts of "work" and "performance" notations, in *Baroque Music Today: Music as Speech,* trans. Mary O'Neill (Portland, OR: Amadeus Press, 1995), 29.

[17] Although a detailed and precise history of their musical-cultural function is obscure, published volumes of IKT dedicated to intabulations suggests that they were intended to offer solo keyboard versions of the music they contain. For example, Jacques Buus's 1549 print of ricercars in IKT, the *Intabolatura d'organo di ricercare* (Venice: Gardane, 1549), seems to be intended for those who wanted to play part-book ricercars on keyboard; see Robert Judd, "The Use of Notational Formats," vol. 2, 8. Judd interprets a pedagogical purpose to Buus's volume. The first ricercar in the collection is an intabulation of the composer's own part-book ricercar, from *Il secondo libro di recercari* (Venice: Gardane, 1549). This particular intabulation was shown in example by Richard Taruskin, in the *Oxford History of Western Music,* vol. 1, Chapter 15, "Peaking Behind the Curtain." (accessed online June 18, 2016).

Two intabulated ricercars from Padovano's 1556 part-book collection found in Bertoldo's 1591 *Toccate* (these ricercars are unattributed to Padovano in Bertoldo's print) were also probably intended for solo performance. This is suggested by the extensive ornamentation; in addition, the fact that they are heavily truncated perhaps indicates a specific liturgical function. Sperindio Bertoldo, *Toccate Ricercari et Canzoni Francese Intavolate per Sonar d'Organo* (Venice: Gardano, 1591). See modern edition with facsimile: Sperindio Bertoldo, *Opere per tastiera (Venice 1591)*, ed. Luigi Collarile (Colledare: Andromeda Edition, 2005).

That playing intabulations was a popular past-time for lutenists is well-documented in sources such as Galilei's *Fronimo;* that solo keyboard intabulations played a similar functional role is probably indicated by the number of extant prints dedicated to them (see the series of Gabrieli, for example), as well as by prints such as the 1577 Gardano publication of chansons, put in score, untexted, "per sonar d'instromento perfetto." Antonio Gardano, *Musica de diversi autori* (Venice: Gardano, 1577); facsimile ed. (Bologna: Forni Editore, 1971). The contents of this volume include many chansons that were popular vehicles for solo instrumentalists. For modern edition and translation of Galilei's lute treatise, see Vincenzo Galilei, *Il Fronimo,* trans. Carol McClintock (Stuttgart: American Institute of Musicology, 1985).

[18] The mimetic qualities that I argue IKT possess are expanded upon in Chapter 3 to construct a theory of "self-fashioning" in intabulation.

Part 1: IKT as a Notational System

IKT Revisited

The studies of Boncella, Silbiger, and Clericetti, mentioned above, imply that IKT functioned as a system, a system defined by unwritten yet implicitly understood rules and conventions. These rules and conventions can be observed in the majority of the music written down in the notational format. As mentioned previously, my initial approach in reexamining IKT is to analyze its functioning as part of the process of intabulation, as observed throughout the corpus of extant print and manuscript intabulations. My search focuses on manuscript and print sources notated in IKT dating before 1611; the Appendix contains select comparative models of intabulations that have not previously been published (in this format).[19]

Example 1.1, an excerpt from Andrea Gabrieli's intabulation of Clemens's chanson *Frais et Galliard,* makes a good introduction to IKT's notational irregularities. (The music here has been arranged as it will be for all of the examples in this chapter: the bottom two staves are a transcription of Gabrieli's keyboard intabulation, and the top four are a full-score transcription of Clemens's chanson). In bar 7, the alto and tenor parts of Clemens's chanson cross, briefly forming a unison on the same *d'* above *c'* on the second part of the first beat; in Gabrieli's intabulation, however, the unison between the two parts is not shown. Instead, it is represented

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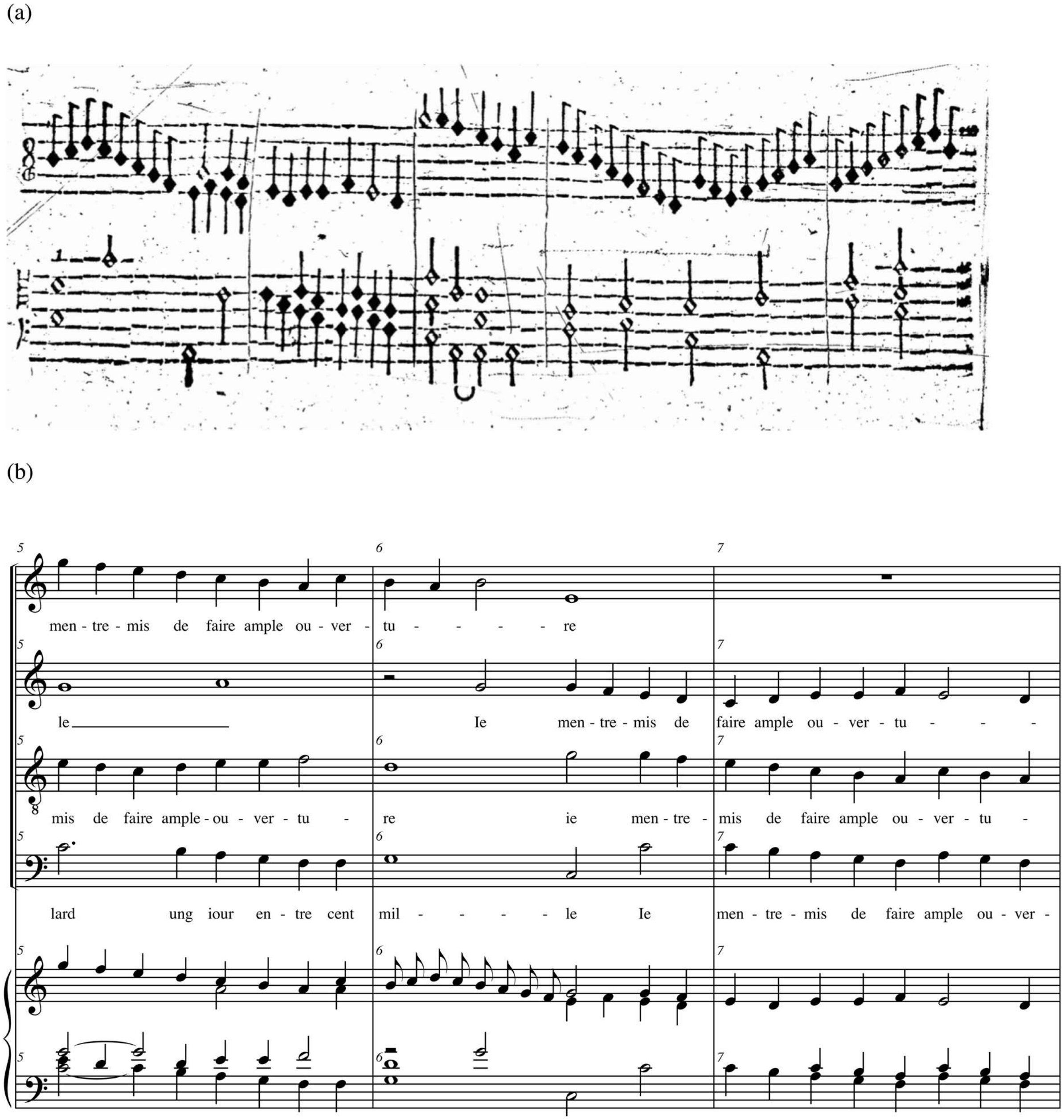
[19] Only for Merulo's intabulations and for the intabulations in the Pietro Francese manuscript (Pf) are there complete comparative models available to the modern reader. Complete models of Merulo's canzonas can be found in Charles McDermott's doctoral dissertation; see Charles M. McDermott,"The *Canzoni d'Intavolatura d'Organo* of Claudio Merulo: A Guide to Improvised Oranmentation" (PhD diss., University of California, Berkeley, 1979): see the second volume for complete comparative models of Merulo's canzonas. Marie Louise Göllner provides comparative models for all of the intabulations in the Pietro Francese manuscript. See *Eine neue Quelle zur italienischen Orgelmusik des Cinquecento*, vol. 3 of *Münchner Editionen zur Musikgeschichte* (Tutzing: Schneider, 1982).

Example 1.1 Top: facsimile, Andrea Gabrieli, *Canzon Francese deta Frais & galliard A Quatro voci; di Crequillon* (1605); bottom: transcription of Andrea Gabrieli's *Canzon Francese deta Frais & galliard A Quatro voci; di Crequillon* (1605), mm. 5-7, from GABRIELI 1605a (bottom two staves); Clemens non Papa, *Frisque et galliard* (upper four staves), adapted from Jacobus Clemens non Papa, *Chansons,* ed. Karel Bemet Kempers, vol. 4, part 10 of *Corpus mensurabilis musicae* (Rome: American Institute of Musicology, 1962).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by one note. Neither is another unison on the first part of the beat in this same measure, between the alto and bass, which is treated in the same way. The end result is that, until the second beat, Gabrieli's intabulation looks like it is missing a part.[20] Rather than clarifying the voice leading of Clemens's chanson, Gabrieli's intabulation obscures it.

The treatment of the polyphonic unison in this example can be cited as the first of the many irregularities that define IKT. Another one of these irregularities can be seen in the same example. The voice crossing between the alto and tenor parts at the beginning of measure 7 is not reflected by the stem directions in the intabulation – this also works to obscure the voice leading of Clemens's chanson. Stem directions are assigned based upon the vertical placement of notes in a staff at any given moment, with the highest note taking an upward stem, and the lowest taking a downward one. This practice is also observed in the next bar, as well as where the alto and tenor parts of the chanson cross in beats one and two. Rather than being arranged in a way that makes the voice crossings clear (as would be done in modern keyboard editorial practice), the stems always reflect the vertical position of the notes.[21] In general, this practice of determining stem direction, combined with the practice of handling unisons, obscures the contour of the model's voice leading; without recourse to a score or part-books, or having memorized the voice leading of the original, a player of Gabrieli's tablature would have no clue as to the precise identity of the parts in these instances. Instead of the model's polyphonic voices, the player sees a "fake" set of composite parts, each formed of the highest or lowest tones, as suggested by series of notes with the same stem direction.[22]

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[20] Hiding unisons in the polyphonic model in this way is seen fairly consistently in printed music from Venetian publishing houses. Modern keyboard notational practice would have of course required using a double stem – for that matter, contemporary English notation would have as well. See Silbiger, "Tablature?": 97.

[21] As noted by Silbiger; see "Tablature?," 90-92. Silbiger points out that even Bach's notation is more "performer-oriented" than typical modern editorial practice; citing an example from the *Well-Tempered Clavier,* Silbiger shows that Bach notated two voices on top of each other in the same staff, even as stem direction made the voices clear (which would not be the case in IKT). As Silbiger points out, modern editorial practice can be seen clearly in the edition of Frescobaldi's polyphonic works as published by Bärenreiter; see for example the *Fantasie.* When transcribing Frescobaldi's four-part counterpoint in a modern keyboard score (the majority of Frescobaldi's contrapuntal works were originally published in *partitura,* or full score), stem direction is used to clarify the integrity of the voices, and additional lines added to clarify voice leading and voice crossings. See Frescobaldi, *Das erste Buch der Capricci, Ricercari und Canzoni 1626,* ed. Pierre Pidoux (Kassel: Bärenreiter-Verlag, 1949).

Example 1.1 also demonstrates another irregularity. In measure 8, the notes are arranged so that the soprano part is isolated on the top staff, and the other voices are moved to the bottom one. This is perhaps the IKT irregularity best known to performers: the staves dictate the notes to be played by each hand, with notes on the top assigned to the right, and notes on the bottom to the left.[23] The precise arrangement of parts between the two staves is often dictated by ornamentation; if one staff (or hand) has *passaggi,* the other one will take the rest of the notes as accompaniment. This can be seen in **Example 1.2,** from an intabulation of Willaert's chanson *Qui la dira,* again by Andrea Gabrieli. The parts are generally disposed evenly between the two staves until one hand has *passaggi*; in these instances, the ornaments are isolated on one staff, and the other voices form chords on the other. In general, the convention of arranging the parts on the staves in this manner obscures the model's voice leading.

Example 1.2 also demonstrates another notational irregularity: rests are treated in ways that differ from standard practice. For example, rests from the model are generally omitted when intabulated in IKT. However, a few rests are kept (see, for example, rests in the Tenor and Quintus parts in measure 20). In this cases, their inclusion seems to be tied to clarifying the entrance of the notes that immediately follow them. Sometimes rests are *added* to the tablature

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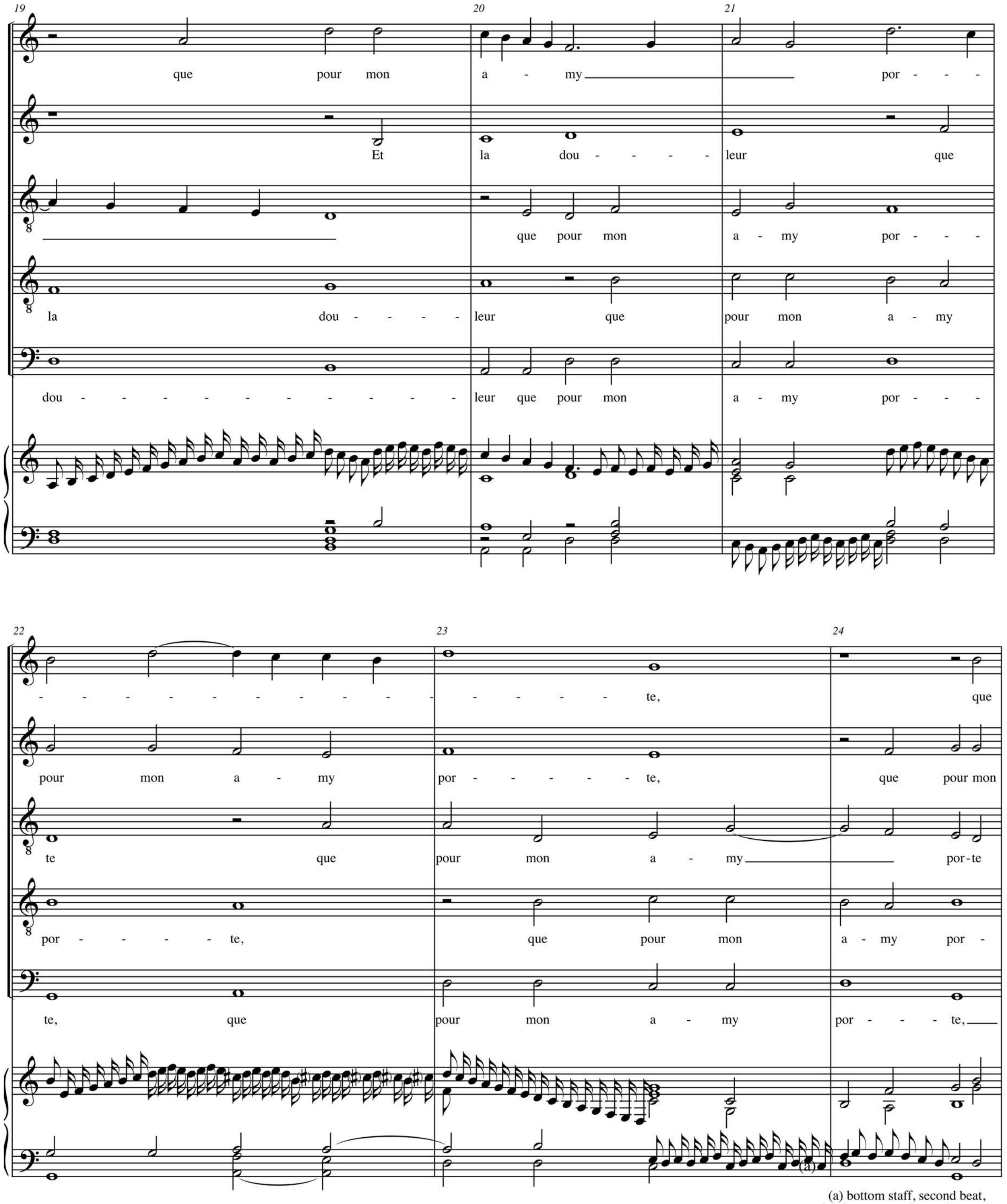
[22] This phenomenon is clearly related to *basso seguente* practice in late Renaissance keyboard accompaniment practice. A thorough comparison between IKT and *basso seguente* will be conducted further on in the present chapter. For more on *basso seguente,* see Peter Williams and David Ledbetter, "Basso seguente," *Grove Music Online. Oxford Music Online,* accessed January 5, 2015. http://www.oxfordmusiconline.com.libproxy.usc.edu/subscriber/article/grove/music/02279.

[23] Further on in this chapter, I will argue that this practice is grounded in the conceptual alignment of the notation with the physical keyboard itself. For now, it will suffice to note that it can be tied directly to creating a notation designed for playability; in Gabrieli's intabulation, the entire alto part, from the second beat onward, is simply removed – presumably its inclusion would have made for an awkward stretch for the player. (The alteration of the model's polyphony in the process of intabulation will be covered shortly.)

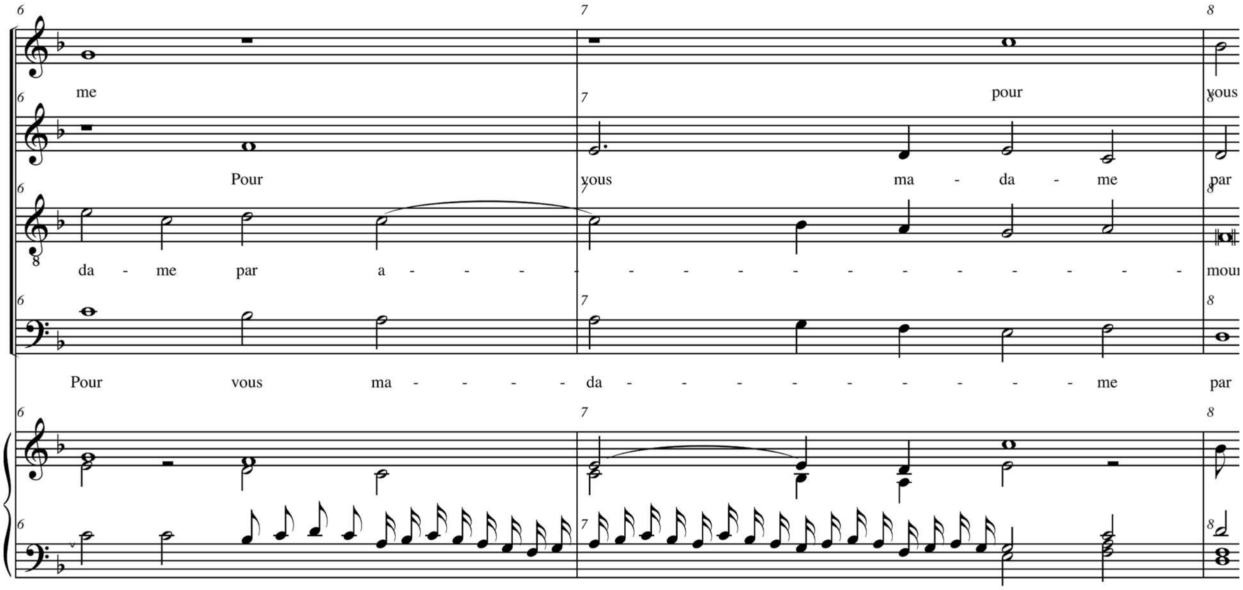
Example 1.2 Andrea Gabrieli, *CANZON deta Qui la dira* (1605)*,* mm. 17-21, from GABRIELI 1605b; Adrian Willaert, *Qui la dira,* adapted from Willaert, *The Complete Five and Six-Voice Chansons,* ed. Jane A. Bernstein, vol. 23 of *The Sixteenth-Century Chanson* (New York: Garland, 1992).


19
20
21
que pour mon a - my por - - -
Et la dou - - - - - leur que
que pour mon a - my por - - -
la dou - - - - - leur que pour mon a - my
dou - - - - - - - - - - - leur que pour mon a - my por - - -
22
23
24
- - - - - - - - - - - - - - - - - te, que
pour mon a - my por - - - - - - - te, que pour mon
te que pour mon a - my por - te
por - - - - - te, que pour mon a - my por -
te, que pour mon a - my por - - - te,
(a)

(a) bottom staff, second beat, eighth notes are sixteenth notes in original.

when they are not technically needed, or, for that matter, present in the original polyphony; see, for example, the last beat of measure 7 in **Example 1.3**. Silbiger calls these “fictitious” rests, as they don't serve any contrapuntal function.[24] Instead, they are tied to the mechanical realization of the tablature by the player – they are intended to help the player read the intabulation easily, rather than to demonstrate information about voice leading.[25] For example, these rests are sometimes used to clarify voices moving between staves; this can be seen in measure 6 of Example 1.3.[26]

Example 1.3 Andrea Gabrieli, *Canzon Francese deta Ie prens en gre* (1605), mm. 6-7, from GABRIELI 1605b; Clemens non papa, *Je prens en gre la dure mort,* adapted from Jacobus Clemens non Papa, *Chansons,* ed. Karel Bemet Kempers, vol. 4, part 10 of *Corpus mensurabilis musicae* (Rome: American Institute of Musicology, 1962).


6
7
8
me
pour
vous
Pour
vous
ma - da - me
par
da - me par a - - - - - - - - - - - - - - - - -
mour
Pour vous ma - - - - - da - - - - - - - - - - - me
par

These fictional rests could be interpreted more literally, however; simply as signs to remove a finger from a key. One gets the sense that most rests in IKT held this function. This can be seen, for example, in **Example 1.4,** an excerpt from Gabrieli's intabulation of Ferrabosco's *Io mi son giovenetta.* When the right-hand *passaggio* begins its ascent on *g′* after the first note, the bottom staff (or left hand) gets a rest to clear space, followed by a quick restriking of the note (or key). Giuseppe Clericcetti calls these rests "'pause di mano' o 'di dita,'" in that they literally dictate the removal of the player's hand from a key – and as Clericcetti indicates, the rests have nothing to do with the polyphony of the model.[27]

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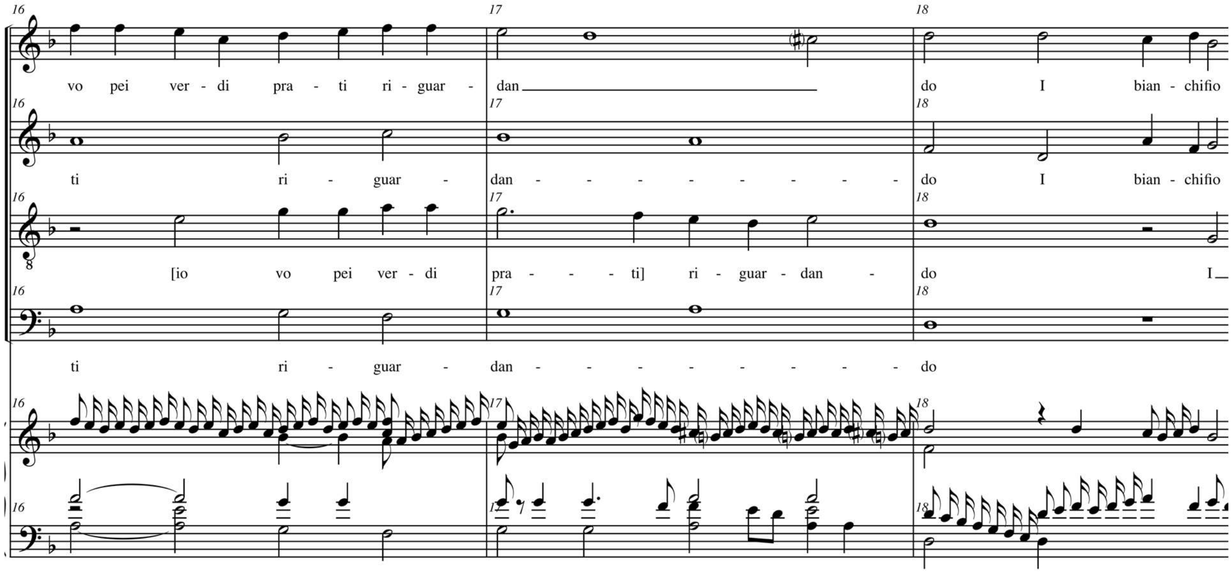
[24] Silbiger, “Tablature?”: 83.

[25] As Silbiger puts it: “Thus we see that in the original notation no attempt was made to clarify the voice leading; the player is merely instructed when to press which keys.” Ibid.

[26] In his description of IKT conventions, Boncella argues for three functions for rests: “(1) to clarify the alignment of notes, (2) to signal the entrance of a voice or voices, and (3) to show when a voices passes to another hand.” Boncella, “Venetian Organ Toccata,” 125-26. The second category corresponds with Silbiger’s “fictitious” rests. I would argue that all rests in IKT are rooted in the same basic function: indicating the physical removal of a finger from a key, even when they are used to indicate possible details of voice leading. Note that the rest in measure 6 can be interpreted either way.

Example 1.4 Andrea Gabrieli, *Io mi son giovinetta. Madrigale a4. Tabulato da Andrea Gabrieli* (1596), mm. 16-18, from GABRIELI 1596; Domenico Ferrabosco, *Io mi son giovinetta, et volontieri,* adapted from Domenico Ferrabosco, *Opera Omnia,* ed. Richard Charteris, vol. 102 of *Corpus mensurabilis musicae* (Neuhausen-Stuttgart: American Institute of Musicology, 1992).


16
17
18
vo pei ver - di pra - ti ri - guar - dan do I bian - chifio
ti ri - guar - dan - - - - - - - - - do I bian - chifio
[io vo pei ver - di pra - - - ti] ri - guar - dan - do I
ti ri - guar - dan - - - - - - - - - - do

Rests, along with all of the tablature conventions cited so far, tend to obscure the original voice leading but create a texture easier to read for the player. IKT's treatment of long notes can be seen in similar light. Longer notes are commonly split into shorter, even ones, which are often tied but not always. This irregularity can be seen in Example 1.4, in measures 16 and 17. Here, the semibreves of the bass part in the model are consistently intabulated as repeated half-notes. Intabulators are not consistent in whether these split long notes are tied; [28] in fact, the notes in measure 16 have ties, and the ones in measure 17 don't.

---

[27] See Clericetti, "Criteri," 373.

To the categories of "fictitious" (or note-clarifying) and "mechanical" rests, we could also potentially add a third: a "figural" rest, in which a rest is part of a repeating motive or gesture: this can be seen in Example 1.4, in the last measure. The rest before the quarter note (comparable to the truncating of dactylic figures in canzonas) is part of an ornamental figure.

Also notable in Example 1.4 are two additional instances of the treatment of rests in IKT: the model's tenor rest in measure 16 is omitted, and a rest is added to clarify Gabrieli's new soprano figure in measure 18. IKT notational conventions can interact in complex ways, working in tandem to obscure the voice leading of the model. This can be seen in **Example 1.5**, an excerpt from Gabrieli's intabulation of *Frais et Galliard.* The combination of the conventions of splitting long notes (see the semibreves in the alto part of the model), staff/hand practice, and unisons creates a visual keyboard score that looks fundamentally different from its model, even as the actual notes are essentially the same.

Are IKT's Rules Universal?

The notational irregularities demonstrated up to this point are applied with enough consistency to be seen as a set of standard notational conventions, and the features seen in these examples can be taken as models to which features in intabulations can be compared. This is especially highlighted by the fact that, in general, IKT rules function in manuscript sources as well as in

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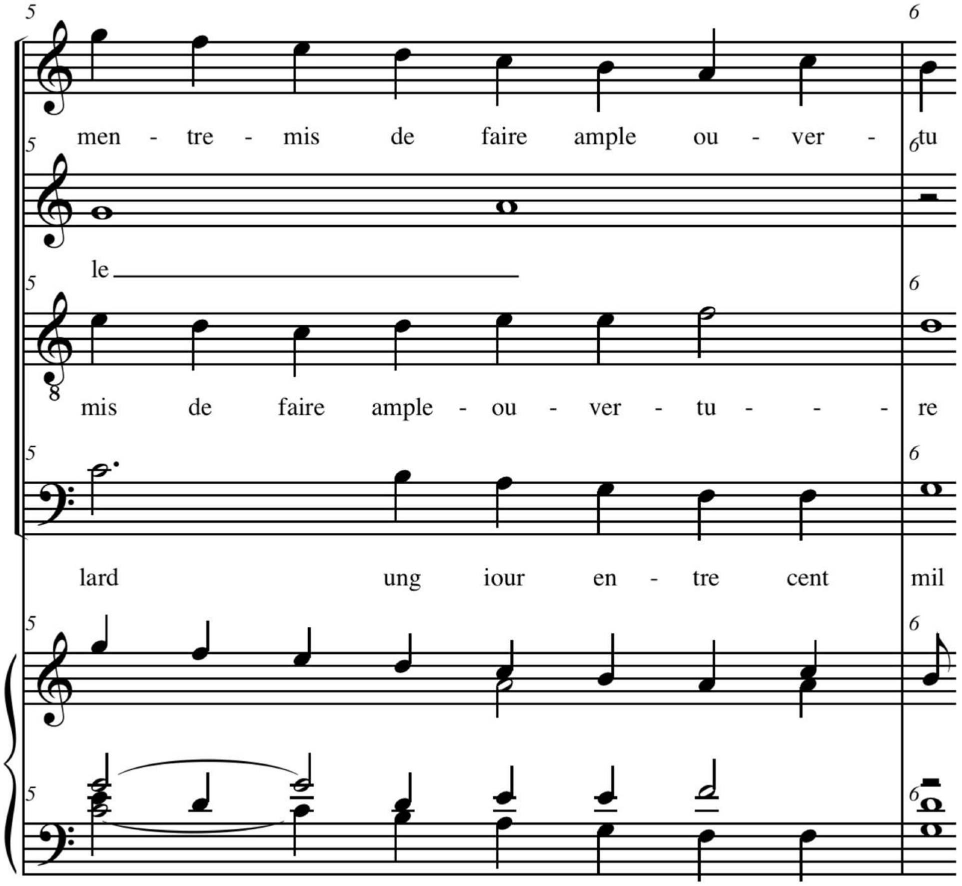
[28] Clericetti, "Criteri," 380. The inconsistent application of ties may reflect performance reality: whether or not ties were observed in performance may have had to do with the choice of instrument. Performance on quilled keyboard instruments probably entailed restriking tied notes as a matter of course. See Luigi Ferdinando Tagliavini, "The Art of 'Not Leaving the Instrument Empty': Comments on Early Italian Harpsichord Playing," *Early Music* 11 (1983), 300.

Example 1.5 Andrea Gabrieli, *Canzon Francese deta Frais & galliard A Quatro voci; di Crequillon* (1605), m. 5, from GABRIELI 1605a (bottom two staves); Clemens non Papa, *Frisque et galliard* (upper four staves), adapted from Jacobus Clemens non Papa, *Chansons,* ed. Karel Bemet Kempers, vol. 4, part 10 of *Corpus mensurabilis musicae* (Rome: American Institute of Musicology, 1962).


5
6
men - tre - mis de faire ample ou - ver - tu
le
mis de faire ample - ou - ver - tu - - - re
lard ung iour en - tre cent mil

print ones.[29] **Example 1.6** demonstrates IKT practice in five print and manuscript sources.[30]

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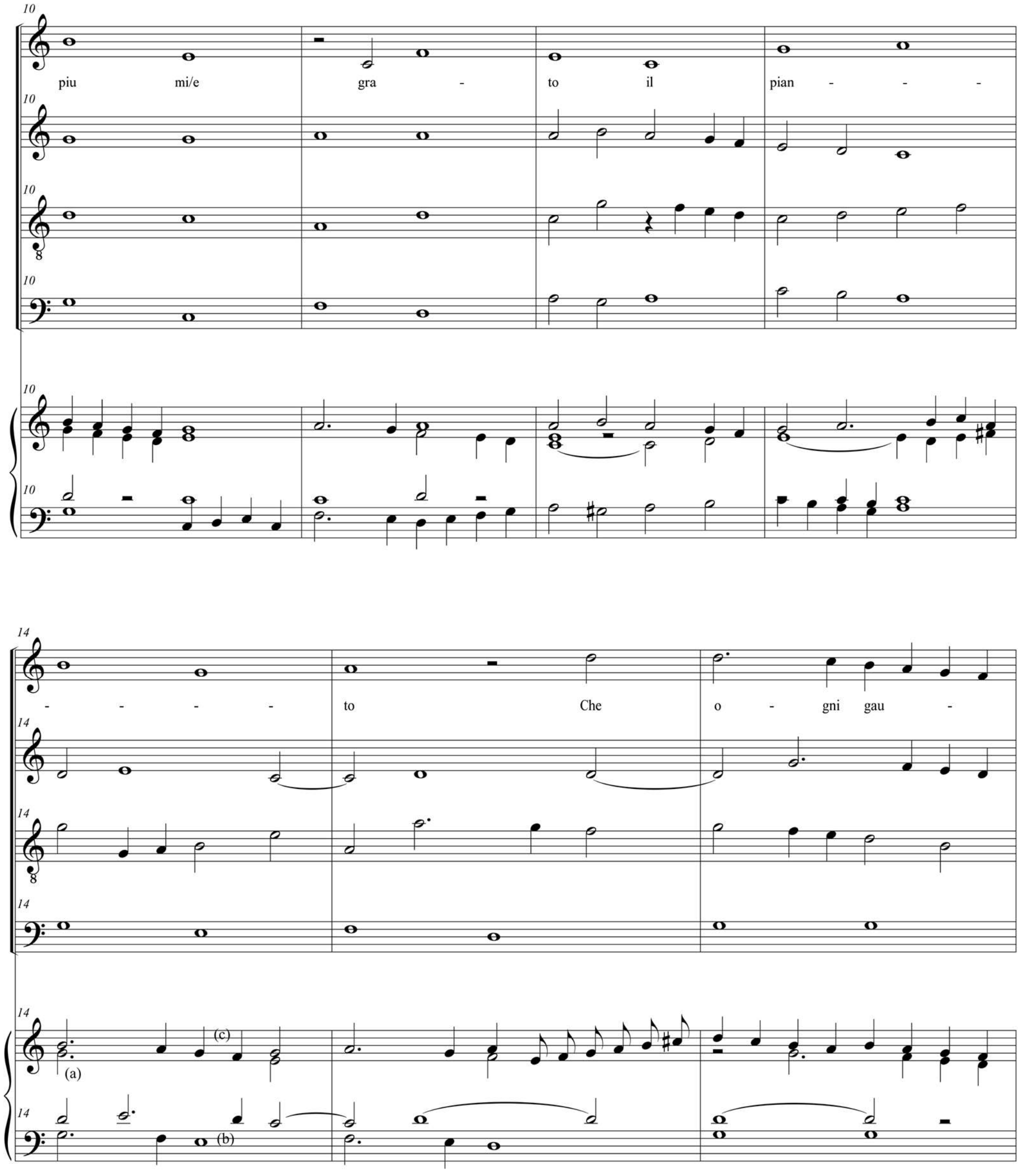
[29] This study does not attempt to trace a specific genesis for IKT's conventions. Any theory that attempts to explain this genesis, however, should carefully consider the relationship between print technology and scribal conventions. While the latter undoubtedly influenced the former, one may well wonder about the role of the former in establishing IKT as a uniform system.

[30] For a transcription of selected intabulations from Antico's 1517 print arranged with their polyphonic models, see Knud Jeppesen, *Die Italienische Orgelmusik am Anfang des Cinquecento,* 2nd ed. (Copenhagen: W. Hansen Musik-forlag, 1960); see 47-75 for commentary on this volume. For a modern edition of keyboard music from Castell'Arquato, see H. Colin Slim, ed., *Keyboard Music at Castell'Arquato*, vol. 3, ed. H. Colin Slim, CEKM 37 (Middleton, WI: American Institute of Musicology, 2003), ix. For a modern facsimle edition of I-Trmp L. Feininger, n.s ("Feiniger Codex") see the edition, with commentary, by Alexander Silbiger, *Trent, Museo provinciale d'arte, Biblioteca musicale L. Feininger, n.s.* (New York: Garland, 1987).

Example 1.6

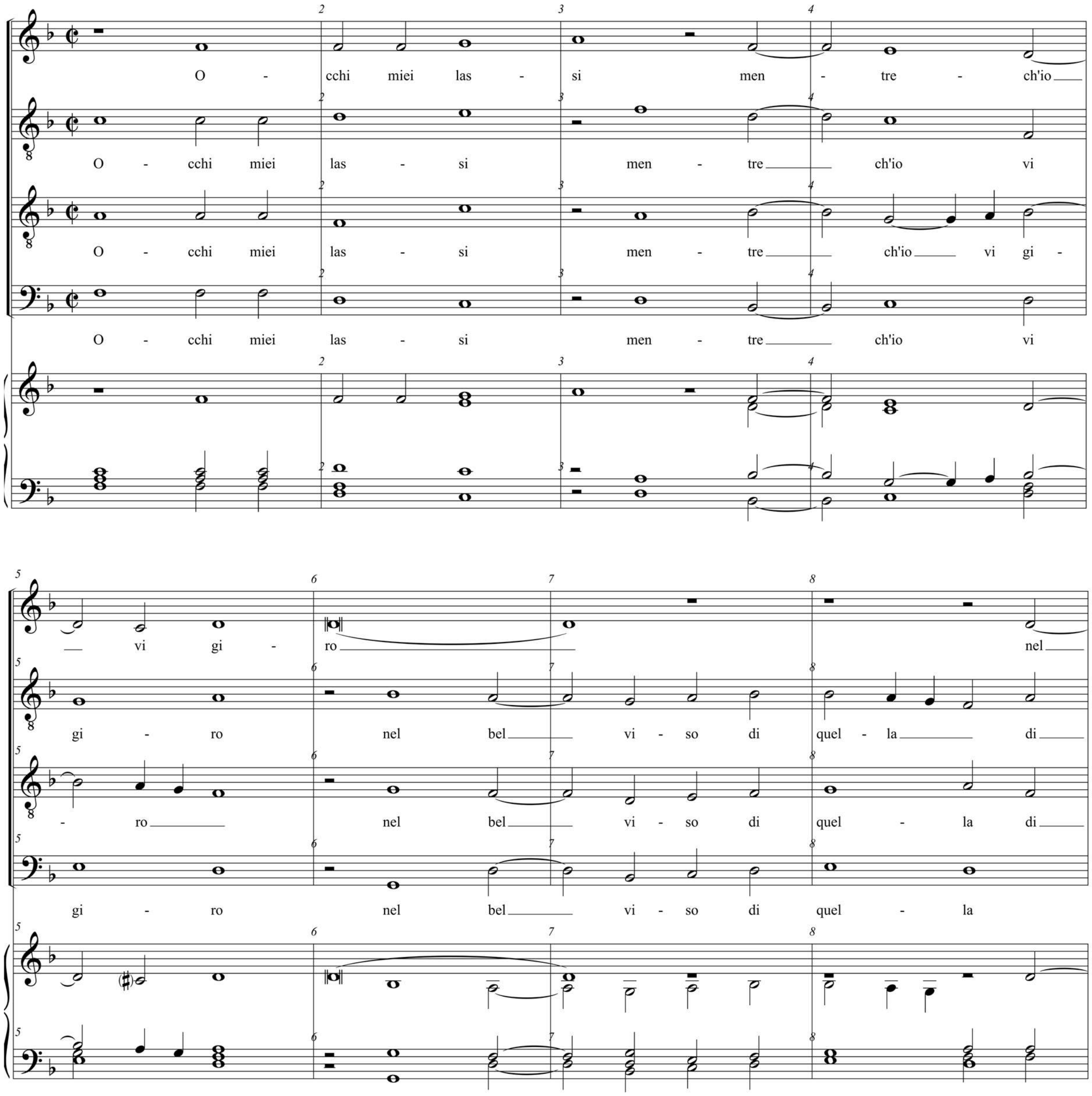
a) Antico, *Per dolor mi bagno el viso,* mm. 10-16, from ANTICO 1517; vocal score adapted from Knud Jeppesen, *Die italienische Orgelmusik,* vol. 1, appendix, 9-16.
b) Anon. *Occhi miei lassi ben,* mm. 1-8, from Ca, fascicle 1; Arcadelt, *Occhi miei lassi mentre,* transcription from *Il primo libro di madrigali d'Archadelt, a quatro con nuova gionta impressi* (Venice: Gardano, 1539).
c) Anon. *A la dolce ombra*, from Ba, 81v.; Rore, *Alla dolce ombra,* adapted from Cipriano de Rore, *Opera omnia*, ed. Bernhard Meier, vol. 14, part 4 of *Corpus mensurabilis musicae* ([Rome]: American Institute of Musicology, 1969).
d) Anon. *Orsus a cop,* from Pf, 18r; Crecquillon, *Or sus a cop, qu'on se resveille!*, adapted from Thomas Crecquillon, *Opera omnia,* ed. Laura Youens and Barton Hudson, vol. 63, part 16 of *Corpus mensurabilis musicae* ([Germany]: American Institute of Musicology, 2003).
e) "d'incerto," *Susana,* from Tr, 39r; Lassus, *Susane un jour d'amour solicitée,* adapted from Orlando di Lasso, *Chansons,* ed. Jane Bernstein, vol. 14 of *The Sixteenth-Century Chanson* (New York: Garland, 1987).

a)

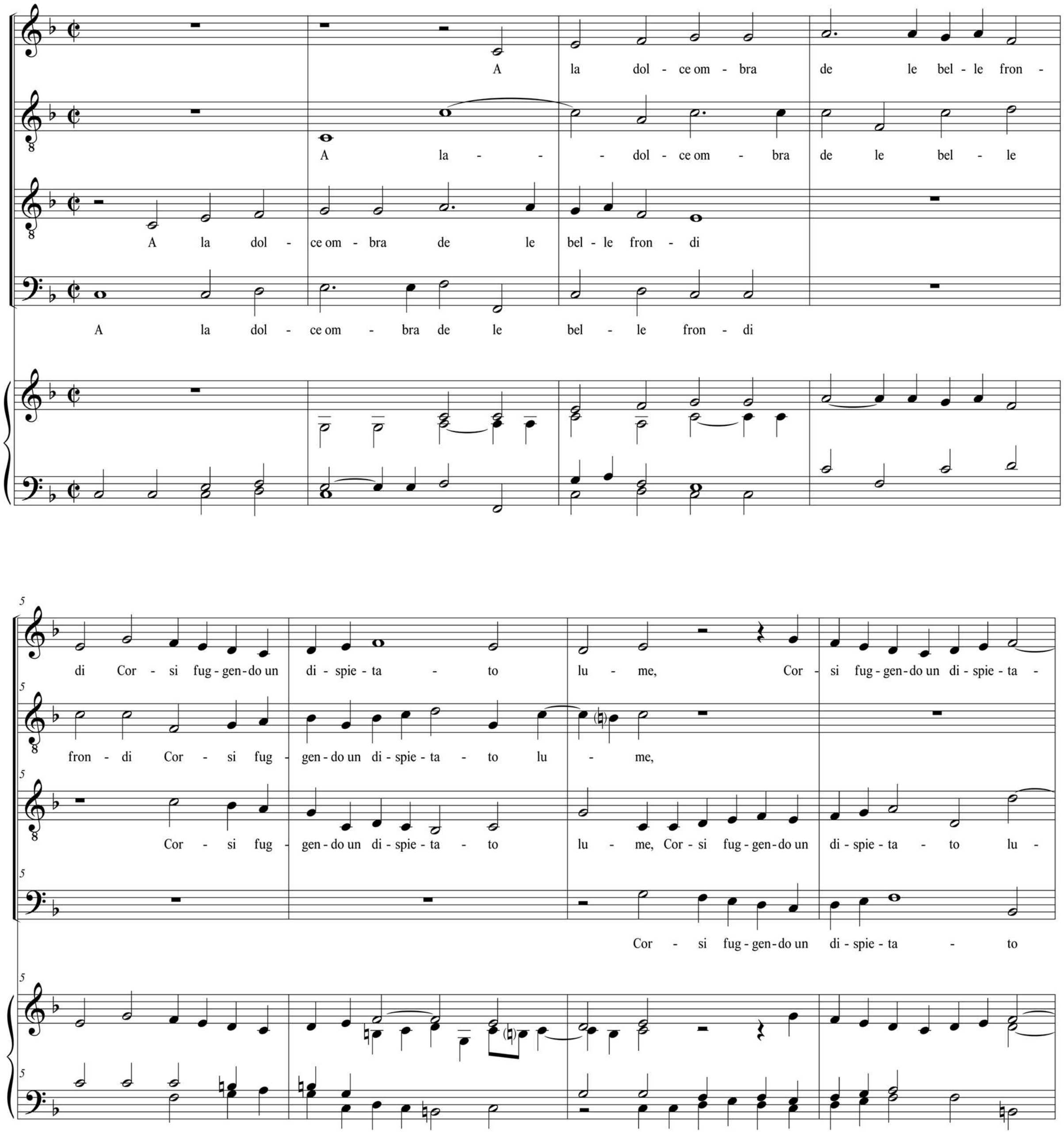


(a) g' in tablature alto = f' in original.
(b) e in bass has tie in original.
(c) g's are tied in original.

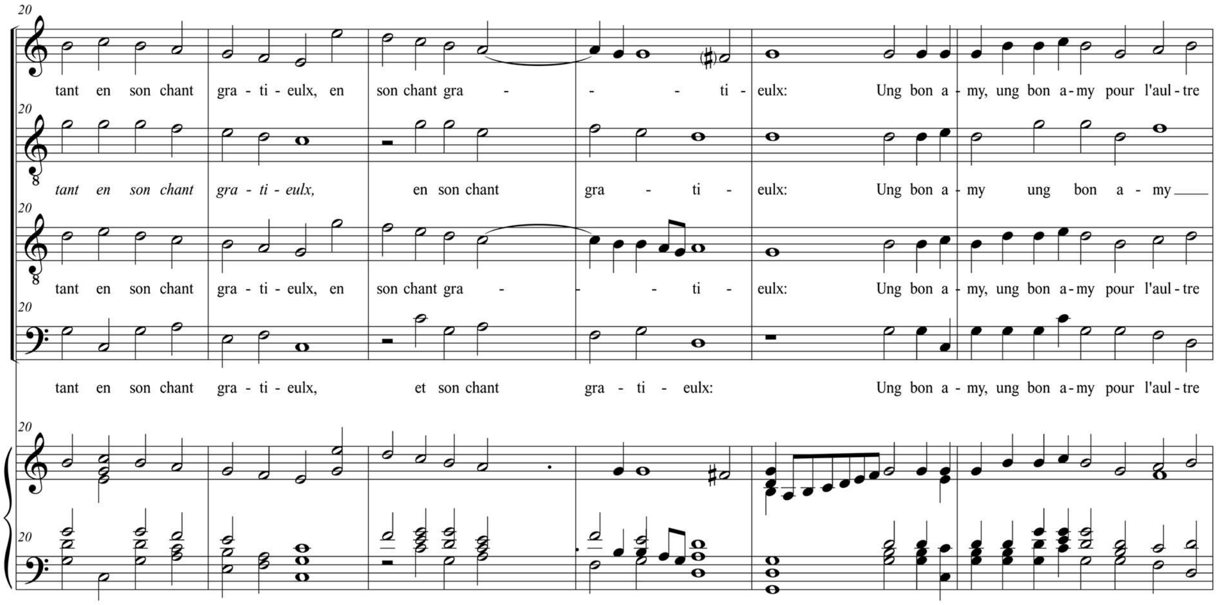
b)


O - cchi miei las - si men - tre - ch'io vi gi - ro nel
O - cchi miei las - si men - tre ch'io vi gi - ro nel bel vi - so di quel - la di
O - cchi miei las - si men - tre ch'io vi gi - ro nel bel vi - so di quel - la di
O - cchi miei las - si men - tre ch'io vi gi - ro nel bel vi - so di quel - la

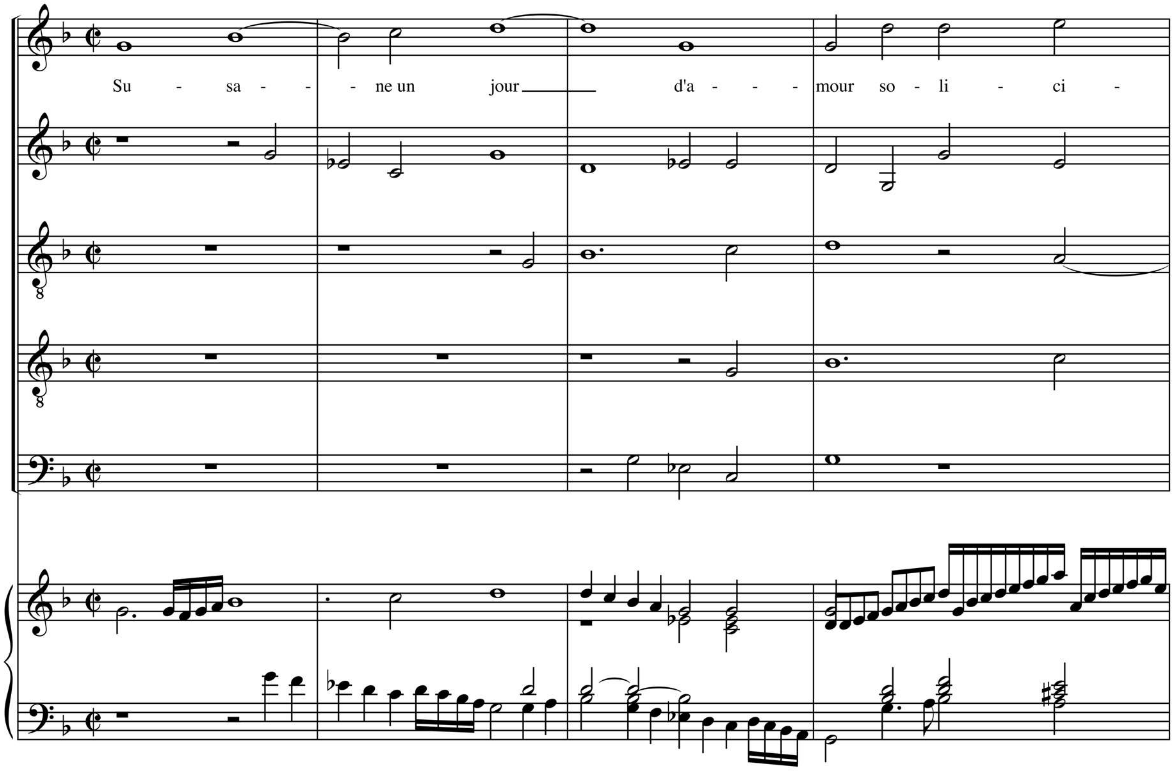
c)


A la dol - ce om - bra de le bel - le fron -
A la - - dol - ce om - bra de le bel - le
A la dol - ce om - bra de le bel - le fron - di
A la dol - ce om - bra de le bel - le fron - di
5
di Cor - si fug - gen - do un di - spie - ta - to lu - me, Cor - si fug - gen - do un di - spie - ta -
fron - di Cor - si fug - gen - do un di - spie - ta - to lu - me,
Cor - si fug - gen - do un di - spie - ta - to lu - me, Cor - si fug - gen - do un di - spie - ta - to lu -
Cor - si fug - gen - do un di - spie - ta - to

d)


20
tant en son chant gra - ti - eulx, en son chant gra - - - ti - eulx: Ung bon a - my, ung bon a - my pour l'aul - tre
tant en son chant gra - ti - eulx, en son chant gra - ti - eulx: Ung bon a - my ung bon a - my
tant en son chant gra - ti - eulx, en son chant gra - - ti - eulx: Ung bon a - my, ung bon a - my pour l'aul - tre
tant en son chant gra - ti - eulx, et son chant gra - ti - eulx: Ung bon a - my, ung bon a - my pour l'aul - tre

e)



Although there are notable differences in the application of IKT conventions between these three examples, they all adhere to principles of the basic functional "model" established by the conventions.

Intabulations in IKT can deviate from this model by degree, but one gets the sense that scribes and publishers always strove towards it, and even intabulations that deviate substantially from it can be shown to demonstrate its effect as a kind of background force. For example, the Castell'Arquato intabulation of *Occhi felici miei ben* demonstrates many instances in which the scribe deviates from IKT rest practice – maintaining rests from the original polyphony when the functional model would dictate their removal in intabulation – but, at the same time, contains many instances in which standard rest practice *is* followed. Perhaps the scribe "bent" the rules to transmit polyphonic information that normal procedure would hide in particular instances, but would "fall back" to standard practice if not conscious about doing so. In this sense, the established IKT functional model works as a kind of Platonic ideal.[31] Furthermore, the shared presence of IKT's rules throughout extant sources suggest an understanding of the notation, on some level, as a unified *system* – a universally understood set of unwritten laws and conventions, shared by publishers and scribes alike. While many intabulations contain instances in which the intabulator *pushes back* against IKT's rules – that is, the intabulator deviates from IKT conventions, in order to show the voice leading of the model – one gets the sense that this pushing back is very much a conscious decision to go against a commonly understood notational system: otherwise, the rules of IKT are followed almost automatically. This pushing back is particularly seen in manuscript intabulations, in which deviations from IKT practice may have been easier to accomplish than with print technology. Pushing back against IKT conventions can particularly be seen in messy situations in which IKT conventions and deviations clash. The deviations, often found within the context of an intabulation that generally follows IKT rules, cast the normal functioning of IKT's conventions in sharp relief. Deviations against IKT rules and conventions can be observed in a fragmentary intabulation of Rore's *Ancor che col partire* in the Castell'Arquato manuscripts, **Example 1.7.** (It is illuminating to compare this intabulation of this popular madrigal with those found in the Pietro Francese, Layolle, and Trent manuscripts, as well as with the one in GABRIELI 1596 – all found in the Appendix.)

The *Ancor* intabulation shows a curious mix of IKT conventions and attempts to push against them. At first glance the excerpt seems to largely ignore IKT's rules: for instance,

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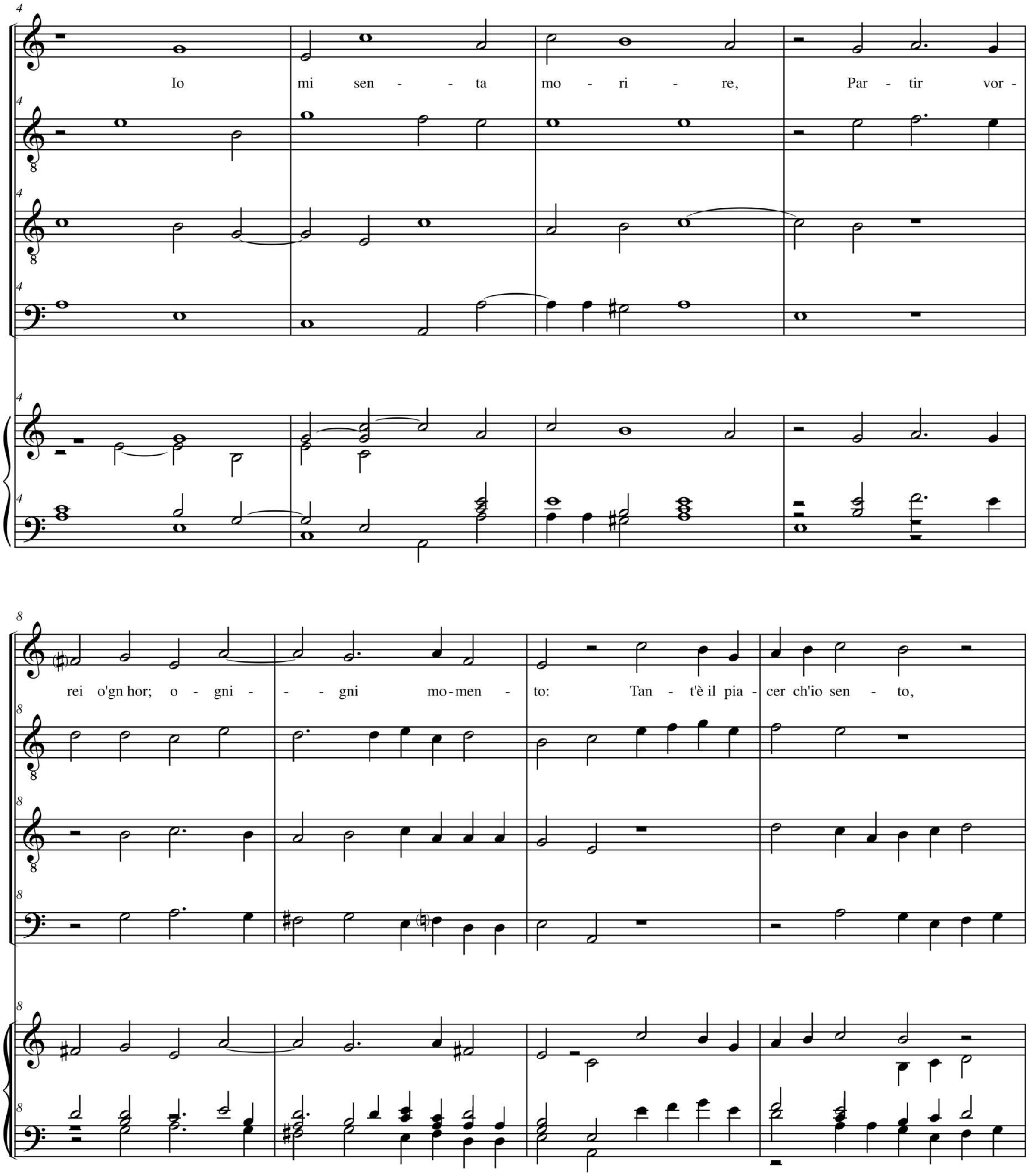
[31] The intended function of individual intabulations would obviously dictate their musical style, including fundamental arrangement decisions made by their intabulators, a point that Victor Coelho and Keith Polk make with regard to lute tablature. See Coelho and Polk, *Instrumentalists,* 213-17. Coelho's concept has to deal with the "target" audience of a given intabulation, and organizes lute intabulation into eight categories, each with its own intended audience and subsequent approach.

Example 1.7 Anon, *Ancor che col partire,* mm. 4-11, from Ca, fascicle 4a, 14v; Rore, *Ancor che col partire,* adapted from Cipriano de Rore, *Opera omnia*, ed. Bernhard Meier, vol. 14, part 4 of *Corpus mensurabilis musicae* (Rome: American Institute of Musicology, 1969).


4
Io mi sen - - ta mo - ri - re, Par - tir vor -
8
rei o'gn hor; o - gni - - - gni mo-men - to: Tan - t'è il pia - cer ch'io sen - to,

polyphonic rests are kept in; doing so contradicts the usual procedure of creating *seguente* parts (see measures 7-8). The deviations in the intabulation allow the intabulator to push back against

IKT conventions, to *reveal* the original voice leading of the model, a phenomenon further supported by deviations from normal IKT stem treatment. However, in other instances in the intabulation IKT conventions *are* followed: the unison in measure 8 between the Alto and Tenor parts is represented by a single note, in typical IKT fashion, and normal *seguente* procedure is followed in measure 10 (bottom staff), in measure 11 (see the Tenor and Bass on beat 2, and in the Superius-Alto voice crossing in measures 4-5). In measure 9 typical IKT hand distribution is seen. In measures 10-11, normal IKT stem practice is *contradicted* by the addition of the minim rest – which clarifies the original voice leading – on the first beat of measure 11. In this instance IKT convention and a deviation are seen simultaneously.

Interestingly enough, the deviations in this intabulation all seem to be driven by the same desire: to show polyphonic detail in the model that IKT conventions would ordinarily hide. This trend is seen throughout the examined intabulations, with scribes and publishers adopting various strategies to show voice leading that is usually hidden by IKT's conventions. For example, rests unidiomatic to IKT – that is, rests that relate to the model's polyphony as opposed to IKT conventions – can be used to clarify voice exchanges. In the Layolle manuscript, one of the scribes adopts a highly particular convention, using a custos sign to signal instances in which a voice jumps between staves (see below). Many of these irregularities are undoubtedly easier to accomplish by hand as opposed to print technology (in the latter case many of them would undoubtedly require extra steps in the printing process) which must at least partly explain why they are more commonly seen in manuscript sources.[32]

The studies of Clericetti, Silbiger, and Boncella all called attention to the important role of IKT conventions in understanding early keyboard music transmitted in this notational format, and the need for modern editors to faithfully transmit notational irregularities. This is largely because IKT conventions are closely tied to performance, and therefore may be understood as important performance indicators. They may also be seen as individual stylistic markers; for example, the intabulations attributed to Andrea Gabrieli demonstrate a greater willingness to bend IKT convention to show polyphonic detail. When combined with other features, such as ornamentation or other stylistic markers, the "behavior" of IKT in a given score could be used as a puzzle piece in the identification of scribe, publisher, or (in some cases) composer.

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[32] This fact must also increase the significance placed on instances of irregularities and pushing back against IKT convention in print sources; in fact, the idea of composers and printing houses breaking IKT convention to show voice leading is the core argument in Chapter 3.

Comments on Specific Sources and Intabulations

While a thorough analysis of extant intabulations is beyond the scope of the current study, a few sources merit special comment. I will provide a few notes for each, with the hope that they become the objects of future study.

Antico 1519

Antico's volume of *Frottole* is already notable for being the first printed collection of music in IKT.[33] It is also an outlier in many respects: the other printed sources examined in this study are all produced by figures in the Venetian orbit. In addition, Antico's early publication date distances it from the Venetian intabulations (all of which date from the end of the sixteenth century or from the first decades of the seventeenth). Interestingly enough, Antico's (or his workers') approach differs substantially from typical IKT practice in many respects. Notable is a tendency to preserve the Superius and Bass parts of the models, along with a strikingly cavalier approach to the integrity of the middle voices. This loose treatment of the inner voices is not surprising, given the flexible nature of the frottola's compositional structure.[34] While one may question whether these intabulations were even based on existing vocal models, in some instances the intabulations do demonstrate a fidelity to their inner voices, suggesting a relationship between the intabulations and the printed vocal versions.

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[33] See Don Harrán and James Chater, "Frottola," *Grove Music Online, Oxford Music Online,* accessed on October 1, 2018. http:////www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000010313.

Layolle Manuscript

The Layolle manuscript was described thoroughly in an article by Frank D'Accone.[35] Along with the Bardini manuscript, this source is notable for being a large-scale collection entirely devoted to intabulations of vocal music. Although well beyond the scope of the current study, both merit thorough examination, specifically with regard to intabulation process. As mentioned, this manuscript is highly notable for the habit of one scribe to use custos signs to signal instances in which voices leap between staves.[36] These can be seen in **Example 1.8**. The custos sign is used to subvert IKT's tendency to hide details of voice leading, and has a clear affinity with Vincenzo Galilei's cross sign in lute *intavolatura*, which is used for essentially the same purpose.[37] The fact that the manuscript is of Florentine provenance is therefore highly notable.

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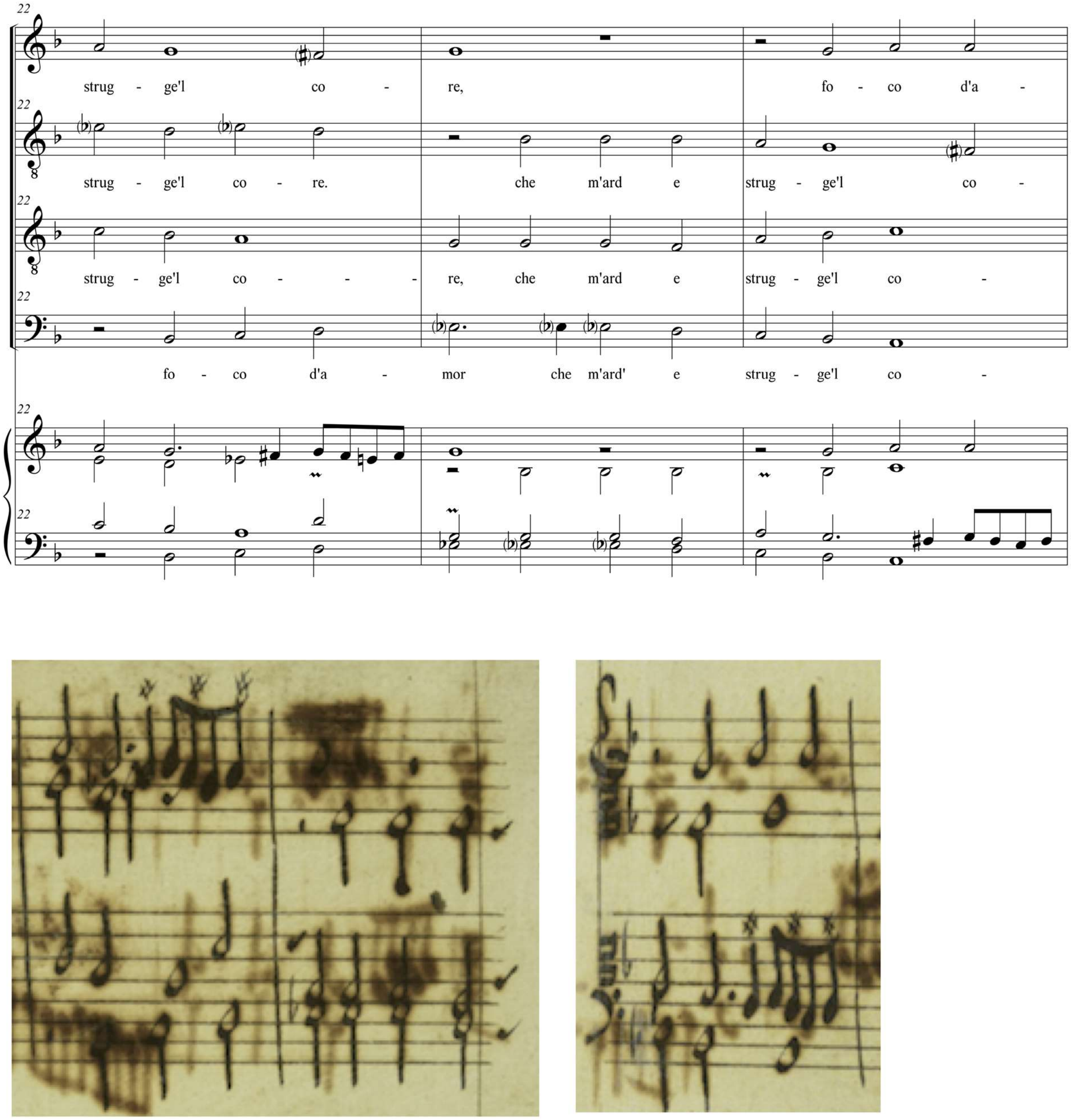
[34] Ibid. See especially Section 4, "Performance Practice": lute and voice arrangements of frottole often removed the Alto part, or used the inner parts freely as a kind of harmonic filler.

[35] Frank D'Aconne, "The 'Intavolatura di M. Alamanno Aiolli': A Newly Discovered Source of Florentine Renaissance Keyboard Music." *Musica Disciplina* 20 (1966): 151-74.

[36] Frank D'Accone identifies this first scribe as the first owner of the manuscript: the Florentine organist Alamanno Layolle. Interestingly enough, Layolle grew up in Lyon, where his father Francesco worked with the publisher Jacques Moderne and as an organist. As mentioned above in note 3, potential connections between Lyon and IKT's development merit closer scrutiny. See D'Accone, "'Intavolatura'," 158-60. For more on Alamanno Layolle, see D'Accone, "Layolle, Alamanne de," *Grove Music Online, Oxford Music Online,* accessed on October 1, 2018. http:////www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000016158. For more on Francesco de Layolle, see D'Accone, "Layolle, Francesco de," *Grove Music Online, Oxford Music Online,* accessed on October 1, 2018. http:////www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000016159.

[37] For more, see Chapter 3 of the present dissertation, 71.

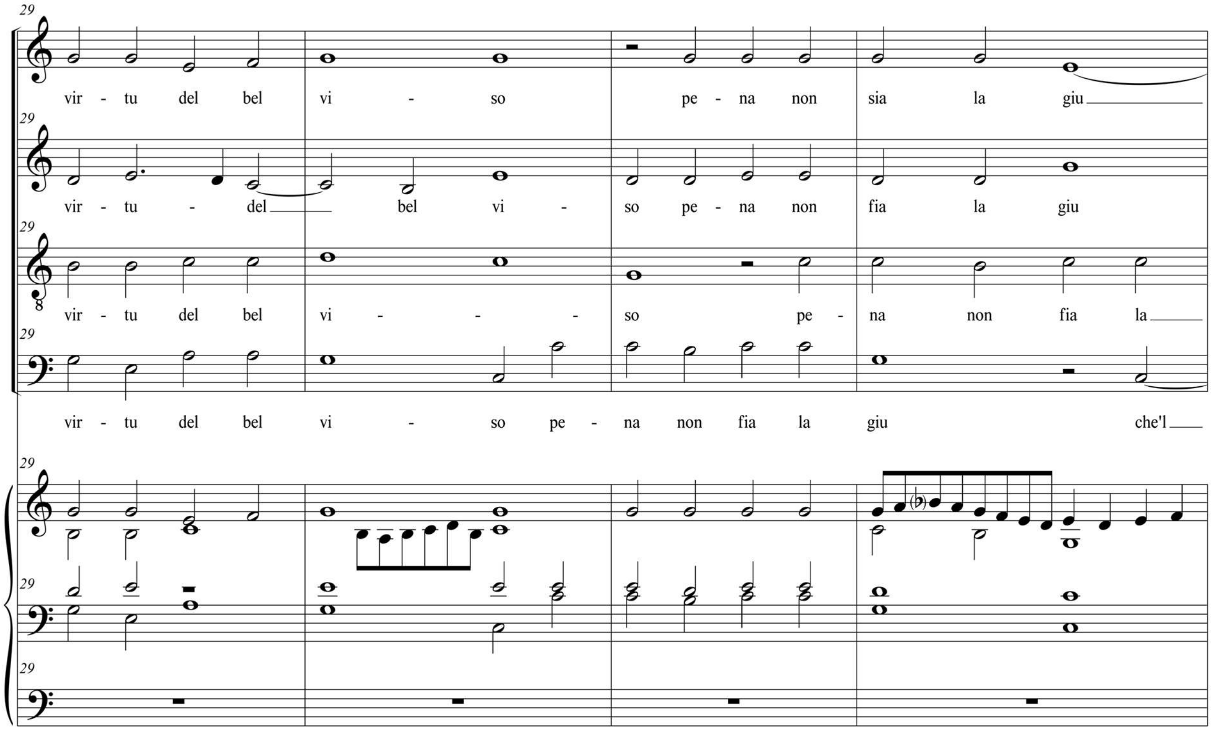
Example 1.8 Anon., *O s'io potessi Donna,* mm. 22-24, from La (bottom staves); Berchem, *O s'io potessi donna.,* adapted from Jacob Arcadelt, *Opera omnia,* ed. Albert Seay, vol. 31, part 2 of *Corpus Mensurabilis Musicae* (NP: American Institute of Musicology, 1970).; facsimile, Layolle ms. (La), 3r-6r.


22
strug - ge'l co - re, fo - co d'a -
strug - ge'l co - re. che m'ard e strug - ge'l co -
strug - ge'l co - - - re, che m'ard e strug - ge'l co -
fo - co d'a - mor che m'ard' e strug - ge'l co -

Castell'Arquato and Intabulation Process

While the limited nature of the present inquiry prevents a thorough investigation, it should be noted that some intabulations may provide a glimpse into the intabulation process.[38] This is particularly seen in the Castell'Arquato intabulations; unfortunately, the continued relative inaccessibility of the collection, in addition to its generally less than optimal condition, makes a complete investigation impossible at this point. Even as of 2018 this rich and extensive source still awaits a thorough study; a clean facsimile copy of the entire manuscript collection is not yet available. Of particular note is the intabulation of Arcadelt's *Se per colpa* (**Example 1.9**), which is partly notated on three staves. It is tempting to see this intabulation as an intabulation sketch,

Example 1.9 Anon., *Se per colpa,* mm. 29-32, from Ca, fascicle 5, 22v; Arcadelt, *Se per colpa del vostro fiero sdegno,* transcription from *Il primo libro di madrigali d'Archadelt, a quatro con nuova gionta impressi* (Venice: Gardano, 1539).


29
vir - tu del bel vi - so pe - na non sia la giu
vir - tu - del bel vi - so pe - na non fia la giu
vir - tu del bel vi - - - so pe - na non fia la
vir - tu del bel vi - so pe - na non fia la giu che'l
(♭)

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[38] As mentioned previously, this inquiry was chiefly intended to ascertain the extent of IKT's broader functioning.

analogous to a compositional sketch; at first glance it doesn't seem to be a traditional IKT intabulation at all, but rather a condensed *partitura.* IKT stem practices are largely ignored, making the original voice leading completely clear. However, in certain instances the inner voices swap places (for instance, in measure 15, in measure 35, and briefly in measure 30). The intabulation also contains instances of alteration to the original polyphony, including the addition of passaggi and reworkings of voice leading. These alterations suggest an awareness of IKT conventions. This is seen in measure 30, in which the cadential ornament in the alto part necessitates a brief inner voice exchange – the typical keyboard cadential ornament links the Alto's *b* to the Tenor's *c*', forcing the intabulator to rewrite the composition in a manner that is more idiomatic for the keyboard. Other brief rewritings point to IKT convention; for example, the unison between the Bass and Tenor on the last beat of measure 31 is represented by one note, as would be seen in an IKT intabulation. These instances are especially notable given the general full score tendency already noted. It is tempting to see this intbaulation as a sort of intermediary or preparatory score; the intabulator seems to be preparing elements such as the disposition of voices and alterations to the polyphony to accommodate ornamentation.

Many of the intabulations in Castell'Arquato contain similar instances; the entire collection merits further study. The intabulation of *Ancor che col partire* examined above in Example 1.7 contains instances in which a *single* polyphonic voice is written twice – that is, in both staves – suggesting that the intabulator had not yet decided on which staff the note was to go (see measure 11, beat four). It should be noted that intabulations from other manuscripts also suggest similar instances: for example, in the intabulation of Berchem's *O s'io potessi Donna* in the Layolle manuscript, a custos sign is used simultaneously with an alteration. This could suggest that the intabulator made the alterations in a preparatory score, one similar to the *Se per colpa* intabulation in Castell'Arquato, from which a final intabulation was made.

Part 2: IKT as an Algorithmic Process

Untangling IKT Convention and Intabulation Process

As I pointed out at the beginning of this chapter, my approach in demonstrating IKT conventions differs from that of prior studies in that it focused exclusively on intabulations – pieces for which extant models exist. A potential problem with this approach is that it automatically conflates IKT's notational conventions with the process of intabulation. It is relatively easy to do this: I've been using these examples of intabulated counterpoint to demonstrate the conventions of IKT as a notational format, even as they are equally demonstrative of intabulation process. The studies of Boncella, Silbiger, and Clericetti cited above don't seem to make a distinction between the two. While this may be partly due to their individual focuses,[39] studies of intabulation in other tablature notational systems also seem to accept that the laws of IKT as a notational system and the process of intabulation can be basically conflated; at least, they don't make a point of distinguishing between them.[40] The historical sources surveyed in Dinko Fabris' thorough study on lute intabulation instruction don't seem to make a distinction between notational format and intabulation process either.[41] One reason why the distinction may be more important in IKT than in other tablature systems is IKT's use of mensural notation, which gives it a hybrid nature: its conventions are comparable to those in figure-based tablature systems, but its notation symbols align it with the notation of vocal polyphony. The problem of this “dual nature” is highlighted by intabulations that circumvent IKT rules, but not always (as seen in the Castell'Arquato intabulation above).

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[39] For example, Boncella's study dealt with toccatas – abstract, model-less works – and therefore wouldn't need to address intabulation process; Clericetti's article was conducted from the standpoint of the editor, and was therefore largely concerned with typographical detail (and largely framed by this focus); Silbiger's study, although examining a few intabulations in addition to "free" pieces, never distinguished between the two.

[40] See, for example, Polk and Coehlo, *Instrumentalists;* Dinko Fabris, "Lute Tablature Instructions in Italy: A Survey of the *Regole* from 1507-1759," in *Musical Theory in the Renaissance,* ed. Cristle Collins Judd (Farnham, VT: Ashgate, 2013), 451-82; Cleveland Johnson, *Vocal Compositions in German Organ Tablatures 1550 - 1650: A Catalogue and Commentary* (New York: Garland Publishing, Inc., 1989).

[41] Fabris, "Lute Tablature Instructions."

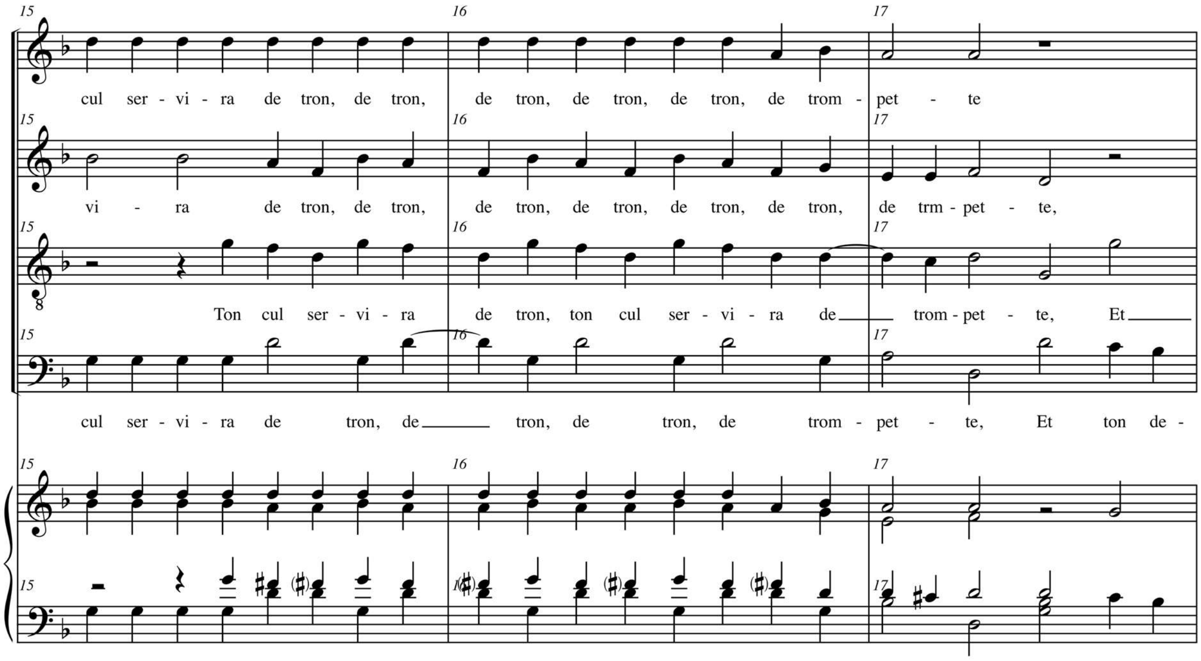
In addition, the fact that the same IKT conventions are observed in intabulations and in abstract keyboard works (without models) also suggests a high degree of entanglement between IKT conventions and the processes of intabulation. Coupled with the general lack of distinction between the two just cited, we might very well assume that this all indicates that IKT conventions and intabulation process should essentially be conflated: in this scenario, “intabulating” is simply a way of describing writing anything down in IKT, as already implied by IKT’s very name (*intavolatura*). However, this is, at the same time, a dangerous assumption to make; after all, abstract works have no models from which to intabulate. If IKT conventions and intabulation are *separate* phenomena, this would necessitate that IKT conventions exist as an *a priori* set of conditions, a system of rules that preclude the act of *writing* anything in IKT, whether this is an arrangement of polyphony (an intabulation) or a "transliteration" of an abstract piece of music. And, if intabulation and notational convention are actually aspects of the same general process (in this scenario, IKT conventions would follow intabulation as a by-product of its processes and procedures), this would mean that writing anything down in IKT is the same as intabulating it. Interestingly enough, both Diruta’s intabulation guide and an examination of extant intabulations show that intabulating in IKT routinely involved the recomposition of the model’s polyphony; this alteration would also have to be seen as part of writing anything down in IKT.

The Problem of Alteration

The importance of distinguishing between IKT's notational conventions and the process of intabulation is especially highlighted by this practice of alteration, which is commonly seen in IKT intabulations. Like their counterparts who used lute or figure-based keyboard notational systems, intabulators working in IKT often freely altered the polyphony of their models, to make the music idiomatically suitable for keyboard (or, in some cases, physically playable). Is this sort of alteration best seen as part of the process of intabulation, or could it actually be a notational convention? If it is accepted that IKT conventions and intabulating are basically two sides of the same coin, it would seem that, by implication, every piece of music notated in IKT – regardless of whether there was a polyphonic model from which it was intabulated – implied a "process" of intabulation as part of its genesis, as dictated by the notational system. The question as to whether alteration in intabulation should be viewed as a notational convention, a part of intabulation, or occupying a space between the two, can help establish the role that notation played in compositional process.

As we've seen, the use of IKT often results in the general reduction of complicated polyphonic textures to simpler, chordal textures. Of course, these conventions have a rather superficial effect, altering the *appearance* of the music, not the actual music itself. This isn't to say that they don't change the music on some level: arguably the reader's *perception* of the music is altered, even when the notes aren't. This can be demonstrated through a passage from Bertoldo's intabulation of Crecquillon's *Or vien ça vien* (**Example 1.10**). Long notes are consistently split in the tablature as shorter notes, and voice-crossings and stem practices simplify the polyphony to create a series of chords. While almost none of the notes from the model are altered, IKT conventions create a very different texture, at least visually.

Example 1.10 Sperindio Bertoldo, *Hor vienza vien* (1591), from BERTOLDO 1591a; Janequin, *Or vien ça, vien, m'ayme,* adapted from Clément Janequin, *Chansons Polyphoniques,* ed. A. Tillman Merritt and François Lesure (Monaco: Editions de L'Oiseau-Lyre, 1965).


15
16
17
cul ser - vi - ra de tron, de tron, de tron, de tron, de tron, de trom - pet - te
vi - ra de tron, de tron, de tron, de tron, de tron, de tron, de trm - pet - te,
Ton cul ser - vi - ra de tron, ton cul ser - vi - ra de trom - pet - te, Et
cul ser - vi - ra de tron, de tron, de tron, de trom - pet - te, Et ton de -

Perhaps the effect that IKT conventions have on the music could be described as part of a process of *translating* polyphony into a form more suited to keyboard playing, or more accurately, the idiomatic style of *cinquecento* keyboard players. The concept of intabulation as translation was established by Victor Coelho and Keith Polk, in their recent study of lute intabulation and *cinquecento* compositional practices.[42] Coelho draws an analogy between intabulation practice and sixteenth-century literary translation: intabulations "translate" music in one "language" (vocal polyphony) into the another (the "vernacular" lute tablature); like textual translation, the style of the translation is dependent upon the intended audience and their social context.[43] And, rather than being derivative works, translations are artistically "autonomous," to be understood and valued on their own terms.[44] In the case of IKT intabulations, much of the translation is generated automatically by the conventions themselves, which work to create an easier, rough-and-ready homophonic texture, even when the *actual* underlying music (that is, the music of the model) is polyphonic. Beyond simply making the music easier to play, this translation of polyphony *refers* the player to a specific *cinquecento* keyboard idiom, therefore operating in and of itself as a type of coded performance indicator.[45] One of the textures associated with this idiom is formed of a series of chords in one hand that support *passaggi* in the other. This is commonly seen in (for example) the *ballo* repertoire as well as in the "free" sections of the "Classical" Venetian organ toccata. It can also be seen in intabulations of vocal music: this can be seen in Meulo's intabulation of *Susanne un jour* (**Example 1.11**), in which the chanson's polyphony is "reduced" or "converted" to a texture that would not be unusual in the

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[42] Coelho seems to have first introduced this idea in a paper read at the 69th Annual Meeting of the American Musicological Society in Houston, Texas, 2003: "Crossing the Sacred: Intabulations as Translations." The concept is a central part of his study of *cinquecento* lute improvisational and compositional practices; see Coelho and Polk, *Instrumentalists,* 189-225. Other studies that have developed this concept include the dissertation by Coelho's graduate student: Stefano Graziano, "From Language to Music: Mapping the History of the Italian Lute Vocabulary" (PhD diss.: Boston University, 2011).

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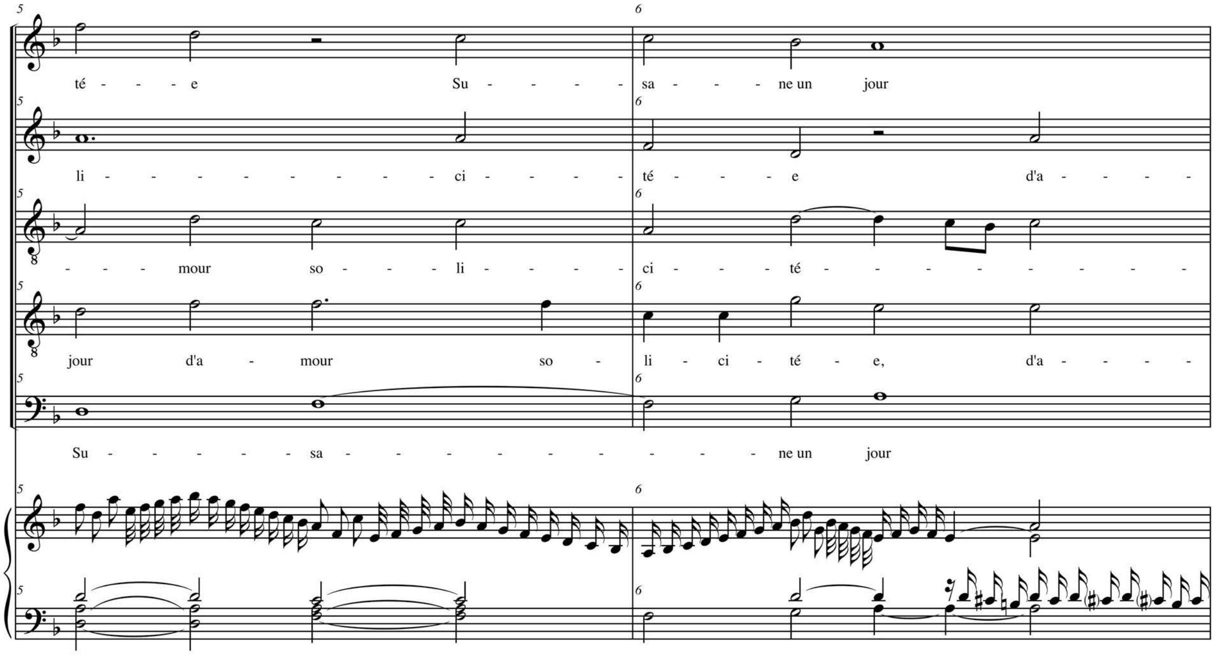
[43] Coelho and Polk write, "As with translation, the motives of intabulators are fundamentally determined by the audience, or target. Some demonstrate, by their choice of model and approach to arranging, a regional or cultural practice, or even a performance context. In this case, the target audience is fairly well defined. Other intabulations, such as those based on popular vocal models, reveal an interest in the economics of the market – that is, the popularity of the work or composer – and therefore reach out to a broader and more diverse audience; still others are dedicated to pedagogical ends. In other words, there are several goal-oriented strategies influencing how and why intabulations are made, a point that suggests examining the practice of intabulation within the broader context of literary translation and imitation." Coelho and Polk, *Instrumentalists,* 215.

Regarding social context, Coelho and Polk write, "As motets and Mass movements cross into secular, domestic environments, soloistic figuration, cadential ornaments, occasional parallel intervals, unprepared dissonance, and truncations of the original usually prohibited in the writing of sacred music are permitted, producing a new "vernacular" in translation that is not limited by language or religion." Ibid., 218.

[44] As Coelho puts it, "Clearly, the traditional understanding of intabulations as merely derivative works of limited value to editors of texts is unsatisfactory to account for the diversity of approaches. In a powerful critique of the historical exclusion of arrangements, Vaccaro sees musicology's resistance to valorizing intabulations as an 'almost Manichean' process, in which music originally conceived naturally in the mind of the composer subsequently devolves into an abstraction of new notational characters, to finally being incarnated as an instrumental realization. In this conceptual model, writes Vaccaro, importance is placed only on the original composition, not the sound – *la forme sonore*, as the French say – or performance adaptation(s) of the piece; 'the instrument is regarded as constraining' the work, the arrangement limiting the natural freedom of the musical imagination. Similar to translations of classical texts, intabulations, on the contrary, demonstrate both flexibility and fidelity with respect to the model, and they deserve to assume a more autonomous, rather than a merely derivative, role." Ibid., 216.

[45] In addition to being a possible indicator of how the music was conceived by its creators, as Silbiger points out. Silbiger, "Tablature," 95.

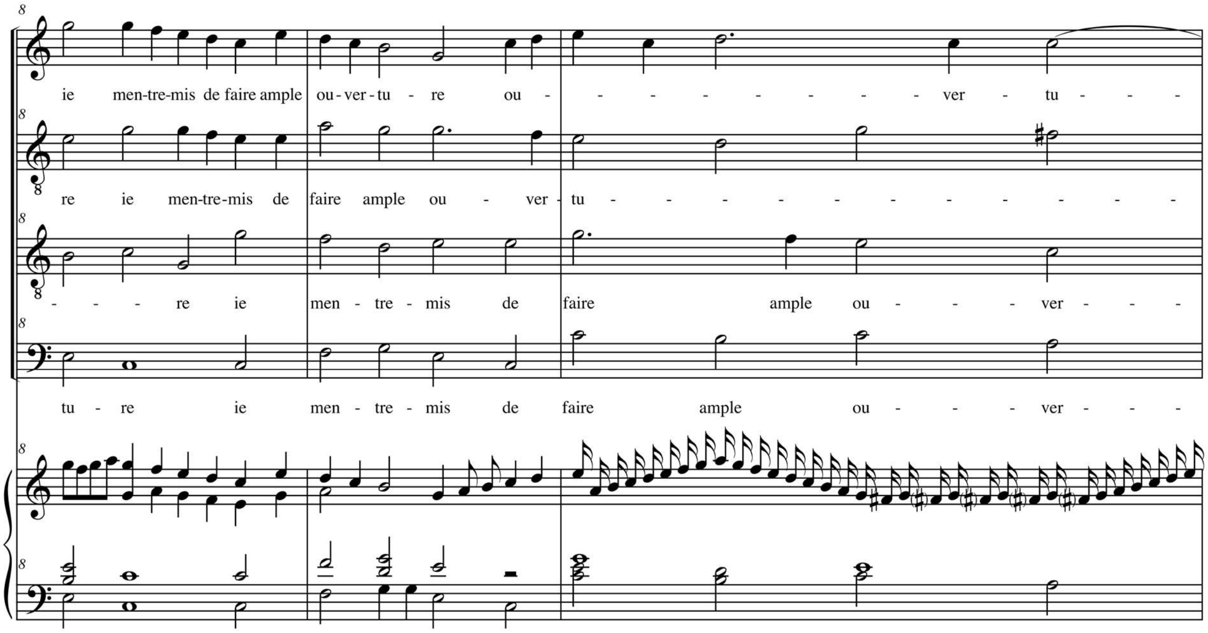
Example 1.11 Claudio Merulo, *Susanne un giour, D'Orlando Lasso A5* (1611), mm. 5-6, from MERULO 1611; Lassus, *Susane un jour d'amour solicitée,* adapted from Orlando di Lasso, *Chansons,* ed. Jane Bernstein, vol. 14 of *The Sixteenth-Century Chanson* (New York: Garland, 1987).


5
6
té - - - e Su - - - - sa - - - - ne un jour
li - - - - - - - - - - - ci - - - - - té - - - - e d'a - - - - -
- - - mour so - - - li - - - - - ci - - - té - - - - - - - - - - - -
jour d'a - mour so - li - ci - té - - e, d'a - - - -
Su - - - - - - sa - - - - - - - - - - - - - - ne un jour

genres listed above. Perhaps IKT conventions create the visual appearance of this texture to facilitate a *mode* of performance.

Of course, Merulo's intabulation doesn't just feature substantial changes in texture through IKT conventions; the notes from Lasso's original are altered substantially in the intabulation, largely to accommodate the extensive ornamentation. It is common to observe intabulators altering or even removing notes from the tablature in order to create textures more suitable for the keyboard. This can be seen in Bertoldo's intabulation of *Frais et galliarde* (**Example 1.12**). Notes from Clemens's polyphony are either removed or altered, both to accommodate wide intervals (the removal of the alto and tenor notes in measure 9), and for ornamentation (the removal of notes from the same parts in measure 10). As in Merulo's intabulation of *Susanne un jour*, the polyphony in measure 10 is simplified to create an idiomatic accompaniment texture for the *passaggio* in the top staff.

Example 1.12 Sperindio Bertoldo, *Frais e gagliard* (1591), mm. 8-10, from BERTOLDO1591a; Clemens non Papa, *Frisque et galliard,* adapted from Jacobus Clemens non Papa, *Chansons,* ed. Karel Bemet Kempers, vol. 4, part 10 of *Corpus mensurabilis musicae* (Rome: American Institute of Musicology, 1962).


8
ie men-tre-mis de faire ample ou-ver-tu - re ou - - - - - - - - - - - ver - tu - - - -
re ie men-tre-mis de faire ample ou - ver - tu - - - - - - - - - - - - - - - -
- - - re ie men - tre - mis de faire ample ou - - - - ver - - - -
tu - re ie men - tre - mis de faire ample ou - - - - ver - - - -

The alteration seen in these two examples makes the music both playable and idiomatically suitable to the keyboard. It could therefore be described as effecting the same change as IKT conventions: translating polyphony into an idiomatic texture and style. This notion is supported by further examination of the repertoire. For example, the five-voiced chansons intabulated in Merulo's *Terzo Libro* are for the most part effectively reduced to four-voice textures, the normal number of voices in *cinquecento* keyboard repertoire (this can be seen in Example 1.11 above).[46] **Example 1.13**, from Bertoldo's *Or vien ça vien,* shows another instance of "conversion," here caused by both IKT convention and by substantial alteration. The complicated polyphony,

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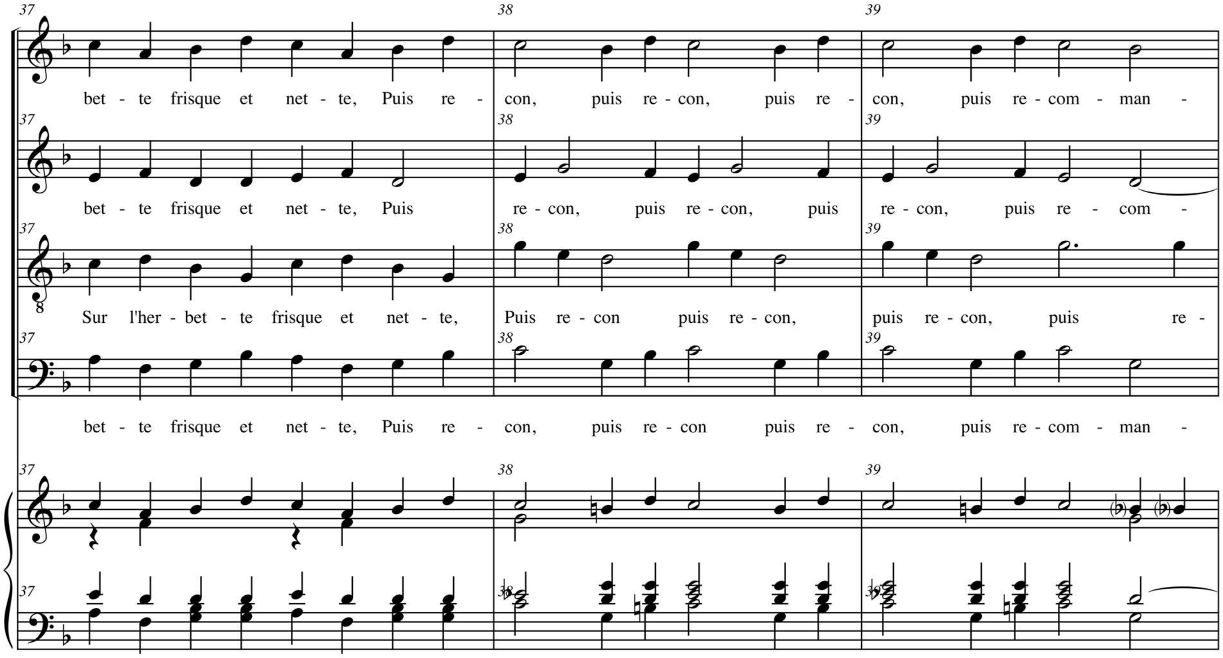
[46] Merulo's third book of intabulated *canzoni* differs from his first two – which consist of intabulations of the composer's own *a4* instrumental works – in that it features intabulations of four a5 vocal chansons (three by Crecquillon as well as the ubiquitous *Susanne un jour* by Lassus). Claudio Merulo, *Terzo libro de canzoni d'intavolatura d'organo fatte alla francese* (Venice: Gardano, 1611). Interestingly, two of the works – *Susanne un jour* and Crecquillon's *Oncques amour* – are also used by the same composer as models for *imitatio* masses. *Missarum quinque vocum. Liber primus..* (Venice: Gardano, 1573).

Example 1.13 Sperindio Bertoldo, *Hor vienza vien* (1591), mm. 37-39, from BERTOLDO 1591a; Janequin, *Or vien ça, vien, m'ayme,* adapted from Clément Janequin, *Chansons Polyphoniques,* ed. A. Tillman Merritt and François Lesure (Monaco: Editions de L'Oiseau-Lyre, 1965).


37
38
39
bet - te frisque et net - te, Puis re - con, puis re - con, puis re - con, puis re - com - man -
bet - te frisque et net - te, Puis re - con, puis re - con, puis re - con, puis re - com -
Sur l'her - bet - te frisque et net - te, Puis re - con puis re - con, puis re - con, puis re -
bet - te frisque et net - te, Puis re - con, puis re - con puis re - con, puis re - com - man -

difficult to play on keyboard, is simplified to create an idiomatic chordal texture that is comparable to abstract keyboard works from the period.

The shared "goals" of IKT convention and intabulation process suggest a large grey area between the two, and determining how the practice of altering polyphony in intabulation related to each of them is particularly relevant for the present study. From a modern standpoint, alteration would typically be seen as compositional practice, and surely classified as part of the agency of the intabulator. But perhaps it should be classified as an element of IKT convention: if the laws of notation dictated a visual appearance that made the music more accessible to keyboardists (in order to make it easier to read), maybe altering polyphony to fit under the hands (to make it easier to play) should be considered a notational convention as well. Alteration could be classified in a way similar to the addition of ornaments in early music: applied with relative freedom on the one hand but on the other obligatory to add.[47] In addition, there is arguably a thin line between alteration and the IKT conventions demonstrated above. For example, we've seen that IKT conventions demand that the intabulator arrange notes between the staves in a manner that would facilitate keyboard playing; when an intabulator alters the notes to accommodate a cadential *passaggio,* or to form a polyphonic cadential formula common to *cinquecento* keyboard music, could this not be seen as an extension of this practice? The IKT convention of breaking longer notes into shorter ones could also be seen as a case of alteration.[48] While distinctions can be made between IKT's notational conventions, minor alterations to make the music playable or idiomatic for the keyboard, and larger-scale recomposition, it seems reasonable to view these three domains as points on a continuum, rather than set categories.

Intabulation Process, Notational Convention, and Diruta's Intabulation Method

These problems of classification suggest that the precise nature of the relationship between IKT's notational conventions and intabulation process (and, for that matter, compositional process) should be established. As the alteration of polyphony in intabulations is clearly, even by conservative analysis, a step removed from outright compositional (or recompositional) practice, viewing alteration as part of IKT's notational conventions would have profound effects upon our understanding of keyboard compositional process. In addition, clarifying the nature of the relationship between the two would help shed light on the development of IKT's conventions –

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[47] To put it another way, Coelho and Polk argues that alteration is "inevitable" as a part of translation; "Intabulation, like translation, is a bilingual exercise, and within translation theory, belongs to an intersemiotic category in which verbal signs (text, and music/ text relationships) are translated into signs of non-verbal systems, *meaning that alteration is almost inevitable* (emphasis mine)," Coelho and Polk, 219.

[48] As mentioned earlier, the decision to restrike or hold the note is best viewed as the domain of the performer. Still, the visual presentation perhaps changes the music on some level.

specifically, whether they developed out of intabulation practice, or instead acted as an *a priori* influence on it.

Interestingly, the sole historic source to treat the process of intabulation in IKT, Girolamo Diruta's well-known keyboard treatise *Il Transilvano,* seems to tie alteration to notational convention, in that both are treated in his instruction on intabulation.[49] Diruta's intabulation guide is found in the second volume of the treatise (published in 1609), in a section entitled *Regola de Intavolar qual si voglia Cantìlena.*[50] Diruta's work stands out for being the sole source to address intabulating keyboard music in IKT.[51] It is also notable for its late date of publication, as the first printed Italian book of keyboard music in *intavolatura* format*,* Antico's book of intabulated *frottole*, was published in 1517, predating Diruta's work by almost one hundred years.[52] Diruta's work can also help to clarify the relationship between intabulation and IKT

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[49] Girolamo Diruta, *Il transilvano*: *Dialogo sopra il vero modo di sonar organi, et istromenti da penna,* 2 vols. (Venice: Vincenti, 1593, 1609). The section on intabulation is found in the second volume, which was published as the *Seconda parte.* Note that the "seconda parte" is divided into books, each with its own pagination; this will be reflected in my citation practice. See facsimile edition of both volumes: Diruta, *Il Transilvano* (Bologna: Forni, 1969). For a modern English translation, see Diruta, *Il Transilvano,* translated and edited by Murray Bradshaw and Edward J. Soehnlen (Henryville: Institute of Medieval Music, 1984).

[50] Diruta, *Transilvano,* vol. 2, bk. 1, 1-14.

[51] Diruta, *Transilvano,* Ibid. The paucity of instructional material for arranging in Italian keyboard tablature is not the case for other tablature systems. For an overview of historic sources on Italian lute tablature, see Dinko Fabris, "Lute Tablature Instructions." Fabris' study shows that brief instructions for tablature were common in Italian lute books. The most complete treatment of intabulation in Italian lute tablature notation can be found in Vicenzo Galilei's treatise *Fronimo.*

Intabulation guides were also more common in printed books of German organ tablature, perhaps due to the relative novelty of their notation systems. For more on German tablature notation and the process of intabulation, see Cleveland Johnson's important study: *German Organ Tablatures*. In particular, see 29-60; 111-22.

[52] Andrea Antico, *Frottole intabulate per sonare organi libro primo* (Rome: Antico, 1517); facsimile ed. (Bologna: Forni, 1970). This was the first printed volume from the Italian peninsula to use a two-staff mensural notation with the word *intavolatura;* all of the arrangements are anonymous – or perhaps made by Antico himself (or a "house" intabulator?). A brief perusal of the arrangement procedure indicates many of the same functional rules described earlier regarding the Venetian prints. The second Italian print of keyboard *intavolatura,* Marco Antonio Cavazzoni's *Recerchari, motetti, canzoni ... libro primo* (Venice: Bernardo Vercelensis, 1523)*,* also shows many of the same features (thanks to Liuwe Tamminga for the facsimile copy of this edition). So far, there has been one model identified for the intabulations in this volume: Josquin's *Plusierus regretz* is arranged as *Plus ne regres.* See Martin Picker, "A Josquin Parody by Marco Antonio Cavazzoni," *Tijdschrift van de Vereniging voor Nederlandse Muziekgeschiedenis* 22 (1972): 157-59. Picker notes that this intabulation is "a kind of parody, or paraphrase," in that it doesn't stick to the structure of its model. Ibid.: 158.

For a detailed analysis of this intabulation, see Leon Chisholm, "Keyboard Playing and the Mechanization of Polyphony in Italian Music, Circa 1600" (PhD diss., University of California, Berkeley, 2015), 27-37. See also convention; although not a discourse on notation, elements of the latter are described when teaching how to intabulate.

Diruta's chapter on intabulation can be roughly divided into two parts, based upon what Diruta describes as two *modi* of intabulating: in the first, he shows how to intabulate "simply" (that is, without diminution), and in the second, he provides a method for intabulating with diminutions (*L'intavolare diminuito*). He addresses the practice of altering a model's original voice leading at the end of the first section, which otherwise consists of instruction on the elementary steps in intabulating. Diruta begins by instructing his fictional student-interlocutor to make a *partitura* of the polyphonic model (ostensibly from part-books).[53] The student is then instructed to begin copying the parts of the original polyphony in the order of soprano, bass, tenor, and alto. The examples proceed in difficulty by virtue of the the number of voices in the model (progressing from two to four).

Along the way, Diruta refers to many of the notational conventions demonstrated in the first part of this chapter. While there are a few instances in which they are referred to explicitly, for the most part they have to be inferred from his text. On some occasions their existence even seem to be contradicted by his text, while at the same time often clearly observable in his musical examples. Diruta's text has to be accepted as being unclear to a degree in this sense; however, the divergences between Diruta's method and the observed conventions of IKT are illuminating, and can, to a degree, help distinguish between elements of notational convention and elements of intabulation process. For example, Diruta does describe removing rests from the

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John Ward, "Parody Technique in 16th-Century Instrumental Music," in *The Commonwealth of Music, in Honor of Curt Sachs* ed. Gustave Reese and Rose Brandel (New York: Free Press, 1965): 208-28.

[53] Diruta's treatise is typical for the time in taking the form of a Platonic dialogue between the author and a fictionalized interlocutor, in this case the titular Transylvanian.

parts of his model when copying them into IKT (to not "entangle" the notes – "acciò non intrichino le notte"):

> My reply is that when there is some part on the five- or eight-line staff, you must not use rests there lest they crowd the notes. You sometimes put in short rests to make the voice entries clear and also to complement the notes, as you see in the fifth measure in the middle part and also at the beginning of the ninth measure in the soprano part. In the fourteenth measure, you will find that I do not write the soprano as a third part because the imitation enters on a unison with the bass.[54]

Missing from this advice is the practice of adding rests that aren't in the model at all – the various "fake" rests, whether they be mechanical, clarifying an entrance, or part of a musical figure. He does talk about leaving some of the rests from the original model in the intabulation in some instances, to "accompagnare le notte." This seems to refer to the added rests used to clarify entrances of notes in the tablature.

Diruta seems to directly contradict observed practice at times, for example in his description of stem direction:

> Having divided up all the parts, start intabulating the soprano on the five-line staff with two beats per measure. Then intabulate the bass on the eight-line staff. Be careful to place the notes right under those of the soprano and also to turn the stems of the soprano up and those of the bass down so that you can better accommodate the inner parts. When you have intabulated the outer parts, intabulate the tenor above the bass on the eight-line staff. This will produce one of these consonances – unison, third, fifth, sixth, or octave. Take care that if the tenor is over an octave above the bass, you intabulate it under the soprano on the five-line staff. Similarly, intabulate the alto above the bass, either above or below the tenor. But when the alto is an octave above the bass, write it on the five-line staff either below or above the soprano. It should also be observed that at times the tenor passes below the bass. The middle parts, namely the tenor and alto, are suited to either the eight- or the five-line staff, whichever is more convenient for

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[54] "Vi rispondo, che quando le cinque righe, over le otto sono occupate da qualche parte, non si devono mettere le pause, acciò non intrichino le notte. Li sospiri, alle volte si mettono per fare intendere le parti quando entrano, & anco per accompagnare le notte, come si vede nella quinta casa, con la parte di mezo, & anco nel principio della nona casa nella parte del Soprano. Nella decima quarta casa trovarete, che non metto il Soprano della terza parte, perche la fuga entra Unisono, con il basso."
Diruta, *Il Transilvano,* vol. 2, bk. 1, 4. Translation by Murray / Soehnlein, *Transylvanian,* 2:9.

> playing diminutions. To make it easy for you, I shall begin to partition songs for two, three, and four voices. After you will have grasped the manner of partitioning and intabulating with four voices, you will then be able to intabulate also for five, six, seven, and even eight voices by observing the same procedure.[55]

Diruta does indicate that the soprano part should take upward stems, the alto lower part downward stems, and so on, but it appears as if he is instructing his student to take the soprano part from the *model* and apply stem directions, rather than to form a composite soprano part formed of the highest sounding tones in the composition, as in the practice examined earlier. In fact, his advice seems to contradict this practice; he simply describes copying out the model's parts with a single set of stem directions, and there is no indication that he is talking about any "parts" other than the ones from the model. There is certainly no reason to suspect that he is actually referring to seguente-style parts formed of the vertical array of notes in the texture, and he makes no mention of working out voice-crossings as one puts the parts in tablature (instead, he seems to indicate copying the entire soprano part from the model), or working out the stem directions on another score or *alla mente* before intabulating the complete parts. A process like this would have to be undertaken in order to make the stem directions work as seen in IKT practice.[56] Interestingly, Diruta's own musical examples demonstrates the same procedure as seen in the intabulations, therefore contradicting his own text (**Example 1.14**).

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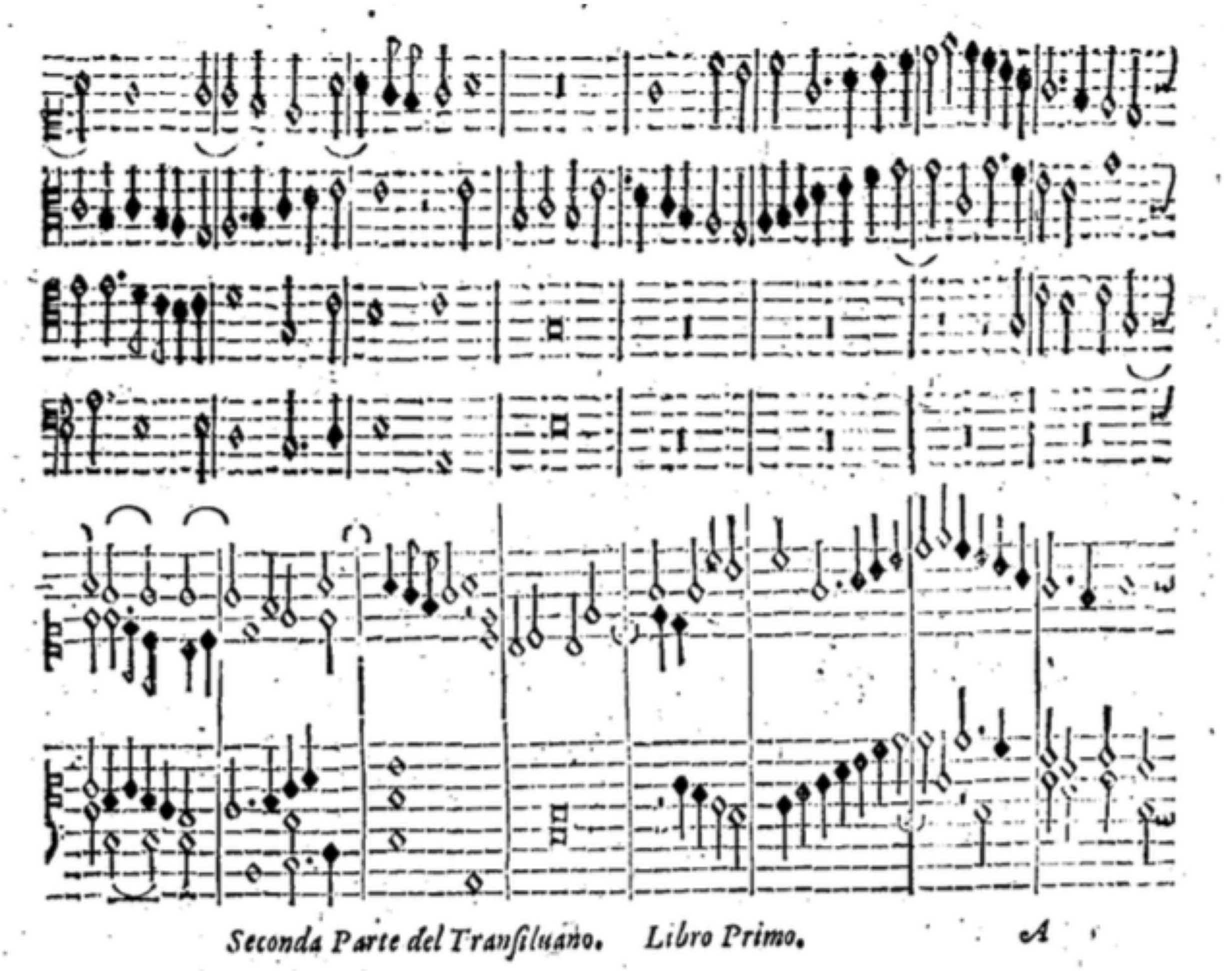
[55] "Divise c'haverete tutte le parti, incominciarete ad intavolare il soprano nelle cinque righe à due battute per casella, e poi intavolarete il Basso sopra le otto righe. Avertendo di fare le notte dritte à quelle del Soprano, & che le gambe delle Notte del Soprano siano voltare in sù & quelle del Basso in giù, per poter melgio accomodare le parti di mezo. Intavolate c'havrete le parti estreme, intavolarete il Tenore nelle otto righe, sopra il Basso, qual verrà à fate una di queste consonanze, Unisono, Terza, Quinta, Sesta, over Ottava, avertendo, che quando passa l'Ottava sopra il Basso, bisogna intavolarlo sotto al Soprano nelle cinque righe. Similmente il Contralto s'intavola sopra il Basso, e sopra, over disotto al Tenore. E quando passa l'Ottava sopra il Basso, si potra nelle cinque righe di sotto, over di sopra al Soprano: & anco, è d'averritre, che alle volte il Tenore passa di sotto alle cinque, per commodità di fare le diminuitioni. Et per facilitarui, incominciarò à partire un Canto à due voci, à tre, e à quattro. Inteso c'haverere il modo di partire, & intavolare à quattro, potrete poi anco intavolate à cinque, à sei, à sette, & anco à otto, osservando il medesimo ordine." Diruta, *Transilvano,* vol. 2, bk.1, 2-3. English translation by Murray & Soehnlein, *Transylvanian,* 2:4.

Example 1.14 Girolamo Diruta, *Transilvano,* vol. 2, bk. 1, 6.



Diruta's handling of unisons is also different from what is typically observed in the intabulations.

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[56] It is unclear as to whether the voice crossings were arranged in the process of intabulation or in the preparatory work, i.e., arranging the polyphony in score (*partitura*). In describing the "pre-intabulation" process, Diruta writes "Prima dovete haver la Cartella rigata, eccetto le due ultimi poste, delle quali una sarà di cinque righe, et l'altra di otto, come travarete in diversi luoghi; poi pigliarete la parte del Soprano, et lo partirete à due battute per casella. Nella seguente posta il Contr'alto, seguitando poi con l'istesso ordine il Tenore, & il Basso, come per gl'esempii più chiaramente intenderete." It could be that he is not describing simply copying the part-book soprano into the score, but a process in which the intabulator would see where parts crossed to extract the highest-sounding *seguente*-style soprano part. That said, Diruta's examples, which contain both the *partitura* and the two staves of *intavolatura* below it, clearly demonstrate that the stem directions are changed in the process of copying the score into tablature. Diruta, *Transilvano,* vol. 2, bk. 1, 1.

Initially, he doesn't explicitly mention the practice of representing unisons between parts with one note (with what looks like a single part); instead, he ties unison practice to a rather specific instance, occasions in which the first note of a subject happens to form a unison with a note already struck:

> When you find that one part forms a unison with another, and that both form some subject or answer, you must srtike the unison with both hands, and after striking the unison let one of the parts hold it and let the other go its way. Similarly when the imitation begins on a unison, on the strong or weak part of the beat, it is necessary to restrike the unison in order to make the imitation heard. This is what you ought to observe in all the parts with regard to the unison not only with two but also with three, four, and more voices.[57]

Diruta does seem to explicitly mention the IKT unison practice later on in the discussion, but only in passing and, curiously, again related to a very specific instance, when addressing intabulating pieces in more than four voices. Here, Diruta states that, between the Quintus part and its counterpart, one should take care that, between the parts, "ci nascono delli unisoni," again mentioning the importance of keeping the *soggetto* clear when it begins on a note already held by another voice.[58] The fact that Diruta is more concerned with keeping entrances of *soggetti* intact – and only mentions the fundamental IKT treatment of unisons in passing – perhaps indicates that IKT's unison practice was to be understood as common knowledge.[59]

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[57] "Quandro troverete una parte, ch'entra Unisono nell'altra, e che tutte due faccino qualche soggetto, over risposta, bisogna battere l'Unisono con tette due le mani, & che doppò battuto l'Unisono, una delle parti stia ferma, & l'altra daccia il suo viaggio. Similmente quando comincia la fuga nel Unisono, nella prima over seconde parte della battuta, è necessario battere l'Unisono per far sentire la fuga. Questo è quanto dovete osservare intorno all'Unisono non tanto à due, ma anco à tre, a quattro, & à più voci in tutte le parti. Hor c'havete inteso il modo di far la Partitura à due voci, seguitiamo l'ordine di partire, & d'intavolatre à trè voci." Diruta, *Il Transilvano,* vol. 2, bk. 1, 2. Translation by Murray / Soehnlen, *Transylvanian,* 2:6.

[58] Diruta, *Il Transilvano,* vol. 2, bk. 1, 10.

[59] It is also interesting to note that Diruta is specifically referring to an instance involving imitative polyphony. Perhaps surprisingly, Diruta's concern with preserving the integrity of imitative passages – a running theme in his instructional material, particularly in the application of diminutions – does not typically coincide with the intabulation practice examined here. In intabulations of ricercars by Jacques Buss and Sperindio Bertoldo (of works from Padovano's 1556 collection of part-book ricercars), the intabulators demonstrate a rather striking disregard for the preservation of *soggetti* – when intabulating works in a genre that is essentially founded on the principal of imitative polyphony. Bertoldo, *Toccate, Ricercari;* Buus, *Intabolatura d'organo di ricercare.*

IKT's other notational irregularities are not explicitly stated in Diruta's text, only being alluded to indirectly or not mentioned at all, even as they appear in the musical examples as just demonstrated; in the case of stem directions, his advice seems to contradict practice as observed in the repertoire. This dissonance suggests a conceptual difference between notational convention and the practice of intabulation, even if they are closely intertwined – after all, Diruta is describing the process of intabulation, rather than the laws of notation. Perhaps the fact that Diruta doesn't mention these explicitly, but shows them in his examples, is suggestive of the fact that they were to be taken as given – "natural laws" that were commonly understood.[60] The notion that notation and intabulation process should be viewed as distinct is also supported by the fact that most IKT intabulations demonstrate the conventions with a fair amount of consistency, even when they "break the rules" to show polyphonic detail (as seen above, in the Castell'Arquato intabulation). Intabulations that do so may very well be intended to function as a kind of full score; the fact that intabulators seem to "slip up" and fall back on IKT convention shows that the conventions constituted standard practice from which intabulators consciously deviate. The fact that IKT functions are usually present on some level would indicate that they should be viewed as distinct from intabulation.

At the same time, all of the IKT conventions that are mentioned by Diruta are done so as part of his description of the intabulation process, indicating that there was at the least considerable overlap between intabulating and notation. For example, rests are removed from tablature as part of Diruta's intabulation method ("non intrichino le notte"), but this feature is observed in the "free" (i.e. model-less) keyboard music as well, as are the other IKT conventions.[61] While Diruta's text is unfortunately not clear enough – in fact, it is marred by contradictions – to fully support either viewpoint, it certainly does support the notion that there is a considerable grey space between them. After all, his advice is only suitable for intabulating in IKT, not in any other format: in this sense, notational conventions and intabulating are wholly interdependent. While intabulation was distinct from IKT's notational conventions, the two overlapped considerably.

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[60] He even frames his instruction with the rather evocative advice, "In tutte la professioni è sonnamente necessario saper le sue Regole, senza le quali sarebbe un'incaminare al buio" – do the "rules" here indicate the laws of notation in addition to the process of intabulation? Diruta, *Il Transilvano,* vol. 2, bk. 1, 1.

To return to the issue of alteration, it is interesting that the last problem Diruta addresses in this first section refers to the problem of awkward leaps between parts, and the need for the intabulator to recompose sections to make the texture playable on keyboard:

> T: When the soprano or bass are at extreme pitches and one of the middle parts has an imitaive theme, may I place the soprano an octave lower and the bass an octave higher in order to play the imitative theme in the middle?
> D: Sometimes you may do it. At other times you won't want to transpose the bass to the octave above since you have to be careful that the tenor does not form a fourth below the bass, for this would not be good. Also, the soprano transposed to the octave below might prove awkward with the middle parts. When no such defect arises, you can do this. If it does, you can then arrange the soprano a third, fourth, or fifth lower, but only if it agrees with the other parts and does not form parallel fifths or octaves.[62]

Diruta indicates that the voice leading of the model may be altered to accommodate counterpoint that is difficult to play on the keyboard, but only in certain cases. In this, Diruta is actually quite cautious, and his advice is not reflective of the extent of practice in much of the repertoire; for instance, Diruta neglects to mention the practice of omitting notes from the original polyphony, an occurrence that happens with considerable frequency. Diruta's cautiousness is obvious when comparing his advice to the elaborate published intabulations seen in the previous section; these intabulations freely alter and omit parts, and for idiomatic reasons, such as adding ornamentation, not just for awkward intervals between parts. Despite his cautious stance, however, Diruta considers the alteration of polyphony a normal part of the intabulation process – after all, it is included as a basic step, right along with putting the notes on the page and adding rests – and this intabulation process includes elements that we have seen as IKT irregularities. By extension, could this mean that alteration should also be seen as a part of IKT's notational conventions?

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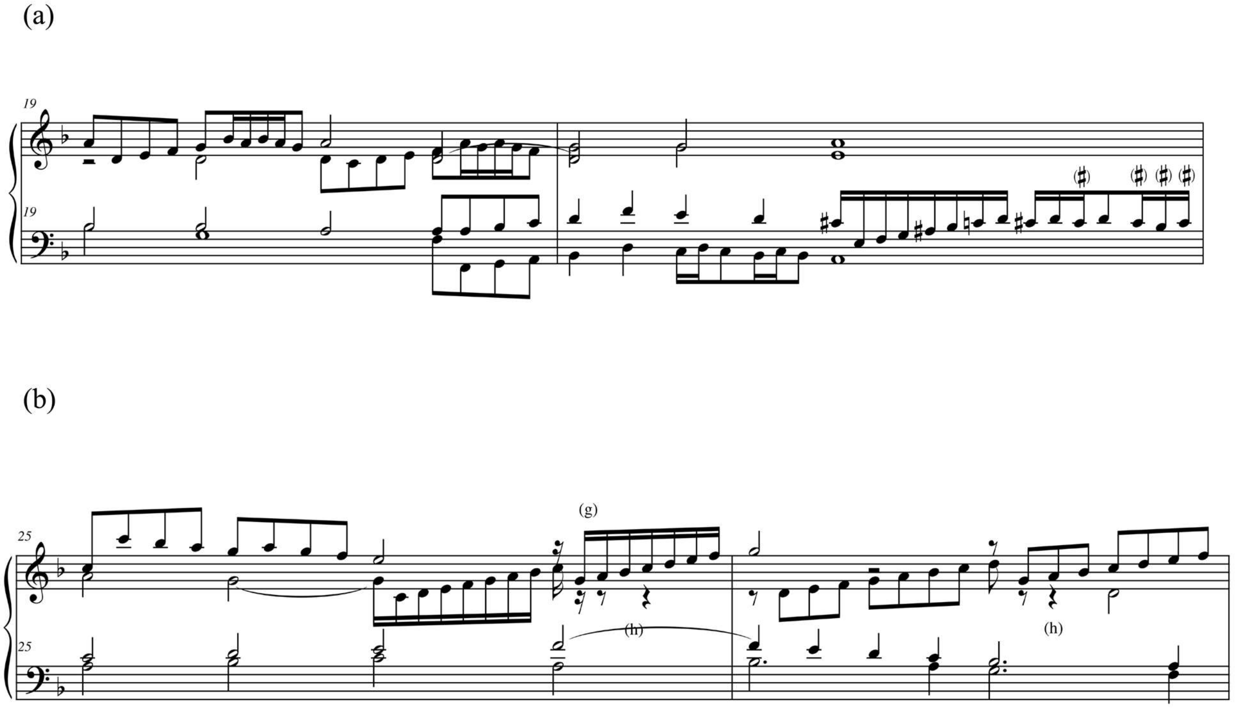
[61] As mentioned earlier, previous studies by Silbiger, Clericetti, and Boncella largely dealt with IKT functioning in abstract pieces.

[62] "T: Quando il Soprano, overo il Basso sarà estremo, & che faccia la fuga una parte di mezo, potrò io collocare il Soprano all'Ottava bassa, & le parte del Basso, all'Ottava alta, per poter fare la fuga di mezo?
D: Alcune volte lo potrete fare, & alcune voltenò volendo trasportare il Basso all'Ottava di sopra; dovete avertire, che il Tenore non faccia Quarta di sotto al Basso, che non staria bene: così il Soprano traportato all'Ottava bassa, potria impedire le parti di mezo. Quando non nascerà tale incoveniente lo potrete fare: Nascendo poi potrete accommodare il Soprano una Terza, ò Quarta, over Quinta bassa, pur che accordi con le altre parti, & che non faccia due Quinte, nè due Ottave." Diruta, *Il Transilvano,* vol 2, bk. 1, 10. Translation by Murray / Soehnlein, *Transylvanian,* 2:18

Perhaps, while on a fundamental level separate phenomena, intabulation process and IKT's notational conventions were intrinsically linked, and alteration occupied a space that overlapped with both of them. If so, every time music was written down in the format, it had to obey the same rules of intabulation – which include both IKT conventions as well as a version of the entire process described by Diruta – regardless of whether the model was an existing piece of polyphony, a conceptual "model" that existed only in the mind of the composer, or a transcription of an improvisation. In this view, IKT would actually be an agent in forming musical style, actively shaping elements that would normally be considered to be compositional. The fact that free keyboard music and intabulations "behave" in similar fashion would seem to support this, and the fact that the majority of music notated in IKT is relatively easy to play – that is, it fits under the hands in an idiomatic way – also supports this view. In contrast, the works of the Neapolitan composers Trabaci and Mayone, whose works are published in full score (*partitura*), are notably full of awkward stretches and passages near-impossible to play as written, even as the style of ornamentation is clearly tied to keyboard conventions (see **Example**

1.15).[63] If these composers had published their works in IKT, they would be playable, as IKT convention would demand that they be altered to be so as part of the intabulation process, which in turn is embedded within the notation itself.[64] In this view, IKT would function in a quasi-algorithmic fashion. That is, it functioned as system that automatically and mechanically converted polyphonic textures into ones idiomatic for the keyboard.

Example 1.15 Ascanio Mayone, *Ancidetemi pur,* (a) mm. 19-20, (b) 26-27, from *Primo libro di diversi capricci per sonare.* MAYONE 1603.



Idiomatic style is therefore inherent within the conventions and logic of IKT itself. I can give an example to demonstrate some potential ramifications of viewing IKT as an algorithmic, systematic process. Alexander Silbiger begins his article with an analysis of a toccata by Andrea Gabrieli, pointing out that IKT conventions hide an underlying imitative polyphonic structure, meaning that the piece is less "free" than may be initially presumed (in this case, "free" meaning not composed of strict counterpoint).[65] Does this mean that Gabrieli, at some point in the compositional process, prepared a more or less polyphonic version – conceptually, we might say that this version was notated in full-score, even if, in reality, this score only existed in the mind of the composer – and that he was "forced" to hide this structure because writing the music down in IKT demanded that he do so? Or, put another way, does writing anything down in IKT entail using an intabulation process similar as described by Diruta and as seen in the analyses at the beginning of this chapter? If this is true, every piece notated in IKT would be automatically subject to the alterations caused by IKT's embedded intabulation process.

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[63] Ascanio Mayone, *Primo libro di diversi capricci per sonare* (Naples: Constantino Vitale, 1603), and the *Secondo libro di diversi capricci per sonare.* (Naples: Gargano and Nucci, 1609); facsimile copies supplied by the Museo internazionale e Biblioteca della musica di Bologna. Giovanni Maria Trabaci, *Ricercate, canzone franzese, capricci, canti fermi…. à quattro voci: Libro primo* (Naples: Constantino Vitale, 1603); facsimile ed. (Florence: Studio per Edizioni Scelte, 1984). Giovanni Maria Trabaci, *Il secondo libro de ricercate & altri varij capricci;* facsimile ed. (Florence: Studio per Edizioni Scelte, 1984).

[64] In addition, this raises questions about the development of IKT's conventions, and in turn, their relationship to the practices of intabulation: did these laws develop out of intabulation practice? Or did intabulation practice follow an already developed set of notational conventions as an *a priori* set of conditions?

A Model for Analyzing Intabulations

The question of distinguishing between intabulation process and notational convention is not only useful for analyzing intabulations, but also for analyzing compositional process in keyboard music notated in IKT. This dissertation explores this topic from several angles, all of which can be approached, as a starting place, through an analysis of the intabulation process as demonstrated in this chapter. The potential utility of intabulations for studying *cinquecento* keyboard compositional process can be demonstrated by examining the more elaborate intabulations in the repertoire.[66] These intabulations are elaborate largely in their application of ornamentation, which often forces substantial recomposition. In fact, many of these intabulations could be classified as a type of *imitatio*, even as the fundamental harmonic or contrapuntal structure of their model often remains intact.[67] In occupying a space between intabulation and composition, they present many challenges when analyzed within the lens of intabulation process. They also invite the examination of two key problems in considering IKT conventions as part of compositional process. The first is in regard to analytical process: the complicated nature of these intabulations – which often invites multiple interpretations – demands a stable and consistent analytical methodology. The second regards the fundamental nature of the intabulation process itself: was it always a fully writing-dependent system, or does musical evidence suggest the role of improvisation as well? I will begin by addressing the first of these issues.

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[65] Silbiger, "Tablature?"

[66] These include the intabulations of Claudio Merulo (published in three volumes, dated 1592, 1606, and 1611), as well as many attributed to Andrea Gabrieli and Bertoldo, in addition to several manuscript intabulations. For example, see the intabulations, one anonymous and one attributed to Ercole Pasquini, in the Trent Codex: Silbiger, *Trent.* See the Appendix for the anonymous intabulation (of Lasso's *Susanne un jour*).

Analyzing intabulation process in IKT should be straightforward, at least if understood as a simple process, as suggested by Diruta's method.[68] It should be noted that, further on, Diruta does provide a method to what he calls *intavolatura diminuito*. However, it is largely concerned with the classification of ornamentation, and many of the complexities seen in the repertoire are not addressed. In fact, alteration is only mentioned briefly, and in the first section, which is somewhat ironic, as the application of ornamentation in one part often requires the alteration or omission of notes from the other parts. There is a considerable gap between Diruta's text and what is seen in practice in elaborate intabulations.

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[67] In this they differ from what is traditionally understood as *imitatio* composition in the Renaissance. Supporting the notion that there was considerable overlap between parody composition and intabulations are the intabulations of Marco Antonio and Girolamo Cavazzoni; these rework the structures of their models, and often freely use motives to compose new music, to the point that they are more akin to *imitatio* composition. In contrast, the elaborate intabulations of Andrea Gabrieli and Claudio Merulo typically retain the structures of their models. It is notable that Andrea Gabrieli composed three *imitatio* ricercars (entitled "ricercar sopra...") of vocal works; in these parody ricercars, subjects of the vocal works are reworked contrapuntally. Interestingly, in the printed volumes these immediately follow elaborate intabulations that maintain the structure of their models, albeit under substantial ornamentation.

Perhaps it is this overlap between intabulating and *imitatio* compositio that led to Diruta to state that "L'intavolare diminuito è un'arte giudiciosissima, & si ricerca essere buon Cantore, & anco buon Contrapuntista." Diruta, *Il Transilvano,* vol. 2, bk. 1, 10. For the classic study on instrumental parody composition in the Renaissance, see John Ward, "The Use of Borrowed Material in 16th-century Instrumental Music," *Journal of the American Musicological Society* 5 (1952): 88–98.

Coelho challenges the notion that intabulations are parody composition, as parody compositions are not translations – both model and *imitatio* work are in the same "language" of polyphony. Coelho and Polk, *Instrumentalists,* 218-19.

[68] As will be demonstrated shortly, this may be a faulty assumption to make in the first place; having said that, Diruta's method is the sole extant guide from the period, and therefore makes a *de facto* starting place for lack of other options.

Diruta also seems to tie intabulation, and the application of ornamentation, directly to the basic method of applying the individual parts to the intabulation, telling his Transilvanian student that, when approaching the second method, he "graduated" from having to put the parts in *partitura*:

> Because you have practiced intabulation from open score so well, this second method will be easier for you, since you can intabulate the parts without placing them in open score. Follow the system above, however, by first beginning to intabulate the soprano and bass and then the middle parts.[69]

Diruta clearly indicates that elaborately ornamented intabulations are grounded in the basic fundamentals of intabulating, and therefore it is reasonable to accept these fundamental steps as a starting place for the analysis of intabulations in IKT.[70] Individual parts of the model should be traceable in the intabulation, and alterations to the polyphony structure of the model categorized. However, this approach is often undermined by complex situations that suggest multiple interpretations of deviations from the model's polyphony. **Example 1.16**, an excerpt from

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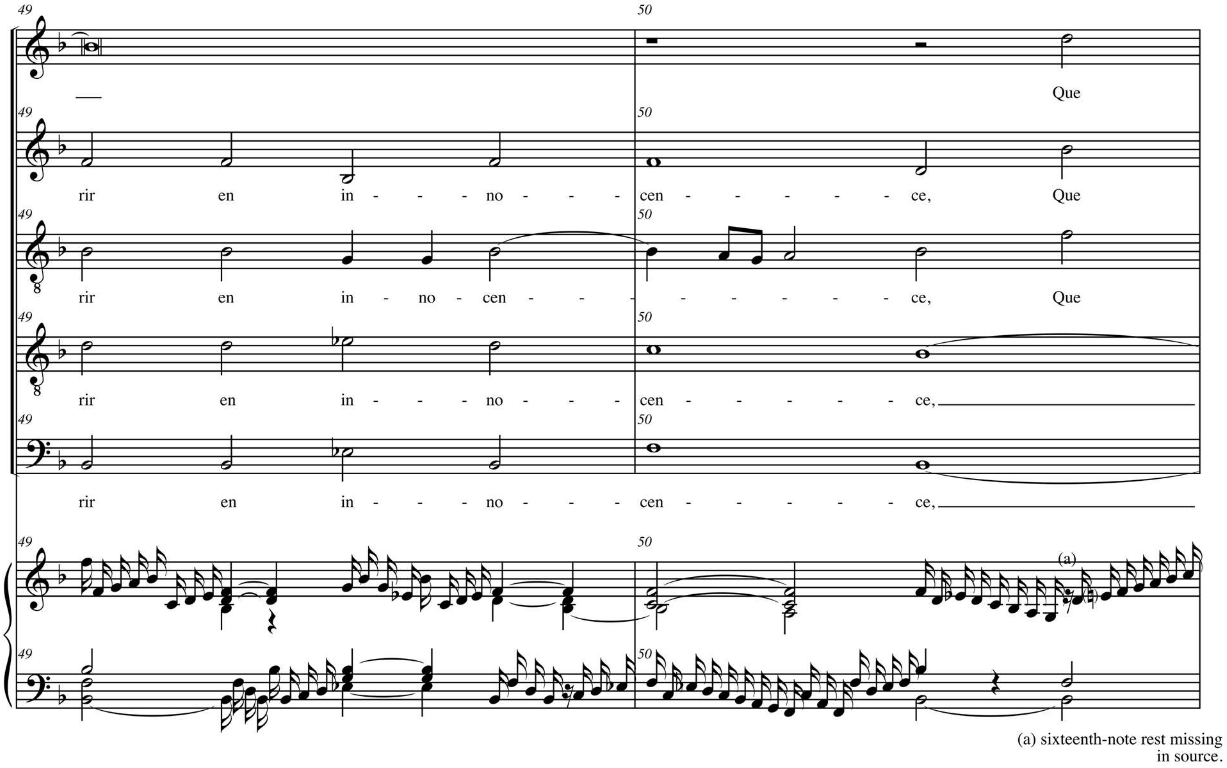
[69] "Fatto c'havete buona pratica d'intavolare sopra alla Partitura, assai più facile vi sarà quest'altro secondo modo: poi che senza partire le parti potrete intavolare, osservando però il modo sudetto, prima incominciarete ad intavolare il Soprano, e il Basso, & poi le parti di mezo." Diruta, *Il Transilvano,* vol. 2, bk. 1, 10. Translation by Murray / Soehnlen, *Transylvanian,* 2:18. Once again, notably absent from Diruta's instruction is the need to arrange the parts so that the highest-sounding notes of the soprano form a composite part made of the highest sounding tones, and so on; as mentioned earlier, this is a practice that would require pre-planning, and it is curious that Diruta once again doesn't mention anything that could even be construed as referring to it.

[70] Regarding the role of ornamentation in elaborate intabulations, Diruta provides a brief discussion that classifies them and briefly demonstrates their application, but ultimately allows two arrangements (of *canzoni* by Mortaro and Giovanni Gabrieli) to speak for themselves, advising the reader to follow these and other "tablatures by various skilled men" as examples to follow in a continued pursuit of the art. In this sense, Diruta follows many other instrumental treatises from the period, advising the student to seek models to imitate rather than providing a complete method. Specifically, Diruta recommends the intabulations of Claudio Merulo: "Più facile vi sarà l'intavolare diminuito; perche essaminando diversi essempii, che sono per darvi, & l'intavolature de diversi valenthuomini, & in particolare quelle di Claudio Merulo, il quale più de ogn'altre se è affaticato in questa bell'arte d'intavolare diminuito come si vede in diverse sue Opera Stampate; Messe, Ricercari, Canzon alla Francese, e Toccate." Diruta, *Transilvano,* vol. 2, bk. 1, 10.

Merulo's *Susanne un jour,* demonstrates such a case. In measure 49, on the first beat, the model's Altus *f'* could be viewed as being omitted in the intabulation; it could also be seen as being transposed down an octave (and therefore part of the left-hand chord), with the Quintus *d'* the omitted note. If the Altus *f'* is understood to be the omitted note, this would mean that the Quintus *d'* is transposed down a sixth to form the *f* in the left-hand chord. The *b-flat'* breve in the soprano presents similar complexities. At first glance, it seems to be altered in the intabulation, transposed up to an *f''* (or, the alto's *f'* could have been transposed up an octave); however, it is part of a *passaggio* that continues from the previous measure, meaning that it is probably best seen as "skipping over" the note temporarily as it travels (this is common in sixteenth-century

Example 1.16 Claudio Merulo, *Susanne un giour, D'Orlando Lasso A5* (1611), mm. 49-50, from MERULO 1611; Lassus, *Susane un jour d'amour solicitée,* adapted from Orlando di Lasso, *Chansons,* ed. Jane Bernstein, vol. 14 of *The Sixteenth-Century Chanson* (New York: Garland, 1987).


49
50
Que
rir en in - - - no - - - cen - - - - - - ce, Que
rir en in - no - cen - - - - - - - - - ce, Que
rir en in - - - no - - - cen - - - - - - ce,
rir en in - - - no - - - cen - - - - - - ce,
(a)
(a) sixteenth-note rest missing in source.

diminution practice).[71] However, the ornament on the first beat manages to briefly touch upon both the Cantus *b-flat''t* and the "missing" Altus *f'*. Does this mean that the intabulation actually maintains these notes? And, if the Altus *f'* is seen as being kept, the Quintus *d'* is the note that is transposed.

Situations like this suggest that a relatively systematic analytical approach should be established. It should be assumed that Diruta's method suggests that a basic process of intabulation was adopted, at least as a foundation.[72] Much of the complexity in analyzing intabulation involves deciding which individual notes are altered, and which are omitted. As Diruta doesn't mention omitting notes (only altering them), it seems safe to assume that, in cases that are ambiguous, the *de facto* analytical position is to assume alteration over omission.

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[71] In *Transilvano*, Diruta classifies his diminutions as two groups: *minute,* which are *passaggi* that occur in the course of the piece, and *groppi,* cadential formulae (Diruta's other ornaments are shorter gracing figures; see note 68 below for a further explanation of Diruta's treatment of diminution). In doing this, Dirita follows standard practice; also following sixteenth-century practice, Diruta's *minute* either begin and end on a single note, or travel over the course of an interval, essentially connecting the two notes.

The practice and style of sixteenth-century ornamentation can be seen clearly in the multitude of diminution treatises published throughout the course of the century. For more on late sixteenth-century ornamentation in particular, see Bruce Dickey, "Ornamentation in Early Seventeenth-Century Italian Music," in *A Performer's Guide to Seventeenth-Century Music,* 2nd. ed., ed. Stewart Carter, rev. and ed. Jeffrey Kite-Powell (Bloomington, IN: Indiana University Press, 2012): 293-316. For late sixteenth-century diminution practice in particular, see 295-302.

For a thorough examination of Claudio Merulo's ornamentation practice, see Charles M. McDermott,"The *Canzoni d'Intavolatura*": see especially 1-53; 144-181. McDermott divides keyboard ornaments into three categories: ornaments that "sought to enhance certain structural aspects of a composition"; those that were "used as a vehicle to demonstrate the skill and dexterity of the performer"; and those that were "suggested by technical and physical factors of the instrument." McDermott, "*Canzoni,"* 43. Further on, he describes the second class – "virtuoso" ornaments – as frequently using "the whole note and even the breve as the time unit being ornamented, resulting in a reduction of the melody to a mere outline of its original self." Ibid., 159-60. This is typical in the "elaborate" intabulations in the repertory.

[72] Coelho and Polk are quite critical of the traditional approach to analyzing intabulation, at least in the case of lute intabulations: "Until now, the traditional procedure for studying intabulations has been to begin with the vocal source as a model, examine the intabulation derived from it, and then work from the intabulation back to the model in order to assess differences and similarities. In truth, however, the intabulation occupies a middle ground between model and target, and the flow moves in the opposite manner. Rather than mirroring (or distorting) its model, an intabulation suggests instead the presence of a newer readership to which it is aimed." Coelho and Polk, *Instrumentalists,* 215.

The target of his criticism seems to be those who hold the traditional view of intabulations as wholly derivative of their models. In this case, he is of course entirely correct. At the same time, Diruta's method makes it quite clear that intabulators in IKT worked in a step-by-step process of arranging parts from the model, and the analytical stance taken here is grounded in that methodology.

However, the intabulations themselves show that omission is adopted much more than alteration; in Merulo's intabulation of Crecquillon's *Oncques amour,* for instance, there are 35 instances of alteration, and 50 instances of omission; in the same composer's intabulation of *Susanne un jour,* there are 57 instances of notes altered, and 153 notes omitted.[73]

In looking for alterations and omissions, it is clear that the would-be analyzer should adopt a reductive process beginning with identifying the notes that are kept from the model. When doing this, it becomes clear that, due to IKT conventions, these notes must be taken on a moment-by-moment basis, without regard to the voice leading in the model. That this is the case can be demonstrated in **Example 1.17**, from Merulo's intabulation of *Oncques amour* (see below). When tracing the model's voice leading in measure 4, we quickly establish that the Cantus, Altus, and Tenor parts are present in the intabulation (the Tenor's long *c′* forms the division in the left hand); due to IKT convention, the Altus's notes appear as if belonging to multiple parts in the intabulation. However, only the two *g′*s from the Quintus (on the third and fourth beats) are present in the intabulation. At the same time, the intabulation contains notes that aren't from the model: the *g′* at the bottom of the right-hand chord on the first beat, the *c″* in the chord on the second beat, and the *e′* in the bottom staff on the last beat. The Quintus *e′* on the first beat of measure 4 can be viewed as being transposed upward to make the *g′* in the chord, with the quarter-note *f′* on the second half of the beat similarly becoming the *c″* in the chord. In these instances, IKT conventions are applied to the altered notes, seamlessly incorporating them into the keyboard texture. This works on a minim-by-minim basis: the Quintus *e′* is altered to a *g′* on the first minim beat; that *g′* is tied to the Altus *g′* on the second beat, and so on. Due to IKT

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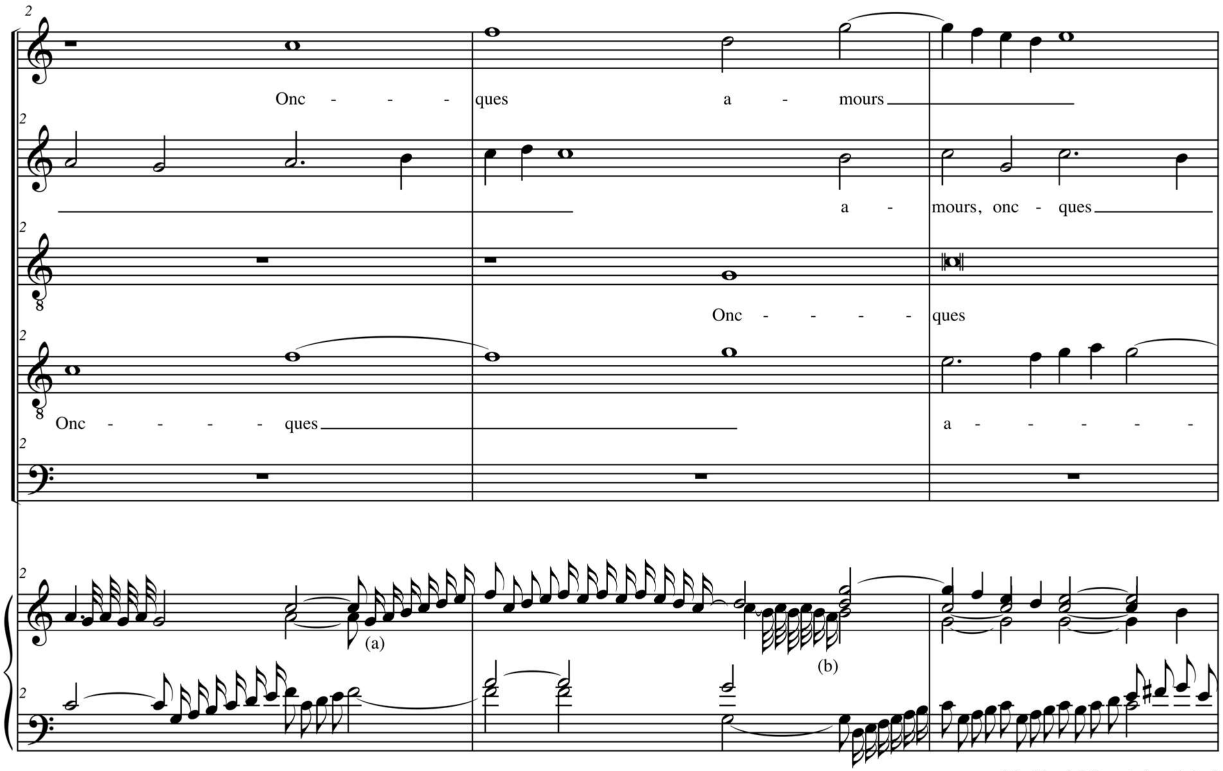
[73] In calculating these figures, I have treated ambiguous instances that could be interpreted as either alteration or omission as if they were alterations.

Example 1.17 Claudio Merulo, *CREQUILLON. Onques Amour A 5.*(1611), mm. 2-4, from MERULO 1611; Crecquillon, *Oncques amour ne fut sans grand langueur,* adapted from Thomas Crecquillon, *Cantiones Quator Vocum,* ed. Barton Hudson, et. al., vol. 63, part 19 of *Corpus mensurabilis musicae* ([Germany]: American Institute of Musicology, 2000).



(a) g' is eighth note in original
(b) b' is eighth note in original

conventions of stem direction and voice crossings, these two tied *g*′s appear as if in the same "voice" in the intabulation.

Rather than considering the notes of the Quintus as part of an independent polyphonic voice, the intabulator seems to use each note as an individual piece of raw material, organized in distinct segments, with each segment the length of a minim. This can be seen clearly if we trace what looks like the lowest "part" of the right-hand staff in the intabulation. The *g*′s are taken from two voices: the first *g*′ from the transposed Quintus, which is tied to the second *g*′, taken from the Altus; the third and fourth *g*′s from the Quintus, and the last *b*' from the Altus. It is almost as if the intabulator is viewing the model as four distinct minim-long chunks that "verticalize" and segment the texture.

How Were Elaborate Intabulations Composed?

Of course, there may be a simpler explanation behind the creation of Merulo's intabulation: that he simply bypassed the procedure described by Diruta and freely recomposed the piece for keyboard. Take the cadential ornament in measure 3: this could be viewed as a complicated procedure in which Merulo transposed the Altus *c″-d″-c″* figure on beats one and two to create the *a′* in the bottom staff of the intabulation, and then (breaking rules of counterpoint) suddenly brought in the *c″* from the model to form the cadential 4-3 figure (the Cantus motion from *f″-d″* is clearly ornamented by the *passagio* on the second beat, and the 4-3 figure in the intabulation seems to come out of nowhere). Or, we could simply see Merulo recomposing the music by superimposing a passage of common keyboard figuration that follows its own musical logic. In fact, Merulo's cadences demonstrate a great amount of consistency in their figuration and voice leading, suggesting that they may have been formulae.[74]

It is interesting that the amount of alteration in these pieces directly contradicts the conservative stance taken by Diruta. As mentioned above, Diruta treats elaborate intabulation largely as a problem of ornamentation, classifying and describing the application of specific figures.[75] However, when it comes to applying ornamentation, Diruta clearly indicates that the intabulator should concentrate on applying *passaggi* to individual parts of the model.[76] In contrast, many intabulations seem to follow a logic dictated by the ornamentation, with *passaggi* freely traveling from part to part (in a manner obviously related to *bastarda* ornamentation), and the other parts fit in as necessary to accommodate them. Diminution was a fundamental component of the art of the *cinquecento* keyboardist, and the repertoire strongly suggests that it must considered in tandem with the arrangement process itself.[77] Typical ornamentation practice can be seen in **Example 1.18**, from Claudio Merulo's intabulation of Crecquillon's chanson *Content ou non*.

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[74] The fact that these figures are consistent in their disposition of parts and specific musical figures may indicate that they are in fact formulae developed through keyboard playing and internalized in memory (see Introduction). They are polyphonic units, but not in a way in which each voice is conceived independently. Instead, the "parts" are formulaic, gracing figures rather than truly independent voices, performed automatically through the fingers. In this sense they are vertical, as their parts are not conceived independently.

[75] At the same time, it must be remembered that intabulations didn't necessarily need to incorporate ornamentation; the art of diminution, not necessarily tied to any particular instrumental medium, occupied a fundamental aspect of Renaissance instrumental performance, as demonstrated by the sheer number of diminution treatises from the

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sixteenth century. For an introduction to sixteenth-century ornamentation and its primary source material, see Howard Mayer Brown's still-important guide, *Embellishing Sixteenth-Century Music* (Oxford: Oxford University Press, 1976). In general, the keyboard ornaments in Venetian music appear to be somewhat conservative when compared to the ornaments found in contemporary divisions treatises for melodic-instrument players. For a comparison of some ornamented superius parts from these treatises with keyboard versions of the ubiquitous *Susanne un jour*, please see McDermott, "*Canzoni,"* 144-49. Johnson also provides a comparison of incipits of *Susanne* intabulations in German tablature sources; Johnson, *Tablatures,* 137.

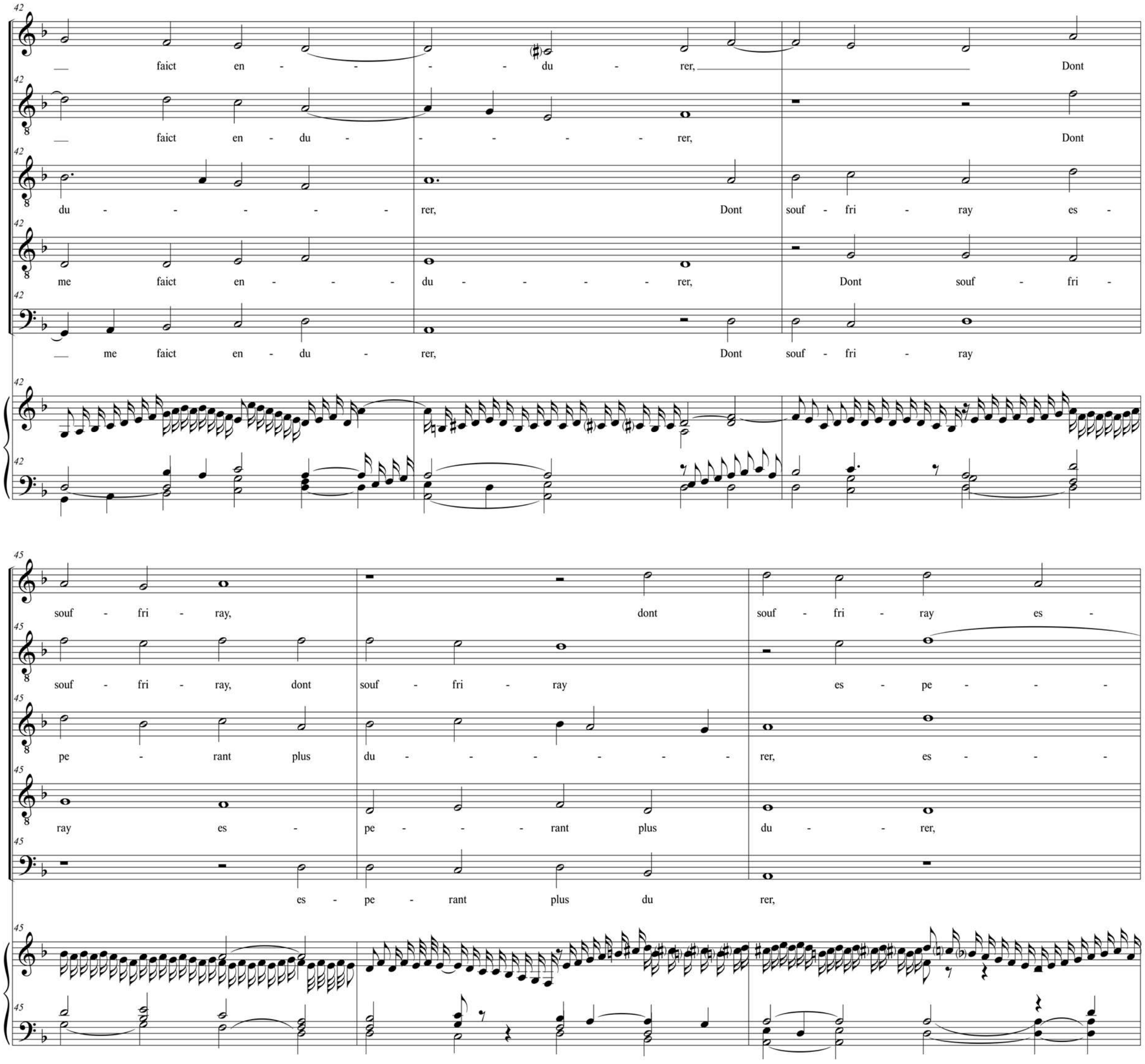
Lastly, Giuseppe Clericetti compares Gabrieli's setting of the chanson *Martin menoit* with an anonymous setting in the Turin tablatures; interestingly, he points to the distinctively "Venetian" style of ornamentation in many of the settings in this important manuscript source; Giuseppe Clericetti, "Martin menoit son porceau au marché: Due intavolature di Andrea Gabrieli," in *Musicus perfectus: Studi in onore di Luigi Ferdinando Tagliavini 'prattico & specolativo' nella ricorrenza del LXV compleanno* (Bologna: Pàtron, 1995), 147-83.

[76] When describing the ornamentation in the analyses in this chapter, I will adopt Diruta's terminology and classification system. See Diruta, *Transilvano,* vol. 2, bk. 1, 10-21, for Diruta's treatment of ornamentation in elaborate intabulations. Diruta classifies his ornamentation into five categories: the *minuta* (diminutions of a single line, which can either begin and end on the note being ornamented, or travel from the first note to the second); the *groppo* (cadential formulaic ornaments); the *tremolo* (an upper-note trill beginning on the main note); the *accento;* and the *clamatione* (these latter two ornaments are shorter gestures, and reflect the aesthetics of the nascent Baroque period). He then demonstrates the application of the ornaments to individual parts in short examples of polyphony. His section on ornamentation ends with two examples – an intabulation of Giovanni Gabrieli's *La spiritata* and a canzona by Antonio Mortaro. For the latter, he labels the ornaments based upon his classification system.

Bastarda-style ornamentation is also commonly seen in intabulations in IKT, but is not directly mentioned by Diruta. For more on *viola bastarda* music and technique, please see Jason Paras, *The Music for Viola Bastarda* (Bloomington: Indiana University Press, 1986).

[77] Much of the ornamentation is related to *viola bastarda* practice, in which a single-line instrumentalist ornamented multiple parts in a polyphonic composition, "leaping" from part to part rather than sticking with one. Common in IKT intabulations are instances in which a line of *bastarda* ornamentation runs "freely" over reduced and simplified polyphony, forming a texture of accompaniment and a solo ornamental part, as well as instances in which the *bastarda* line coexists with the original polyphonic structure. In this latter case the intabulation essentially mimics a common sixteenth-century two-instrument texture in which a solo *contrapuncto* or bastarda solo is accompanied by another instrument playing a full polyphonic texture; examples include Terzi's lute duets (in which the ornamental *bastarda* lute part is called a *contrapuncto*) and the viola bastarda repertoire. See Suzanne Elizabeth Court, "The Role of the Lute in Sixteenth-Century Consorts: Evidence from Terzi's Intabulations," *Performance Practice Review* 8 (1995): 147-70. McDermott pointed to the similarities between Merulo's elaborate intabulations and Terzi's duos; see "*Canzoni*," 159.

Example 1.18 Merulo, *CREQUILLON. Content A 5,* m. 43-49, from MERULO 1611; Crecquillon*, Oncques amour ne fut sans grand langueur*, adapted from Thomas Crecquillon, *Cantiones Quator Vocum*, ed. Barton Hudson, et. al., vol. 63, part 16 of *Corpus mensurabilis musicae* ([Germany]: American Institute of Musicology, 2003).


42
faict en - - - du - rer, Dont
faict en - du - - - - - rer, Dont
du - - - - - - rer, Dont souf - fri - ray es -
me faict en - - - du - - - - - rer, Dont souf - fri -
me faict en - du - rer, Dont souf - fri - ray
45
souf - fri - ray, dont souf - fri - ray es -
souf - fri - ray, dont souf - fri - ray es - pe - - -
pe - rant plus du - - - - - - rer, es - - -
ray es - pe - - - rant plus du - - rer,
es - pe - rant plus du rer,

In this example, *bastarda*-style ornaments can be seen in measures 46 and 47: an ornament beginning on the Altus *e′* on beat 2 travels to the Bassus *d′* on beat 3, and the Cantus *d″* on the third beat of measure 47 travels to the Quintus *d′*. In addition to *bastarda* ornaments, it is common to observe *minute – passaggi* that begin and end on the note that they are “dividing” –

that include notes that are omitted from other parts.[78] This can be seen in measure 44 of Example 1.18, on the last beat: the Altus *f'* is technically omitted, but it is "included" in the *minuta* on the Cantus *a'*. These types of ornaments are common in Merulo's and Gabrieli's intabulations; they allow the intabulator to artfully include notes that are otherwise omitted in the intabulation, in a more idiomatic fashion (see, for example, the first example of measure 46). In some cases, *passaggi* manage to cover notes that would be unplayable in a strictly polyphonic texture, due to excessive gaps between parts. In a sense, this practice can be compared to *style brisé* in later French Baroque lute and keyboard repertoire, in which chords were "broken" through artfully irregular arpeggiation and patterns of chord-spreading.[79] In addition to these *style brisé*-style *passaggi* (that evoke later *style brisé* practice but are nonetheless linear diminutions), instances of actual broken chords can be found. This can be seen in Example 1.18. At the end of the first measure in the example, the Cantus and Tenor II parts are broken, suggesting the style of spread chord breaking typical of harpsichord style in the later Baroque. Like the *style brisé*-like ornaments of the later Baroque period, these types of ornaments are perhaps especially suited for plucked keyboard instruments.[80]

The ornamentation practices seen here bring us back to the question of process: did the intabulator begin by copying the voices from the model into tablature, in a matter similar to that described by Diruta, or did he work out an arrangement (again, whether *alla mente* or on paper, or a mixture of both) and then intabulate that pre-composed arrangement? And if not following a tablature method as described by Diruta, what might the *recompositional* process look like? As a starting place, some general stylistic tendencies can be observed in the intabulations that suggest recomposition over a Dirutian process of intabulation: (a) a "polarization" between staves / hands, with a tendency for one hand to play ornaments and the other to play chordal accompaniment[81]; (b) the importance of the *seguente* outer voices over the middle ones; these often frame harmonies that are used to compose new figuration and chord voicings in seemingly free fashion; of special importance is the *seguente* bass part (in general, all of the examples shown here demonstrate a tendency to preserve the sounding bass over the other parts of the model); and (c) the superimposition of idiomatic figures; this can be seen most often in cadences, but often in other passages as well. All of these can be tied to the *cinquecento* keyboard style described above.

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[78] This phenomenon is described by Diruta as well (or rather, by his fictional interlocutor):"Digratia dichiaratime quelle diminutioni fatte sopra la parte del Soprano, & anco sopra l'altre parti, quali entranno una nel'altra, & viene à perdere parte della sua armonia, &alle volte tutta." Diruta, *Transilvano,* vol. 2, bk. 1, 14.

[79] *Syle brisè* was an idiomatic technique that was tied to the sonority of the instrument itself. See David Ledbetter, "Style brisé," *Grove Music Online. Oxford Music Online*. Oxford University Press, accessed January 5, 2015, http://www.oxfordmusiconline.com.libproxy.usc.edu/subscriber/article/grove/music/27042.

[80] This would make sense, as Diruta specifically suggests Merulo's works for plucked keyboard instruments, despite the former's notorious dislike for these instruments as well as those who play them. See Diruta, *Transilvano,* 1:5v-6r. This is also despite the fact that Merulo's published keyboard volumes all carry the title "d'intavolatura d'organo," regardless of content. This phrase most likely refers to the notation, rather than prescribing the organ as the preferred instrumental medium. For more on possible stylistic markers of harpsichord playing in early Italian keyboard music, see Luigi Ferdinando Tagliavini, "The Art of 'Not Leaving the Instrument Empty," 299-308.

But as we have seen, a careful reading of Diruta seems to indicate that even elaborate intabulations were grounded in a basic intabulation method, even as the extent of alteration, and the application of idiomatic keyboard textures, seem to challenge this notion. Perhaps, rather than following one or the other, intabulators mixed both a process of step-by-step intabulation with recomposition. This hypothesis is supported by the intabulations themselves: in **Example 1.19** (from Merulo's *Oncques amour*), the alteration in measure 37 seems to be more readily explained as recomposition. However, in the next measure, where a new point of imitation begins, Merulo is careful to include all of the original voices (even the tenor *c'*, not initially present, is covered in the *bastarda* ornament).

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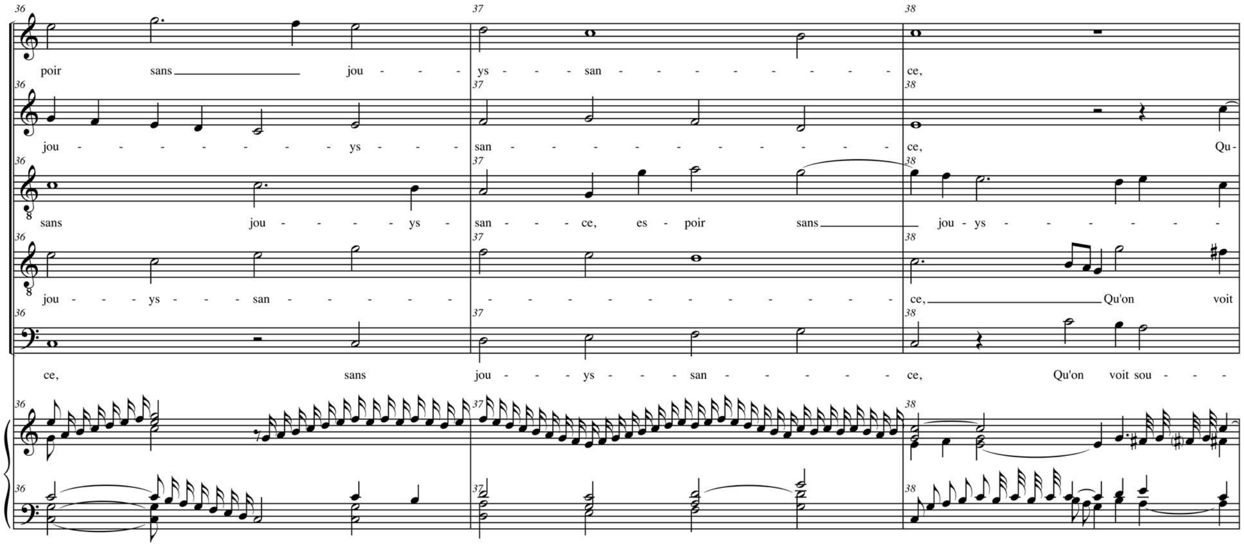
[81] McDermott ties this texture – common in Merulo's intabulations in particular – to the earlier fifteenth-century practice of improvising counterpoint to *canti fermi,* and also to the style of accompaniment in works such as Ortiz and the virtuosic lute duet. McDermott, "*Canzoni*," 154-59.

See Diego Ortiz, *Trattado de glosas sobre clausulas..* (Rome: Luis and Valerio Dorico, 1553). Accessible on imslp.org; http://imslp.org/wiki/Trattado_de_Glosas_(Ortiz%2C_Diego). Accessed on March 1, 2017.

Example 1.19 Claudio Merulo, *CREQUILLON. Onques Amour A 5.*(1611), mm. 36-38, from MERULO 1611; Crecquillon, *Oncques amour ne fut sans grand langueur,* adapted from adapted from Thomas Crecquillon, *Cantiones Quator Vocum,* ed. Barton Hudson, et. al., vol. 63, part 16 of *Corpus mensurabilis musicae* ([Germany]: American Institute of Musicology, 2003).


36
37
38
poir sans jou - - - ys - - - san - - - - - - - - - - - ce,
jou - - - - - - - - ys - - - san - - - - - - - - - - - - - ce, Qu-
sans jou - - - - - ys - san - - - ce, es - poir sans jou - ys - - - - - - -
jou - - - ys - - - san - - - - - - - - - - - - - - - - - ce, Qu'on voit
ce, sans jou - - - ys - - - san - - - - - - - ce, Qu'on voit sou - - -

The hypothesis is also supported by recent research on intabulations in other notational formats, as well. In the case of lute intabulations, Victor Coelho challenges the assumption that the original polyphony even had to serve as the model for an intabulation:

> ..lutenists, like translators of Latin texts, seem to be aware that the source-model might itself be a translation, *perhaps of some live performance as part of the compositional process of the work* (emphasis mine)**,** rendering the translator as justified in adapting his translation.[82]

In the case of Merulo's intabulations, perhaps these works are better viewed as intabulations of Merulo's virtuosic *performances* of the models – learned partly by ear, developed on the keyboard, and internalized in memory – not intabulations of the models at all. This point was also recently raised by Leon Chisholm, regarding Marco Antonio Cavazzoni's intabulation of Josquin's chanson *Plus ne regres*; Chisholm notes that the intabulation's "structure suggests that its composition was not so much the result of a careful study of Josquin's chanson as it was the fruit of aural memories that the chanson had left in Marcantonio's ears."[83] The same statement could be applied to the elaborate intabulations examined above, even as they retain more of the structures of their models than does the Cavazzoni intabulation.

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[82] Coelho and Polk, *Instrumentalists,* 218.

However, this raises important questions about the *process* of creating these "aural memories" – in other words, how exactly was this (as Coelho and Polk put it above) "live performance as part of the compositional process of the work" executed? For example, what notational medium did a virtuosic performer-intabulator such as Claudio Merulo or Andrea Gabrieli use when playing a vocal work? It seems as if there would be three options: (a) part-books; (b) a "short score" comprised of the *seguente* treble and bass parts (this would be reflected in IKT's emphasis on the highest and lowest sounding notes of the texture);[84] or, (c) a "simple" intabulation (that is, one devoid of diminution), as described by Diruta. And, independent of the notational medium, memory must have played a significant role; one could easily imagine a process in which one (or several) of the notational formats were used as part of a fluid process involving the frequent playing through of the model from memory, with reworkings and diminution added through improvisation. And, as noted in the Introduction, this line of inquiry raises more questions about the precise nature of the "model" in *abstract* keyboard compositions that share identical stylistic surface features as intabulations.

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[83] Chisholm, "Mechanization," 29.

[84] See, for example, the Royal College of Music manuscript below, in Example 1.25. Although these "short scores" are typically associated with accompaniment, this would not, of course, prevent their use in the creation of intabulations. I use the phrase “short score” after the usage of Imogene Horsley in her important article, “Full and Short Scores in the Early Baroque,” *Journal of the American Musicological Society* 30 (1977): 466-99. Horsley points to the important role of the short score as an accompaniment tradition in printed vocal music in the decades surrounding the year 1600.

IKT and Composition: A Summary

To return to the question raised at the beginning of this section – that of the relationship between notational format, intabulation, and compositional process – it seems clear that IKT could have an effect on compositional process in several ways. The relationship between lute intabualtions and "free" composition is an active field of scholarship, and it is now generally accepted that intabulation was a fundamental part of the compositional process – both pedagogically and practically – in the creation of so-called "free" (that is, model-less) lute works.[85] I will describe some basic ways in which IKT could be seen as influencing compositional process; these can be organized into three basic categories:

(a) Verticalization and Segmentation. IKT demonstrates a vertical conception of polyphony. All of the tablature elements I've highlighted in this chapter can be tied to the creation of a portrayal of musical reality that is fundamentally chordal in its nature. For example, the favoring of the outer sounding voices of the texture over the integrity of the inner ones polarizes the texture in a way that partly foreshadows the "trio sonata" ideal of the early seventeenth century. Many of the idiomatic stylistic features seen in the intabulations also demonstrate this "verticality": the polarization of ornaments and chords; the favoring of the *seguente* outer parts, particularly the bass, over the inner ones; and the superimposition of keyboard figures, such as stereotypical cadential formulae. In fact, as shown above, the intabulation process itself seems to result in an automatic verticalizing and segmenting of the polyphonic texture, as the intabulator had to precisely consider the vertical alignment of the parts at given rhythmic points, typically at the minim.

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[85] For a general introduction to this research see, Coelho, "Workshop." Polk and Coelho write: "At the fundamental level, tablature allowed for preservation of improvised music and a resulting codification of style and repertory. Most importantly, tablature became lute, vihuela, and guitar players' new workbench of assembling – *intabulating* – polyphonic vocal parts into a single instrumental arrangement of vocal music. Intabulations allowed instrumentalists to make the jump from two or three players improvising one or two parts against a tenor, to a single player composing and performing complete four- and five-voice polyphony." Polk and Coelho, *Instrumentalists,* 212.

(b) Self-Fashioning in IKT**.** IKT conventions, combined with IKT's use of mensural notation over figures, allow for a duality analogous to the one between intabulation process and idiomatic recomposition: as we have seen, IKT's conventions seem to "convert" polyphony into an idiomatic style, but at the same time, the use of mensural notation could allow intabulators to circumvent the rules to show precise details of a model's voice leading. In Chapter 3, I argue that intabulations demonstrate the tendency to favor one approach over the other, and these tendencies may be read within a theory of self-fashioning: that arrangers exploited the "laws" of the notation system to highlight either recomposition and alteration, or the faithful transmission of polyphony. "Elaborate" or "virtuosic" intabulations – which I call "sounding images" – fully use IKT's conventions to obscure polyphonic structures and the voice leading of vocal models, while "faithful" intabulations – which I call *dotte partiture* – exploit IKT's use of mensural notation to circumvent IKT conventions; this is done to demonstrate fidelity to the original model.[86] To some extent, the process of these particular intabulations entailed the creation of a performance identity through print.

(c) IKT as tablet. Lastly, IKT could also function as a "tablet." In the use of the word tablet, I am specifically referring to the erasable tablets used in Renaissance composition; the concept was most thoroughly covered in Jessie Ann Owen's important study *Composers at Work.*[87] However, I'm using the term conceptually and symbolically as well. In referring to IKT as a tablet, I specifically mean the tablet's function as an open space upon which musical problems could be worked out, without the finality of committing the music to paper (composers in the Renaissance didn't have the benefits of the eraser). In other words, I am referring to the potential role of IKT as a compositional "workshop," to borrow terminology from Coelho. In this sense, IKT is a tablet on a symbolic level, although interestingly enough, Owens points out that erasable tablets were apparently prepared for use *in* IKT, and Diruta's use of the word *cartella* may specifically refer to the erasable tablet.[88]

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[86] This resonates with McDermott's "structural" and "virtuosic" dichotomy; see Note 63 above.

[87] Jessie Ann Owens, *Composers at Work: The Craft of Musical Composition 1450-1600* (New York: Oxford University Press, 1997), 74-107.

Within the tablet analogy, IKT could have an influence on composition on some practical levels as well. As Coelho notes in the case of lute intabulation and compositional process, a major part of the notation's influence on composition may have been on the pedagogical level – if the process of intabulation was used as a step towards learning how to composer, surely its techniques made their way into the compositional process.[89] In addition, we've already seen that the very conventions of IKT itself may alter the music, resulting in the reduction and translation of polyphony into an idiomatic keyboard language, in an algorithmic fashion. This is especially the case if intabulation process is seen as an element of IKT convention, as described earlier, with alteration equally a part of both. In addition to alteration, other elements of the intabulation process may therefore also be "algorithmic" and part of IKT's conventions, such as the application of ornamentation. In addition, common procedures observed in intabulation process could conceivably translate into composition: for example, the use of brief voice exchanges is seen in some intabulations, a technique that could be used in the composition of new keyboard music.

The way that intabulators conceived of music through the lenses of intabulation and IKT convention could affect the way they composed on a conceptual level as well. For example, as seen above, intabulations often demonstrate the recomposition of polyphony into textures that consist of ornaments in one hand and chordal accompaniment in the other. This could affect the way that keyboardists wrote abstract or "free" keyboard music on a conceptual level, informing a compositional process that involved a temporary focusing on a primary part (say, the *soggetto* of a ricercar) at the expense of the others. In this scenario, the other, non-primary parts would be composed on simple harmonic criteria, rather than as "independent" polyphonic voices.

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[88] Owens, *Composers,* 94-95.
[89] Coelho and Polk, *Instrumentalists,* 212-13.

But IKT's influence as a compositional medium could work on an even deeper level, too. On a theoretical level, viewing IKT as a "tablet" raises interesting questions: do IKT and its conventions reflect the way keyboardists thought about music, or did IKT actively *influence* keyboard thought? (Or a mixture of both?) In his analogy of intabulation as translation, Coelho describes some of the characteristics of the new "vernacular" language of lute intabulation:

> As motets and Mass movements cross into secular, domestic environments, soloistic figuration, cadential ornaments, occasional parallel intervals, unprepared dissonance, and truncations of the original usually prohibited in the writing of sacred music are permitted, producing a new "vernacular" in translation that is not limited by language or religion.[90]

All of these musical features have been described above as part of idiomatic keyboard writing, and they all appear, to some degree, in the intabulation examples in this chapter. It is possible that, rather than viewing these features either as superficial products of IKT convention, or as artistic license on the part of the intabulator, they should be viewed as products of *natural law* in IKT. In other words, parallel octaves are allowed in IKT because its notational laws operate differently from those of standard mensural notation – it is in some sense a universe separate from that of vocal polyphony. IKT reorganizes mensural notation's polyphony into new structural arrangements: independent polyphonic voices are temporarily merged through IKT conventions such as stem direction treatment, a process amplified through the application of ficta and ornamentation. Rather than merely being visual by-products of notational convention, the "parts" in IKT, formed through stem direction and other conventions, are *musical reality* as experienced – and developed by – keyboardists. They are not fictitious or fake – in fact, they are just as "real" as the original polyphonic parts.

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[90] Polk and Coelho, *Instrumentalists,* 218.

IKT's Universe: Tablature Voices

The notion of IKT representing a type of keyboard-specific "musical reality" was first raised by Alexander Silbiger; it comes up as part of his discourse on the tablaturishness of IKT:

> However, could it be that *intovalatura* notation, with its emphasis on the vertical at the expense of the horizontal, reflects an earlier recognition by Italian keyboard players of the rising to the foreground of the harmonic aspects when full-voiced passages are performed on their instruments, and thus, might it have formed a progressive strain in their thinking about music? If such were indeed the case, *intavolatura* should not be regarded as a tablature, since it would represent *musical reality as conceived in the minds – not just in the hands – of those musicians* [emphasis mine].[91]

Silbiger situates IKT within an emergent awareness of "harmonic aspects" by *cinquecento* Italian keyboardists (right before the cited passage he identifies these as formally indicated by the arrival of basso continuo).[92] Silbiger's notion of IKT representing "musical reality as conceived in the mind… of those musicians" is perhaps actively reflected in what may initial be observed as a simple visual by-product of IKT convention: in the "new" voices that IKT seems to display through its notational conventions. I would like to formally identify these new polyphonic constructs as "tablature voices." They are largely created by IKT's practice of stem directions, as dictated by the vertical placement of notes in the score, although all of the other IKT conventions reinforce their existence.

The phenomenon of tablature parts can be seen clearly in **Example 1.20**, from another intabulation of *Frais e galliard,* this one by Bertoldo (the phenomenon of tablature voices can also be seen clearly in Gabrieli's intabulation of this chanson as well – see Example 1.1). When tracing

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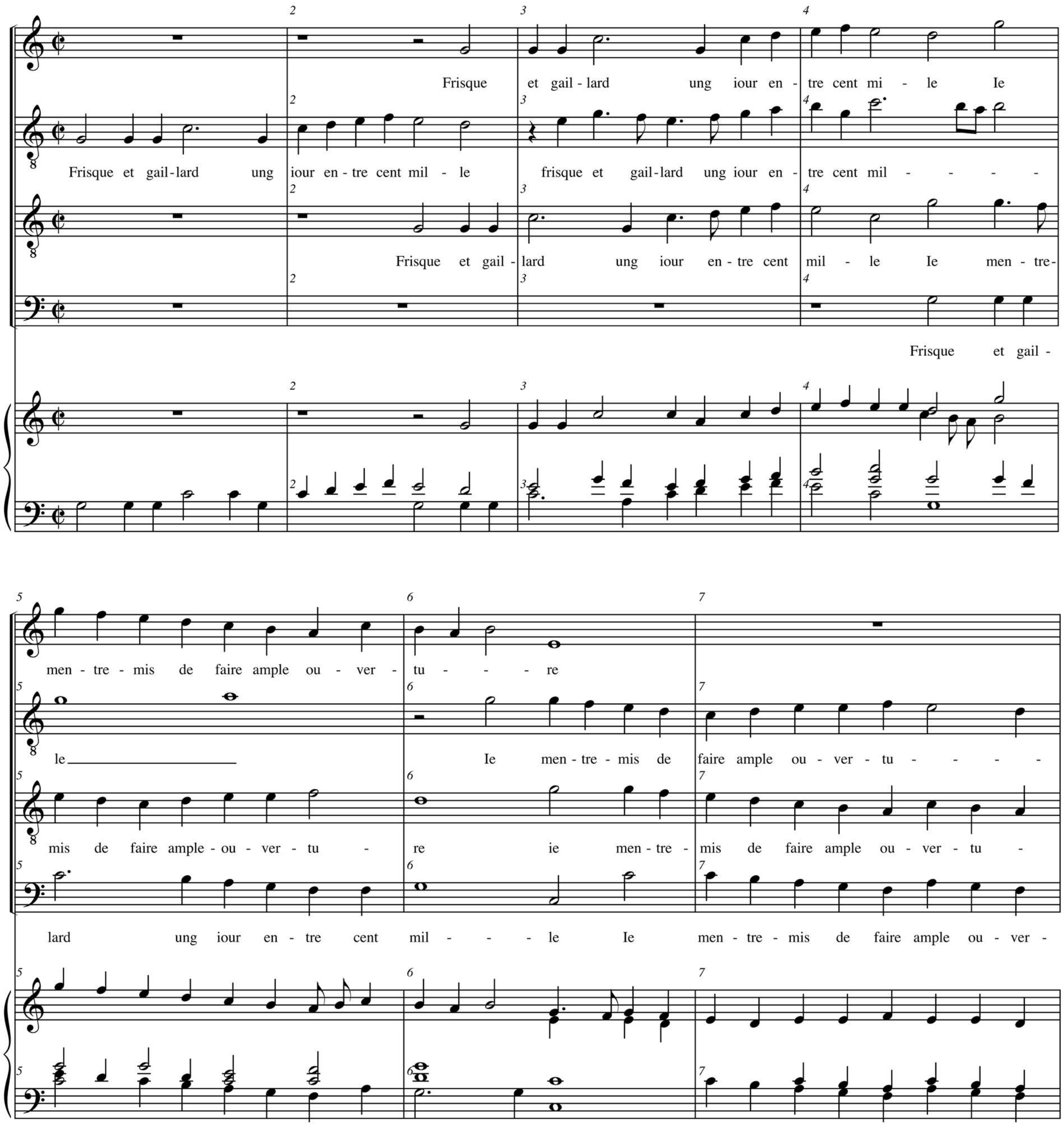
[91] Silbiger, "Tablature?": 98.
[92] Ibid.

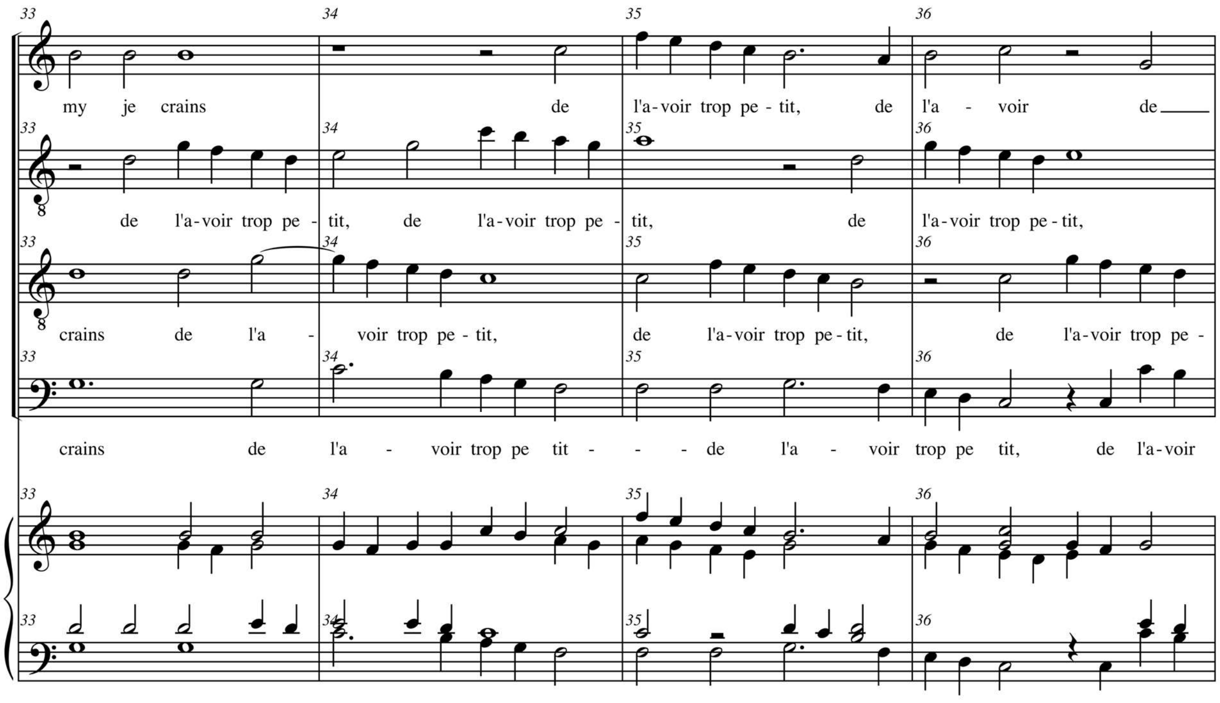
Example 1.20 Sperindio Bertoldo, *Frais e gagliard* (1591), from BERTOLDO 1591a; Clemens non Papa, *Frisque et galliard,* adapted from Jacobus Clemens non Papa, *Chansons,* ed. Karel Bemet Kempers, vol. 4, part 10 of *Corpus mensurabilis musicae* (Rome: American Institute of Musicology, 1962).


2
3
4
Frisque et gail - lard ung iour en - tre cent mi - le Ie
Frisque et gail-lard ung iour en - tre cent mil - le frisque et gail-lard ung iour en - tre cent mil - - - - -
Frisque et gail - lard ung iour en - tre cent mil - le Ie men - tre-
Frisque et gail -
5
6
7
men - tre - mis de faire ample ou - ver - tu - - - re
le
Ie men - tre - mis de faire ample ou - ver - tu - - - - -
mis de faire ample - ou - ver - tu - re ie men - tre - mis de faire ample ou - ver - tu -
lard ung iour en - tre cent mil - - - le Ie men - tre - mis de faire ample ou - ver -

the route of each of the model's parts through the tablature, many instances can be seen in which voice-crossings are obscured by stem direction. Beyond simply obscuring the original voice leading, IKT's stem direction practice creates the appearance of new voice leading *not* in the original polyphonic structure, as the eye of the player tends to follow musical lines implied by the succession of notes sharing the same stem direction.

These tablature voices are reinforced by IKT's other conventions, as can be seen in **Example 1.21**, from the same intabulation. Here, the intabulation seems to clearly present four distinct parts; a closer examination, however, reveals that they are largely "fictitious" (to borrow terminology from Silbiger), created by the IKT conventions of stem directions, unisons, and restriking. The rest in measure 35 is a "fictitious" rest, but works seamless within the logic of the "fictitious" tablature "tenor" part in the left hand. In essence, the player is left with an alternative-reality version of the model; while the parts in the intabulation may largely reflect the parts of the model, they don't entirely. Beyond simply being a visual phenomenon, however, tablature voices arguably reflect the way that intabulators thought about their models conceptually. Instances can be found that suggest that intabulators often followed the logic of the tablature voices over the

Example 1.21 Sperindio Bertoldo, *Frais e gagliard* (1591), mm. 33-36, from BERTOLDO 1591a; Clemens non Papa, *Frisque et galliard,* adapted from Jacobus Clemens non Papa, *Chansons,* ed. Karel Bemet Kempers, vol. 4, part 10 of *Corpus mensurabilis musicae* (Rome: American Institute of Musicology, 1962).

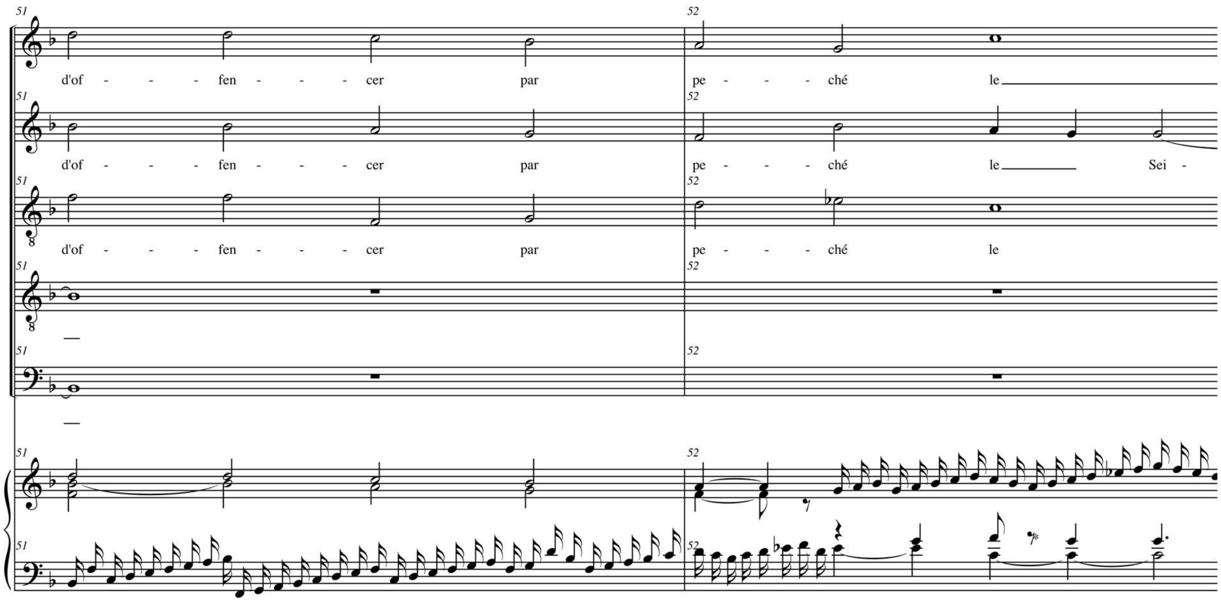

33
34
35
36
my je crains de l'a-voir trop pe - tit, de l'a - voir de
de l'a-voir trop pe - tit, de l'a-voir trop pe - tit, de l'a-voir trop pe - tit,
crains de l'a - voir trop pe - tit, de l'a-voir trop pe - tit, de l'a-voir trop pe -
crains de l'a - voir trop pe tit - - - de l'a - voir trop pe tit, de l'a-voir

ones from the model. This can be seen in Example 1.21, again in measure 35: the alto *g'* only makes sense as part of the alto tablature voice; it makes no sense in terms of the model's polyphony.

Two more examples demonstrate intabulators creating a new logic of the tablature voices: in **Example 1.22**, from Merulo's *Susanne un jour,* the left-hand passaggio follows the composite lower part, migrating from the Bassus to the Tenor to the Quintus in the course of the first measure. In **Example 1.23**, from Merulo's *Oncques amour,* a cadential *groppo* decorates voice movement – a cadential resolution – that is only found in the tablature voices, not in the real ones, further reinforced with added *ficta*.

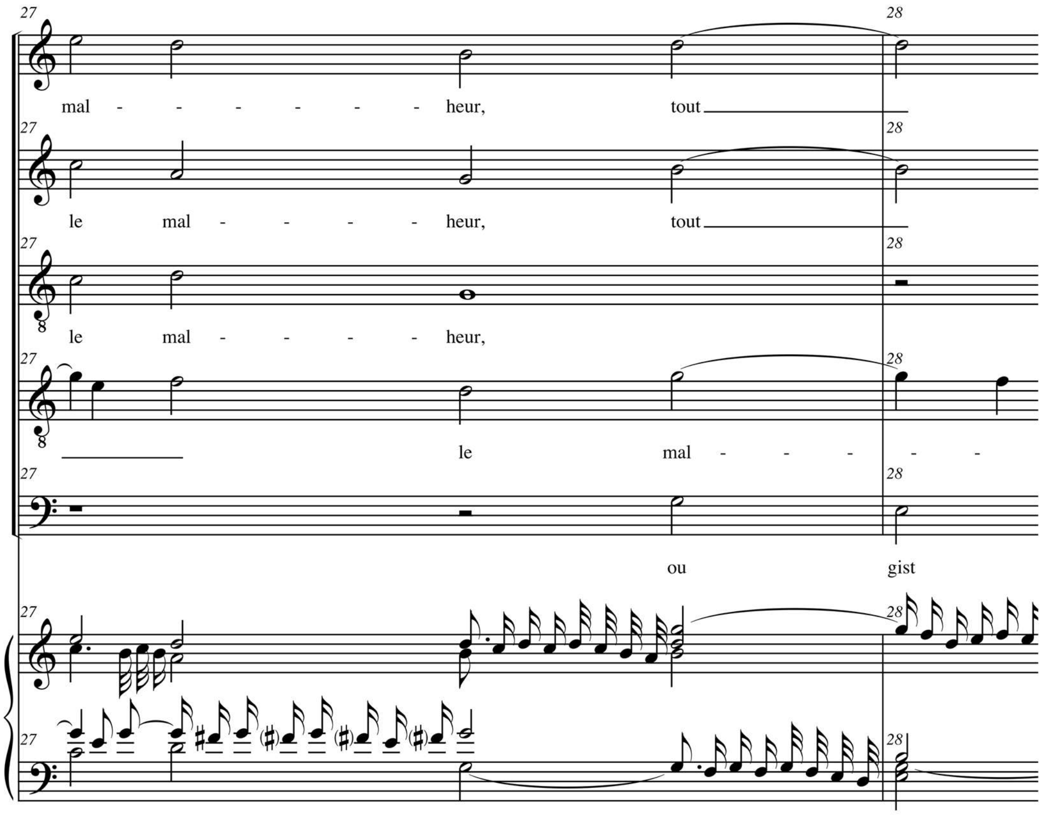
I would argue that both instances demonstrate intabulators "thinking in tablature" (or tablature voices). These examples suggest that tablature voices reflect the way that keyboardists conceived of polyphony. I would argue, in fact, that the tablature voices embody the compositional tablet in which a composer worked, on both literal and symbolic levels. The traditional view of

Example 1.22 Claudio Merulo, *Susanne un giour, D'Orlando Lasso A5* (1611), mm. 51-52, from MERULO 1611; Lassus, *Susane un jour d'amour solicitée,* adapted from Orlando di Lasso, *Chansons,* ed. Jane Bernstein, vol. 14 of *The Sixteenth-Century Chanson* (New York: Garland, 1987).


51
52
d'of - - - fen - - - - cer par pe - - - ché le
d'of - - - fen - - - - cer par pe - - - ché le Sei -
d'of - - - fen - - - - cer par pe - - - ché le

intabulation (and, by extension, IKT) is derivative – that is, intabulations follow their models. But

Example 1.23 Claudio Merulo, *CREQUILLON. Onques Amour A 5.* (1611), m. 27, from MERULO 1611; Crecquillon, *Oncques amour ne fut sans grand langueur,* adapted from adapted from Thomas Crecquillon, *Cantiones Quator Vocum,* ed. Barton Hudson, et. al., vol. 63, part 16 of *Corpus mensurabilis musicae* ([Germany]: American Institute of Musicology, 2003).



what if there existed a composition process that started with tablature voices? In other words, what if the normal order were reversed, and a piece was composed in IKT (and therefore conceived in tablature voices) and then *detabulated* (to borrow a coinage by Silbiger).[93] If this detabulated piece were then reintabulated, it might look something like the elaborate intabulations examined above. This hypothetical process would help explain the hybrid nature of these complicated arrangements.

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[93] Silbiger, "Tablature?," 81.

Tablature voices have some notable echoes in other types of early keyboard notation, and these comparisons support the notion of their existence. A comparison could be made, for example, between IKT's tablature voices and the "parts" of German and Spanish keyboard tablatures. These systems are not conceptually dissimilar to a full score (the difference being, of course, that they are of made up of symbols, representing physical keys, rather than note signs that represent tones). In his survey of German intabulations, Cleveland Johnson points out that some intabulations faithfully transmit the original polyphony, and some rearrange the polyphony; in the case of the latter, the rearrangement is to put the notes in "a vertical alignment in which notes are ordered consecutively by pitch."[94] The more elaborate rearrangements in books such as Bernhard Schmid's *Zwey Bücher einer neuen kunstlichen Tabulatur* show a remarkably similar procedure to what is seen here: in essence, the "parts" created in IKT through stem direction directly mirror the parts of German organ tablature, in which each line represented a part (see Example 1.24 below). In the case of German intabulations that rewrite the voice leading for the sake of vertical alignment, each line is given a "false" composite part, identical to the "false" parts I've described in Italian *intavolatura.*[95] This can be seen clearly in Schmid's intabulation of *Ung gai bergier* (**Example 1.24**). Another parallel can be drawn between IKT's tablature voices and the nascent forms of notation used for accompaniment in Italy in the latter half of the sixteenth century. IKT itself was one of these early alternatives to basso continuo.[96] Many of

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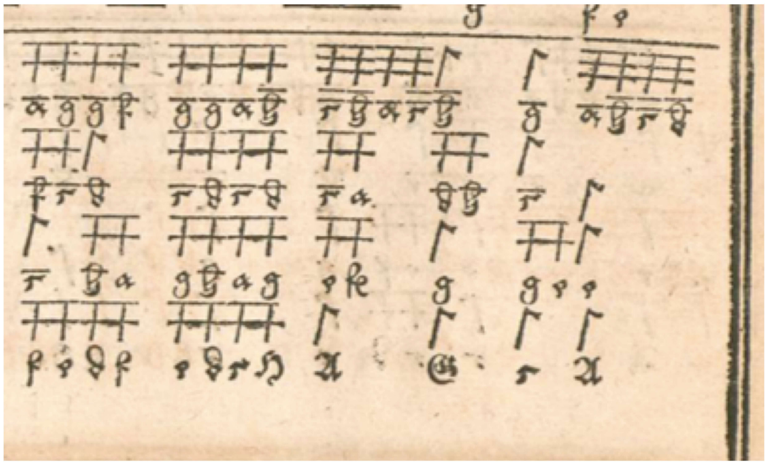
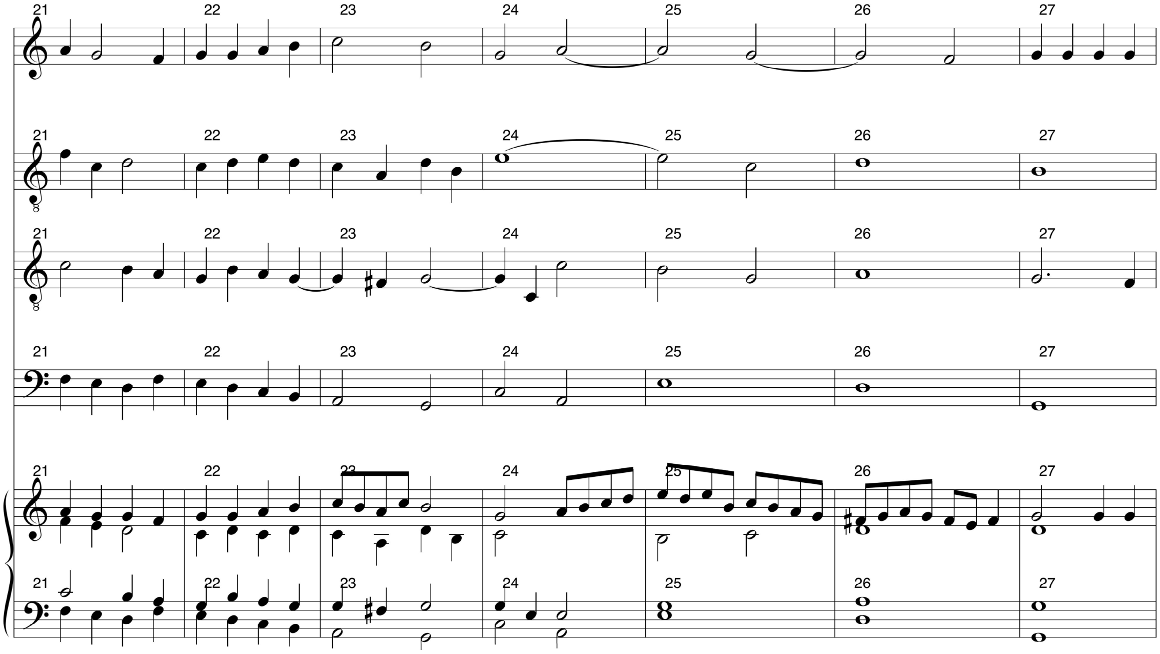
[94] Johnson, "Tablatures," 118

[95] Johnson discusses intabulation in German organ tablature that rearrange the voice leading of their models, in order to fit under the hands in more idiomatic fashion. There are strong parallels with IKT's priorities: "What is clear though, even if the horizontal movement is ambiguous, is that the goal of such rearrangement is a vertical alignment in which notes are ordered consecutively by pitch." Interestingly, Johnson also cites the prefaces of Bernhart Schmid and his son, who mention rearrangement: Schmid the Elder writes, "So ist auch ein jetliches Gesang also resoluiert, das allwegen die höchste Stimm hinauf gesetzt, zum / theil umb bessers gesichts willen, zum theil auch, das es leichter zuschlagen," and Schmid the Younger, "…. so hab Ich auch an die principia Muices Vocalis mich nicht binden können: Sondern hab je zu / weylen, bevorab in Coloraturen, von Herren Componisten und Authoren praescripto abwiechnen, und wil mehr wie es der Hand bequem falle erwegen müssen." Johnson, "Tablatures," 118.

[96] *Intavolatura* format often served as a "proto-continuo" notation, and this function of *intavolatura* as a notation for keyboard accompaniment may partly explain some its notational irregularities, in particular the prioritization of the



Example 1.24 (left) facsimile, Bernhard Schmid (i), *Ung gaij bergier,* from *Zwey Bücher einer neuen kunstlichen Tabulatur auff Orgel und Instrument,* vol. 2 (1577); (bottom): Bernhart Schmid, *Ung gaij bergier* (transcription); Crecquillon, *Ung gai bergier prioit une bergiere*, adapted from Thomas Crecquillon, *Cantiones Quator Vocum,* ed. Barton Hudson, et. al., vol. 63, part 18 of *Corpus mensurabilis musicae* ([Germany]: American Institute of Musicology, 2003).



these formats, such as *basso seguente,* demonstrate tendencies markedly similar to IKT's conventions. In the case of *basso seguente,* an accompanying organ part was formed by extracting a bass line from the lowest *sounding* notes of the texture.[97] In another format, often referred to as "short score," a *basso seguente* part was joined by a *soprano seguente* part made

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seguente upper and lower parts. For more on the role of intabulations as accompaniment in Italian practice, see H. M. Brown, *Sixteenth-Century Instrumentation: The Music for the Florentine* Intermedii (American Institute of Musicology, 1973), 22-24.

[97] Peter Williams and David Ledbetter, "Basso seguente," *Grove Music Online. Oxford Music Online*, accessed January 5, 2015. http://www.oxfordmusiconline.com.libproxy.usc.edu/subscriber/article/grove/music/02279

up of the *highest* sounding pitches, forming a two-part "skeletal" keyboard score from which a keyboardist could extrapolate a triadic accompaniment.[98] This can be seen in **Example 1.25**, from the keyboard manuscript Gb-Lcm ms. 2088. In fact, the false "soprano" and "bass" parts created by ITK's practice of stem direction are conceptually the same as the "soprano" and "bass" parts in a short score. It has been suggested by Howard Mayer Brown that this manuscript in particular could have been used as a springboard for solo performances.[99] This would make sense, as in fact these *seguente* short scores simple provides the player with the outer two tablature voices, which are formed by the same principal. If the player already knew the basic harmonic structure, if not the actual inner voices, of a given composition, it is easy to imagine that she or he could use a short score as an *aide-mémoire* for solo performance as well as for accompaniment.

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[98] When playing from a short score, the accompanist would ostensibly "fill in" the space between the *seugente* soprano and bass parts with triadic harmonies. Given that the harmonic language of music of the late sixteenth century was largely grounded in triadic harmonies in the form of either 5/3 or 6/3, this technique would result in the correct harmony for much of the time; the player could then alter the chords as necessary to accommodate suspensions and other non-triadic sonorities.

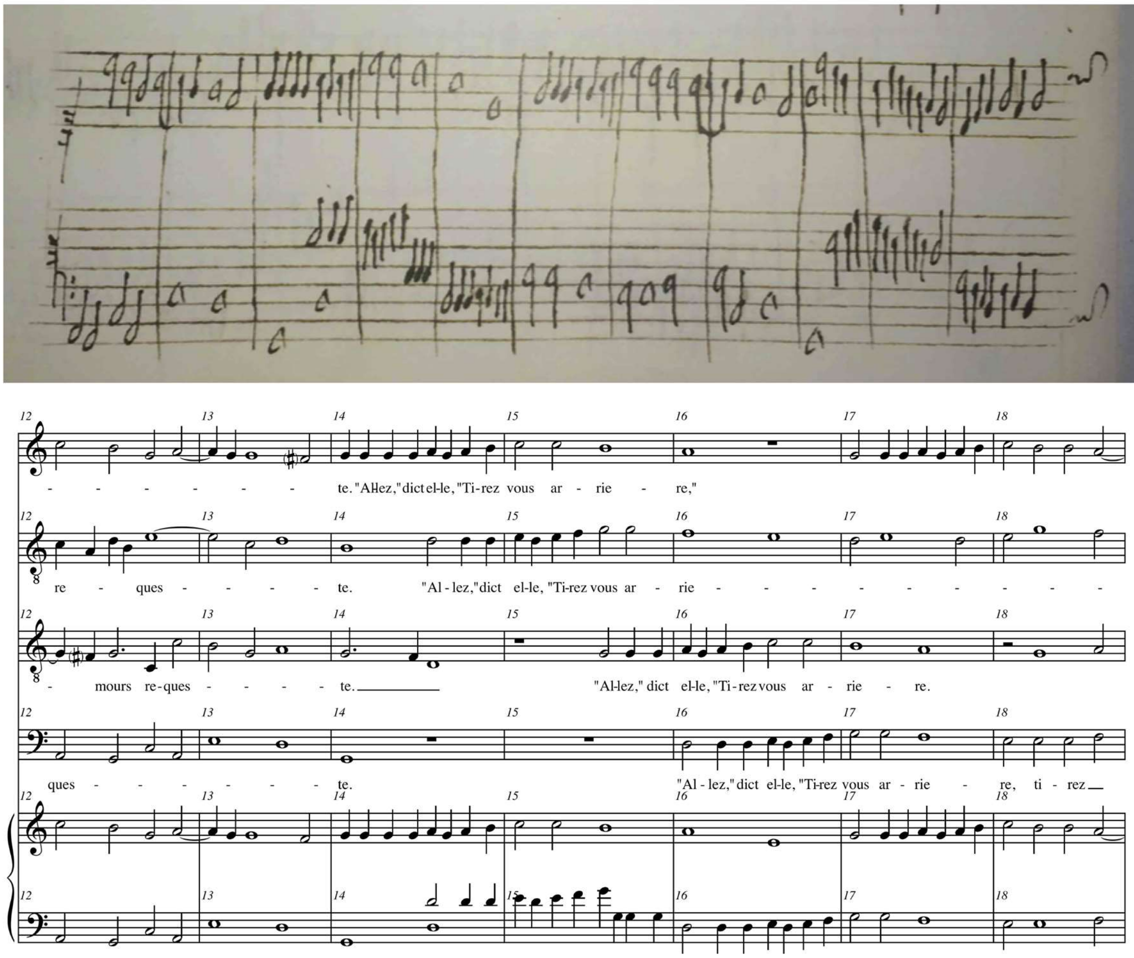
The similarity between the practice of treatment of stem directions in *intavolatura* and the short score is not surprising, given that accompaniment was undoubtedly one reason for which keyboardists made intabulations. The fact that intabulations were used for the purpose of accompaniment is reflected in Agazzari's well-known quip regarding the burden of having to make intabulations or scores: "poiche se si havessero ad intavolare, `o spartire tutte l'opere, che si cantano fra l'anno in una sola Chiesa di Roma: dove si fa professione di consertare, bisognarebbe all'Organista che havesse maggior libraria, che qual si voglia Dottor di legge.." Agostino Agazzari, *Del sonare sopra'l basso con tutti li stromenti* (Siena: Falcini, 1607), 12.

Many instances of Italian intabulations being used specifically for accompaniment can be cited; to mention two well-known examples: the accompaniments in Diego Ortiz's treatise, and those in Luzzaschi's famous 1601 madrigal collection. Diego Ortiz, *Trattado de glosas;* Luzzasco Luzzaschi, *Madrigali per cantare et sonare a uno, e' doi, e' tre' soprani* ... (Rome: Verovio, 1601). Ortiz's work indicates the role of the keyboard in instrumental accompaniment in the Renaissance, and contains two intabulated vocal works against which solo-line players would perform diminutions.

In his study of German organ tablatures, Cleveland Johnson points to the important role of tablatures as written-out accompaniments for choral music; in fact, the majority of these tablatures, at least those in manuscript, seem to be for this purpose. Johnson, *Tablatures,* 128-35.

For more on the role of written-out accompaniments in the early Baroque in general, see Gregory Johnston, "Polyphonic Keyboard Accompaniment in the Early Baroque: An Alternative to Basso Continuo," *Early Music* 26 (1998): 51-64.

[99] Howard Mayer Brown, *Instrumental Music Printed Before 1600; A Bibliography* (Cambridge: Harvard University Press), 343.


12
13
14
15
16
17
18
te. "Allez," dict el-le, "Ti-rez vous ar - rie - re,"
re - ques - te. "Al - lez," dict el-le, "Ti-rez vous ar - rie
mours re-ques - te. "Al-lez," dict el-le, "Ti-rez vous ar - rie - re.
ques - te. "Al - lez," dict el-le, "Ti-rez vous ar - rie - re, ti - rez

Example 1.25 anon. top: facsimile, *Ung gay berger*, Gb-Lcm ms. 2088; bottom: *Ung gay berger*, Gb-Lcm ms. 2088; top staves: Crecquillon, *Ung gai bergier prioit une bergiere*, adapted from Thomas Crecquillon, *Cantiones Quator Vocum,* ed. Barton Hudson, et. al., vol. 63, part 18 of *Corpus mensurabilis musicae* ([Germany]: American Institute of Musicology, 2003).

IKT as Mimesis

IKT and Lute Tablature

However, another strong parallel can be made between IKT and a sixteenth-century notational format: Italian lute *intavolatura.* This comparison may also be fruitful with regard to answering the question posed by Silbiger's article: "Is Italian *Intavolatura* a Tablature"? Silbiger was not the only commentator who puzzled over the apparent disparity between the use of mensural notation and the use of the word *intavolatura* by sixteenth-century scribes and publishing houses; in fact, earlier commentators such as Apel didn't consider IKT a true tablature at all.[100] In this view, IKT's conventions would be dismissed as archaic features that don't fundamentally alter the musical information they convey. (That this view was prevalent is indicated by the lack of care given to these conventions when creating modern editions of music notated in IKT.)[101]

A large part of the reason for IKT's irregularities is, as many commentators have pointed out, that IKT was fundamentally "mechanical," in the sense that the notation was intended to be read for playing, rather than to show polyphonic detail.[102] Many of the conventions can be directly linked to the need to create a visual texture that is easy to read. I would also argue that they can be directly linked to the physical actions related to playing the keyboard. This notion is actively supported by much of Diruta's language, which often speaks of intabulating in terms suitable for performance, not writing music down on paper. For example, in describing unisons, Diruta writes, "bisogna *battere* l'Unisono con tutte due le mani, & che doppò *battutto* l'Unisono…" (emphasis mine)[103] – the verb he uses, *battere,* is directly tied to a physical action, not to writing music down. In many of the passages already cited, Diruta clearly refers to intabulation within the context of playing (for example, "Le parti di mezo, cioè il Tenore, & il

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[100] Apel treats prints in IKT under the general category of "keyboard scores," noting that they are written "in a manner similar to that of the piano score of our day." Willi Apel, *The Notation of Polyphonic Music 900-1600,* 5th edition (Cambridge: The Mediaeval Academy of America, 1953), 3. He does acknowledge the sixteenth-century terminology, but doesn't apparently see it as a "true" tablature; see 14-15.

[101] See, for example, H. Colin Slim's editions of the keyboard music of Castell'Arquato. H. Colin Slim, ed. *Keyboard Music at Castell'Arquato,* in 3 vols, *Corpus of Early Keyboard music* 37 (Middleton, WI: American Institute of Musicology, 1975-2005).

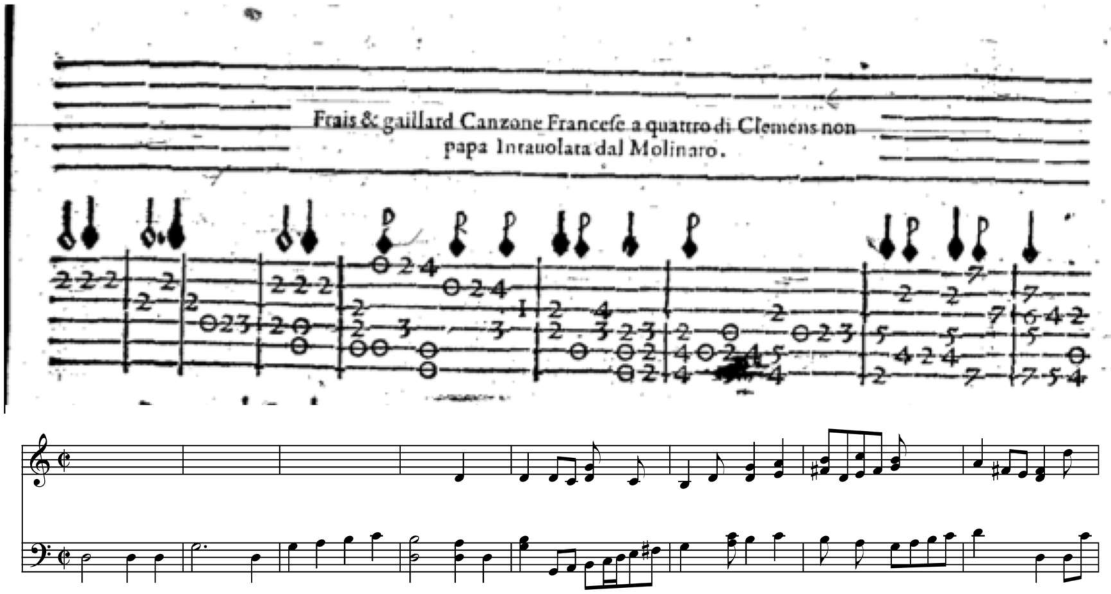
[102] Silbiger writes: "One way of characterizing tablature notation is to say that it provides no information beyond what is required to realize a piece phyiscally; or to put it less kindly: tablature addresses the fingers of the players rather than their musical understanding – their bodies rather than their minds. For example, lute tablatures and German keyboard tablatures do not distinguish between enharmonically equivalent notes such as G-sharp and A-flat, since while such a distinction tells us something about the musical function of those notes, it does not affect their performance on a lute or keyboard." Silbiger, "Tablature?": 93.

[103] Diruta, *Transilvano,* vol. 2, bk. 1, 2.

Contralto s'accomodano come piu piace, nelle otto righe, overo nelle cinque, per commodità di fare le diminutioni"); it is clear that intabulating was one step removed from playing.

This mechanical aspect of IKT partially explains the use of the word *intavolatura.* However, IKT differs substantially from other types of keyboard tablature in the Renaissance. As seen earlier, the other major tablature systems – namely, German and Spanish keyboard tablature – operate functionally like a full score: each line of tablature indicates a fully formed "voice," even if in the case of these system letters or numbers indicate the physical keys of the instrument, rather than signs indicating tones. In contrast, Italian *intavolatura* provides mensural notes that signify tones, but no way of distinguishing the voice leading in a composition. Perhaps the ambiguity stems from the fact that scholars have traditionally tended to attempted to define the notation through its divergence from modern keyboard notation; for example, while Silbiger certainly conceded that IKT had "tablaturish" elements, he assumed that IKT was a variant of standard keyboard notation. But what if we viewed IKT within the conceptual framework of lute *intavolatura* instead? Italian lute *intavolatura* was a format produced by the very same printing houses that produced volumes in IKT. It could be argued that, in the mind of *cinquecento* Italian scribes, printers, and composers, lute *intavolatura* was the natural – and automatic – point of comparison to IKT. This is of course indicated by the shared used of the word "*intavolatura*."

Comparing the two formats reveals some interesting parallels. For example, in Italian lute notation, polyphonic detail is also hidden: each line of the tablature represents one of the instrument's strings, and the figures in the tablature indicate the physical frets of the instrument, as can be seen clearly in **Example 1.26**. A mensural note above the staff indicates the rhythmic value of each figure or note in the tablature, which continues as the dominant rhythmic value until another one takes its place. In essence, the rhythmic value subsumes the texture, reducing the rhythmic individuality and contour of the original voices and creating vertical "blocks" of activity. This mirrors the segmentation and verticalization of the texture seen in IKT; and, in a general sense both notational systems emphasize verticality at the expense of voice leading. Lute *intavolatura*'s rhythmic system segments its polyphonic texture into chunks in a way directly parallel to that seen above in IKT's intabulation process. And although the particulars of lute *intavolatura's* rhythmic system doesn't really transfer to IKT, many elements do, such as the tendency to break longer notes into shorter ones, forming regular chordal structures; the treatment of unisons; and the lack of polyphonic rests. All of these have strong parallels in IKT's conventions. I would like to suggest that, at least to publishers and composers of the *cinquecento*, Italian keyboard *intavolatura* was thought of as a close relative to lute notation, with a functionality that went beyond a shared terminology. Perhaps the two-staff system literally represented the keyboard, with each note of the tablature a physical symbol – conceived just like a number or letter figure in lute tablature – representing a key, rather than a sounding tone. This


Frais & gaillard Canzone Francefe a quattro di Clemens non
papa Intauolata dal Molinaro.

Example 1.26 Top: Simone Molinaro, *Frais & gaillard Canzone Francese a quattro di Clemens non papa Intavolata dal Molinaro* (1591), facsimile excerpt; bottom: transcription, Molinaro, *Frais & gaillard Canzone Francese a quattro di Clemens non papa Intavolata dal Molinaro.*

would explain why, for example, unisons aren't notated: the notes in the tablature represent the physical keys of the keyboard.[104]

While an examination of IKT intabulations shows that the concept holds up for the most part, some caveats must remain. For example, notes in the middle of the keyboard can potentially appear in either the top or bottom staff, showing that, if taken as visual images of the keyboard, the two staves actually overlap. This would seem to partly debunk the theory. Perhaps it is better to view the two staves as two *separate* visual images, each one a representation of a particular section of the keyboard; in other words, IKT consists of two separate windows onto the keyboard, each one representative of the domain of either the right or left hand.

This hypothesis is supported by the notation used in the Neapolitan organist Antonio Valente's 1576 volume *Intavolatura de cimbalo.* Valente's notational format – the only example of its kind (in the preface Valente explains that he invented it himself) – has long been assumed to be a version of Spanish organ tablature, primarily due to the fact that it uses the same numerical figures (which represent the white keys of the keyboard).[105] However, its particular combination of characteristics also make sense if the notation is viewed as a hybrid between Italian lute and keyboard *intavolatura* notations. Its rhythmic flags are exactly the same as seen in Italian lute *intavolatura*, and while numbering the keys is a feature of Spanish organ tablature, it is not conceptually far removed from the numbers representing frets seen in Italian lute tablature. More notable, however, is the horizontal division of the tablature between the left and right hands (marked "D" and "M," for "dritta" and "manca"), which directly mirrors the functioning of the two staff systems in IKT (see **Example 1.27**). It can therefore be seen as not only a hybrid, but arguably a glimpse into the thought processes and mutual flow of influence between the two notational formats.

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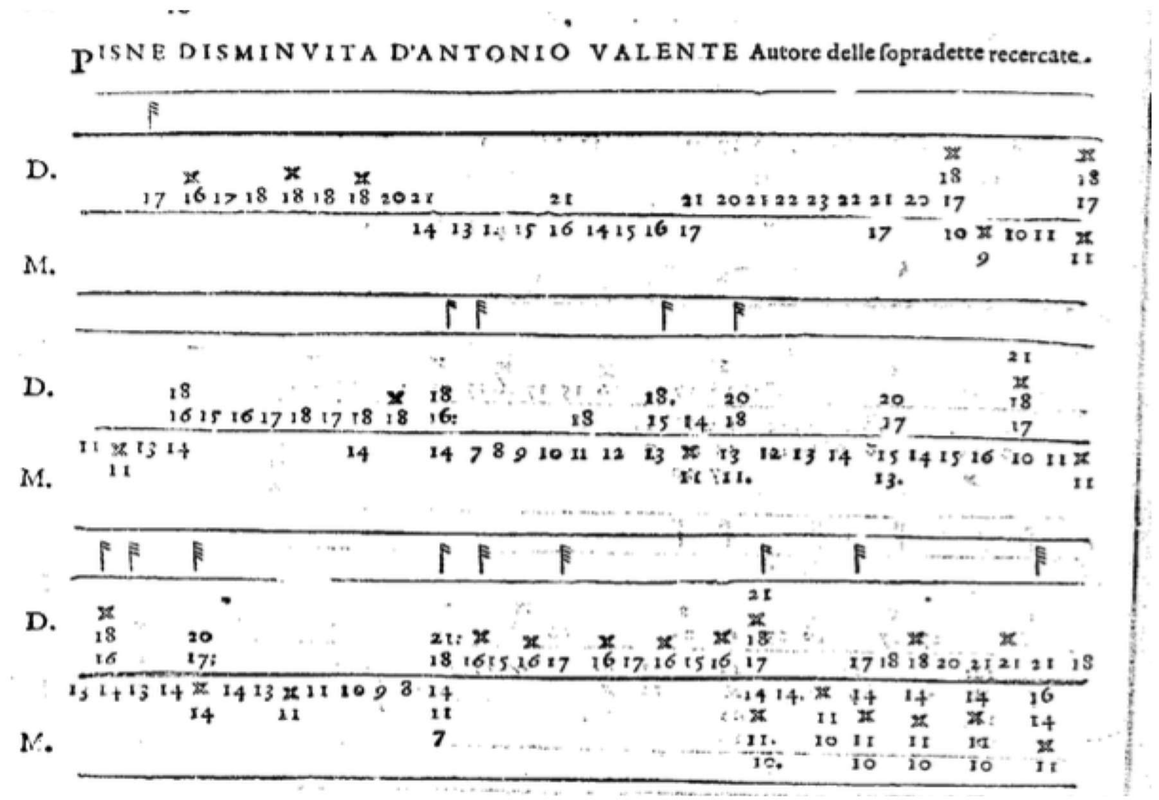
[104] The notion of iconic notation is taken from Cristle Collins Judd: "There are times when notation serves a purely iconic function – we are meant to *see* notation, but not hear it. At other times, the notation serves as a generalized reminder of music as sounding phenomenon, and at other times, the notation is meant to be 'read' and 'heard,' although the reading and hearing may take many forms." Cristle Collins Judd, *Reading Renaissance Music Theory: Hearing with the Eyes* (Cambridge: Cambridge University Press, 2000), 8.

[105] See, for example, Robert Judd, "Italy," in *Keyboard Music Before 1700,* ed. Alexander Silbiger (New York and London: Routledge), 272-73. This assumption is also held by Diego Cannizzaro, "Legami tra Spagna e Italia meridionale," *Revista de Musicología* 34 (2011): 185-201. In particular, see 194-99 for a useful discussion on Valente's print and its unique notational system.

Example 1.27 *Pisne dismiuta,* from Antonio Valente, *Intavolatura de cimbalo* (1576). The rhythmic flags indicate the durations of the notes, the numerical figures represent the keys of the instrument, and the tablature is divided into two sections, "D." and "M.," for the left and right hands, respectively.


PISNE DISMINVITA D'ANTONIO VALENTE Autore delle ſopradette recercate.
D.
M.
D.
M.
D.
M.

IKT and Mimesis

However, a close examination of IKT intabulations reveals further problems with my theory. For example, playing through the intabulations of Andrea Gabrieli frequently shows small breakdowns of the conventions if followed literally; for example, the left hand is left holding a long note that clashes with a passaggio in the right hand, even as IKT conventions would normally dictate a series of rests to force the left hand out of the way. Gabrieli's intabulations often show an understanding of IKT that is conceptual rather than literal, although at many other points his tablatures do *strive* towards a literal dictation of when fingers should depress and release keys.[106] IKT conventions therefore often have to be taken as general tendencies rather than as absolute dictates. With this in mind, perhaps a better description of IKT's conceptual basis would be that its symbols represent the *actions* of placing and removing the fingers from the physical keys of the instrument – in other words, IKT embodies the player herself, rather than the instrument. In this view, IKT functioned like a piano roll, with the player the mechanical implement that realized the coded performance.[107] Writing of lute and keyboard intabulations generally, Howard Mayer Brown noted that

> The volumes of music published by these men are thus the closest thing to phonograph records that we shall ever have from the sixteenth century, for they preserve personal, idiosyncratic versions of well-known compositions as they were performed by leading sixteenth-century virtuosi.[108]

This well-known statement speaks to a fundamental truth of tablature notation and intabulations. At the danger of superimposing a modern way of thinking on the sixteenth century (specifically, a desire for or imagination of the ability to make audio recordings), it is almost as if tablature notation was, in some sense, a technological response to a desire to *reproduce* performance. Perhaps one may draw an analogy with the later phenomenon of automatons, or to Giambattista Aleotti's attempts to construct mechanical organs.[109] Of course, intabulations are quite literally *res facta* – and, books of intabulations, material objects – and perhaps we could think of them as slates upon which a performance is "frozen"; the process of freezing, however, includes the possibility of careful crafting. There is a fundamental duality to intabulations in this sense: on one hand, they are carefully crafted material objects; on another level, they are frozen performances, or at least closer to the source than other forms of notation. Their nature is informed by this fundamental tension.

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[106] For example, a cautionary single rest will be supplied that generally indicates a removal of a finger, but doesn't do so early enough to be truly prescriptive. Instances such as these have to be understood as limitations of print technology, as Clericetti noted. For more, see Clericetti, "Critici," and Chapter 3, 74-76 of the present dissertation.

[107] Thanks to Adam Knight Gilbert for suggesting this analogy. If we extend this concept, IKT perhaps can be viewed as "iconic" representation of *idealized* performance – not one needing to be physically realized at all – but specifically referring the viewer towards the physical actions of the keyboardist. This forms the basis for the theory of self-fashioning that forms the basis of Chapter 3.

[108] H. M . Brown, *Embellishing Sixteenth Century Music* (London: Oxford University Press, 1976), xiii.

[109] See Kimberly M. Parke, "Engineering Music: A Critical Inquiry into Giambattista Aleotti's 'De la musica' (1593)" (PhD diss., University of California, Berkeley, 2006), for more on Aleotti's mechanical organ.

In this sense, IKT, like lute tablature, can be seen as a form of mimesis. Lute *intavolatura* does not only graphically depict the instrument (its core conceptual basis is that it is, in essence, a picture of the instrument) it also contains embedded within it a set of coded instructions to the player.[110] Without having to be able to read mensural notation or understand music theory at all, the player can simply follow the signs and execute the music. Extended the analogy between the two tablature systems, it follows that IKT has embedded within it the same sort of instructions as well. Conceivably, a player of IKT would not really need to understand a great deal of music theory to play from it, but would only have to learn which notes on the staff represent the equivalent keys on the keyboard, and the durations signaled by the mensural note signs – the tendency of publishers to try to vertically align notes absolves the player of having to count too much. Here, IKT is mimetic in the sense that it represents the *actions* of the player, represented by the instructions embedded within the tablature.

While I would argue that IKT indeed sought to mimic lute notation in its basic concepts and orientation, the mensural notation it uses does allow composers and publishers the possibility to circumvent the standard conventions of IKT, to provide polyphonic detail that a notation system such as Italian lute *intavolatura* can't provide.[111] For example, added rests and ties can clarify voice leading, and a stem here or there can be pointed in the "wrong" direction (by the rules of IKT) to clarify voice leading. In the intabulations surveyed in this dissertation, those of Gabrieli and Gardano demonstrate a much greater tendency to do this.[112] On the other hand, Bertoldo and Vincenti show less care for voice leading. These tendencies and their ramifications are fully explored in Chapter 3 of the present dissertation, in which I demonstrate the extent to which some intabulators favored the voice leading of their models, and others the creation of an idiomatic keyboard texture.

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[110] Polk and Coelho write, "Although regional variants of tablature proliferated throughout the period, namely Italian, French, German, Spanish, and Neapolitan, the principle remained the same: unlike staff notation, which represents actual pitches on a staff line, tablature is essentially a 'picture' of the lute neck that shows player vsually where to place their fingers on the frets of the instrument." Polk and Coelho, *Instrumentalists,* 210.

Conclusion

I would like to note one other factor that creates a parallel between lute tablature and IKT: both are grounded in a musical reality that is essentially "vertical," or harmonic, in its conception. That IKT has a vertical conception has been pointed out by Silbiger, who point to the apparent great lengths that IKT went to to highlight vertical allignment, arguing that Italian scribes and printers prioritized this more than their, say, French or English counterparts.[113] IKT's essential verticality is a point that has been raised at several points in the present study, and it will occupy the focus of the next chapter, which will trace this vertical element in keyboard music from the first half of the sixteenth century, arguing that it provides a strong piece of evidence for the development of IKT's conventions.

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[111] It is interesting to note attempts by Vincenzo Galilei and other later sixteenth-century lute composers to bend the notation to allow greater polyphonic detail. Dinko Fabris points out the important role of counterpoint in Galilei's treatise (Galilei has an extensive section on the rules of counterpoint); it is really an elevation of intabulation to a "learned" status. See Dinko Fabris, "Lute Tablature Instructions in Italy: A Survey of the Regole from 1507 to 1759," in *Musical Theory in the Renaissance,* A Library of Essays on Renaissance Music (Burlington, VT: Ashgate, 2013), 451-82.

[112] This phenomenon will be explored fully in Chapter 3.

[113] Silbiger, "Tablature?," 97.

Chapter 2

Sonare a Consonanze: IKT and Improvisation in the Ricercar before 1550

Scholars have generally identified two types of keyboard ricercar in the sixteenth century: a preludial type largely based on chords and passagework, and an imitative type largely based on the pervasive imitation of the Netherlandish motet.[1] Many have noted an improvised quality to the former, and a composed quality to the latter.[2] In addition, the preludial type often demonstrates what might be called a chordal style: the prominent use of chordal structures and a general tendency towards homophony. This can be seen clearly in **Example 2.1**, the opening of Marco Antonio Cavazzoni's sole ricercar in the Castell'Arquato manuscripts. Chordal passages

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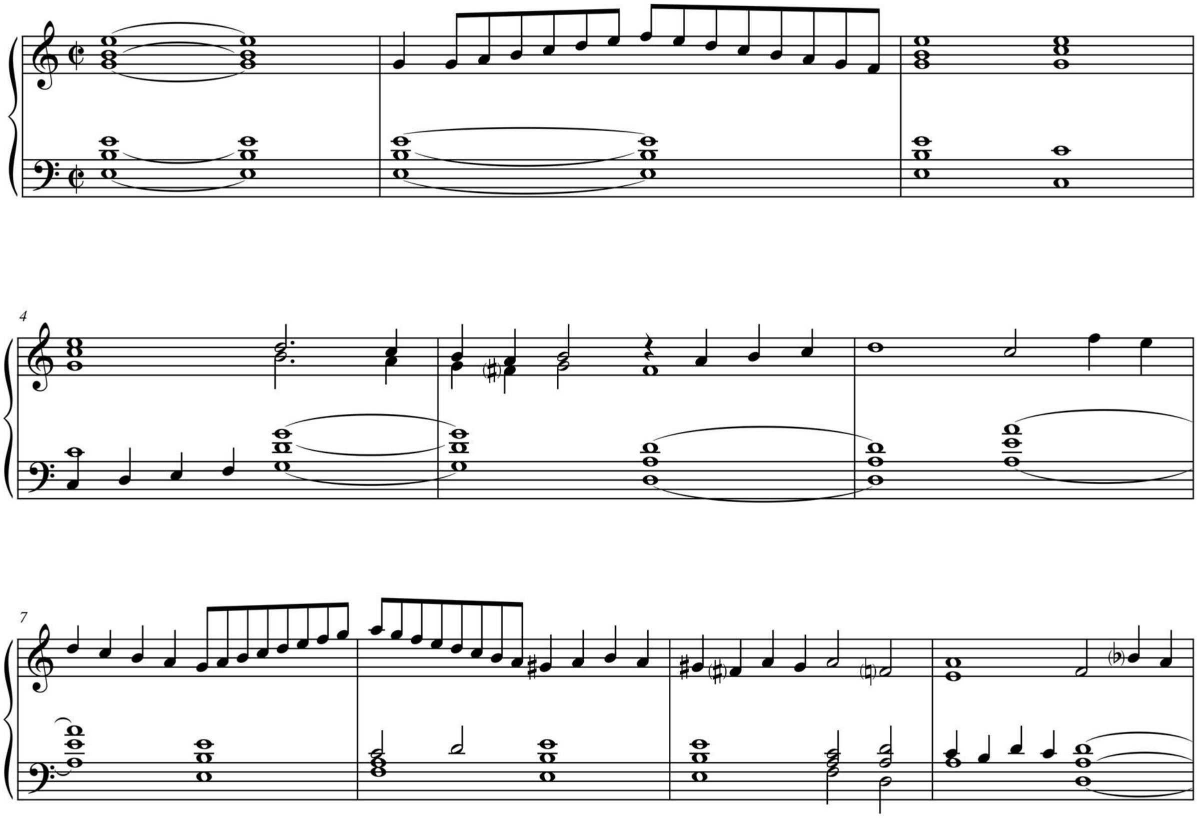
[1] My use of scare quotes highlights the imprecise nature of these terms, as many of the preludial ricercars show various degrees of imitative counterpoint; elements of the earlier ricercar type persist in many of the later imitative ricercars (see, for example, the four ricercars in Girolamo Cavazzoni's *Intavolatura cioe. Recercari Canzoni Himni..Libro Primo* (Venice: B.V. 1543). Facsimile copy supplied by the Museo Internazionale e Biblioteca della Musica di Bologna. There seems to be no universally understood terminology for the two types of ricercar; in his *New Grove* article, John Caldwell identifies the first type as the "preludial or rhapsodic ricercar," although he later refers to it as the "non-imitative ricercar"; in his chapter for *Keyboard Music before 1700,* Robert Judd refers to the first type as the "early ricercar"; Warren Kirkendale refers to "free" and "imitative" ricercars. The consistent defining criterium seems to be the presence or absence of pervasive imitation. For this chapter, I will adopt the terms "preludial" and "imitative." While there is some evidence that the preludial ricercar had an actual preludial function (in preceding intabulations of vocal works, seen in some early lute prints and in M. A. Cavazzoni's 1523 *Recerchari Motetti Canzoni... Libro Primo* (Venice: Vercelen, 1523), there are many sources that don't seem to imply this function; rather than functional considerations, I adopt the term "preludial" based on stylistic ones. John Caldwell. "Ricercare." *Grove Music Online, Oxford Music Online,* accessed September 13, 2014, http://www.oxfordmusiconline.com.libproxy.usc.edu/subscriber/article/grove/music/23373.; Robert Judd, "Italy," in *Keyboard Music before 1700* 2nd edition*,* ed. Alexander Silbiger (London: Routledge, 2002), 252; Warren Kirkendale, "Ciceronians versus Aristotelians on the Ricercar as Exordium, from Bembo to Bach," *Journal of the American Musicological Society* 32 (1979): 2. Thanks to Liuwe Tamminga for supplying the facsimile copy of Marco Antonio Cavazzoni's *Recerchari.*

[2] While scholars have debated whether these differences mean that the imitative ricercar should be viewed as a new genre that maintained the title "ricercar," or as a shifting of compositional priorities within a continuous genre, it seems clear that two important mid-century prints, the *Musica Nova accommodata per cantar et sonar sopra organi et altri strumenti / composta per diversi eccellentissimi musici* (Venice: Pozzo, 1540) and Girolamo Cavazzoni's *Intavolatura* (1543) introduce a ricercar type that had, to a large degree, adopted the contrapuntal language of the sixteenth-century vocal motet. The well-known 1540 *Musica Nova,* published by Pozzo, is a set of part-book ricercars by various composers, including Adrian Willaert. For a modern edition, see *Musica Nova: Ricercari*, ed. Liuwe Tamminga, *Tasture* 3 (Colledara: Andromeda Editrice, 2001). However, the composer whose works are featured most prominently is Giulio Segni, organist at San Marco from 1530 to 1533. Unlike the *Musica Nova* ricercars, which were published in part-books, Cavazzoni's volume is in Italian keyboard *intavolatura.* Despite the fact that these "new" ricercars are based on points of imitation – comparable to the vocal motet – they still contain elements of the older, "preludial" style.

Example 2.1 M.A. Cavazzoni, *R(i)cercada de ma(r)ca(ntonio) in bologna*, from Ca, fascicle 1, 5v, opening.



like this are common in keyboard music from the first half of the *cinquecento,* and the purpose of this chapter is to suggest that IKT's notational conventions are closely tied – perhaps even rooted in – this chordal style. As demonstrated in the previous chapter, both IKT's notational conventions and the intabulation process demonstrate the same general tendencies: (1) complicated polyphonic structures are reduced to simpler, homophonic ones; (2) the rhythmic independence of the model's voices coalesces around regular chordal motion; and, (3) the *sounding* (or *seguente*) bass and treble notes are consistently favored over independent inner parts. These tendencies are all observed in Italian keyboard music from the first half of the sixteenth century, and the central thesis of this chapter is that this relationship between musical style and notational conventions is more than casual; rather, IKT's notational conventions grew directly out of *cinquecento* keyboard playing, and out of the chordal style in particular.

Where I argued in Chapter 1 that these stylistic features had ties with IKT's notational conventions, here I examine the relationship between these features (and ultimately, IKT's notational conventions) and the unwritten traditions of *cinquecento* keyboard playing. Specifically, I point to the stylistic overlap between "abstract" keyboard genres, such as the preludial ricercar, and liturgical keyboard music,[3] arguing that the chordal style can be directly tied to organ performance in the liturgy, and possibly to a method of harmonizing chant in the creation of *alternatim* versets. In building this argument, I offer a hypothetical reconstruction of a method for harmonizing short melodic fragments, which I call the technique of *sonare a consonanze.* My contention is that the chordal style in early *cinquecento* keyboard music was directly linked to this hypothesized technique, which in turn can be tied to a larger tradition of improvised Renaissance counterpoint. While the attempt to, in a sense, reconstruct this undocumented (and therefore, theoretically conceived) technique may seem an entirely speculative exercise, my purpose in doing so is to address gaps in several areas: (a) to propose a prominent compositional technique in an area of music history for which such techniques are essentially undocumented; (b) to both describe and explain the prominence of the chordal style in early *cinquecento* keyboard music; and (c) to solidify and sharpen the connection between the chordal style and IKT's notational conventions.

Lastly, although I do not attempt to propose a complete history of IKT as a notation in this chapter, I do, in a way, investigate the origins of IKT's notational conventions, in that I argue that they are ultimately a product of keyboard playing. In the last part of the chapter I attempt to sketch out the development of IKT's notational conventions, demonstrating the close and often complicated relationship between notational convention and the (for the most part unwritten) traditions of keyboard playing. Taken in tandem with IKT's functioning in intabulations (examined in the previous chapter), an aspect of IKT's history can be gleamed, although in no way a complete one. While my investigation here begins with unwritten traditions, I will close the chapter by highlighting the utility of examining these traditions as a means to analyze the development of IKT's conventions – its "behavior" as a notation.

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[3] Many pieces in the latter category exist in the same sources as the former, often side by side.

The Technique of *Sonare a Consonanze:* A Basic Description

The core of the argument presented in this chapter is the technique of *sonare a consonanze* – I contend that it formed the central component of the chord-driven style of early *cinquecento* keyboard music, and, in turn, IKT's emphasis on the vertical in its musical conception. It is important to stress that *sonare a consonanze* is not described in any historical source; its existence is inferred from a careful contextual reading of improvised counterpoint sources and an examination of repertoire. The term itself was chosen as a direct parallel to the Spanish theorist Santa María's method of playing in chords that he calls "playing in consonances" (*tañer a consonancias*), described fully in his 1565 treatise *Arte de Tañer Fantasia* (*The Art of Playing the Fantasia*), and I propose that the inferred Italian technique was, in many ways, analogous to the documented Spanish one (specific differences between the two will be described shortly).[4]

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[4] Tomás de Santa María, *Libro llamado arte de tañer fantasia* (Valladolid: Fransicso Fernandez de Córdova, 1565), vol 2, 12. Accessible on imslp.org: http://imslp.org/wiki/Arte_de_Ta%C3%B1er_Fantasia_(Santamar%C3%ADa,_Tom%C3%A1s), accessed May 25, 2017. For an English translation, see Tomás de Santa María, *The Art of Playing the Fantasia (Libro Llamado El Arte de Tañer Fantasia [Valladolid, 1565]*, translated and edited by Almonte C. Howell, Jr. and Warren E. Hultberg (Pittsburg: Latine American Literary Review Press, 1991).

As Miguel Roig-Francoli notes, the term is used in other Spanish vihuela sources, suggesting that it -- or some variant of it -- was common among Spanish players. Miguel Roig-Francoli, "Compositional Theory and

As a plausibly reconstructed historical method of improvising keyboard musi*c, sonare a consonanze* should also be seen as fully rooted in a larger tradition of Renaissance improvised counterpoint, and connections between between the two will be drawn in course.

At its core, *sonare a consonanze* entails the triadic harmonization of *canti fermi* or shorter *figurato* fragments (such as a motive or subject from a ricercar) in the treble part of a keyboard texture. These melodic fragments are accompanied by a bass, and together they form a skeletal framework that is then filled in with chords. These chords are typically subject to various sorts of diminution figures and passagework.

It is important to stress that *sonare a consonanze* should be understood as being primarily rooted in the *practical* experience of playing, rather than in theory or in abstract rules of written counterpoint; that is, in what Rebecca Cypess calls (after Vincenzo Galilei) *dispositione di mano,* or as a product of what other modern scholars refer to as *Griff,* or hand position – both terms imply what Leon Chisholm recently describes as the "sensorimotor experience": the memorized physical motions involved with playing, and on a deeper level, a musical conception shaped by the act of using a pair of hands to make music on a keyboard.[5] It was a technique that could be applied with relative ease, as at its root it entailed the creation of a series of chords through a simple process executed on the keyboard. At the same time, through the application of ornamentation, it could also be used to generate seemingly complicated polyphonic textures.

Practice in Mid-Sixteenth-Century Spanish Instrumental Music: The 'Arte de tañer fantasia" by Tomás de Santa María and the Music of Antonio de Cabezón" (PhD. diss., Indiana University, 1990), 207.

[5] *Dispositione di mano* – a phrased invented by Vincenzo Galilei – is used by Rebecca Cypess to imply performance practice – specifically virtuosic performance – but also "the physical memory… involved in the use of instruments." Cypess adopts the term based on the concept of *habitus* as defined by Jean-Phillipe Gauvin. See Rebecca Cypess, *Curious and Modern Inventions: Instrumental Music as Discovery in Galileo's Italy* (Chicago: University of Chicago Press, 2016): 22-23. The word *Griff* implies the generation of chords from hand position; for more on this, see Menke, "'Ex Centro' Improvisation," 70; see also David Ledbetter, *Bach's "Well-Tempered Clavier": The 48 Preludes and Fugues* (New Haven: Yale University Press, 2002), 105.

Methodology and Musical Sources

The basic analytical approach adopted here is, on the surface, relatively straightforward. The proposed functioning of *sonare a consonanze* is established by two main points of comparison: with Santa María's above-mentioned method of *tañer a consonancias*, and with improvised counterpoint techniques documented in sixteenth-century sources. With regard to the latter area, I build upon the work of Peter Schubert, Phillipe Canguilhem, and others, who have established not only the important role of improvised counterpoint in sixteenth-century music-making overall, but have also highlighted specific methods used to do so. Extant Italian keyboard music before 1550 (see **Table 2.1)** – the area of the repertoire most reliant on the chordal style – is examined for musical evidence, with a particular emphasis on the harmonization of melodic fragments or canti fermi. The mid-century cut-off date reflects two publications that heralded the advent of the imitative ricercar, which quickly supplanted the preludial ricercar in Italian keyboard sources: the volume *Musica Nova* (1540)*,* and the later *intavolature* of Girolamo Cavazzoni (1543). Together, Girolamo Cavazzoni's two publications of keyboard music are also a major source for liturgical keyboard settings, and the chosen cut-off date was selected to

Table 2.1: Sources of Liturgical Settings and Preludial Ricercars Before 1550

Manuscripts:

Manuscript	Ricercars	Liturgical Settings
I-CARcc Ms. 7832, fascicle I. ("Castell Arquato") (Ca)	Six ricercars (two attrib. Jacopo Fogliano, two attrib. "Jaches," one attrib. Giulio Segni, one attrib. M. A. Cavazzoni).	
I-CARcc Ms. 7832, fascicle II. ("Castell Arquato") (Ca)	Two ricercars (attrib. Jacopo Fogliano)	*Missa de la dominica* ("Jaches"),
I-CARcc Ms. 7832, fascicle IVa. ("Castell Arquato") (Ca)	Ricercar (anon.)	*Missa dell'Apostoli;* Credo verset (all anon.)
I-CARcc Ms. 7832, fascicle V. ("Castell Arquato") (Ca)	Ten ricercars (eight attrib. Claudio Veggio; one fragmentary).	
I-CARcc Ms. 7832, fascicle VIII. ("Castell Arquato") (Ca)		Mass *In Solemnitatibus Beate Marie; Agnust Dei*
I-CARcc Ms. 7832, fascicle IX. ("Castell Arquato") (Ca)		*Patrem* verset
D-Mbs Munich, Bayerische Staatsbibliothek, Musikabteilung, Mus Ms. 9437 (Go)	Ricercars (all anon.)	Liturgical versets based on plainchant melodies (all anon.)
I-Vnm: Ms. It. IV 1227 (Ve)		*Veni creator spiritus; Et exultavit spiritus meus*

Printed Volumes:

Printed Volume	Ricercars	Liturgical Settings
Marco Antonio Cavazzoni, *Recerchari, motetti, canzoni…libro primo.* Venice: Bernardinum Vercelensem, 1523.	Two ricercars.	
Girolamo Cavazzoni, *Intavolatura cioe. Recercari Canzoni Himni..Libro Primo.* Venice: B.V. 1543.	Four (imitative) ricercars.	Hymn versets.
Girolamo Cavazzoni, *Intabulatura d'organo, cioè Misse Himni Magnificat. Libro secondo.* [...], 1543?		Three *alternatim* Masses; hymn versets; Magnificat setting.

include them. Roughly half of the sources are printed volumes, and the other half manuscripts; especially notable is the large Castell'Arquato collection.[6]

In arguing for a different organ-based performance tradition, one also missing complete documentary evidence, Arnaldo Morelli cites a well-known remark made by Nino Pirrota: "La storia della musica è in gran parte da scrivere o da riscrivere. Il perché si comprende facilmente se si pensa che in moltissimi casi essa deve cominciare col ricostruire il suo oggetto."[7] Similarly, the present study addresses a hypothetically conceived, reconstructed "object" (or compositional-performance tradition). This approach potentially brings with it inherent logical and historical problems. In an attempt to address these, I will adopt the analytical stance represented by keyboard thinking, as established in the Introduction of this dissertation. A keyboard-thinking approach attempts to circumvent these problems by considering facets such as musical style and notation to be not only interrelated but interdependent; it also deliberately encompasses both the attempt to approach the *mindset* of *cinquecento* keyboard improvisers as well as the analytical stance adopted towards musical texts that form the evidence of that mindset.

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[6] For more on the Castell'Arquato colletion, see two articles by H. Colin Slim: "Keyboard Music at Castell'Arquato by an Early Madrigalist," *Journal of the American Musicological Society* 15 (1962): 35–47; and "Some Puzzling Intabulations of Vocal Music for Keyboard, c. 1600, at Castell'Arquato," in *Five Centuries of Choral Music: Essays in Honor of Howard Swan*, Gordon Paine, ed. (Stuyvesant, NY: Pendragon, 1989): 127–51. The Castell'Arquato manuscripts are also discussed in Jessie Ann Owens, *Composers at Work: The Craft of Musical Composition 1450-1600* (Oxford: Oxford University Press, 1997), 168. Also see Knud Jeppesen, "Eine Frühe Orgelmesse aus Castell'Arquato" *Archiv für Musikwissenschaft* 12 (1955): 187-205.

For a modern edition of the keyboard music in Castell Arquato, see H. Colin Slim, ed. *Keyboard Music at Castell'Arquato,* in 3 vols, CEKM 37 (Middleton, WI: American Institute of Musicology, 1975–2005).

[7] Quoted in Arnaldo Morelli, ""Cantare sull'organo": an unrecognized practice," *Recercare* 10 (1998): 205. Morelli argues for the existence of a practice of solo singing with organ accompaniment in sixteenth-century Italian liturgical contexts.

Keyboard Thinking and *Sonare a Consonanze*

The analytical construct of keyboard thinking allows the analyst to bypass the logical and historical problems inherent with examining written-down music for evidence of unwritten traditions. Many of these problems (and potential solutions) have already been described in the Introduction; however, they are most prominent in this chapter, in that its central thesis is grounded in the examination of textual evidence for reflections of improvised practice. This potentially carries the logical fallacy of circular reasoning, in that the text itself establishes the necessary stylistic (and, by extension, analytical) criteria by which the hypothesized method is partly established, but accepting that the criteria are present in the text at all depends upon the method itself. Keyboard thinking offers a way to circumvent this problem, at least in part, by attempting to adopt elements of a historical mindset itself as its basic analytical stance. In sixteenth-century Italy, composition and improvisation are seen as points on a single continuum of musical creation – best represented in the phrase "composing at the keyboard." Therefore, from a sixteenth-century perspective, written texts are not distinct from improvised practices. Therefore, the analyst who adopts the stance of keyboard thinking need not consider the distinction between written text and unwritten tradition as particularly relevant.

The adoption of a historical mindset is also key to a project of *reconstruction,* which is the primary aim of this chapter. Keyboard thinking should be seen as an attempt to discern the "archaeology" of *cinquecento* keyboardist thought, an attempt to recreate and retrace historic thought patterns and conceptual structures, which can then be used as a framework for the reconstruction of lost traditions (that is, traditions that are undocumented by extant source material). By plausibly establishing both the underlying thought patterns as well as the precise steps taken by, say, a historical keyboardist improvising a ricercar, one can attempt to reconstruct techniques that *could* have existed, through the careful analysis of both extant techniques of musical construction as well as musical texts. It is exactly this category into which *sonare a consonanze* falls.

Precise techniques used to improvise vocal counterpoint can be seen regularly in the music analyzed in this chapter, establishing it – and more precisely, the technique of *sonare a consonanze* – within a larger context of sixteenth-century composing in the mind at the keyboard. Therefore, while the technique of *sonare a consonanze* should be seen as a keyboard-specific practice, it should also be seen as conceptually grounded in a more general realm of improvised counterpoint, one that extended between vocal and instrumental practices.[8] Keyboard thinking also draws upon these Renaissance counterpoint traditions, in that it seeks to reconstruct the systems of thought that underlaid the specific practices and methodologies of improvisational traditions, such as those used by *cinquecento* keyboard players. By examining commonalities in functioning between diverse rules and practices, it becomes plausible to reconstruct lost ones (or even to recreate new ones in the same tradition) – to recreate, in other words, the rules that were orally transmitted and, therefore, didn't make their way into surviving theoretical or practical texts.

Sonare a Consonanze **in its Historical Context: Horizontal and Regressive Approaches**

Before moving into the analysis itself, we should note that the technique of *sonare a consonanze* – and indeed, the chordal style in *cinquecento* keyboard music generally – invites clear comparisons with later practices, most notably basso continuo. Beyond the shared use of chords as a structural foundation, *sonare a consonanze* itself represents a foreshadowing of basso continuo, particularly the role that the latter played in solo keyboard improvisation. Looking at this study historiographically, one could describe two complementary approaches. The primary approach involves situating the repertory and the reconstructed techniques within the context of vocal improvised counterpoint – that is, with practices from other areas that are historically contemporary with it; we might characterize this as a "horizontal" approach. In contrast, we might call a comparison with later practices a "regressive one," as described by Domenico Pietropaolo. A regressive approach would start with analysis of similar musical traditions that *followed* the repertory in question, and its generative processes, and then work backwards. According to Pietropaolo, this would

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[8] As just described, *sonare a consonanze* is essentially the chordal "filling-in" of a treble-bass framework, and this framework can be seen as a *bicinium* in note-against-note style. The links between *sonare a consonanze* and bicinia are explored below.

> force us to unite theory and history, since its practice would require use to develop distinct theoretical models for each stage of development of the idea of improvisation, each new model representing a revision of the one that is closer to us in history, and simultaneously to explain the changes that we are compelled to make in response to the historical parameters that define each earlier period.[9]

While I will primarily place *sonare a consonanze* within the context of sixteenth-century improvised counterpoint – again drawing primarily on the "horizontal" approach – I periodically refer to the "regressive" as well, particularly in highlighting ways in which the techniques here seem to foreshadow *partimento.*[10]

It is important to note that chords themselves – that is, the bare conception of chords as intact units, devoid of any functional context – were arguably not a musical-theoretical concept that existed in concrete fashion in the sixteenth century. It is notable that Santa María uses the same word to describe intervals and chords alike, *consonancias;* what we today call "chords" were simply a joining of several consonances together. This is echoed in Italian sources as well: for example, Banchieri, in his brief dialogue on basso continuo in the "Quinto Registro," in the second edition of *L'organo suonarino* (1611), uses the same terminology – *consonanze* – when describing the formation of what we would call chords formed over a bass note (although he does occasionally use the word "*corda"* as well)[11]. A concrete concept of a "chord" – and indeed, the consistent use of the term – is lacking in early Italian continuo treatises such as those by Viadana and Agazzari.[12] Without a musical-theoretical construct of a chord, it is best to view the chords seen in this repertoire as being conceived as physical-mechanical phenomena – products of the *dispositione di mano* of the player rather than grounded in theory.

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[9] Domenico Pietropaolo, "Improvisation in the Arts," in *Improvisation in the Arts of the Middle Ages and Renaissance,* ed. Timothy G. McGee (Kalamazoo, MI, USA: Medieval Institute Publications, Western Michigan University), 4.

[10] As I demonstrate below, *sonare a consonanze* clearly foreshadow basso continuo.

The problem of tonality has been raised in criticism of Murray Bradshaw's well-known theory that psalm tones were the basis of the Venetian organ toccata.[13] Bradshaw uses Roman numeral analytical symbols, which is problematic because of its implicit "tonalizing" of non-tonal music. That being the case, there is a basic similarity between the nature of my theory and Bradshaw's – both posit the use of plainchant as a core element of the compositional process in *cinquecento* keyboard music. However, there are some important differences to note. For one, Bradshaw examines repertory later in the *cinquecento,* and his criteria for identifying his

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[11] See Banchieri, *L'organo suonarino,* 2nd ed., 6.

[12] Agazzari does use the word "corda," but in the sense of "string," both literally (in the sense of string instruments) and in the sense of a starting pitch when discussing the transposition of modes. See Agostino Agazzari, *Del sonare sopra'l basso con tutti li stromenti e dell'uso loro nel conserto* (Siena: Domenicao Falconi, 1607), accessible online: http://imslp.org/wiki/Del_Sonare_sopra'l_basso_con_tutti_li_stromenti_(Agazzari%2C_Agostino). Viadana does not use the term. His continuo treatise is found as the preface of his famous print, Lodovico Viadana, *Li cento concerti eccelesiastici* (Venice: Vincenti, 1602), 1605 edition available online: http://imslp.org/wiki/Per_sonar_nel'organo_li_cento_concerti_ecclesiastici_(Viadana%2C_Lodovico_da). Both accessed on June 14, 2017.

[13] Bernhard Meier, "Die Modi der Toccaten Claudio Merulos," *Archiv für Musikwissenschaft* 34 (1997): 196. See Alexander Silbiger, "From Madrigal to Toccata: Frescobaldi and the *Seconda Prattica,*" in *Critica Musica: Essays in Honor of Paul Brainard,* ed. John Knowles (Amsterdam: Gordon and Breach Publishers, 1996), 404, for a further list of sources that criticize Bradshaw's theory.

"hidden" psalm tones are very loosely applied; in addition, he argues for their use in a particular abstract genre, the toccata, not in a liturgical one. In contrast, I only hypothesize the use of plainchant for music in which it is explicitly designated; my proposed extension of the technique to abstract keyboard music is only in the technique, not in the type of melody it is used to harmonize. While I do argue that the origins of *sonare a consonanze* may have originated in the harmonization of plainchant, the technique itself could be applied just as easily to the subject of a ricercar or another type of melody.

Chordal Structures in Early *Cinquecento* Keyboard Music

I would like to begin the musical analyses of this chapter with a look at the chordal style in the preludial ricercar, examples of which are common. Sections in the chordal style take on multiple forms, including instances of toccata-like textures like that seen in the Cavazzoni ricercar above, quasi-contrapuntal sections that suggest an underlying chordal framework, and short, distinct sections of undecorated or nearly undecorated chords – I will refer to instances in this latter category as chord chains.[14] Typically consisting of a pronounced series of entirely undecorated block chords, sections of chord chains make for a fairly striking addition to the overall textural language of the preludial ricercar. They are also where I propose to begin the exploration of the chordal style overall, for several reasons:

1) Identifying situations with underlying chord chains in decorated textures is problematic: this is primarily due to the nature of the applied decoration, which can range from a few passing notes to toccata-like flurries of activity, to seemingly complex contrapuntal

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[14] As demonstrated in the Introduction, chain thinking seems to be a major part of *cinquecento* keyboard improvisation. See Introduction, 55-56.

structures in which multiple voices are decorated in imitation. The ornamentation can create grey areas; drawing sharp distinctions between passages that are unambiguously chord-driven and those in which homophonic textures are generated as a by-product of polyphony is essentially impossible. This leaves the identification and subsequent analysis of the chord chains a frustratingly subjective process.

2) The sheer frequency of entirely undecorated or near entirely undecorated chord chains highlights their important role in *cinquecento* keyboard music.
3) The undecorated versions of the chord chains offer an unfiltered glimpse of the technique of *sonare a consonanze*.
4) Comparing decorated and lightly decorated versions show how the chord chains might have functioned as the foundation of seemingly complicated polyphonic textures.
5) Isolating and highlighting undecorated chord chains allows them to emerge from the obscuration of IKT notational convention, which, through its functioning, creates "fake" voice leading (see Chapter 1), implying polyphony that could actually have been generated by playing in *consonanze.*

In order to isolate undecorated chord chains I have adopted a rigid set of criteria: chordal passages should be in four or more voices, in a completely homophonic texture (with only one passing note per chord pair), and they must consist of at least three chords to count as a chain (although many examples last as long as six to eight chords). **Table 2.2** demonstrates every chord chain that meets the criteria.

Table 2.2: Instances of Chord Chains in Keyboard Sources Before 1550[15]

Work	Source	Section (if applicable)	Measures	Comments
Missa de la dominica	Ca, fascicle 2.	*Glorificamus te*	33-34	
		Domine deus	69-70	
		Et in spiritum sanctum dominum	104	
Missa dell'Apostoli	Ca, fascicle 4a.	*Kyrie P[rimo]*	3-4	
			8-10	
			15-17	partly in a3 texture (measure 16)
			25-27	
			30-31	
			39	
			42	
		Primo verso della Gloria	1	
			4	
			9-11	
			12	
			19-21	
			23-24	
			31-32	
			35-36	
			45-46	
			55-56	
			57-58	one passing note
			59-62	partly in a3 texture

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[15] The comment "cadential" refers to chord chains that are cadential in nature; they may include stereotypical cadential voice behavior and suspensions, resulting in chords that are not strictly 5/3 or 6/3 chords. Chord chains that included a few passing notes are noted as such in the comments.

			70-72	cadential
			77-79	
			82-83	passing note; partly in a3 texture
			91-93	one passing note
			96-98	
unidentified fragment (setting of *Christe* from B.V. Mass)	Ca, fascicle 4a.		6-10	light decoration
Primo versetto del credo	Ca, fascicle 4a.		4-5	
			7	passing note
			9-10	passing note
			15-16	one short run
			17-18	
			22-23	cadential
			24-25	
			31-32	passing note
			36-37	passing note
Missa in Solemnitatibus Beate Marie	Ca, fascicle 8.	*Glorificamus te*	23	
		Domine deus Rex caelestis	41-42	passing note
Patrem	Ca, fascicle 9.		5-6	
			14-16	passing notes
			19-20	cadential
		Et ex patre	21	
			23-24	cadential
			25-26	
		Genitum non factum	27-29	
			29-31	
		Crucifixus	37-39	
			39-41	

			42-43	
			44-46	
		Et ascendit	47-48	passing notes
			50-52	passing note
		Et in spiritum	57-59	one 6/3 chord
			61-63	
			63-64	variable (a3-a5) texture
		Et unam	66-68	passing notes
			70-71	partly a3 texture
			76-77	
Chirie primo de li apostoli	Go		2-5	passing notes; cadential
			6-7	passing notes
			7-8	
Intonazione del settimo tono	Go		20-21	
R[i]cerchare di Jaches	Ca, fascicle 1.		6-7	cadential; some dissonances
			21-23	partly a3 texture
			32-33	passing notes
			46-47	cadential; passing note
			48-50	passing notes
			64-65	cadential; suspensions
			65-72	cadential; suspensions
			73	passing note; 6/3 chords
			89-90	partly a3 texture
			93-94	cadential
			96-97	cadential
			99-104	cadential
			104-106	
			108-109	partly a3 texture; passing notes

		111-113	passing notes
		116-118	partly a3 texture
		122-123	cadential; passing notes
R[i]cercare di Jacobo fogliano da modena	Ca, fascicle 1.	14-16	
		36-40	partly a3 texture; cadential
		40-42	suspensions; passing notes
		43-50	
		52-53	two 6/3 chords
Ricercare	Ca, fascicle 4a.	1-4	passing notes
		17-18	
		45-46	passing notes; partly a3 texture
		47-49	passing notes
R[i]cercada de ma ca in bologna (fascicle 1; 5v)	Ca, fascicle 1.	3-4	passing notes
		4-5	passing notes
		9-10	passing notes
		26-27	
		35-36	
		37-38	passing note
		53	passing note
Ricercar Primo (Cavazzoni 1523)	CAVAZZONI M 1523	1-2	
Ricercar Secondo (Cavazzoni 1523)	CAVAZZONI M 1523	1-3	
		5-8	cadential
		59-60	cadential
		72-73	
		84-85	
		98-99	

		101-102	
R[i]cerchare di Jacobo Fogliano	Ca, fascicle 2.	5-6	
		16-17	
		18-19	
		27	
		35	
R[i]cerchare di Jacobo fogliano da modena	Ca, fascicle 2.	22-25	cadential; passing notes
		29-30	
R[i]cercare di Julio da modena p[er] musica fi(c)ta in sol p(er) la via di G sol re ut	Ca, fascicle 1.	1-4	passing notes
		6-8	passing notes
		11	
		13-15	
		50-51	passing notes
		61-63	passing notes
		65	passing note
		67	
		72	
		74-75	passing notes
La Fugitiva (Veggio).	Ca, fascicle 5.	5	passing notes; cadential
		6-8	
		15-17	
		26-27	
		29-30	
		32-34	cadential
		37-41	
Recercar de l'otavo tono	Ca, fascicle 5.	19-20	
untitled fragment (anon)	Ca, fascicle 5.	2-3	

		5-7	one 6/4 chord
		23-26	cadential
		31-33	cadential
		48-50	
Recercada per b quadro del primo tono (Veggio)	Ca, fascicle 5.	25-28	
		28-32	cadential
		38-39	
		40-41	
		69-73	cadential; passing notes
		91-93	
		97	
		104-106	passing notes; cadential
		107-112	
		131-137	
		143	cadential
		145	cadential
Recercada per b mollo del primo tono (Veggio)	Ca, fascicle 5.	14-15	
		17-19	
		20-22	passing notes; cadential
		22	
		32-34	passing notes
		48-50	passing notes; cadential
		61-63	
		68-69	
		82-85	partly a3 texture; passing notes
		88-90	
		93-95	

		96	passing notes; cadential
		103-105	passing notes; cadential
Recercada vil (Veggio)	Ca, fascicle 5.	5-7	passing notes
		9-11	passing notes; cadential
		11-12	
		13-14	
		15-16	
		19	cadential
		21-23	passing notes
		23-25	
		29-31	passing notes; cadential
		32-34	one passing note
		34-36	
		39-41	passing notes
		45	
		46	
Vi ricercada' (anon)	Ca, fascicle 5.	6-8	passing notes
		8-10	cadential
		14	
		15-16	
		17-19	
		21-22	
		23-24	
		25-26	
		30-32	
		36-37	
		40-41	passing notes

Recercada tel primo tono per b mollo (Veggio)	Ca, fascicle 5.	14-15	
		25-27	passing notes
		31-32	
		42-44	
Recercar del primo tono (Veggio)	Ca, fascicle 5.	1-4	
		6-9	passing notes
		11-15	passing notes
		18-19	cadential
		20-22	passing notes; cadential
		27-28	
		30-32	suspensions
		39-40	
		41-42	
		43-44	
		45-46	passing note; cadential
Recercada per b quadro dal quarto tono (Veggio)	Ca, fascicle 5.	7-8	cadential
		20-23	
		26-27	
		38-39	cadential
		40	
Recercar del quinto tono per b mollo (Veggio)	Ca, fascicle 5.	22-23	cadential; passing notes
		23-24	
		25-26	cadential
		31-32	
		35-36	
		37-38	passing notes
		38-39	passing note (note parallels)

		41-43	cadential; passing notes
		44-45	
		59-60	
		60-62	passing notes; cadential
		68-80	
Untitled (ricercar?)	Go	12	
		13-14	cadential
		38-40	passing note
		39-40	cadential
		48-49	
		54-55	
		63-64	
Untitled	Go	7	
		8-10	
		10-15	passing notes
		19-21	passing notes
		24-26	
Recercar	Go	14-15	cadential; passing note
		15-21	
		28	passing notes
		29-30	cadential; passing notes
Untitled	Go	1-2	
		7-8	passing notes
		9-10	
		12-14	passing notes
		15-16	passing note
Untitled	Go	9-11	passing notes
Untitled	Go	2	passing notes

4	cadential
6-7	passing notes; cadential
9-10	passing notes
15-17	passing notes; cadential
18-21	passing notes

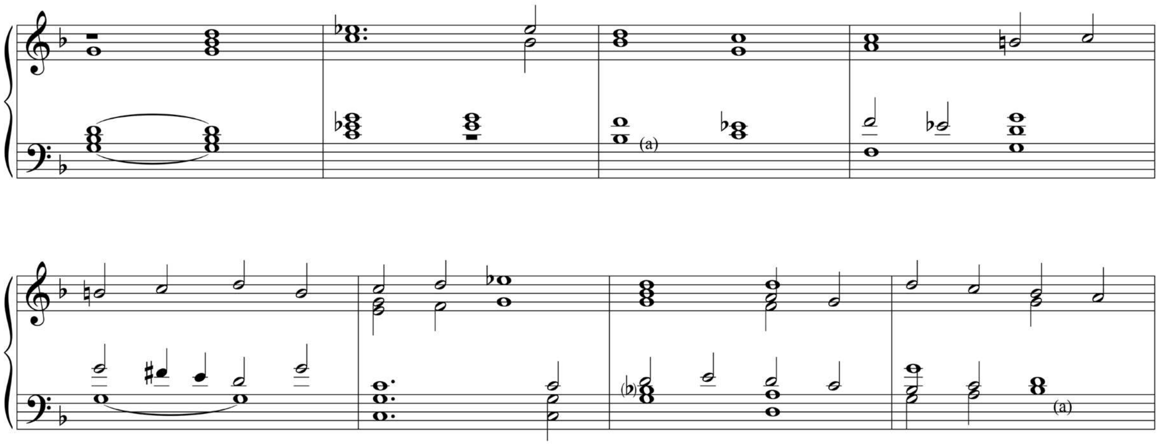
The table also includes instances that *almost* qualify, but exceed the criteria in minor fashion; these are noted as doing so in the comments column. Instances without comment are therefore entirely undecorated – a total of 122 out of 242 cited chord chains. **Example 2.2** shows a few typical instances, demonstrating some of the situations in which they are seen: Example 2.2a-b presents opening gestures of ricercars by Segni and Veggio; these consist of chord chains, similar to those seen in the Cavazzoni ricercar at the start of this chapter, but without the decoration. In Examples 2.2c-d**,** broad, toccata-like chord chains form distinct sections *within* ricercars; notably, they are used to harmonize short motives or *soggetti* in the treble part. In Example 2.2e, the slow, static treble part, presented in semibreves, is harmonized with minim chords.

The examples demonstrate three general contexts in which undecorated chord chains are typically found. Especially of note is the use of chord chains to harmonize *soggetti* in the treble part, as can be seen in Example2.2c-d; in fact, even the melody of the slow, seemingly toccata-like opening of the ricercar shown in Example 2.2a turns out to be a principal *soggetto* of the ricercar. (The *soggetti* in the preludial ricercar are used more loosely than they are in the later imitative ricercar.) In all of the examples, each note of the melodic fragment is harmonized with a 5/3 chord, or what modern music theory would call a root-position triad, with the occasional

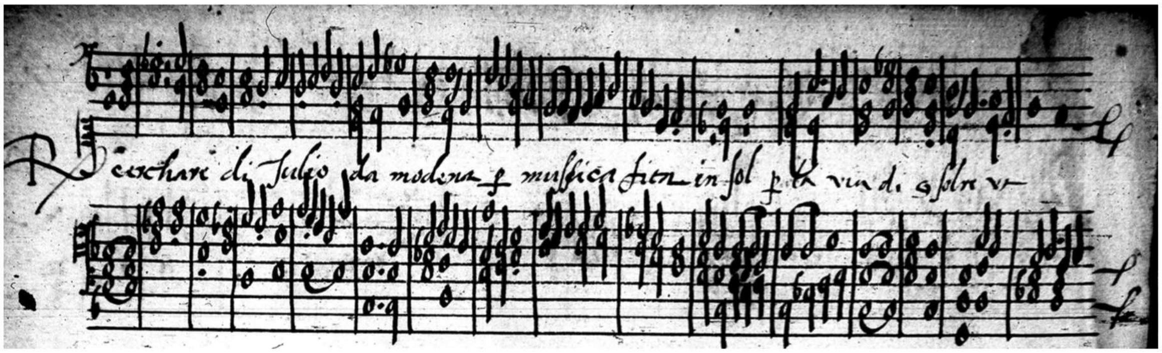
Example 2.2

(a) Giulio Segni, *Rcerchare di Julio da modena p musica fita in sol p la via di G sol re ut*, mm. 1-4, from Ca, fascicle 1, 10v; facsimile, Ca, fascicle 1, 10v.
(b) Claudio Veggio, *Recercar del primo tono*, mm. 1-4, from Ca, fascicle 5, 26v, opening; facsimile, Ca, fascicle 5, 26v.
(c) Anon., *Vi' Recercada,* mm. 17-21, from Ca, fascicle 5, 24v.
(d) Anon, fragment, from Ca, fascicle 5, 13r; adapted from Slim, Castell'Arquato, 3, 40.
(e) Fogliano, *Rcerchare de jacopo fogliano,* mm. 5-8, from Ca, fascicle 2, 1.

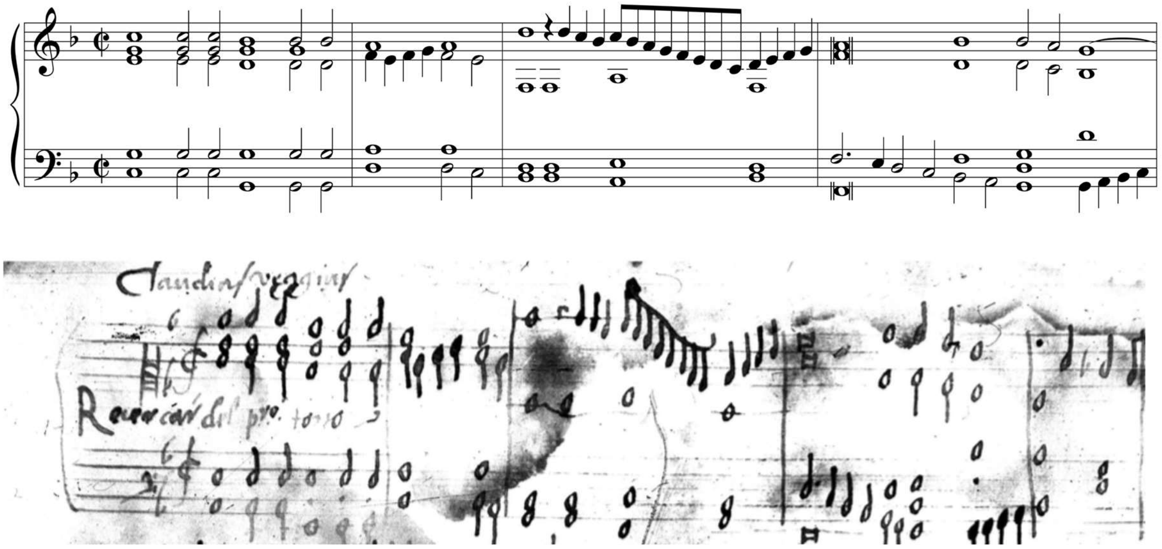
(a)



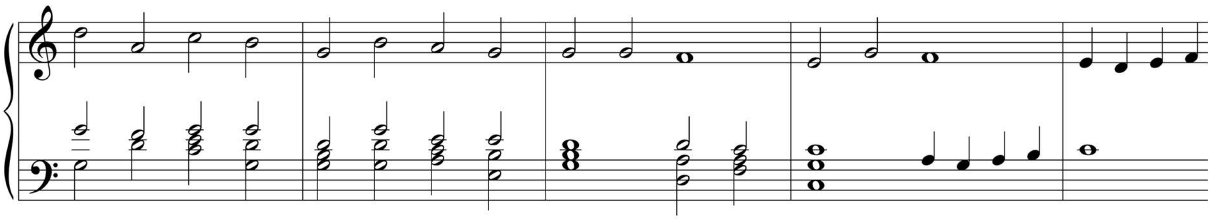
(a) notes have dots in source.


Rcerchare di Julio da modena p musicha fita in sol p la via di g sol re ut

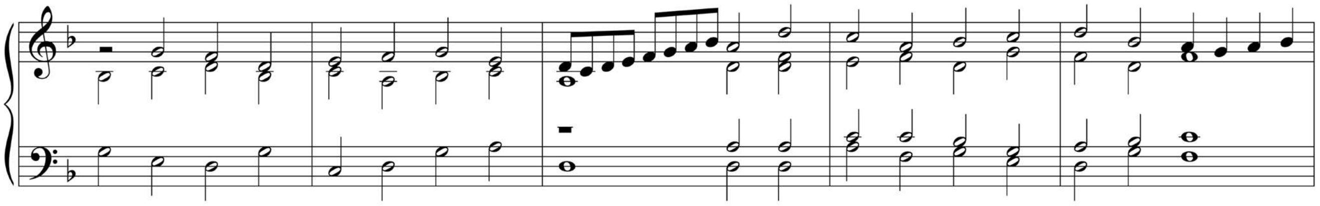
(b)


Claudio Veggio
Recercar del pro. tono

(c)



(d)



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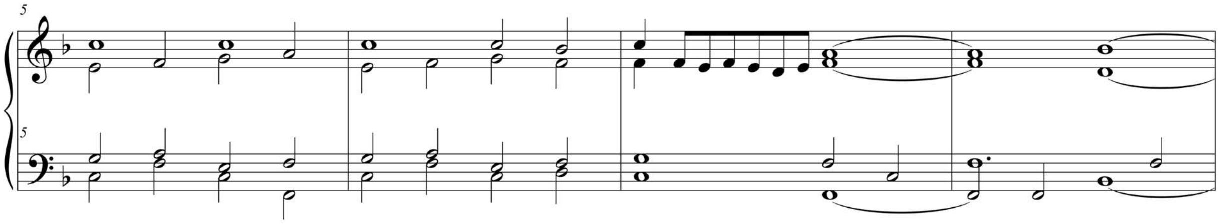

6/3 chord.[16] The harmonization of a *soggetto* is the most common function that chords hold in the preludial ricercar; a particularly striking example can be seen in **Example 2.3**, from Veggio's lengthy *Recercada per b quadro del primo tono.* Again, the *soggetto* is placed in the treble, repeated, and once again harmonized with triads predominately in root position.

Block triads and homophonic sections are, of course, not unusual in sixteenth-century vocal music – one immediately thinks of *falsobordone* style – but one gets the sense that their use in this repertoire is particularly rooted in keyboard playing.[17] In Veggio's *Recercada per*

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[16] Without a formally defined sixteenth-century theoretical language to talk about these chords, I will adopt terminology from later basso continuo practice. Therefore, I will write 5/3 chord in place of root position, and 6/3 in place of first inversion.

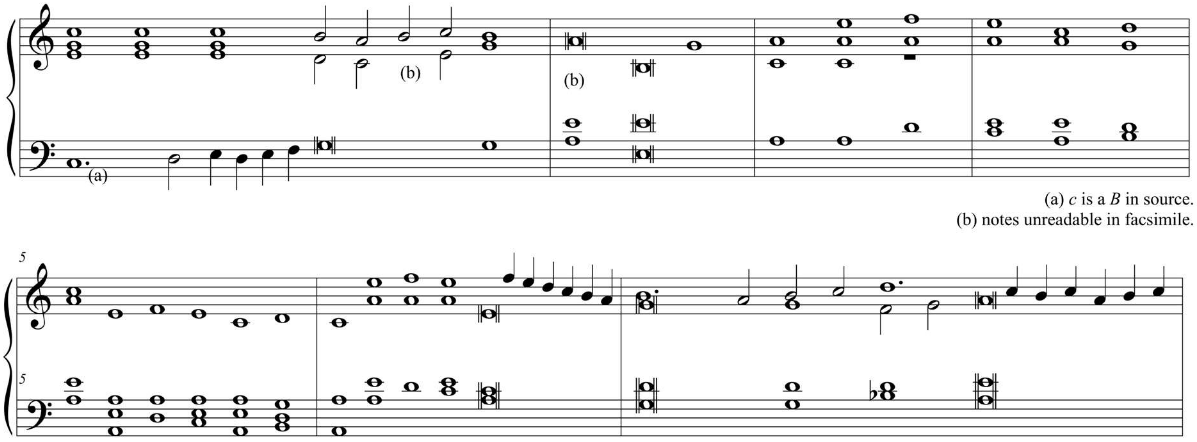
[17] The connection between the *falsobordone* and keyboard music in the sixteenth century had been promoted by Murray Bradshaw, as mentioned earlier. In spite of the legitimate rejoinders to Bradshaw's theory (cited above), there are some interesting connections between the *falsobordone* and chordal style in late Renaissance keyboard music; Bradshaw touches upon many of the general connections in his various studies. See especially Chapter 8 of his monograph *The Falsobordone: A Study in Renaissance and Baroque Music* (Neuhausen-Stuttgart: Hänssler-Verlag, 1978), 73-80, as well as the article "The Influence of Vocal Music on the Venetian Toccata," *Musica Disciplina* 42 (1988): 157-98.

In his reading of the Venetian toccata as influenced by psalm tones, Bradshaw points to the decorated *fabordones* of Antonio Cabezón. Interestingly enough, Santa María includes in the discussion of his "consonances" a chapter on the *fabordones,* suggesting some sort of connection, at least for him. See Santa María, *Arte de Tañer,* 42v-48.

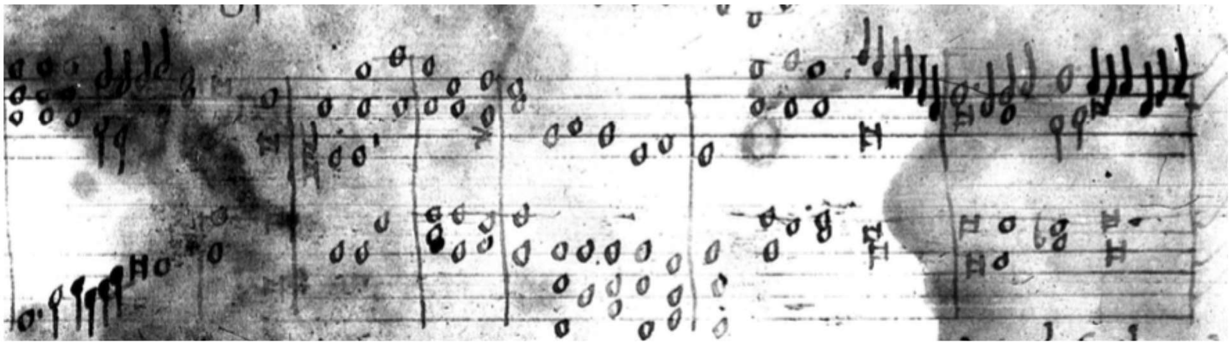
Having said that, while I would not categorically deny any influence of the falsobordone on the music examined in this chapter – the link between *falsobordoni,* the music of Cabezón, and Santa María's treatise are certainly intriguing – there does not seem to be enough evidence to posit any sort of direct relationship between the chord chains seen here and *falsobordoni* practice; the chord chains don't show any similarities to psalm tones seen in *falsobordoni*, save for a homophonic texture. In addition, the chord chains include more 6/3 chords than do *falsobordoni,* and in general are freer in their treatment of texture and voice leading, again suggesting idiomatic keyboard origins.

There are two *falsobordoni* in the Castell'Arquato manuscripts: Castell'Arquato, Chiesa collegiata, Archivio. I-CARcc Ms. 7832, fascicle 5; 21v. Except for the chords of the opening intonation and the beginning of the second half of the verse, they are ironically more contrapuntal than the chord chains examined in this chapter.

Example 2.3 Claudio Veggio, *Recercada per b quadro del primo tono,* mm. 71-76, from Ca, fascicle 5, 18v; facsimile, Ca, fascicle 5, 18v.



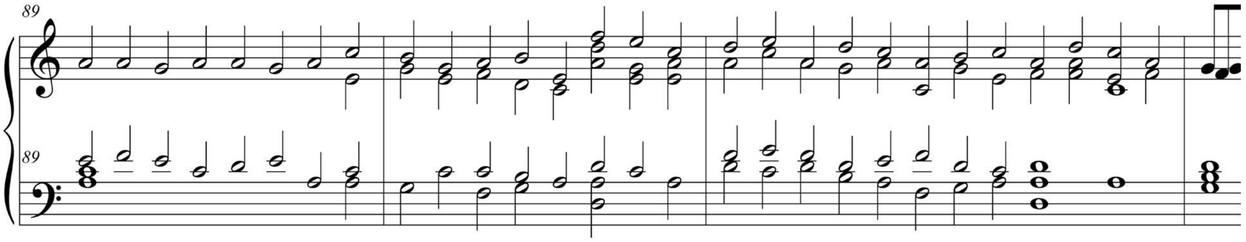
(a) *c* is a *B* in source.
(b) notes unreadable in facsimile.



quadro del primo tono (**Example 2.4)**, another melodic fragment (related to the subject seen in the previous example) is harmonized and repeated four times in sequence, which the lower parts again accompanied as 5/3 chords. The obstinate repetition of the harmonized motive in sequence, coupled with the range and voicing of the chords, creates a distinctly idiomatic feel.

Of course, other genres of sixteenth-century Italian keyboard demonstrate strong homophonic tendencies. These include dance music (settings of which can be found in both the Castell'Arquato manuscripts and in I-Vnm: Ms. It. IV 1227 (Ve) – see Table 1 above); intabulations of homophonic vocal music such as *frottole,* French chansons, and the works of early madrigalists such as Arcadelt and Verdelot; and *arie* recitation formulae, to name a few. Playing *arie* was apparently a rather common activity for keyboardists; see the second book of keyboard dances by Marco Facoli, which contains several *arie* settings, many named after known courtesans. This musical activity seemed to be associated with the Venetian courtesan. See Berthe Dedoyard, "Des musiques pour arpicordo de Marco Facoli: à la découverte d'un testament inconnu," *Revue belge de Musicologie* 41 (1987): 63-74.

Example 2.4 Claudio Veggio, *Recercada per b quadro del primo tono,* mm. 89-93, from Ca, fascicle 5, 18v.



There are other features that point to a particularly idiomatic nature to these triadic sections. For example, several instances can be cited in which chords are presently broadly and ornamented in toccata-like fashion, as in the Marco Antonio Cavazzoni ricercar mentioned at the beginning of this chapter. In addition, many of the chord chains demonstrate a variable number of parts, with the texture even mutable on a chord-to-chord basis; this is of course allowed by IKT as a notation, unlike in part-book format or even other keyboard tablature systems.[18] Chord spacings also tend to be idiomatic rather than reflective of vocal polyphony, with part-leading obviously geared towards creating playable textures.

I would like to propose that these undecorated chord chains provide an unfiltered glimpse of a fundamental generative process in *cinquecento* keyboard music, one that, combined with diminution practice, could be used as the foundation of more complicated music. Although the process is undocumented and therefore entirely speculative, it is not hard to suggest how it might have functioned: a melodic fragment was accompanied by a bass, forming a treble-bass framework, which was then filled with triadic harmonies. **Example 2.5** offers treble-bass frameworks of the excerpts shown in Example 2.2 above.

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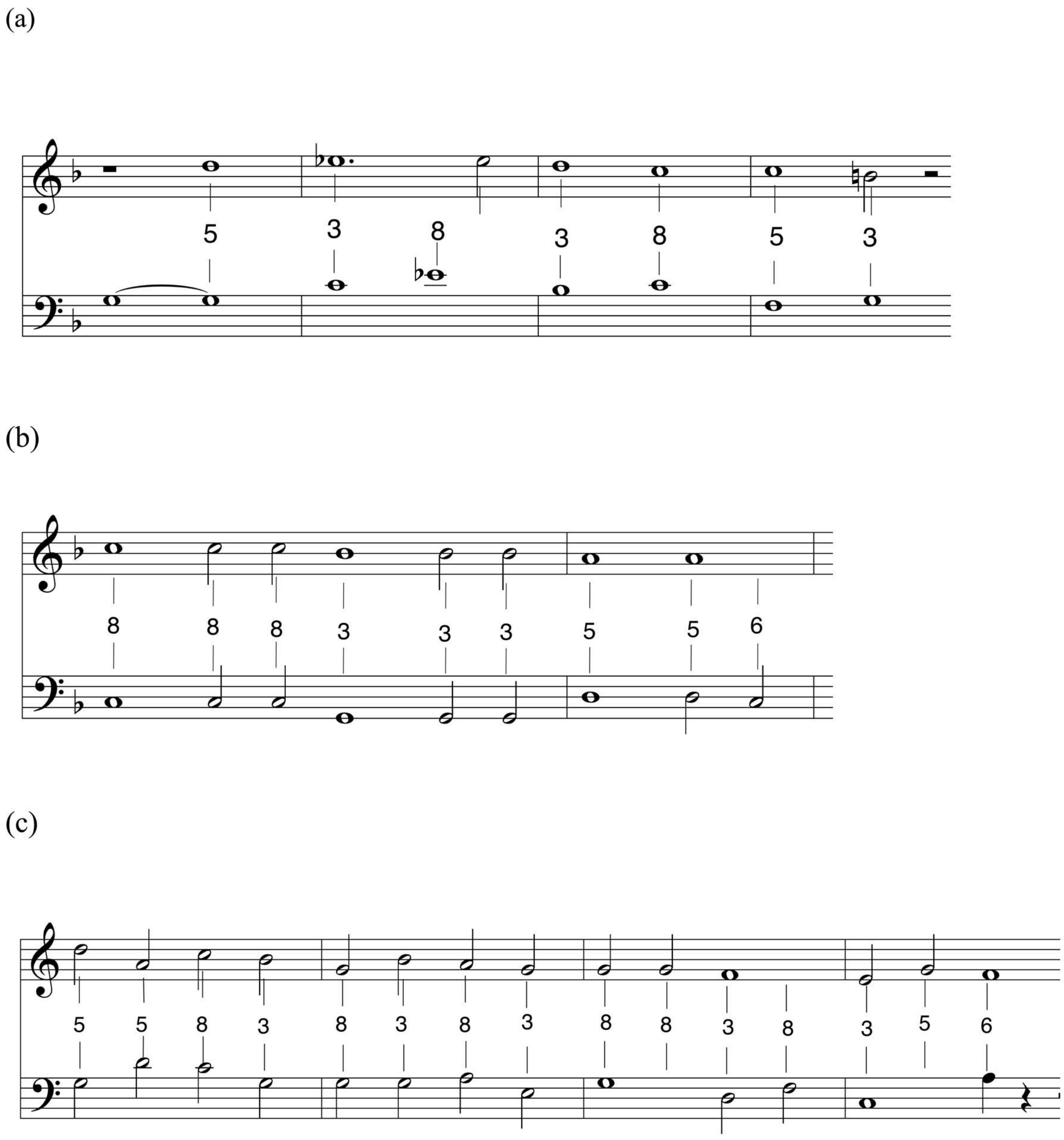
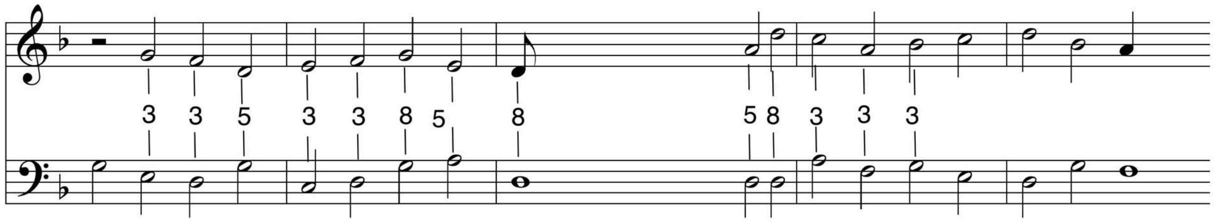
[18] Although German and Spanish keyboard notation allowed for flexibility of texture, they remained conceptually grounded in the framework of four independent parts.

Example 2.5 Outer-voice harmonic skeletons of the fragments in Example 2.2


(a)
5 3 8 3 8 5 3
(b)
8 8 8 3 3 3 5 5 6
(c)
5 5 8 3 8 3 8 3 8 8 3 8 3 5 6

(d)



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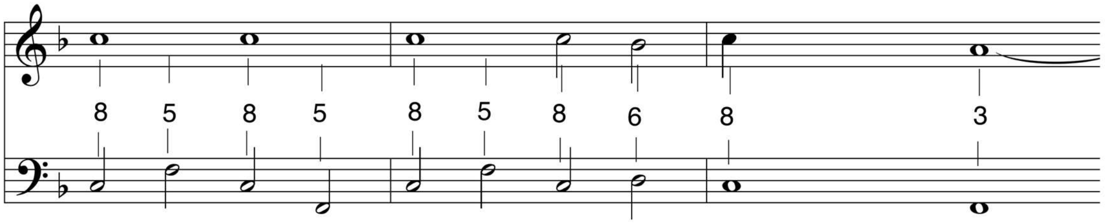
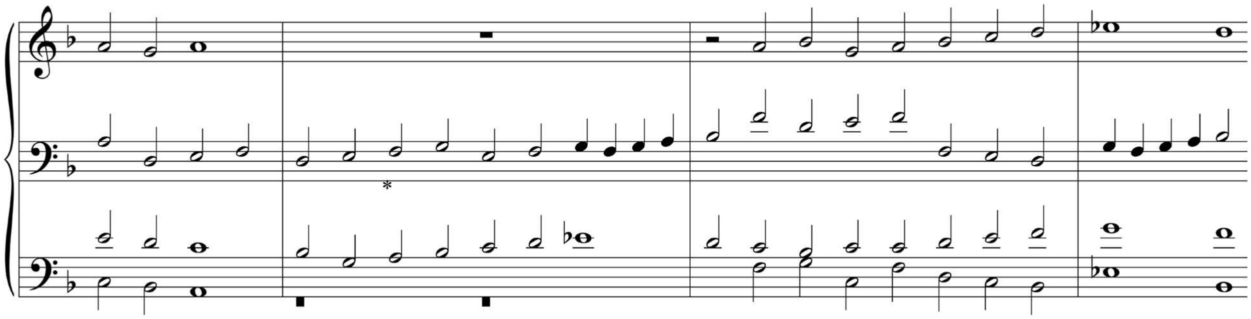


It is highly notable that many of chord chains appear alongside instances in which the *soggetto* is accompanied with a bass, forming a note-against-note-style *bicinium*. This can be seen in Example 2.4 above; after the duo treatment, the subject is subsequently repeated and "fleshed-out" with chords. Even though the bass lines under the repeated *soggetto* vary, the *a2* initial treatment suggests that the chords were *conceived* within the framework of a duo that functions as a treble-bass skeleton.

The bass lines in Example 2.4 above are also worth noting. The bass line of the last iteration moves in parallel twelfths with the subject; bass lines moving in parallel thirds, sixths, or twelfths with the treble are occasionally seen. More common, however, are bass lines that leap about as trebles are accompanied with chains of 5/3 chords. In fact, this leaping bass is close to being a defining feature of the chord chains in general. Both leaping and parallel bass-line types can also be seen in **Example 2.6** below**,** for example, which also begins with an *a2* texture and then repeats its subject with chords (also notable here is the unique three-staff notation).[19]

Example 2.6 Claudio Veggio, *Recercada per b mollo del primo tono,* mm. 8-11 from Ca, fascicle 5, 21r.



Here, the initial duo is in parallel sixths, and the chordal repetition of the subject is supported with a leaping bass line. The notion that a treble-bass skeleton served as scaffolding for chords is supported by the persistent lack of a clear structural tenor part. Instead, inner parts are often crudely written, with awkward leaps, or simply, in parallels with the soprano or bass. Harmonizations in three-voice *fauxbourdon* texture are also occasionally seen, and in some instances the composer builds momentum by placing a *soggetto* in a duo and then repeating it in a *fauxbourdon* version, followed by a version in full triadic harmony **(Example 2.7).**

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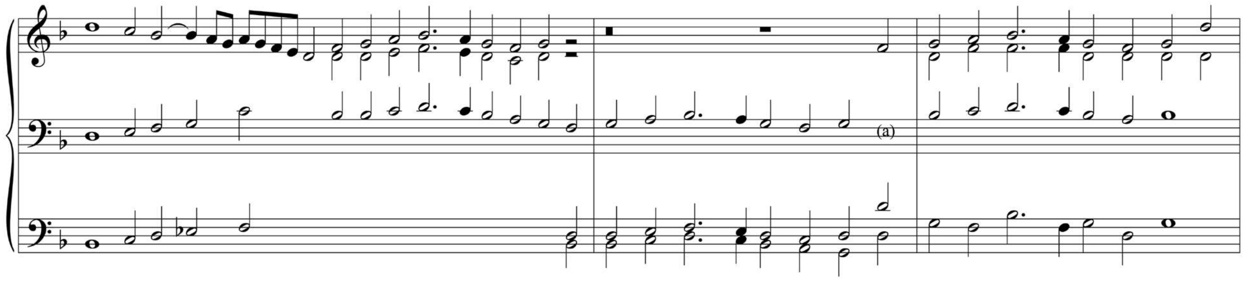
[19] See yet-to-be-determined page in Chapter 1 for more on this notation.

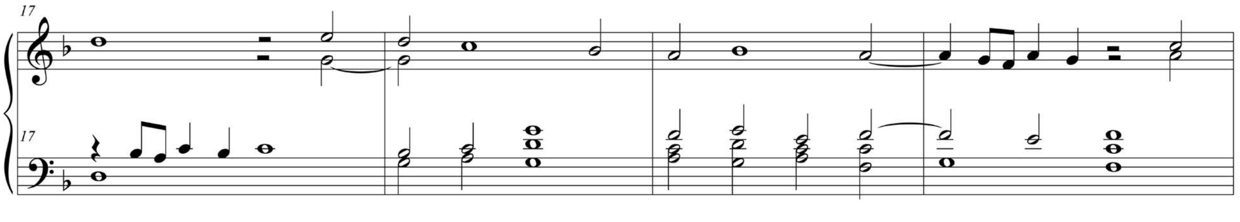
Example 2.7 Claudio Veggio, *Recercada per b mollo del primo tono,* mm. 37-39, from Ca, fascicle 5, 21v.



(a) facsimile of manuscript unreadable.

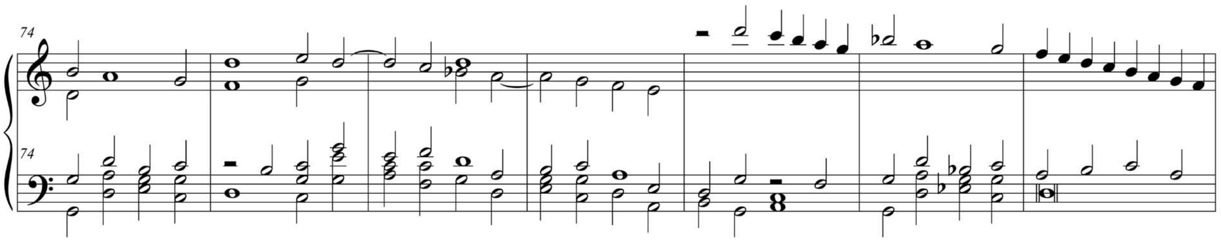
Noteworthy in all of the examples is the crude nature of the inner voice leading. I would again suggest a link with idiomatic performance at the expense of abstractly conceived counterpoint. The idiomatic nature of the chord chains is further highlighted by occasional harsh dissonances that appear as a result of forming a triad over either a bass or treble note while the other parts clash against it (the chord chains in the follow examples are not counted as "pure" undecorated examples as tallied above). Examples of these dissonances can be observed in Fogliano's Lydian *Rcerchada di Jacobo fogliano da modena* (**Example 2.8)**.

Example 2.8 Fogliano, *Rcerchada di Jacobo fogliano da modena,* from mm. 17-20, from Ca, fascicle 2, 2r; facsimile, Ca, fascicle 2, 2r.



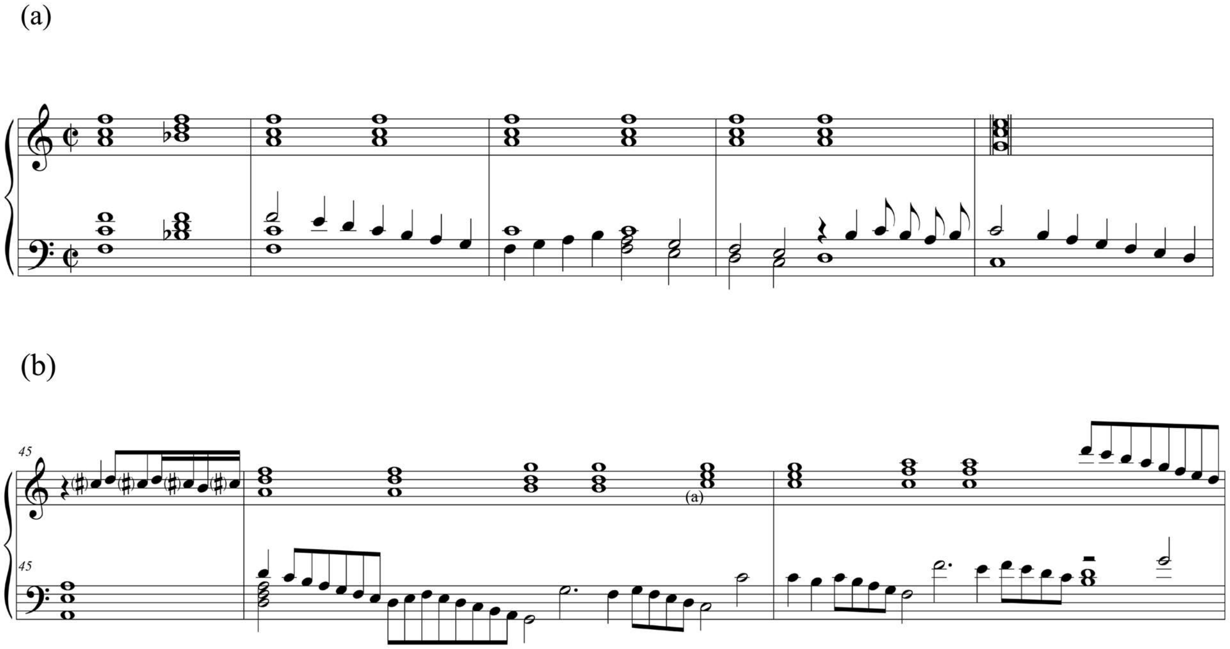
Here, the left-hand chords seem to have been formed as a kind of triadic "reinforcement" of the bass, without any consideration of how the reinforcement notes clash with the dissonant part of the suspension. The same thing can be seen in Cavazzoni's *Recercare Primo* from his 1523 printed volume (**Examples 2.9)**.

Example 2.9 Marco Antonio Cavazzoni, *Recercare Primo*, mm. 74-80, from *Recerchari, Motetti, Canzoni Composti per Marcoantonio di Bologna* (Venice: Vercelen, 1523).



These instances indicate a relationship with keyboard playing, not vocal counterpoint, as the triadic harmonization of the bass note occurs without consideration of the upper part. The process seems simple and mechanical; the reinforcement notes fit naturally under the hand, suggesting that they are generated by playing, not by the rules of counterpoint. This notion is supported by the fact that the subject is isolated on the top staff; according to the conventions of IKT, this means that it was meant to played by the right hand, with the chords in the left. This links it to the *dispositione di mano* – the muscle memory – of the player. The process can be applied to treble notes, too, producing a particular effect that is rather unique to early *cinquecento* keyboard music (see **Example 2.10**). In the latter, however, the dissonances are lessoned somewhat by the simple scalar *passaggi* in the left hand, creating a texture again evocative of the later toccata.

Example 2.10 (a) Marcoantonio Cavazzoni, *Recercare Primo*, mm. 1-5, from *Recerchari, Motetti, Canzoni Composti per Marcoantonio di Bologna* (Venice: Vercelen, 1523); (b) Claudio Veggio, *Recercada per quadro del primo tono,* mm. 45-47, from Ca, fascicle 5, 19v.



The analytical process of isolating these undecorated chord chains highlights certain distinct musical features:

1) chords are primarily root-position triads, with a few 6/3 chords
2) the chords in the chains all principally move at the rhythmic level of the minim
3) chord chains tend to be treble-driven, with trebles typically consisting of either ricercar subjects or fragments clearly identifiable as melodies; these melodies are typically conjunct
4) intervals between treble and bass are usually either thirds, fifths, or octaves (and occasionally sixths)

5) the bass typically leaps, suggesting a role as harmonic driver of the triadic harmony (although somewhat common is motion between the bass and treble in parallel thirds, sixths, and twelfths)
6) the middle voices typically demonstrate crude counterpoint, with frequent parallels and awkward leaps; occasionally reinforcement notes supplement the four-voice texture.

One gets the sense that voice leading is driven by hand position over counterpoint. The crude counterpoint is especially highlighted by contrasting these instances – which as described earlier are *exclusively* in four voices or more – with passages of undecorated chord chains in three-voice homophony. In these latter cases, the inner-voice motion is much more independent.

Within the group of undecorated chord chains I have isolated, a few sub-categories can be observed. For example, a “classic” type can be seen in the ricercars, identifiable through their function of harmonizing a subject. This separates them from brief instances of undecorated chords that occur within passages that are otherwise made up of ornamental textures. The functional context of harmonizing a subject is key; as I will argue shortly, the technique of *sonare a consonanze* may have developed expressly for this purpose.

Also notable as a separate sub-category are cadential passages: these can be identified through the use of formulaic cadential voice behavior, and stereotypical figuration (such as syncopations). Cadences in *cinquecento* keyboard music are usually marked by diminution patterns and figures – equally stereotypical in nature – and these undecorated instances are somewhat rare. The fact that cadences and chord chains are similar should cause no surprise – the links between homophony, cadences, and the emergent tonality of the late sixteenth century have been long understood, and evidence of these links can be seen in the leaping, cadence-like bass motion typically seen in the chord chains. In a classic piece of scholarship, Edward Lowinsky points to the link between dance music – particularly the ground-bass patterns of the late sixteenth and early seventeenth centuries, such as the *Romanesca*, the *Passamezzo*, and the like – and tonality.[20] In light of this, it is interesting to note that several of the manuscripts examined in this chapter (including the Castell'Arquato collection and Venice 1227) also include dance settings that oftentimes appear side by side with settings of liturgical melodies. [21]

Santa María's Playing in *Consonancias*

The existence of the Italian *consonanze* – although supported by the musical evidence presented – is not documented in any extant Italian primary source. However, its existence is supported by a sixteenth-century *musica pratica* treatise, albeit one from another national tradition: Tomás de Santa María's 1565 *Arte de Tañer Fantasia,* a large-scale Spanish *musica pratica* treatise dedicated to the art of playing in *fantasia.*[22] Published in two volumes, the treatise is devoted to teaching the beginning student a complete method for playing in *fantasia*. The first volume provides basic musical knowledge essential for the keyboardist – such as information on intervals, hexachords, modes, time values, and the like – as well as information on technical aspects of playing such as fingering and (as was considered a technical aspect for sixteenth-century musicians) the application of *glosas,* or diminutions. After absorbing this information, the student then moves on to the second book, whose aim is to "teach the art of the fantasy in practical music, so that it may be achieved with a minimum of time and labor."[23]

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[20] See Edward E. Lowinsky, *Tonality and Atonality in Sixteenth-Century Music* (Berkeley and Los Angeles: University of California Press, 1961). See especially 3-15; 62-71.

[21] Another element pointing to the close relationship between cadences and *cinquecento* keyboard playing and music is the tendency for individual ricercar *soggetti* to be identical to cadential figures.

Lastly, it should be noted that there is distinct "class" of three-voice chord chains; some of these behave in similar fashion to the "classic" type, although more typical are three-voice passages in *fauxbourdon* style. As mentioned earlier, chord chains in three-voices tend to have more independent voice leading.

[22] Santa María, *Arte de tañer fantasia.*

The cornerstone of Santa María's *fantasia* method is a technique called "playing in consonances" (*tañer a consonancias*); he devotes a considerable amount of space to it, and notably establishes it as a precursor to common technique such as bicinia and "species"-style counterpoint. He even acknowledges that it may seem odd to some that he begins with four-part chordal harmonies instead of two-part counterpoint, explaining that their importance to his technique as a whole justifies the unusual disposition of the treatise:

> Assuming then this fundamental principle that we have established for all practical music, which is that we have only four consonances and three dissonances, we must now proceed with the observation that the usual way of playing consonance chords is in four voices and compasses and contains *within it two-and three-voiced playing* (emphasis mine). Therefore we shall treat each type separately, that is, consonant chords of four voices, and those of two and three. And although the natural procedure according to numerical order would require that we treat two voiced [consonances] first, three-voiced next, and four-voiced last of all, yet because those in four voices are the most common and the most essential, encompassing and containing within them those of two and three voices, we shall therefore treat them first, followed by those in two and last of all those in three.[24]

Essentially, Santa María's "playing in consonances" is simply playing chords. Santa María's specific instructions can be summarized as the following: a bass line is added to a treble part, after which the middle parts are formed of consonant intervals that complete 5/3 or 6/3 triads. Rather than allowing for freely created bass lines, however, Santa María provides specific patterns, based upon the interval between the bass and treble. (**See Example 2.11**). This is precisely the hypothetical Italian *sonare a consonanze* just described. Santa María classifies his "consonances" (or chords) according to a "best-to-worse"-style ranking system based on the disposition of the inner parts and, ultimately, the resultant sonorities.[25] Demonstrating largely through an encyclopedic collection of examples, Santa María explains that the multiplicity of ways of filling in the chords is essential to the technique; they are needed in order to maintain smooth and proper voice leading:

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[23] Ibid., 2:1 "..cumplir del todo el principal intento que arriba diximos, que es enseñar el arte del fantasia de la Musica, practica, para que en breve tiempo y con menos trabajo se peuda alcançar." Translation by Howell and Hultberg, Santa María, *The Art of Playing the Fantasia,* vol. 2, 1.

[24] "Presupuesto el fundamento que hemos puesto de toda la Musica practica, y como solamente tenemos quatro consonancias, y tres dissonancias, agora passando mas a delante, se a de notar que el comun tañer a consonancias, es a quatro vozes, loqual encierra y contiene en si, el tañer a duo y a tres. Y por tanto trataremos de cada cosa en particular, es a saber de las consonancias a quatro vozes, y de las de a duo y a tres. Y avunque el natural orden de prceder, segun la questa de los numeros, pedia tratassemos primero de las de aduo, y despues de las de a tres, y alapostre de las de a quatro, per porque las de a quatro son mas communes, y mas essenciales, por quanto encierran y contienen en si las de aduo, y las de a tres, por tanto trataremos primero dellas, y despuse de las de a duo, y a la postre de las de a tres." Santa María, *Arte de tañer fantasia,* 2:12. Translation by Howell and Hultberg, Santa María, *The Art of Playing the Fantasia,* vol. 2:39.

> These variations among chords are so necessary that without them one could not play in chordal style; for if we did not utilize such variant forms when playing in two or three or more notes that ascend or descend by step or by leap in four-voiced imperfect consonant chords of the same species (such as 10ths, or 13ths or their double or triple compounds), we would produce two or more successive octaves, or two or more successive octaves and 5ths together, according to number of notes of the ascent or the descent.[26]

Notable is Santa María's emphasis on a treble-bass polarity; indeed, it is the entire structural foundation of the technique. This runs contrary to traditional views of modal theory in the Renaissance, in which the tenor-superius duo served as the structural foundation – in a practical sense until the mid-fifteenth century, and throughout the sixteenth century from a theoretical perspective.[27] Santa María writes:

> We should know that though a consonant chord may be of three, four, or more voices, it is nevertheless identified by reckoning from the bass to the treble, the outer voices; for

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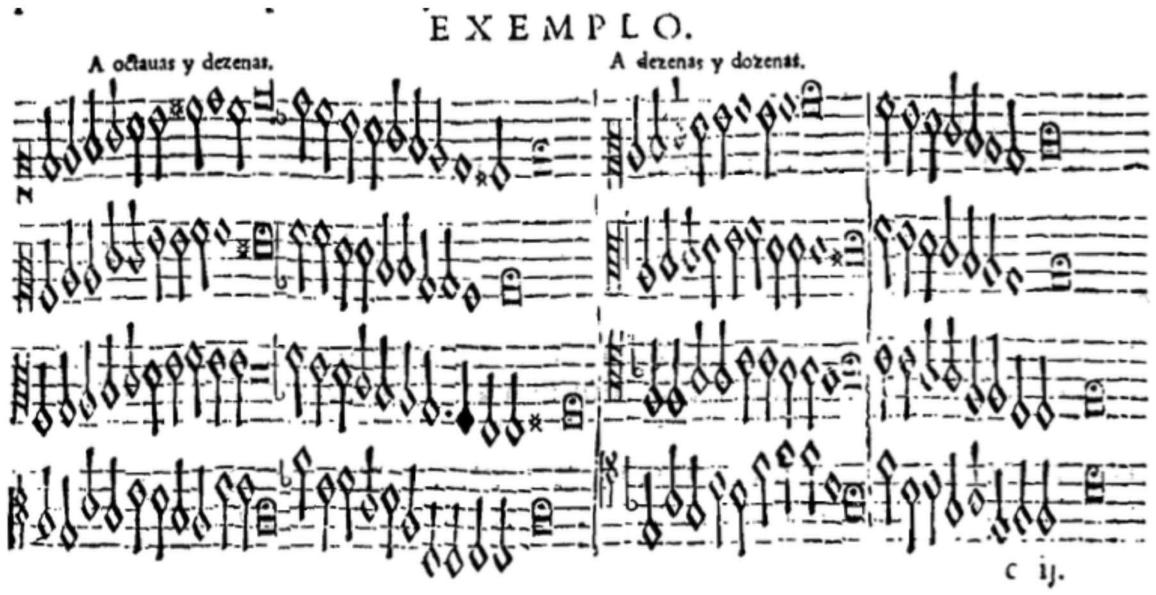
[25] For a thorough description of Santa María's method, see Roig-Francoli, "Compositional Theory," 206-14. The chords are classified by certain "qualities" – factors such as pitch selection, distribution, doubling, and voicing.

[26] "Estas differencias de consonancia son tan necessarias, que sin ellas no se puede tañer a consonancias, porque si tañendo a quatro vozes y subiendo o baxando arreo, o de salto dos o tres punto o mas a consonancias imperfectas que fean de una mesma spetie, assi como a dezenas, o a trezenas, o sus decompuestas, o trico impuestras, no usassemos destas differencias se darian dos octavas o mas, una tras otra o juntamente dos quintas y dos octavas o mas unas tras o tras, segun los puntos que se subiessen o baxassen." Santa María, *Arte de tañer fantasia,* 2:15; English translation by Howell and Hultberg, Santa María, *The Art of Playing the Fantasia,* 2:48.

[27] See Bernhard Meier, *The Modes of Classical Vocal Polyphony,* rev. ed. (New York: Broude Brothers Ltd., 1988); see 1:47-88, on the importance of the superius-tenor framework for modal identification in sixteenth century four-voice polyphony.

> the inner voices, alto and tenor, serve solely to *accompany and to fill out the space* (emphasis mine) between the outer parts in the successive ascent or descent of the four-voiced chords, which are generally made up of rising or falling minims.[28]

Example 2.11 Santa Maria demonstrates how to "rise and fall with other consonances" ("*subriere o baxare con otras consonancias*"); he is referring specifically to the consonances between the treble and bass, here in the pattern of alternating octaves and tenths, and tenths and twelfths. Santa Maria, *Arte de tañer,* vol. 2, 14.



At the same time, as Miguel Roig- Francoli points out, the chords are formed from the bass upwards; thus, although the soprano is harmonized and ostensibly drives the technique as the starting place, the bass arguably holds the important functional role.[29]

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[28] "Es da saber que avunque qualquiera consonancia se de a tres, o a quatro vozes o a mas, con todo eso siempre la consonancia se entiende y se quenta desde el contrabaxo al tiple, que son las vozes extremas, porque las vozes intermedias, que son tenor y contraalto, solamente sirven en las consonancias de accompañamineto y de hinchir el vazio que ay entre las extremas quando se subiere o baxarearreo, a consonancias dadas a quatro vozes, loqual comunmente se haze subiendo o baxando minimas". Santa María, *Arte de tañer fantasia,* 2:14v. English translation by Howell and Hultberg, Santa María, *The Art of Playing the Fantasia*, 2:43.

[29] Roig-Francoli, "Compositional Theory," 209. Roig-Francoli notes that, in examining Santa María's examples: "it is best to double the bass, regardless of its function within the triad. Looking at his classification by degrees, it will also be noticed that sonorities with larger intervals the bottom are more desirable than those with smaller intervals at the bottom." Elsewhere Santa María states that, in an unusual departure from standard sixteenth-century theory, the mode of a given composition should be determined by the soprano, a function typically given to the tenor. Ibid., 41.

Santa María's technique of playing in *consonancias* results in a musical texture comparable to the Italian chord chains seen above: a melody or melodic fragment harmonized with triads. In both, the harmony moves regularly in block minim chords. It is easy to speculate that a technique similar to Santa María's could have been used in the Italian examples, if we assume that they also were the product of a similar system of improvisation. Notable similarities include the functional role of the treble-bass skeleton, the triadic harmonization, and the even rhythmic motion at the minim. Both notably demonstrate a subservient role for the inner voices, which for Santa María "serve solely to accompany and to fill out the space between the outer parts"; the same subservient role is seen in the crude inner-part writing in the Italian chord chains. Also notable are the similar musical contexts in which Santa María's *consonancias* and the Italian chord chains are observed. For Santa María, the *consonancias* can be used to harmonize *passos*, short motives comparable to a subject. In his treatise, Santa María demonstrates various ways in which to treat a *passo* in a contrapuntal texture.[30] These include using the *passo* in duos and trios with and without imitation. Another manner of treating a *passo,* according to Santa María, is in *consonancias,* resulting in a chordal texture comparable to the chord chains seen earlier, with a subject or melodic fragment placed in the top voice with a triadic accompaniment. A *passo* is essentially what Zarlino calls a *soggetto* – and, of course, comparable to the *soggetto* of the sixteenth-century ricercar. Although the consistent application of *soggetti* in imitative points is the structural principal of the imitative ricercar, the preludial keyboard ricercars examined earlier use short subjects or fragments of subjects, albeit in far looser fashion, despite their lack of pervasively imitative textures.[31] It is notable that many of the instances of chord chains are used in precisely the same way as in Santa María's treatise: to harmonize a *soggetto* that is placed in the treble.

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[30] Peter Schubert provides a chart demonstrating them. Peter Schubert, "Counterpoint Pedagogy," in *The Cambridge History of Western Music Theory,* ed. Thomas Christensen (Cambridge: Cambridge University Press, 2002), 522.
[31] For a thorough overview of the *passo* and Santa María's technique of using them, see ibid., especially 519-25.

Not all of the chord chains are used to accompany faster-moving *soggetti,* however. Many instead treat slower-moving treble parts, which are often highly static (see Example 2.2e above, and the Cavazzoni excerpt that opens the chapter). In fact, the Italian chords could be placed into two broad groups, based on their durational values: those that move in minims (these tend to be melodic fragments, ricercar *soggetti*, or cadences), and those that move in semibreves (these tend to be static). It is interesting to note, however, that even the slower treble melodies are often *harmonized* in minims, possibly indicating that the same generative technique was used in both categories. Interestingly, Santa María's technique shows precisely this same thing – melodies in semibreves are to be conceived as split into minims when applying the technique of *tañer a consonancias*.[32]

There are a few important differences between the Italian *consonanze* and Santa María's *consonancias.* For example, while Santa María's chords are strictly in four voices, the number of voices in the Italian examples is variable. This may be due to the constrictions inherent in their respective notation systems; Spanish organ tablature demanded four voices as part of its very system (each line of tablature represented a part), while IKT allowed a much freer treatment of voices and voice leading. One also gets the sense that, while improvisatory, Santa María's method was very much rooted in a kind of *counterpoint* procedure. For example, Santa María's ranking system was designed to enhance the independent voice leading of the inner parts, and his musical examples are in *partitura,* not tablature. In contrast, the *cinquecento* music often shows gross negligence in inner voice leading; parallel intervals are common, and the overall texture is treated with great freedom. One gets the sense that the Italian music was influenced by pure *playing* rather than counterpoint; that is, chords were generated by *dispositione di mano* – physical action and hand position – not by the abstract movement of independent parts. This is highlighted by the use of short melodic sequences, shifts of range, "reinforcement" notes, and clashing dissonances seen earlier. In this, the Italian chords are truly conceived as chords – from a purely practical perspective, generated by *disposizione di mano* rather than by theory.

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[32] For Santa María's advice on playing semibreves in *consonancias*, see vol. 2, chapter 12-22. Santa María, *Arte de tañer fantasia,* 2:48-56; for an English translation, see Santa María, *Art of Playing the Fantasia,* 2:156-84.

Nonetheless, the similarities demonstrated so far encourage a reading of the Italian settings as related to a *method* of improvisation, much in the same way that Santa María's prescriptions create a step-by-step system of learning to play in *fantasia*. I would speculate that the technique of *sonare a consonanze* was taught orally, within a student-teacher dynamic. It should be stressed that there is no reason to suspect a direct link between the Spanish *consonancias* and the Italian *consonanze*; rather, the Italian version would have been a similar but separate phenomenon, in the same way that sixteenth-century counterpoint treatises from diverse national traditions show basic similarities.

Of course, as I make the case for a specific comparison, it must be noted that both Santa María's *tañer a consonancias* and my hypothetical *cinquecento* technique can be placed in a much wider context. There are many instances of "chordal thinking" in other sixteenth-century theoretical sources, seen in, for example, the well-known "consonance tables" of Pietro Aron, Zarlino, and other theorists.[33] Both Santa María and the *cinquecento* keyboard music examined in this chapter should therefore be seen within the context of the emergent centrality of the treble-bass pair in sixteenth-century composition and theory (even as the tenor maintained its role in modal identification). As Benito Rivera indicates, there seems to be a strong connection between this mode of thinking and instrumental practices, noting that two early sixteenth-century treatises that indicate a chordal musical conception, by Simon de Quercu and Johannes Singer, can be linked to instrumental music.[34] In addition, *sonare a consonanze* also foreshadows the basso continuo era; as already noted, Banchieri's versets are the first example of *partimento,* and the music here suggest that the practice of using a bass for harmonic improvisation might have existed well before the beginning of the seventeenth century. Although the Italian chord chains – like Santa María's *consonancias* – are used to harmonize a *soggetto* in the treble voice (that is, a given soprano note is the starting place against which the bass note is chosen to harmonize it), the *harmonies* are primarily generated by the bass.

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[33] Even within this broader context, however, the Italian examples are notable for their obvious relationship to keyboard playing – to *dispositione di mano.* For more on consonance tables in Renaissance theory treatises, see Bonnie J. Blackburn, "On Compositional Process in the Fifteenth Century," *Journal of the American Musicological Society* 40 (1987): 217-19.

The harmonic emphasis of the treble-bass skeleton in Santa María's consonance technique and in the Italian method ties these practices to later ones. As Johann Menke points out, seventeenth-century improvisation was also grounded in a treble-bass skeleton; Menke identifies the treble-bass frameworks in these cases as *ex centro* sound progressions, so called because they "emphasize the 'surface' of the music."[35] I would especially like to highlight here the idea of *sonority,* that the aural effect of playing chordal harmonies on a keyboard instrument could have driven the development of methods such as Santa María's *consonancias* and the Italian *consonanze*. The aural effect of playing full polyphony on a keyboard instrument –

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[34] These two relatively obscure treatises are particularly "progressive" in their vertical approach to harmony. See Benito V. Rivera, "Harmonic Theory in Musical Treatises," *Music Theory Spectrum* 1 (1979): 80-95. Rivera ties these treatises specifically to instrumental practice; as he explains, "There can be no more question that all chord combinations are meant to be reckoned from the bass upwards. Indeed one cannot imagine a more natural approach. It is of interest that prior to his transfer in 1508 to the court of Maximilian I in Vienna, de Quercu had served as a singer in the court of the Duke of Milan. The lively practice of instrumental music in both places apparently exercised a great influence upon him." Ibid., 85-86.

[35] Menke, "Ex Centro," 70.

especially an organ in a large acoustic – emphasized harmony over the movement of independent voices, and perhaps organists began to improvise in a way that reversed the process, with sonority generating the polyphony.

Ornamentation

As mentioned at the beginning of this section, I have deliberately (and somewhat artificially) highlighted undecorated chord chains. I also mentioned that, in particular, much more of the music suggests being conceived of – or generated as – plain chord chains that were subsequently decorated with diminution. I would like to suggest that these undecorated chord chains represent a clear glimpse of a generative process for many of the decorated chordal passages seen elsewhere.[36] This is especially apparent in the many instances of chord chains with very light ornamentation; in these, it is easy to see an underlying chordal structure underneath the short ornamental figures. **Example 2.12** demonstrates two such instances.

Instances like these are common; in fact, lightly embellished chord chains constitute a "standard" texture in the preludial ricercar and liturgical settings alike. In a sense, these lightly embellished passages function as a bridge between undecorated chordal sections and even more elaborate versions, allowing a glimpse as to how the technique of *sonare a consonanze* might have worked as an underlying compositional structure in seemingly thoroughly polyphonic textures. The art of applying diminution to chords – which presumably was developed and taught

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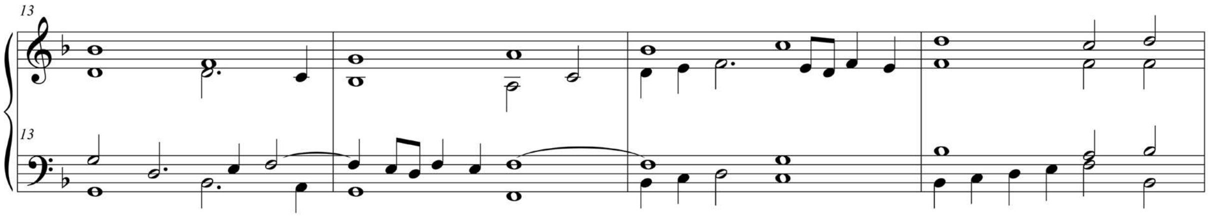
[36] At the same time, it is important to remember that the evidence at hand is comprised of *compositions*, not compositional exercises, and that these chord chains are therefore *reflections* of process, rather than explicit examples of it.

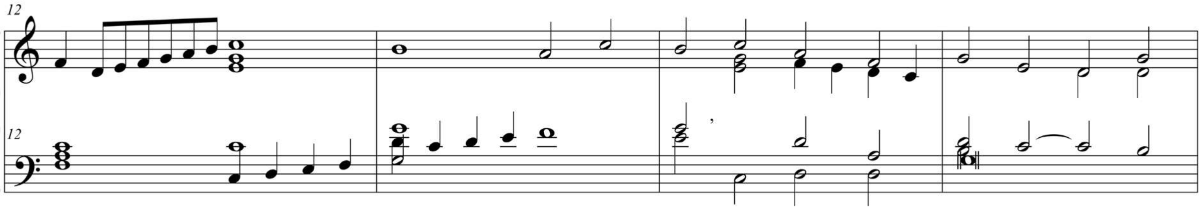
Example 2.12

a. Jacobo Fogliano, *Rcerchare de Jacobo fogliano,* mm. 13-16, from Ca, fascicle 2, 1.
b. Anon., *Vi' Recercada,* mm. 12-15, from Ca, fascicle 5, 24v.

a)



b)



through the act of playing – could be seen as constituting the fundamental art of the *cinquecento* organist, even underlying seemingly complicated contrapuntal textures.[37]

An examination of the repertoire suggests distinct categories of ornamented chord chains (it is important to note that these often overlap): (a) chords decorated by suspensions; (b) chords decorated with simple passing notes; (c) "toccata-style" passages in which chords in one hand accompany rapid diminution in the other; and (d) broken chordal sections. **Example 2.13** demonstrates instances of each category. The broken chords in Example 2.13d-f are striking, as

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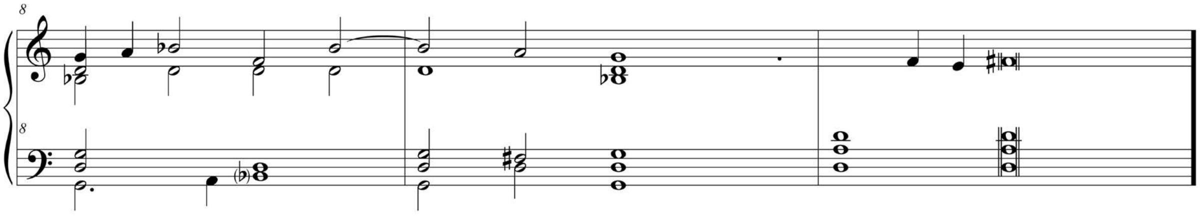
[37] Long understood, of course, is the fundamental role that embellishment played in Renaissance keyboard music. The only Italian source that explicitly deals with keyboard diminution is Diruta, although the many diminution treatises extant for melodic instruments could easily be applied to the keyboard. Dalla Casa indicates in this preface that his treatise is for "tutti gli Strumenti di fiato, & Tasti, & ogni sorte di Viola." See Girolamo Dalla Casa, *Il vero modo di diminuir, con tutte le sorti di stromenti,* 2 vols (Venice: Gardano, 1594), 1:[n.p]. See facsimile edtion, with preface, by Giuseppe Vechhi (Bologna: A. Forni, 1996). In the second volume, Dalla Casa provides ten *bastarda* division sets, as well as a setting of Rore's madrigal *Alla dolc'ombra* with diminutions applied to all parts; all of these could ostensibly be arranged for keyboard.

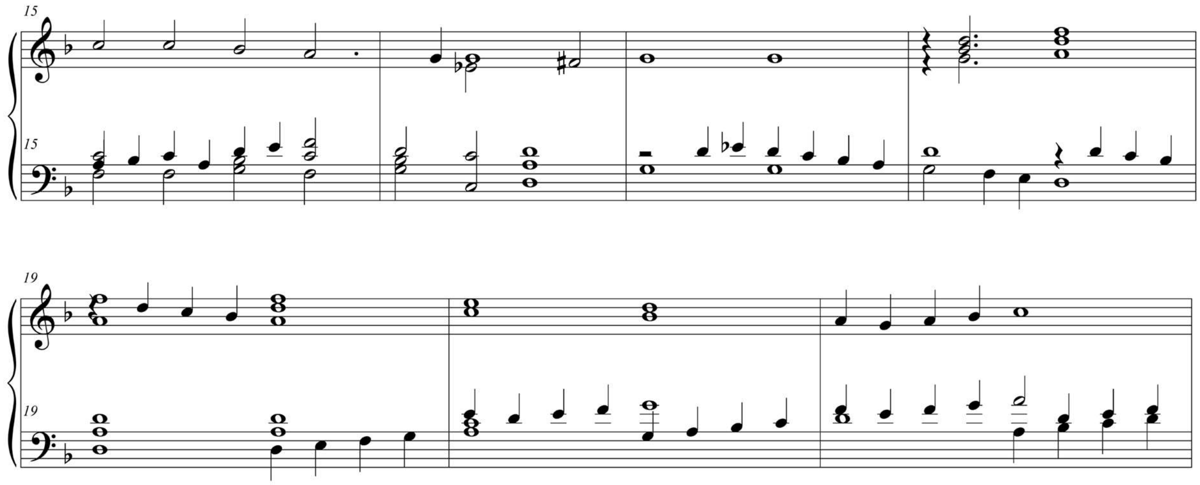
Example 2.13

a) Anon., *Primo ver[s]etto del Credo,* mm. 4-5, from Ca, fascicle, 8v.
b) Anon. Untitled composition, mm. 15-21, from Go.
c) Fogliano, *Rcerchare di Jacobo fogliano da modena*, mm. 38-41, from Ca, fascicle 2, 2v-3r.
d) Anon*., Missa de la dominica, Et as[c]endit in c[o]elum,* mm. 7-11, from Ca, fascicle 2, 12v.
e) Fogliano, *Rcerchare de Jacobo fogliano,* mm. 7-13, from Ca, fascicle 2, 1r.
f) Anon. Untitled composition, mm. 74-82, from Te, 13v.

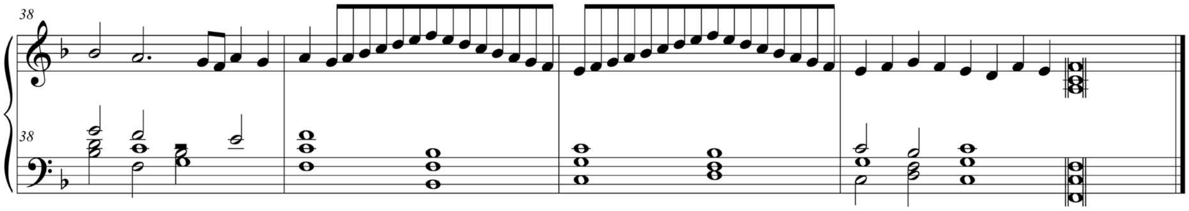
a) Anon., *Primo ver[s]etto del Credo,* mm. 4-5, from Ca, fascicle, 8v.



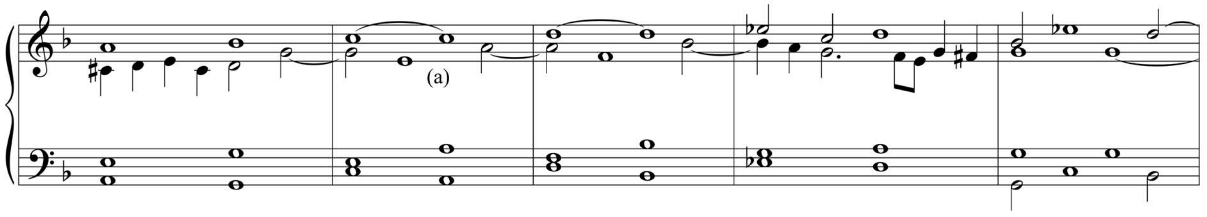
b) Anon. Untitled composition, mm. 15-21, from Go: "Simple" passing notes.



c) Fogliano, *Rcerchare di Jacobo fogliano da modena*, mm. 38-41, from Ca, fascicle 2, 2v-3r: "Toccata-style" passages

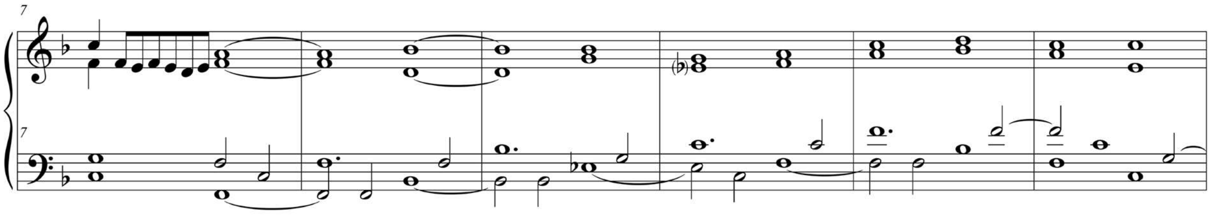


d) Anon., *Missa de la dominica, Et as[c]endit in c[o]elum,* mm. 7-11, from Ca, fascicle 2, 12v: broken chords.



(a) Alto *e′* is *d′* in ms.

e) Fogliano, *Rcerchare de Jacobo fogliano*, mm. 7-13, from Ca, fascicle 2, 1r: broken chords.



they foreshadow the later *style brisé* of French lute and keyboard music; they also clearly reveal a chordal conception. It is possible to imagine how patterns such as this – as well as simply conceived ornamentation schemes such as passing figures between the two hands – could serve as models for generating seemingly more complicated polyphonic structures. In particular, the quasi-*style brisé* instances – fundamentally based on the artful re-striking of notes from individual voices – seem to suggest the possibility of a "carving out" of polyphony from the underlying chord chain. This process could be combined with diminution and other facets of improvised counterpoint to generate seemingly complicated polyphony extemporaneously.

Sonare a Consonanze Extended: Harmonizing a Cantus Firmus

Passages suggestive of the technique of *sonare a consonanze* can be observed in liturgical keyboard music from the same group of sources as the ricercars (see **Table 2.1** earlier). A thorough examination of these passages reveals instances that suggest a compositional process involving the use of decorated chord chains. In these instances, chord chains are not only used to harmonize short *soggetti* that move at the minim level, but also slower-moving CFs as well. These CFs typically move in semibreves, similar to the slower static melodies observed earlier. In general, these settings place the plainchant melody as a CF in one part, typically in the bass or the soprano (and occasionally the tenor), around which the other parts make florid counterpoint or form chordal structures elaborated with diminution.[38] Some settings treat the melody in paraphrased imitative points, although this is relatively rare.[39] Several settings appear to be freely composed with no obvious reference to the plainchant melody. That such a high degree of variety occurs in a small sample pool indicates that the CF-style setting was only one of many options for sixteenth-century Italian organists.[40] Having said that, I will focus here on the CF settings.

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[38] In general, keyboard versets in Italy became less based on plainchant as the sixteenth century progressed. See, for example, Trabaci's *Centi versi* for a set of liturgical versets without the use plainchant melodies. Giovanni Maria Trabaci, *Il secondo libro de ricercate & altri varij capricci* (Naples: Carlino, 1615); facsimile ed. (Florence: Studio per Edizioni Scelte, 1984).

[39] Some of these imitative sections are evocative of the imitative ricercar; Mischiati points to the ricercar-like setting of *Pange lingue gloriosi* in the hymn settings of Girolamo Cavazzoni. See the preface to Girolamo Cavazzoni, *Orgelwerke,* ed. Oscar Mischiati (Mainz: B. Schott's Söhne, 1959), 2:6.

The Castell'Arqauto manuscript collection contain three *alternatim* Masses as well as several settings of plainchant hymns. These liturgical versets often lack attribution; of the Masses, only the *Missa de la dominica* has one, to "Jaches" (usually presumed to be Brumel, following the suggestion of Knud Jeppesen; the musical style of this particular Mass seems closer to that of Marco Antonio Cavazzoni than to that of Brumel, however).[41] Of the three Mass settings, the *Missa de la dominica* treats the plainchant as a CF most consistently; even so, the treatment is often loose, with the CF often disappearing under figuration. Structural modifications such as omitting or adding notes to the CF, or inserting sections of toccata-like passagework in between CF phrases, are common.[42] The plainchant in the Missa *In Solemnitatibus Beate Marie* is also treated as a CF, but less consistently; in the *Missa dell'Apostoli,* it is impossible to follow any CF, as H. Colin Slim points out.[43]

The *placement* of the CF is significant. The *Missa de la dominica* consistently has it in the treble (at least, when it is possible to trace it under the figuration), with the exception of three verses in which it is in the bass, and one in which it is placed in the alto (the "Et in terra pax"). It should be stressed that, in this latter setting, the alto placement is not at all strict; the CF migrates to the treble midway through, and even when it is in the alto it is accompanied with simple triadic “reinforcement notes” above, in the manner seen in the ricercars earlier. The prominence of the chant in the treble here is notable, as both Santa María’s *consonancias* and the Italian chord chains involve a musical conception grounded in a treble-bass framework, and the hypothesized *sonare a consonanze* involves the harmonization of a melody in the treble.

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[40] It is notable that the majority of the settings in manuscript come from the large collection at Castell'Arquato. This may seem to indicate a disproportionate representation of music from a particular geographical location; that the extant sources of organ music from the period represent the tip of the iceberg is, of course, uncontroversial to state. Having said that, it is interesting to note the overall historical importance of organists from Emilia in the development of northern Italian organ playing in the sixteenth century. While the only existing organ music by composers such as Jacopo Fogliano (organist at the Duomo in Modena and brother of the theorist Ludovico) and Claudio Veggio is found in the Castell'Arquato archives, extant printed volumes of organ music by composers such as Marco Antonio Cavazzoni, Girolamo Cavazzoni, and Giulio Segni (a student of Fogliano, and also from Modena) highlight the importance of Emilian composers in the development of Northern Italian organ music: Segni was organist at San Marco from 1530 to 1533 and his compositions were prominently featured in the 1540 *Musica Nova*, and one of the most eminent San Marco organists in the sixteenth century, Claudio Merulo, came from Correggio, outside of Reggio Emilia, and ended his career in Parma.

[41] This piece is also examined in Knud Jeppesen,"Eine Frühe Orgelmesse aus Castell'Arquato," *Archiv für Musikwissenschaft* 12 (1955): 196-204.

[42] This is compounded by the usual obstacles encountered when analyzing music based on plainchant melodies, such as the possibility of local melodic variations and the application of melodic paraphrase.

[43] Slim, *Castell'Arquato,* 2:x.

The first *Christe* is a good example of the general style and CF treatment in *Missa de la dominica* **(Example 2.14)**. The CF is found at the top of the texture, presented initially as a single voice and then given “reinforcement” triadic harmonies in the right hand (measures 7-14); in these cases, the harmonization clashes with the other parts, again resulting in startling dissonance.[44] This can be clearly seen in measure 8, as the right-hand chords against the 7-6 suspension in the tenor part. Also noteworthy is the way in which the CF is set rhythmically; although the plainchant melody is presented in even semibreves, it is consistently divided into two minims, matching Santa María’s method of *tañer a consonancias*, as noted earlier. Overall, the style is clearly idiomatic for keyboard rather than for voices. The largely chordal nature of the setting is notable; the texture can clearly be imaged as a chord chain enlivened with added suspensions and ornamental figurations.

Slim correctly notes that “to deem [the *Missa de la Dominica*'s] movements as built on a cantus firmus would be a little misleading,” as “traces of the chant sometimes disappear.”[45] However, it should be stressed that, when it is present, the chant CF is consistently presented in the same manner – as two repeated minims, often reinforced with triadic notes – suggesting that

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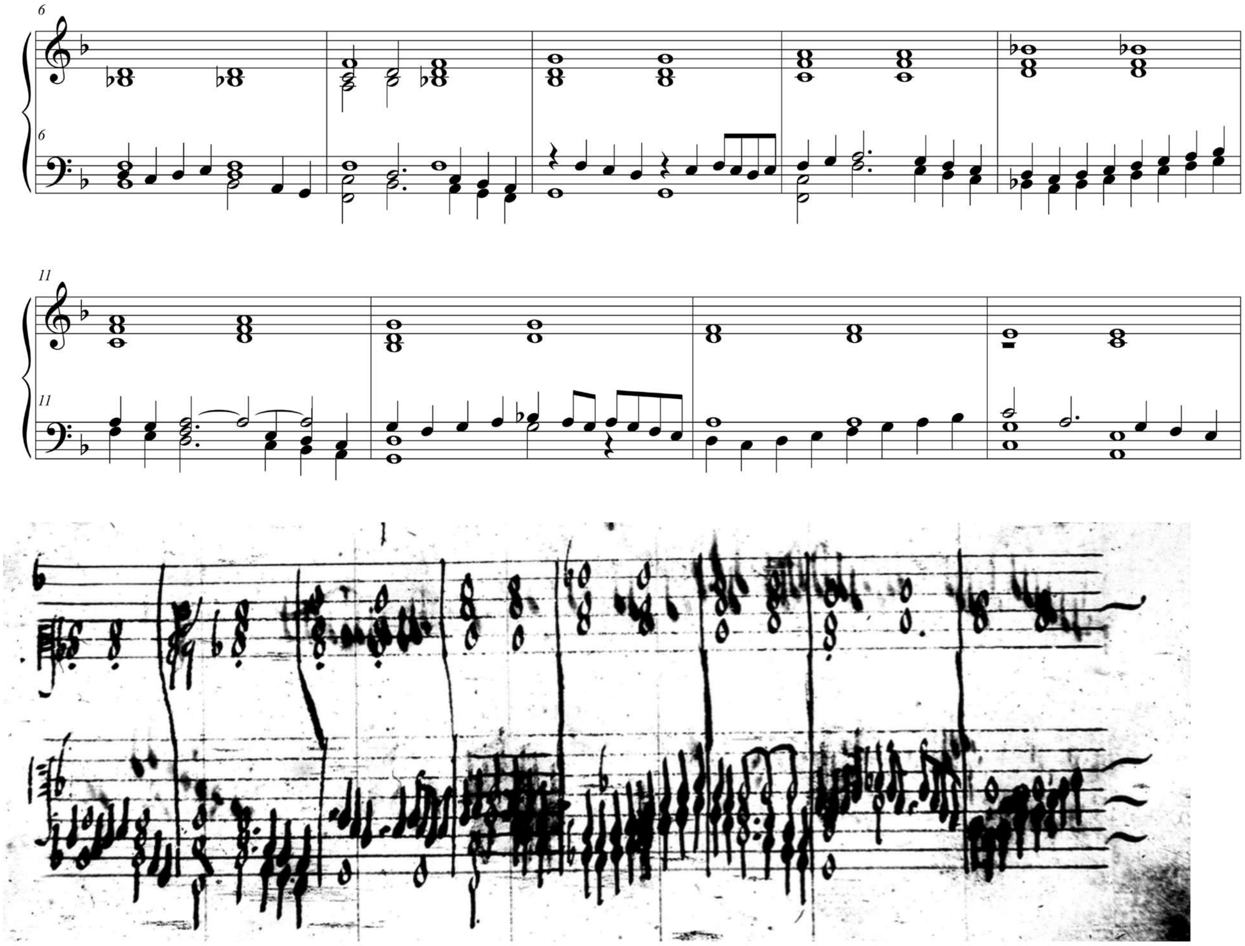
[44] The similarity to Cavazzoni’s style is noted by Slim; see preface to Slim, *Castell’Arquato* 3:x.

[45] Slim, *Castell'Arquato* 3:xii.

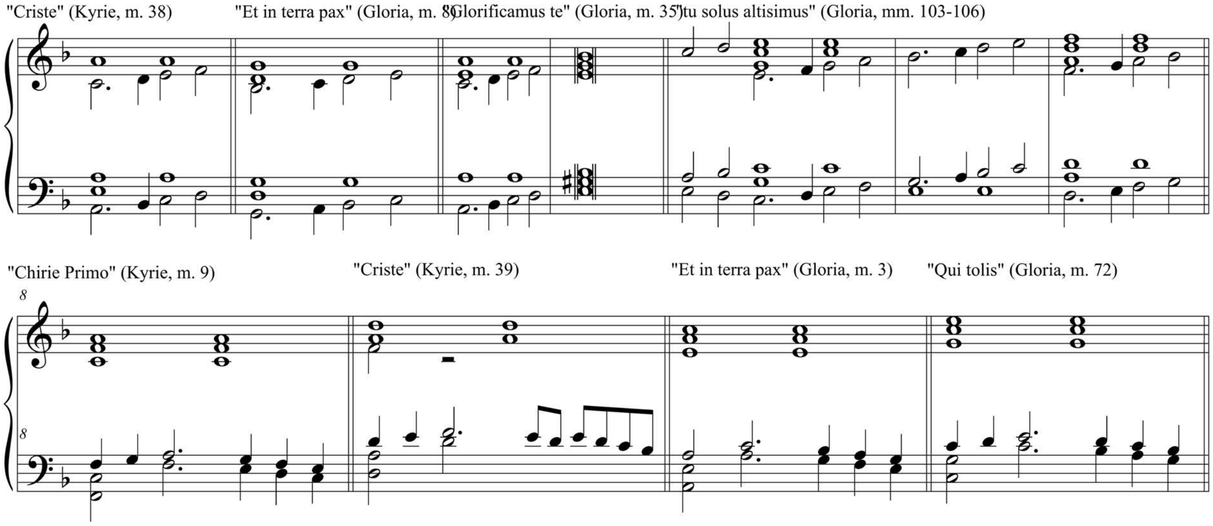
Example 2.14 "Jaches" *Missa de la domenica; Chirie,* mm. 6-14, from Ca, fascicle 2, 3; facsimile, Ca, fascicle 2, 3.



the manner of its application was consistent. In fact, I would suggest that it reflects a compositional process in which chords were generated by *sonare a consonanze,* after which extensive diminution was applied. As Slim suggests, the musical evidence does not suggest a strictly contrapuntal compositional procedure in which a CF was used; the technique of *sonare a consonanze,* with the application of diminution, is a highly plausible alternative.

This would, of course, align the Mass setting strongly with improvisation, and it is interesting to note that there is other evidence for keyboard improvisation present in the setting. For example, the texture relies frequently on parallel thirds and sixths (often applied in a highly idiomatic manner).[46] In addition, short passages and figures are consistently repeated, suggesting their use as internalized fragments that may have been taken from a stockpile of memorized figures. Much in the same way as the formulae cited in Chapter 1 and described in the Introduction, these are three-dimensional, that is, not single-line melodic figures, but complete contrapuntal constructions incorporating multiple diminution figures. The consistent nature of the figuration – with similar material often present in the same disposition – suggest that they were conceived as intact *units* (see **Example 2.15**).

Example 2.15 "Stockpile" figures from the *Missa de la dominica.*


"Criste" (Kyrie, m. 38)
"Et in terra pax" (Gloria, m. 8)
"Glorificamus te" (Gloria, m. 35)
"tu solus altisimus" (Gloria, mm. 103-106)
"Chirie Primo" (Kyrie, m. 9)
8
"Criste" (Kyrie, m. 39)
"Et in terra pax" (Gloria, m. 3)
"Qui tolis" (Gloria, m. 72)

I would suggest that the *Missa della Dominica* was primarily composed (or improvised) by the technique of *sonare a consonanze*. Of course, the music often has to be imagined as being reduced to an underlying triadic structure. A glimpse of such a structure can be viewed in another liturgical fragment, however. In the manuscript I-Vnm: Ms. It. IV 1227 (Ve) (**Example**

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[46] In a recent article Peter Schubert provides a list of techniques that could be used in improvised counterpoint. Peter Schubert, "From Improvisation to Composition," in Improvising Early Music (Ghent: Leuven University Press, 2014), 96.

2.16), the plainchant hymn *Veni Creator Spiritus* is harmonized simply.[47] The melody is placed in the top voice, but without any added figuration. Notable is the crude counterpoint, exemplified by the blatant parallel fifths and octaves. It is tempting to see this short hymn setting as a basic version of playing in *consonanze*. As in the Castell Arquato *Missa della Dominica* the chords here used to harmonize a plainchant melody in the treble; to produce something more elaborate, one would only need to add figuration to the basic chordal texture.[48]Turning now to the other two Masses from the Castell'Arquato collection, we see that, at first glance, they don't seem to use a treble-bass framework. Indeed, in the *Missa dell'Apostoli* the chant is virtually untraceable, save for a few instances. Slim attributed this to its "largely chordal nature."[49] Strangely enough, the *style* of the setting suggests a CF harmonized through playing in *consonanze*, even as the melody doesn't seem to correspond with the traditionally used plainchant.[50] (It is possible that the verset sets a local chant variant that deviates considerably from the one used in other *cinquecento* organ settings.) But I would challenge Slim's characterization of the setting being chordal rather than contrapuntal. If anything, the style of the setting is comparable to that of a preludial ricercar, composed of a patchwork of short sections with distinct textures and figurations; several of these settings consist of undecorated and decorated chord chains. In

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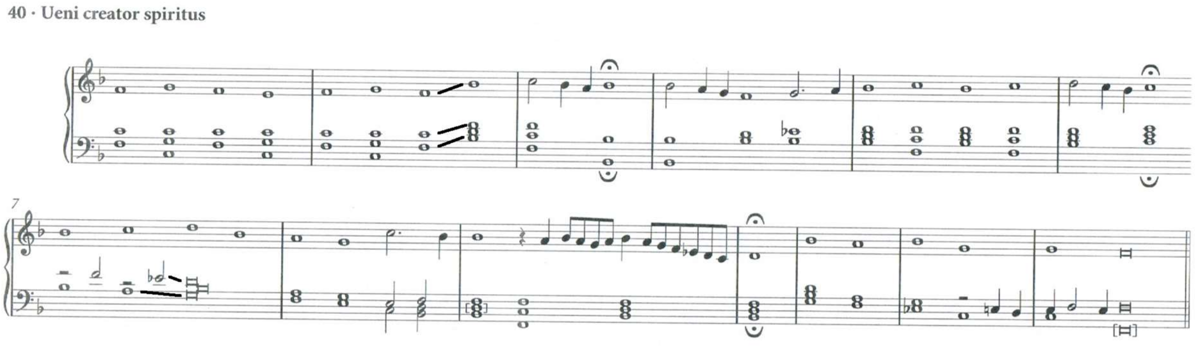
[47] Although this manuscript is primarily comprised of *balli* settings, there are also two short settings of hymns. For a modern edition, see Christopher Hogwood, *Balli per cembalo: 90 Keyboard Pieces from Early Italian Manuscripts* (Launton, UK: Edition HH, 2007).

[48] As already indicated, the treatment of the plainchant in all of the music examined here divides the music into two basic categories, with the plainchant material is either used as a CF or paraphrased and treated imitatively. The settings in which the plainchant is treated imitatively generally demonstrate more developed counterpoint than the CF settings. The setting of the *Patrem omnipotentem* from the Credo of the Castell'Arquato *Missa de la Dominica* examined above shows a markedly different style from the rest of the Mass; Slim echoes Knud Jeppesen in positing that the Credo could even be by another composer, although he points to some concurrent features with the rest of the Mass – for example, the use of parallel-third figurations in the left hand. However, even here, there is evidence for a chord-based procedure in certain sections; for example, in measures 19-20, the left hand demonstrates "bad" voice leading that is difficult to explain, even with the qualifier that Italian keyboard tablature didn't indicate voice leading as a by-product of notational convention. See Slim, *Castell'Arquato*, 3:xii

[49] Slim, *Castell'Arquato*, 2:x

[50] As used in settings by Girolamo Cavazzoni, Andrea Gabrieli, Girloamo Frescobaldi, and Claudio Merulo.

Example 2.16 Anon. *Veni creator spiritus;* from Ve. Reproduced from Christopher Hogwood, *Balli per cembalo: 90 Keyboard Pieces from Early Italian Manuscripts* (Launton, UK: Edition HH, 2007): 22.



general, I would argue that these indeed reflect the technique of *sonare a consonanze*, even as it is applied to seemingly free, fragmentary *soggetti* rather than to a CF from a traditional liturgical melody.

In the Missa *In Solemnitatibus Beate Marie,* the CF is used more or less consistently, but it is almost always placed in the tenor. This would suggest an alternative generative process, one distinct from the one described in this chapter. However, the texture is still frequently chordal in its orientation, and the *bass* serves as the driver of the harmony. We could easily imagine a generative procedure in which the tenor-bass framework is used as the fundamental structure, rather than a treble-bass framework; in this scenario the soprano would have been added as a *contrapunctus* to the core tenor-bass structure. The setting fits this description well: notably, it is often in a three-voice texture, which is unusual when compared to other *cinquecento* settings. The soprano often forms parallel thirds with other parts, suggestive of improvisation,[51] and the texture usually thickens to four voices in cadences. The use of a tenor-bass framework rather than a treble-bass framework highlights the important role of the bass; regardless of whether the central dyad is treble-bass or tenor-bass, it is the bass that drives the harmony. It is no accident that Banchieri gives basso continuo parts for his versets in *L'organo suonarino.*

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[51] See Peter Schubert's chart cited above; Peter Schubert, "From Improvisation to Composition," 96.

Girolamo Cavazzoni's Hymn Settings

Further evidence of *sonare a consonanze* can be seen in Girolamo Cavazzoni's published liturgical versets, found in his two published volumes of organ music (I will focus on his hymn versets here).[52] It is interesting to note that Cavazzoni's versets match exactly what a competent organist would be expected to be able to improvise in a liturgical context; this is demonstrated by a comparison with the famous San Marco *prove*:

> First: One opens a chapel book [choir book] and at random one finds the opening of a Kyrie, or a motet, and it is copied and given to the organist competing. Over this subject the organist should improvise strictly, not mixing together the parts, as in four singers singing separate [parts].
>
> Second: One opens the book of canti fermi at random, and a cantus firmus from an introit or something is copied, and given to the candidate, upon which he should play, drawing out the three parts [*cavando le tre parti*]; putting the cantus firmus once in the bass, another time in the tenor, then in the alto, and finally in the soprano. He should play strict imitations, and not play simple accompaniment.
>
> Third: The Cantor of the chapel will sing some verses from compositions that aren't used often, and the candidate must imitate and response [to the choir] in the tone and outside the tone; these improvisational tests will clearly indicate the worth of the candidate.[53]

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[52] One of Cavazzoni's hymn settings – the *Christe Redemptor Omnium* – is copied in the Castell'Arquato manuscripts.

[53] "Primo – Si apre il libro di Capella et a sorte si trova un principio di Kyrie, ovvero di Motetto, et si copia, mandandolo all'Organista che concorre, il quale sopra quell sugetto ne l'istesso organo vacante deve sonar di fantasia regolatamente, non confondendo le parti, come che Quattro cantori cantassero.

Secondo – Si apre il libro de'canti Fermi a sorte, et si copia un canto fermo o d'introito o d'altro, et si manda al detto Organista, opra il quale deve sonar, cavando le tre parti: facendo il detto canto fermo una volta in basso, l'altra in tenore, poi in contralto, et soprano: cavando fughe regolatamente, et non semplici accompagnamenti.

Terzo – Si fa cantar la Capella de'Cantori qualche versetto di compositione non troppo usitata, la qual deve imitar et rispondergli si in tuono, come fuori di tono: et quest cose fatte d'improvviso dan chiaro indicio del valor de l'Organista, facendole bene." Cited in Francescio Caffi, *Storia della Musica Sacra nella già Capella Ducale di S. Marco in Venezia* (Venice: Antonelli Ed. 1854); reprint (Milan: Bollettino Bibliografico Musicale, 1931), 28.

A few of Cavazzoni's settings paraphrase the chant, creating a texture not unlike that of an imitative ricercar. These settings match the description of the first *prova.* The majority of the settings treat the chant as a CF, which is comparable to the second *prova* (**Table 2.3** demonstrates Cavazzoni's treatment of the plainchant throughout the settings – these two broad categories also apply to the liturgical music in Castell'Arquato, as demonstrated earlier.) While Cavazzoni's settings demonstrate greater contrapuntal independence in their polyphonic parts when compared to the *Missa de la Dominica* or the hymn fragment in Venice 1227 – just as requested by the second *prova* ("‥ cavando fughe regolatamente, et non semplici accompagnamenti‥") – there are nonetheless traces of an underlying homophonic structure. In fact, the admonition to avoid "semplici accompagnati" – which is cast in direct opposition to a thoroughly imitative contrapuntal texture ("fughe regolatamente") – may very well imply chordal accompaniment.

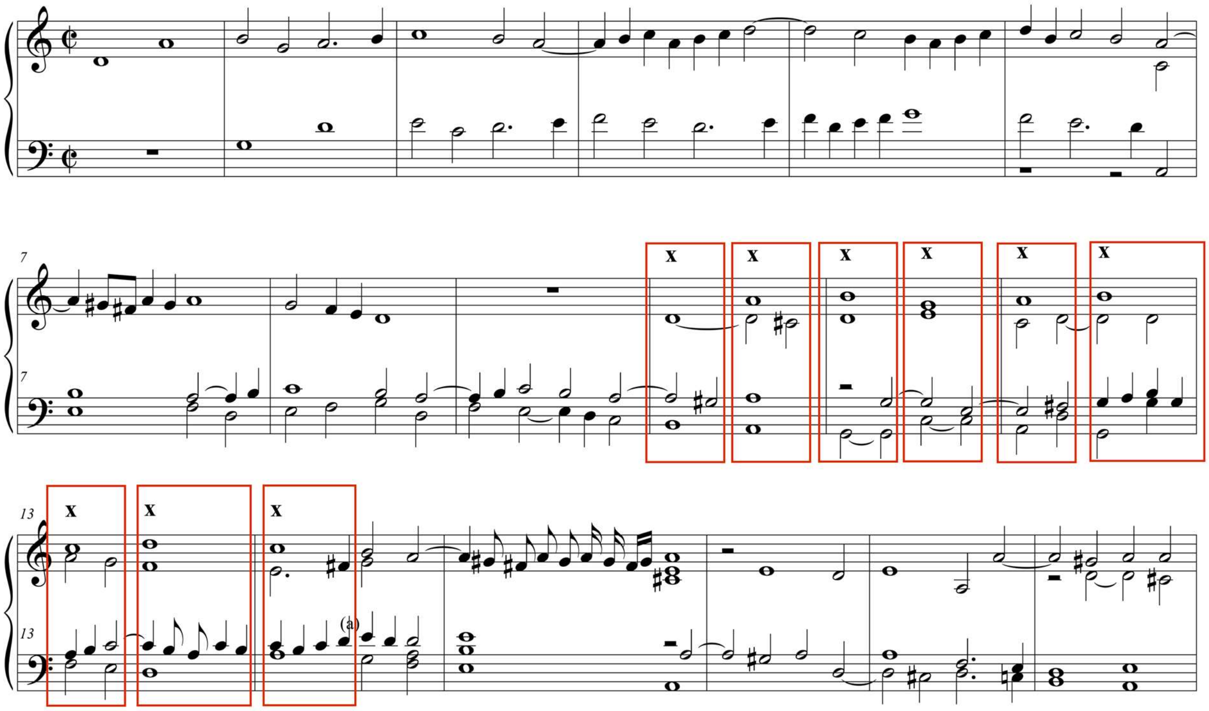
Table 2.3: Girolamo Cavazzoni: Treatment of Plainchant in Alternatim Hymn Settings

Ad Coenam Agni providi	CF chant in top voice.	CF statement preceded by imitative counterpoint paraphasing CF melody.
Ave Maris Stella	CF in bottom and top voices; paraphrase.	In the style of an imitative ricercar; CF treatment very free.
Christe Redemptor Omnium	CF in bottom and top voices.	CF melody paraphrased in imitation between CF statements.
Deus tuorum militum	CF in top voice.	Introductory duo paraphrases chant.

Ad Coenam Agni providi	CF chant in top voice.	CF statement preceded by imitative counterpoint paraphasing CF melody.
Exultet coelum laudibus	CF in bottom voice.	CF statement preceded by imitative counterpoint paraphasing CF melody.
Hotis Herodes impie	CF in top voice.	
Iste Confessor	No CF, although hymn melody is paraphrased entirely in top voice.	No traditional CF statement; in the style of imitative ricercar.
Jesu Corona Virginum	CF treatment in bottom voice and tenor.	
Jesu Nostra Redemptio	CF in tenor.	
Lucis Creator Optime	CF in bottom voice.	CF melody paraphrased in imitation between CF statements.
Pange Linuga Glorisi	No CF; hymn phrases worked in successive points of imitation	In the style of an imitative ricercar; five points of imitation based on successive phrases of the hymn melody.
Veni Creator Spiritus	CF in top voice with added figuration.	

Fitting the pattern that emerges in the *Missa de la Dominica*, the majority of Cavazzoni's CF-style settings place the melody in either the top or bottom voice. As in the Mass, this is significant, pointing to the role of the treble-bass framework. In his setting of the Vespers hymn *Ave Maris Stella* (**Example 2.17**), Cavazzoni begins with free imitation of the opening phrase of the plainchant hymn until measure 10, at which point the hymn tune enters as a CF in the top part. The harmonization at this point is similar to that seen in the *Missa de la Dominica* setting in

Example 2.17 Girolamo Cavazzoni *Hymnus Ave Maris Stella,* mm. 1-18, from CAVAZZONIG 1543, 20v.



(a) dot over *d′* in original.

Example 2.15 (the hymn melody is marked with *x*s while the chord structures are in boxes). While the effect is that of complicated polyphony, one can easily imagine an underlying structure of a simple chordal framework; in fact, the first chords are ornamented simply with suspensions and broken-chord patterns. It is interesting to note that the first segment to demonstrate signs of *sonare a consonanze* coincides directly with the arrival of the CF; up through this point, the introductory counterpoint paraphrases the chant melody in imitation. That is, musical-stylistic evidence for the technique arrives precisely where it is expected, being used to harmonize a slow CF statement of the chant in the treble.

The use of chord chains links Cavazzoni's versets to the Castell'Arquato repertoire examined earlier. I would like to suggest that, in the case of *cinquecento* keyboard playing, the harmonization of a melody through a treble-bass framework – the technique of *sonare a* *consonanze* – may have developed specifically in this liturgical context. I would also propose that this technique was a basic method used in the extemporaneous creation of liturgical music in Italy in the first half of the sixteenth century; it presumably continued, as the fact that the second San Marco *prova* warns the organist to not play "semplici accompagnamenti*"* surely indicates that some organists may have done just that.[54]

Sonare a consonanze and IKT

We can now return to the larger question, regarding the relationship between these practices and IKT's notational conventions. To begin, I would like to highlight two general tendencies in the above analyses: (a) the favoring of a sounding treble-bass structure over truly independent parts, and (b) the role of a regular rhythmic unit, that of the minim, for both melodic motion and for changes of sonority. These tendencies also apply to the chordal style in early sixteenth-century keyboard music in general. I would also like to point out that these observations correlate remarkably well with the IKT conventions highlighted in Chapter 1. We've seen in the previous chapter that IKT's practice of stem directions hides the polyphonic integrity of voices; at the same time, it creates a new set of "tablature voices." With this process, the *sounding* treble-bass pair takes precedence over the other parts. The music in this chapter also reveals influence of an underlying treble-bass structure: in liturgical music plainchant tends to be placed in the treble or bass rather than in the inner voices, and ricercar subjects are almost always found in the treble. Both are accompanied with triads in a homophonic texture, driven by the treble-bass framework of the *consonanze*; the inner voices exist only to fill the harmony, and often demonstrate crude counterpoint. Therefore both IKT and the music seen in this chapter stress the overall *sonority* of music over the precise contour of individual voices. In fact, I would speculate that the treble-bass conception in both the intabulations and in the abstract and liturgical music seen here reflect the *same* process – both conceptually and practically.

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[54] Lastly, there is also the possibility of organ accompaniment of *sung* plainchant; while there is not much musical evidence for this – the existing liturgical music are florid *alternatim* settings – Gary Towne argues for the possibility, and it is quite possible that this practice did indeed exist on some level. See Gary Towne, "Music and Liturgy in Sixteenth-Century Italy: The Bergamo Organ Book and Its Liturgical Implications," *Journal of Musicology* 6 (1988): 471–509. For another theory of sixteenth-century performance practice, one that suggests the solo singing of plainchant with organ accompaniment, see Arnaldo Morelli, “"Cantare sull'organo," 183-206.

The music in this chapter also shares a similar rhythmic approach with IKT and intabulation. In IKT polyphony tends to "coalesce" around regular rhythmic units, through practices such as breaking longer notes into shorter ones. This results in a general reduction of the independence of the model's parts, which lose their rhythmic independence to form quasi-chordal structures. The music seen in this chapter also shows a preference for regular chordal motion: the plainchant or *soggetto* is typically rhythmically even, and accompanied with regular chords. These chords follow a steady minim pulse, often even when the CF is in semibreves.

I would argue that the similarities between IKT's conventions and the music seen in this chapter are more than coincidental; rather, they – as well as the process of intabulation examined in the previous chapter – all reflect keyboard thinking: the thought processes, conceptions, and internalized mechanical actions involved in sixteenth-century keyboard playing and composition. In fact, keyboard thinking – and specifically, its unwritten practices – actively shaped the music written down on paper (whether by hand or by printing press) and the system used to notate it. This leads to a basic tension between the unwritten traditions which, by definition, didn't make use of notation, and the notational system, which was not only shaped by the unwritten tradition but, as has been argued in the previous chapter, could actively alter the music itself.

Intuitively, it certainly seems reasonable to assume that performance tradition and musical style could play significant roles in shaping the laws and conventions of a particular notational system such as IKT. Musical notations develop in a way that reflect the musical cultures that shape them, mirroring the practices and musical thinking of their users. For example, modern notation is limited in its ability to capture certain performance nuances and practices, such as blue notes or portamenti; in a broad sense, its limitations are directly related to the prioritization of the *Werktreue* ideal.[55] Lute tablature notations graphically represent aspects of the instrument, and by extension, the action involved with playing it. In contrast, it is interesting to note that early modern keyboard tablature notations that are based on the use of figures instead of mensural notation, such as German or Spanish organ tablature, are conceptually grounded in the principal of *partitura* (that is, they portray a musical reality formed of independent voices). At the same time, figures represent the physical keys of the keyboard – hence these notations simultaneously prioritize an "intellectual" musical conception in addition to a "physical" one. Lute *intavolatura,* on the other hand, is not concerned at all with intellectual musical conceptions – its signs graphically represent the instrument, its frets and strings. As argued in the previous chapter, IKT graphically represents the instrument – and the actions involved in playing the instrument – as well. And, as *cinquecento* keyboard playing was primarily an oral practice, IKT arguably reflects these unwritten practices and playing styles to a greater degree than do other early keyboard notations.

If we accept the notion that notational systems partially reflect the way that a culture *conceived* of music, it seems noteworthy that the first extant volumes in IKT reflect a particularly idiomatic style, one whose emergence appears to accompany that of IKT in the first decades of the sixteenth century.[56] It is therefore tempting to connect style with notation, a notion partially supported by the fact that several early IKT volumes stress novelty in either their notation or in their printing technology. For example, Marco Antonio Cavazzoni was granted a privilege by the Venetian senate in 1522 or 1523 for "Una nova forma de tablature de metter canti, messe, et altre cose; et quelli sonar in organo et altri simel instrumenti,"[57] and Jacques Buus' 1549 volume of intabulated ricercars, printed by Gardane, goes out of its way to note that it was "novamente stampata con carateri di stagno."[58] There appears to be, at the very least, a casual relationship between early *cinquecento* keyboard music and the need for technological developments in the notation used to print it.

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[55] Speaking generally of the "impossibility" of transcribing improvisation, Derek Bailey writes: "Firstly, it is not possible to transcribe improvisation. There have been some attempts; usually of jazz solos, or organ improvisations and sometimes of 'ethnic' music. Invariably the transcription is into 'standard' music notation, a system which concerns itself almost exclusively with representing pitch and rhythm within certain conventions." Derek Bailey, *Musical Improvisation: Its Nature and Practice in Music* (Englewood Cliffs, NJ: Prentice-Hall, 1980), 25. Bailey's argument – not quoted here entirely – is founded on theoretical grounds as well as practical ones, touching upon the limitations of "standard" music notation when used for certain types of music.

The tension between unwritten practices and notational sysem leads to what must be identified as a major caveat: as IKT's functioning is regulative – that is, it altered the music it transmitted through its very nature – it could be argued that the similarities are explained by the use of IKT itself (as opposed to compositional agency). In other words, the fact that the music under analysis shares features with IKT is precisely because it is notated in IKT. While impossible to disprove, one major rejoinder to this argument is the lack of a model: IKT translates the polyphonic structure of a pre-existing polyphonic composition algorithmically, as part of the intabulation process. Did the ricercars and liturgical versets seen here have fully polyphonic models conceived abstractly? Or were they composed directly from the keyboard into IKT? Notably, several of the ricercars in the Castell'Arquato manuscripts were written down in various forms of *partitura*, not IKT, yet demonstrate the same keyboard idiomatic style as those written down in IKT, indicating that, if anything, "original models" here were conceived in IKT, not in independent abstract parts.

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[56] In particular, Marco Antonio Cavazzoni's 1523 collection seems to herald a dramatically new style of keyboard music; of course, the overall lack of existing evidence undoubtedly leads to an incomplete picture. There is a striking contrast between the music of the early *cinquecento* that is analyzed here and that of the Faenza Codex, the only source of Italian keyboard music extant before Antico's 1517 volume of intabulated *frottole*; the missing sources between the two would presumably smooth over the stylistic chasm between them. See Andrea Antico, *Frottole intabulate per* [i.e. da] *sonare organi* [libro primo]; facsimile ed. (Bologna: Forni, 1970).

[57] Richard Agee, "The Venetian Privilege and Music-Printing in the Sixteenth Century" *Early Music History* 3 (1983), appendix, no. 10.

[58] Jacques Buus, *Intabolatura d'Organo di Recercari* (Venice: Gardane, 1549); see facsimile and modern edition by Liuwe Tamminga ([Bologna]: Arnaldo Forni Editore, 2004).

Nonetheless, a concrete answer is impossible, at least if the question is approached empirically; there are simply too many unknowns and hypothetical factors. In fact, it is this sort of circular argument that may be best approached holistically; rather than making a case for notational convention being influenced by the music, or the other way around, the most satisfying answer may be to accept that both ultimately collapse at their point of origin: the mind of the *cinquecento* keyboardist.

In the end, this chapter may seem to have generated questions rather than conclusions. However, the two central claims – that sixteenth-century Italian organists relied on a treble-bass structure as a fundamental component of their music-making, and that this method profoundly affected the nature and conventions of IKT – seem supported by the available evidence. More broadly, it has demonstrated the need for the scholar to consider the tension – seemingly paradoxical – between notation and the unwritten tradition. The various intersections between the two reveal glimpses of the way that *cinquecento* keyboardist conceived of music. They also call into question some of the core assumptions regarding musical creation; if organists created polyphonic textures in a process that began with chordal harmony first, and then subsequently generated counterpoint through diminution over chord structures, other musicians might have done so as well. That is, perhaps the strong harmonic blocks commonly heard in late sixteenth-century music were not simply the “accidental” product of the multi-layering of melodies, but were the starting place, with the melodies drawn from the harmony.

Chapter 3

Sounding Images and *Dotte Partiture*:

Authorial Self-Fashioning in *Cinquecento* Keyboard Intabulations

In Chapter 1, I suggested that IKT and its particular notational conventions worked algorithmically, automatically adapting polyphony into an idiomatic, keyboardistic mode.[1] The pillars of this theoretical model are distinct but related: 1) musical style was embedded within the logic of the notational format, as the notational conventions were themselves grounded in and formed of keyboard playing; 2) the act of notating a piece in IKT quite literally mirrored that of playing it or improvising the resulting work; and 3) IKT forced the music it notated to adopt a particular idiomatic style through the actions of its unwritten conventions.

IKT's algorithmic adoption of polyphony is most readily apparent in examining intabulations. It can be seen clearly in **Example 3.1,** for instance, from Gabrieli's intabulation of Janequin's chanson *Martin Menoit.* IKT's notational conventions obscure the four-part voice leading of the model. For example, the stem directions are always arranged by the vertical array of the notes (see, for example, measure 20). In measure 13 the unison between the Altus and Superius on the *b-flat'* on the second beat is hidden, and in the same measure the voice-crossing between the same voices is hidden by stem direction. (The same processes can be seen in

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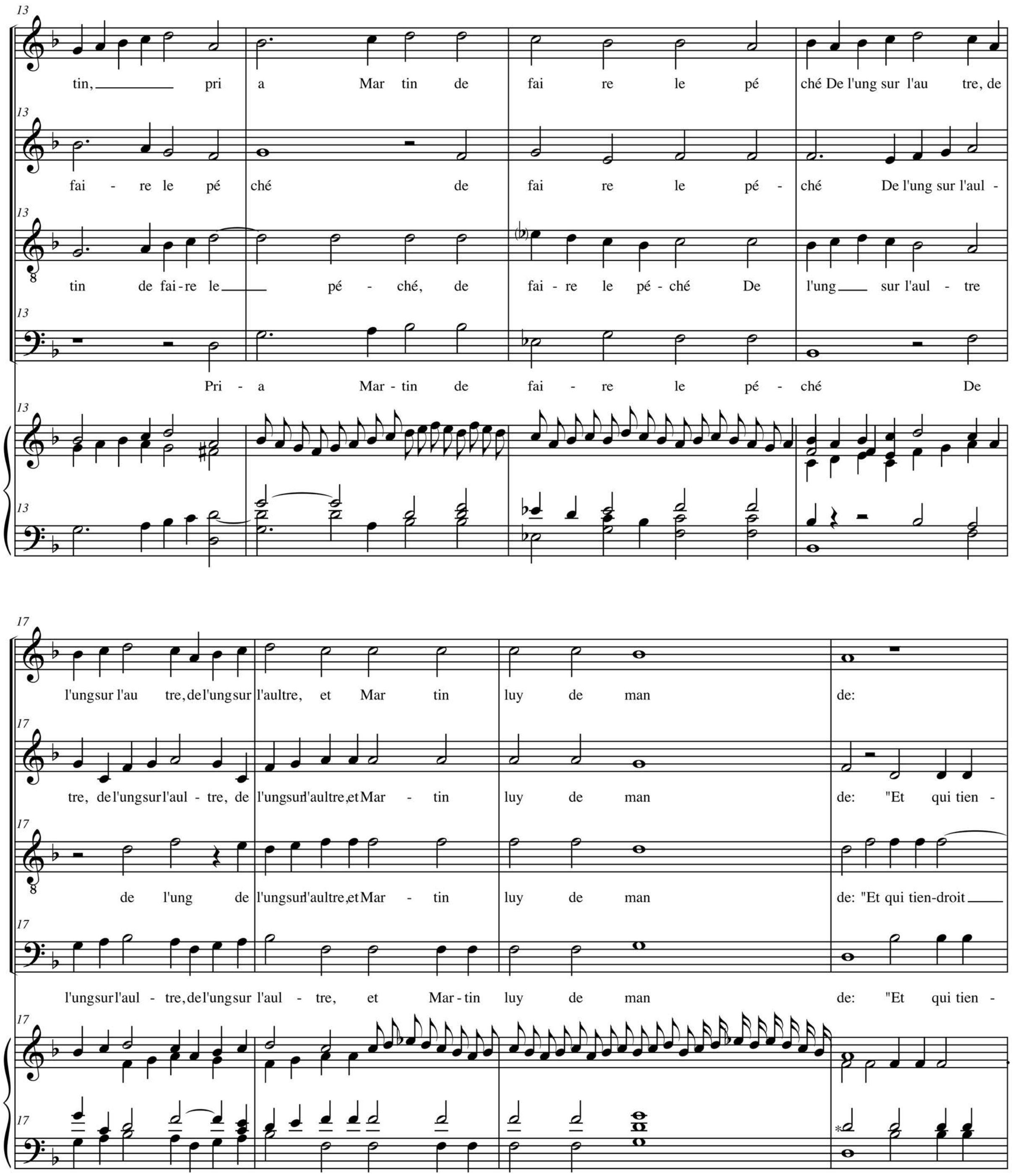
[1] Chapter 1 explored two other models that describe the relationship between an intabulation and its model. Keith Polk and Victor Coehlo have suggested that intabulations can be seen as *translations* of vocal polyphony, from a vocal "language" to the "vernacular" (see Chapter 1, p. 23). Victor Coelho and Keith Polk, *Instrumentalists and Renaissance Culture, 1420-1600: Players of Function and Fancy* (Cambridge: Cambridge University Press, 2016), 189-225.

In addition, Leon Chisholm has examined the intabulation process as the principal site for a comparative analysis between the paradigm of experience polyphony collectively, as a group of singers, and that of experiencing it as a solo instrumentalist; Chisholm's theory partly draws from cognitive science. See Leon Chisholm, "Keyboard Playing and the Mechanization of Polyhpony, Circa 1600" (PhD. diss., University of California, Berkeley, 2015), 20-70.

Example 3.1 Andrea Gabrieli, *Canzon Francese deta Martin Menoit a quatro voci; di Ianequin*, mm. 13-20, from GABRIELI 1605a (bottom staves); Janequin, *Martin menoit son porceau,* adapted from Clément Janequin, *Chansons Polyphoniques*, ed. A. Tillman Merritt and François Lesure, vol. 2 (Monaco: Editions de L'Oiseau-Lyre, 1965) (top staves).


13
tin, pri a Mar tin de fai re le pé ché De l'ung sur l'au tre, de
fai - re le pé ché de fai re le pé - ché De l'ung sur l'aul -
tin de fai-re le pé - ché, de fai-re le pé-ché De l'ung sur l'aul - tre
Pri - a Mar-tin de fai - re le pé - ché De
17
l'ungsur l'au tre,del'ungsur l'aultre, et Mar tin luy de man de:
tre, del'ungsurl'aul - tre, de l'ungsurl'aultre,etMar - tin luy de man de: "Et qui tien -
de l'ung de l'ungsurl'aultre,etMar - tin luy de man de: "Et qui tien-droit
l'ungsurl'aul - tre,del'ungsur l'aul - tre, et Mar-tin luy de man de: "Et qui tien -

measure 17 as well.) "Fake" parallel octaves can be seen in measure 19 – fake because they aren't present in the original polyphony, but created through IKT stem-direction practice. In addition, several outright alterations of the original polyphony are affected. For example, the Altus's *a'*s are removed in measures 18-20; this is to facilitate the *passaggio* in the top staff. Together, all of those processes create a texture that is highly idiomatic to keyboard playing. And, as I suggested, it is almost as if these features – including the brief instances of recomposition or revoicing – were affected by the notational format itself, which seems to act under its own agency. In this sense, IKT seems to convert vocal polyphony into an automatic keyboardistic texture, its unwritten rules functioning algorithmically.

As I suggested previously, IKT and Italian lute *intavolatura* are similar in the sense that the mensural notes in IKT should not be considered as *sounding* pitches, but as the physical keys of the keyboard – in this sense IKT is a mechanical notation like all other tablature formats. However, the fact that IKT uses mensural note signs rather than figures leads to a peculiar situation: mensural notation allows for the possibility of IKT's rules to be broken, in that notational detail such as stem directions, the addition of ties, and the like can easily be added in a way that is difficult to do in figure-based tablature systems. This rule-breaking can be seen in Example 3.1. The ties in the bottom staff measures 13-14 do not conform to IKT practice; in fact, they actually create an *unidiomatic* keyboard texture, at least as if followed slavishly. (Finger substitution was not explicitly discussed in any Italian source until the eighteenth century.)[2] The ties don't facilitate an easy-to-play texture for the player; rather than creating a readable score – seemingly the universal mission of Renaissance tablature notations – it seems as if Gabrieli wanted to reveal the voice leading of the model, voice leading that is typically hidden by IKT convention and normal intabulation processes. The chord on the second beat in the bottom staff in measure 15 is also rather unidiomatic, but it is faithful to the original voice leading; the same thing can be said for the attempt to include the Tenor part in the first half of measure 16 in the top staff. Instances like these, which appear to push back against the algorithmic functioning of IKT conventions, appear frequently in the intabulations of Andrea Gabrieli and Claudio Merulo, even as they generally adhere to them. One gets the sense that the intabulator makes a conscious decision to *resist* the conventions and the notational system's algorithmic action in doing so.

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[2] See Calvert Johnson, “Early Italian Keyboard Fingering,” *Early Keyboard Journal* 10 (1992), 44.

If we accept that these instances represent the agency of the intabualor, it is worth asking why they were done. Rather than being conducted on a more-or-less random basis, I suggest that specific instances of IKT rule violations in intabulations of polyphonic music can be read within a theory of authorial self-fashioning: the construction of musical persona through exploiting or pushing against IKT's notational conventions, which work as a constant background force. While some intabulations *affirm* IKT conventions to create a reproduction of an improvisatory gloss of the vocal model, others *resist* IKT conventions to create a tablature that shows polyphonic detail. I call intabulations that demonstrate the affirmational tendency *sounding images,* and those that demonstrate the resistant tendency *dotte partiture.* Sounding images are conceptually rooted in IKT's mimetic qualities, encompassing the way that IKT seeks to represent the keyboard as well as the actions involved in playing the keyboard. *Dotte partiture* – "learned scores," a term adapted from Vincenzo Galilei's lute treatise *Il Fronimo*[3] – are conceptually rooted in IKT's potential functioning as a *partitura,* or full score, a format strongly associated with both *studiosi* of counterpoint and *artificioso* composition, and, more particularly, with a sub-culture that Naomi Barker has recently identified as *musica erudita.*[4]

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[3] The phrase Galilei uses is "dotte intavolature," in reference to the intabulations of Francesco di Milano. *Fronimo Dialogo di Vincentino Galilei nobile Florentino, sopra l'arte del bene intavolare...* 2nd ed. (Venice: Scotto, 1584), 25.

It is important to note that this theory encompasses both single instances of rule violation and general tendencies – indeed, instances of both can often be seen in the same intabulation. Sounding images and *dotte partiture* are rooted in IKT's Janus-faced nature, and I argue that each is exploited by intabulator-composers in order to fashion particular musical personas for their audience: situating themselves along a spectrum from learned-transcriber-theorist to expert keyboardist skilled in the art of improvisation.

My argument will proceed in the following manner. First I will establish the necessary notational conditions for IKT's functioning as a tool for self-fashioning. In particular, I will argue that IKT should be seen as mimetic, and that its mimesis can be seen as operating in multiple ways: as a graphic representation of the keyboard, as a set of instructions to the player, as a graphic representation of performance. These multiple mimetic functions in turn suggest multiple modes of engagement. Building on recent work of Cristle Collins Judd and Anthony Newcomb[5], I suggest that IKT could be read as well as played, and that, to adopt language of Cristle Collins Judd, "this reading and playing may take many forms."[6] Particularly, I argue for a mode of reception that is a form of silent reading, and I also argue that certain notational features should be viewed as visual signs. In this, I explore the functioning of books of intabulations as material objects that invite a variety of modes of engagement. I then turn to sociological considerations, arguing that two organists in particular – Andrea Gabrieli and Claudio Merulo – present cases of intabulator-as-author. I also suggest motives for using intabulations as a vehicle for self-fashioning, arguing for a direct engagement, on the part of the composers, with humanist academies in Venice. Given the lack of a complete biographical picture, particularly in the case of Andrea Gabrieli, I also establish general patterns based on the biographies of other northern Italian organist-composers. Finally, I then demonstrate the functioning of the sounding image / *dotta partitura* model in intabulations of Merulo and Gabrieli.

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[4] See Anthony Newcomb, "Notions of Notations around 1600," *Il saggiatore musicale* 22 (2015): 5-31; and Naomi Barker, "Music, Antiquity and Self-Fashioning in the Accademia dei Lincei," *The Seventeenth Century* 30 (2015): 375-90. Barker establishes the term "musica erudita" as consisting of two principal strains: musical compositions of the *artificioso* type, and the humanist interest in the musical-intellectual culture of Antiquity. See Barker, "Music, Antiquity and Self-Fashioning," 376.

Regarding the Venetian market (and, by extension, Venetian musical spaces), Stanley Boorman notes that "the Venetian music publisher saw his musical market as having only two components – the full professional and sophisticated amateur, and the purchaser of villanelle and similar musics." Stanley Boorman, "The Music Publisher's View of his Public's Abilities and Taste," reprinted in *Studies in the Printing, Publishing and Performance of Music in the 16th Century,* Variorum Collected Studies Series (Aldershot and Burlington, VT: Ashgate, 2005), 427.

[5] Newcomb, "Notions." Cristle Collins Judd, *Reading Renaissance Music Theory: Hearing with the Eyes* (Cambridge: Cambridge University Press, 2000).

[6] Cristle Collins Judd, *Reading Renaissance Music*, 8. Judd here writes about the function of musical examples in texts about music; as I go on to argue, the dynamic similarly applies to books of keyboard music.

My argument hinges upon the assumption that intabulations increasingly held a "high-art" status through the sixteenth century. Intabulations in IKT were, like their lute cousins, not merely derivative, but autonomous, as Polk and Coelho have suggested.[7] Vincenzo Galilei's lute treatise *Fronimo* – dedicated entirely to the art of intabulation for that instrument – is indicative of the "high art" status that intabulating achieved in general by the end of the century.[8] Likewise, printed keyboard intabulations that appear in Venice at the end of the century can and should be seen as important manifestations of the art of the *cinquecento* keyboardist-composer.

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[7] Polk and Coelho, *Instrumentalists,* 216.

[8] Galilei's emphasis on proper counterpoint and his meticulous attention to mundane detail, such as when and when not to repeat notes, show that intabulation was not merely a technical exercise, and intabulations are not simply pedestrian arrangements of vocal music (although some certainly might be described in these terms); in addition, Galilei's language suggests considering intabulations as autonomous works of art in and of themselves. See Vincenzo Galilei, *Il Fronimo: Dialogo di Vincentino Galilei nobile Florentino, sopra l'arte del bene intavolare...* 2nd ed. (Venice: Scotto, 1584); for an English translation, see Vincenzo Galilei, *Fronimo*, trans. and ed. Carol MacClintock, Musicological Studies and Documents 39 (Neuhausen-Stuttgart: American Institute of Musicology, 1985).

Intabulations as Mimesis: Notational Preconditions

Writing of lute and keyboard intabulations generally, Howard Mayer Brown noted that

> The volumes of music published by these men are thus the closest thing to phonograph records that we shall ever have from the sixteenth century, for they preserve personal, idiosyncratic versions of well-known compositions as they were performed by leading sixteenth-century virtuosi.[9]

This famous statement speaks to a fundamental truth of tablature notation and intabulations. Admittedly there is a danger of superimposing a modern way of thinking on the sixteenth century, specifically, a desire or imagination for the ability to make audio recordings; that said, tablature notation does seem to have functioned, in some sense, as a technological response – a desire to reproduce performance. In a broader sense, one might draw an analogy with the later phenomenon of automatons, or with Giambattista Aleotti's attempts to construct mechanical organs, all being attempts to use technology to “replicate” reality.[10] Of course, intabulations are quite literally *res facta* – and, books of intabulations, material objects – that reflect the physical motions of performance. There is a fundamental duality to intabulations in this sense: on the one hand, they are carefully crafted material objects; on the other, they are frozen performances, or at least closer to the source than other forms of notation. Their nature is informed by this fundamental tension between the permanent and the spontaneous.

As mentioned in Chapter 1, the representational qualities of IKT can be described in multiple ways. **Example 3.2**, from Sperindio Bertoldo's intabulation of Crecquillon's chanson *Petite fleur*, demonstrates the multifarious functioning of this mimesis. The behavior of the notation in Bertoldo's example can easily be explained if it is viewed as a graphical

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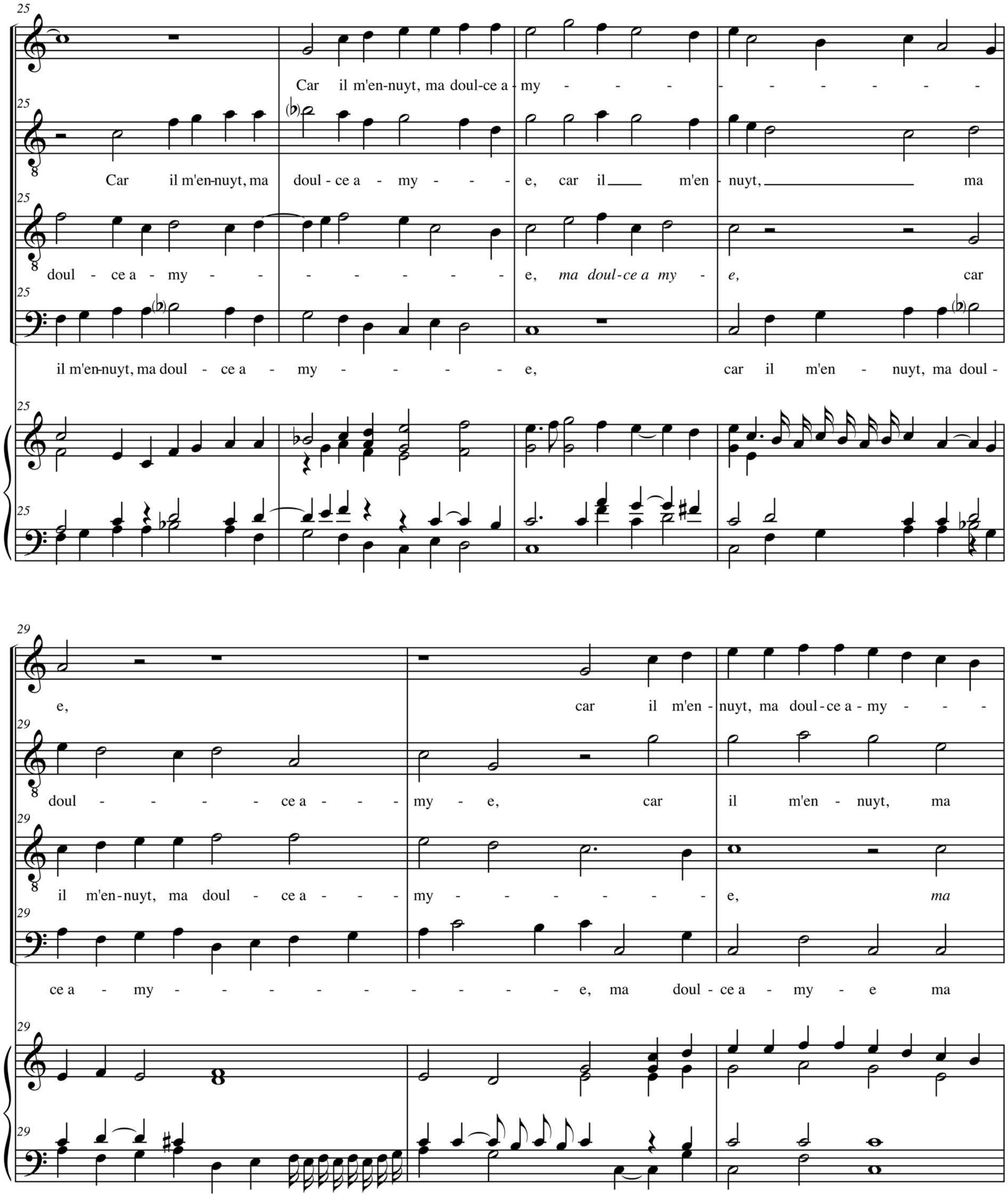
[9] H. M . Brown, *Embellishing Sixteenth Century Music* (London: Oxford University Press, 1976), xiii.

[10] See Kimberly M. Parke, "Engineering Music: A Critical Inquiry into Giambattista Aleotti's 'De la musica' (1593)” (PhD diss., University of California, Berkeley, 2006), for more on Aleotti’s mechanical organ.

Example 3.2 Sperindio Bertoldo, *Petit fleur,* mm. 25-31, from BERTOLDO 1591a; adapted from Thomas Crecquillon, *Cantiones Quator Vocum*, ed. Barton Hudson, et. al., vol. 63, part 17 of *Corpus mensurabilis musicae* ([Germany]: American Institute of Musicology, 2005).


25
Car il m'en-nuyt, ma doul-ce a - my - - - - - - - - - - - -
Car il m'en-nuyt, ma doul - ce a - my - - - e, car il m'en - nuyt, ma
doul - ce a - my - - - - - - - - - e, ma doul-ce a my - e, car
il m'en-nuyt, ma doul - ce a - my - - - - - e, car il m'en - nuyt, ma doul -
29
e, car il m'en - nuyt, ma doul-ce a - my - - -
doul - - - - - ce a - - - my - e, car il m'en - nuyt, ma
il m'en-nuyt, ma doul - ce a - - - my - - - - - - - e, ma
ce a - my - - - - - - - - - - e, ma doul - ce a - my - e ma

representation of the keyboard, just as lute *intavolatura* is a graphical representation of that instrument. To start, Bertoldo follows IKT conventions in textbook fashion. No unisons or voice-crossings are present. This practice makes sense if the notes are seen not as symbols for tones but for keys. In addition, not one of the four rests seen in the intabulation exist in the original model. They are all "fake" rests, and specifically mechanical or *pause di mano*, in that they literally tell the player to remove a finger from a key.[11] This again points to the physical-representational quality of the notation. In addition, the alterations to the polyphony that Bertoldo makes are all conceptually grounded in the notion of creating a score that is idiomatic and easy to play. While I have previously suggested that IKT's representational nature has to be taken as partly conceptual rather than as absolutely literal, Bertoldo's intabulation here makes sense if viewed as an image of the keyboard, again with the notes quite literally being signs – exactly equivalent to the figures used in German tablature or Spanish cifras – that represent the keys.

However, lute *intavolatura* does not only graphically depict the instrument, but also contains embedded within it a set of coded instructions to the player. Without having to be able to read mensural notation or understand music theory at all, the player can simply follow the instructions and execute the music. The player need not understand anything of the structural components of the music at all. If we read IKT as representing the instrument in the same manner as lute intavolatura, it follows that IKT has embedded within it the same sort of instructions as well. And, a player of IKT would not really need to understand a great deal of music theory to play from it, but would only have to learn which notes on the staff represent the equivalent keys on the keyboard, and the durations signaled by the mensural note signs -- the tendency of publishers to try to align notes vertically absolves the player of having to count too much. Here, IKT is mimetic in the sense that it represents the *actions* of the player, represented by the instructions embedded within the tablature. On a functional level, the player of Bertoldo's intabulation would act as the mechanism of a player piano, executing a set of instructions and recreating a performance. In this way an intabulation can be also seen as a sixteenth-century attempt at creating something that might be compared to an audio recording today.

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[11] The term *pause di mano* was coined by Giuseppe Clericetti, "Criteri per un'edizione moderna della musica per strumenti a tastiera di Andrea Gabrieli," in *Andrea Gabrieli e il suo tempo,* ed. Francesco Degrada, *Studi di musica veneta* 11 (Florence, Italy: Leo S. Olschki, 1987), 373. See discussion in Chapter 1.

The mimetic nature of tablature notation, and of IKT in particular, can be viewed from yet another angle. Beyond having a purely functional purpose – that is, to be used in keyboard playing – it is conceivable that prints in IKT were intended to be read as well as played from. That is, they served as visual references to both the physical actions of keyboard playing and to the experience of listening to keyboard playing. The concept of early-modern score reading has traditionally been a contentious one in scholarship, but recently Cristle Collins Judd has described modes of music reading in her monograph *Reading Renaissance Music Theory: Hearing with the Eyes*.[12] Although Judd writes about the function of musical examples in Renaissance theory treatises, the multiple modes of engagement she cites are especially relevant to this study; in these cases, the notation is read rather than performed from, and the reading functions on multiple levels:

> There are times when notation serves a purely iconic function – we are meant to see notation, but not hear it. At other times, the notation serves as a generalized reminder of music as sounding phenomenon, and at other times, the notation is meant to be 'read' and 'heard,' although the reading and hearing may take many forms.[13]

While purchasers of a book of Gabrieli's intabulations could have simply played the music at the keyboard, they also could have read the book, imagining the sound of a performance executed by themselves, or – better yet – by Gabrieli himself. In this sense the examples refer to playing but don't depend upon the actual sound of a performance to function. An analogy can be drawn with early modern attempts to represent reality in stylized form, as in the dialogues published by Venetian literati.[14] In these, the reader is invited to participate in a quasi-fictionalized experience, facilitated by the medium and technology of print.

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[12] Judd, *Reading,* 8.

[13] Judd, *Reading,* 8. See Newcomb, "Notions," for another take on Judd's treatment of "silent reading" of music. Newcomb, "Notions," 6-7.

Thinking of IKT volumes in these terms highlights their role as material objects. In *Reading Renaissance Music Theory*, Judd describes how it is ultimately the user who has control over how he or she wished to engage with a musical text. It is needlessly reductive to limit *cinquecento* keyboard prints to the function of solo performance; scholars have perhaps too often fallen into the trap of allowing a primary function of a given print to become its defining one.[15] The idea of early modern prints having multiple modes of engagement is also echoed by the flexible nature of their performance practices. Without getting into the debate over what constitutes a musical "work" (and when pieces become works), it is safe to state that any given piece of music in the sixteenth century was subjected to a variety of performance mediums and to substantial alteration – including, but not limited to, formal reworkings, restructuring of polyphony on local levels, alteration of ornamentation, and the like – creating a wide variety of possible versions of any given piece. In fact, the multiple levels of mimetic functioning in IKT precisely invite the multifarious levels of engagement described here.

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[14] The most famous of these is Antonfrancesco Doni's *Dialogo della musica* (1544); see edition by G.F. Malipiero (Venice: Fondazaione Giorgio Cini, 1965). The notion of stylized dialogue as a vehicle for a type of self-fashioning is key to Martha Feldman's study of the Venetian madrigal; see Martha Feldman, *City Culture and the Madrigal at Venice* (Berkeley and Los Angeles: University of California Press, 1995). See especially her introductory discussion of Doni's *Dialogo,* 18-21, for an example of the literary dialogue "as a vehicle for self-display and self-fashioning." See ibid., 21.

[15] In his recent study, for example, Anthony Newcomb argues for a uniquely "complete and prescriptive" quality to certain *partitura* versions of *artificioso* compositions, namely ricercars. See Newcomb, "Notions," 6. At the same time, these scores – even if *intended* by their creators to be received in this matter – could easily be played by a keyboardist and turned into a version quite removed from the version in score, through the addition of ornamentation and through the algorithmic application of IKT conventions.

Authorial Self-Fashioning in Intabulations: Some Social Conditions

If I am inviting the reader to consider books of keyboard intabulations as material objects, it seems logical to ask about their users, and, by extension, the relationship between users and author. The question of readership is an important one for the present model, and my argument hinges upon the notion that intabulators willfully included notational detail not because it added anything of value to players of the intabulations, but because it was meaningful on some level to readers of the print. This, of course, invites questions about the readership: who were the buyers of these prints? How were they used (or intended to be used) by these buyers? While the larger European book market might be the initial place one thinks of when considering printed volumes of keyboard music in the sixteenth century, printed volumes might also have been designed with local contexts in mind. That is, local social environments – in this case, the salons and academies in Venice – in which keyboardist-composers such as Andrea Gabrieli and Claudio Merulo flourished may very have been just as much an influence on musical style as market considerations.

Establishing local contexts – including the important links between keyboardists in Venice and their patrons and audiences – is a necessary condition for establishing a case of musical self-fashioning through the practice of intabulation. The term “self-fashioning” was coined by Stephen Greenblatt in his now classic text *Renaissance Self-Fashioning* (1980).[16] Greenblatt, using a series of case studies from sixteenth-century English literature, pointed to the fashioning of public persona through texts. Although Greenblatt's theory was grounded in a narrow framework shaped by the particular contexts in which his literary figures worked, the general parameters are easily applicable to other areas, leading to several other interdisciplinary studies in fields such as art history and musicology. While Greenblatt framed his disparate cases of self-fashioning under a series of conditions, these can be boiled down to interactions between the subject and an "authority" and an "alien."[17] Many of the studies that have followed him have taken the concept of self-fashioning more generally, as a broad concept rather than fully formed theory, following the spirit of Greenblatt's initial definition rather than the precise parameters he subsequently establishes.

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[16] Greenblatt, *Self-Fashioning from More to Shakespeare* (Chicago: University of Chicago Press, 1980).

Several recent musicological studies focusing on early modern Europe have worked with versions of self-fashioning theory, with varying degrees of adherence to Greenblatt's original parameters. To cite four: Naomi Barker examines a sort of "corporate" self-fashioning among members of the Roman Accademia dei Lincei as a driving force behind Fabio Colonna's treatise *La Sambuca Lincea ovvero dell'istromento musico perfetto*; Susan McClary suggested that sixteenth-century madrigal composers exploited aspects of modal theory in order to depict "interiority"; Richard Wistreich examines self-fashioning in the biography of the Neapolitan bass singer Giulio Cesare Brancaccio; and Kristen Gibson suggests that John Dowland's famous melancholic personality was an element of authorial self-fashioning.[18] Examining these four studies, a few common characteristics can be observed. For example, the elements of self-fashioning – from the external forces to which the subject reacts, to the means and methods of the constructing of persona – depend on the precise social and cultural contexts of the subject. In turn, the methodology of the scholarship is molded to these parameters. For example, for Susan McClary much of the self-fashioning is accomplished through musical style and the manipulation of modal theory; in Wistreich's study, court-driven self-fashioning is used to marry, in a sense, disparate elements of Brancaccio's biography: Brancaccio the warrior and Brancaccio the singer. The medium through which the self-fashioning is accomplished also varies – for example, through musical compositions, in the case of McClary's study, and in title pages, dedications, and prefaces, in the case of Gibson's. In addition, the application of self-fashioning in these studies varies from being quite precise in its adherence to Greenblatt's theory, or as a more flexible and loosely-applied concept. For example, Barker uses Greenblatt's framing pillars of "alien" and "authority," whereas Wistreich only uses the concept generally, as a way to explain how Brancaccio constructs his public persona.

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[17] In a general sense Greenblatt's theory could be described as constituting several basic elements, all of which work to apply more generally to diverse scenarios: self-fashioning as situated squarely within the interplay between an authority and self-autonomy; a thin line between literature and real life; and self-fashioning as a strategy in social mobility. See Greenblatt, *Self-Fashioning,* 9.

[18] Barker, "Music, Antiquity and Self-Fashioning"; Susan McClary, *Modal Subjectivities: Self-Fashioning in the Italian Madrigal* (Berkeley: University of California Press, 2004); Richard Wistreich, *Warrior, Courtier, Singer: Giulio Cesare Brancaccio and the Performance of Identity in the Late Renaissance* (Aldershot and Burlington, VT: Ashgate Publishing, 2007); Kirsten Gibson, "'How Hard an Enterprise it is': Authorial Self-Fashioning in John Dowland's Printed Books," *Early Music History* 26 (2007): 43-89.

My own application of self-fashioning theory tends towards a broad application. I don't necessarily have reason to adopt Greenblatt's "alien" and "authority" framework, for example, nor his conditions that reflect sixteenth-century English power structures, but in order to provide some coherence I will describe the process of self-fashioning as a series of conditions. I here extrapolate these from Kristen Gibson's Dowland study – as Gibson's application of "authorial self-fashioning" and the concept of "self-monumentalizing" reflects the central argument here that intabulator became *author* – but they would apply easily to the other studies just cited:

- *Motive:* the subjective, conscious impulses which drive the desire to self-fashion; in the case of John Dowland, this would be to gain economic or cultural capital in his immediate social environment.
- *Means*: the social conditions that *allow* for self-fashioning; in the case of Dowland, social and political conditions in sixteenth-century England allowed for the possible social advancement

of middle- and lower-class men, and music was a possible vehicle for this advancement. (We will see that Venice presents a relatively similar situation.)

- *Environment:* the immediate, local social context to which the processes of self-fashioning are shaped; in Dowland's case, this would be the English royal court and the networks of patronage that extended from it. Although there are many commonalities throughout sixteenth-century Europe, local cultural, social, and even political differences have to be taken into account.[19]
- *Authorship*: the self-identification of the subject as an author, and the desire to exert control over their public persona or image through his or her published work. Gibson is influenced by Foucault's notion of *author*, and by what Gibson, after Joseph Lowenstein, cites as the development of the "bibliographic ego."[20] This entails the subjective identification with being an author, and a proprietary relationship with a work.
- *Medium*: the technology that is exploited in order to accomplish the self-fashioning. In the case of Dowland, Gibson draws a careful study between print and manuscript dissemination, and, in a broader sense, commonalities and disjunctions between print and manuscript cultures.[21]

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[19] In Dowland's case, the restrictive "absolutist" environment at the Tudor court influenced particularities in the functioning of his self-fashioning, as it limited possible avenues of behavior. See Gibson, “How Hard an Enterprise,” 70-72.

In many respects Castiglione's *Il cortegiano* can be seen as a locus for the general mentality behind early-modern self-fashioning, in that it presents a quasi-codified manual through which a subject constructs a persona based on standards of courtly behavior. See Greenblatt, *Self-Fashioning,* 162-3, on how Castiglione’s book can be seen as “the greatest and most familiar” of manuals that serve as “practical guides for a society whose members are always on stage.” Wistreich points out that “the minutiae of conversations and incidents from *Il libro del cortegiano* can be found reverberating throughout the narrative discourses of ‘actual’ noble men and women, including Brancacio.” Wistreich, *Warrior,* 234-5.

[20] Gibson, "How Hard an Enterprise," 51. The phrase "bibliographic ego" was coined by Joseph Lowenstein; see Jeremy Smith, “From 'Rights to Copy' to the 'Bibliographic Ego': A New Look at the Last Early Edition of Byrd's 'Psalms, Sonets & Songs.'" *Music & Letters* 80 (1999): 527n72.

[21] Gibson, "How Hard an Enterprise," 52-58.

Self-Fashioning Organists in *Cinquecento* Venice

The *locus* of the present study is Venice, as both Andrea Gabrieli and Claudio Merulo (whose music forms the focus of this study) spent the majority of their careers working in its state basilica, directly under the control of its procurators, and exploited its networks of artistic patronage.[22] I should note that Merulo's books of intabulated canzonas – all but one published posthumously – were dedicated to figures associated with the Farnese court, where Merulo ended his career and life. However, Merulo's project of intabulation, crucial to the identification of intabulator as author (see below), was conceived while he was at San Marco; as Rebecca Edwards shows, Merulo's ties in Venice with humanist academies, print shops, and patrons in Venice were extensive.[23] Almost all major keyboard figures in Northern Italy in the sixteenth century had strong associations with Venice, due to its prominence as a center of artistic patronage, keyboard activity, and political importance. [24]

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[22] This is definitely the case for Merulo; quite possibly the case for Andrea.

[23] See Rebecca Edwards, "Claudio Merlo: Servant of the State and Musical Entrepreneur in later Sixteenth Century Venice" (PhD diss., Princeton University, 1990). Merulo's networks of patronage, which, given the nature of Venetian patronage at the time, entailed close involvement with humanist circles, forms a major theme in Edwards' study. See especially Chapters 3 and 4, 159-266.

[24] Venice's somewhat unique systems of patronage have frequently been the subject of scholarship; in particular, Martha Feldman's *Madrigal in Venice* and the chapters on Zarlino in Cristle Collins Judd's *Reading Renaissance Music Theory: Hearing with the Eyes* establish important models for present approaches. Martha Feldman's seminal *The Madrigal in Venice* demonstrated how composers in Venice, like their literary counterparts, worked with print mediums to fashion their public images within the complex networks of patronage in the Republic. See Feldman, *City Culture,* especially the first part, 3-119.

For *literati,* this included the exploitation of stylized dialogic genres that depicted fictionalized salon gatherings, or published letters that engage in "dialogue" with already-published volumes. In many ways these present analogues to the musical strategies used in the intabulations examined in this chapter. See ibid, 47-82.

Cristle Collins Judd's two chapters on Gioseffo Zarlino in *Reading Renaissance Music Theory: Hearing with the Eyes* provide another case study for self-fashioning. Zarlino also used the medium of print to carefully craft a public image, and his self-fashioning was also tailored to the same socio-cultural centers and conditions that I argue for here. Judd's examination of the many signs in Zarlino's prints that suggest self-fashioning provide a model of sorts for the present study; in addition, the modes of "silent" notational engagement that are encompassed by Judd's phrase "hearing with the eyes" implies a model for visual engagement of keyboard prints that goes beyond simple seeing them as exclusively intended for performance. This latter point is key for my argument that composer-intabulators could exploit aspects of typography and IKT functioning to fashion musical realities in the minds of their listeners.

See Judd, *Reading Renaissance Music Theory,* 179-261.

As Andrea Gabrieli and Claudio Merulo's keyboard intabulations are the ultimate focus of this study, an exploration of the biographical material of these composers is essential. Unfortunately, complete biographical pictures are lacking, particularly in the case of Andrea Gabrieli; the situation is somewhat better for Merulo, largely thanks to the important study of Rebecca Edwards.[25] In place of full biographical data for these two specific figures, I instead use biographical data from keyboardists who proceeded Merulo and Gabrieli to establish common social conditions. While precise data is scant for these figures as well, enough data exists to establish some general patterns. As a framing mechanism, I will present this data in the categories of self-fashioning conditions established above.

Conditions for Self-Fashioning: ***Means***

As a center of patronage, Venice was in many respects unlike any other European center. Beyond the ubiquitous "myth of Venice" – a frequent trope in secondary literature on society and culture in the Republic – many scholars have pointed to the unique nature of Venetian patronage.[26] Rather than a centralized system involving a single court or patron, Venice instead was made up of a network of competing patrons.[27] This created a fluid social environment – perhaps considerably more fluid than other Italian centers – in which social mobility was a real possibility, especially for those who could capitalize on skills such as writing or music. The element of social and economic mobility was a major component to Greenblatt's theory of self-fashioning,[28] and, despite the lack of precise biographical detail regarding John Dowland, Gibson suggests a similar element of mobility. Dowland had a "socially limited, yet aspirational position"; his musical talents conceivably allowed him to climb the social hierarchy.[29] Similarly, a broad survey of *cinquecento* organists' biographies reveals a similar pattern: organists typically come from the mercantile or bourgeois classes but could use their musical talents as a means to gain acceptance in aristocratic circles. The biography of the San Marco organist and *literato* Girolamo Parabosco aptly demonstrates this potential for mobility: from a lowly bourgeois background, Parabosco was able to use his literary and musical skills to rise within the networks of patronage. As Feldman points out, Parabosco's position as First Organist at San Marco allowed him to hold "a trump card among literary colleagues in the city's populous salons, where music was a valued commodity."[30] Feldman goes on to point out that

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[25] Rebecca Edwards, "Claudio Merlo: Servant of the State."

[26] The "myth of Venice" has been an established trope in secondary literature on *la Serennissima* for some time. For a succinct overview of music's quasi-propagandistic role in supporting Venetian civic mythology, see Ellen Rosand, "Music in the Myth of Venice." *Renaissance Quarterly* 30 (1977): 511-37.

[27] See Feldman, *City Culture,* 3-10 and 51-82 for two specific case studies of Venetian patronage.

> His position placed him conveniently betwixt and between – between professional musicians and literati, between nobles and commoners – a situation that made good capital in Venetian society.[31]

Parabosco was therefore able to use his musical and literary skills to exploit Venice's fluid social environment for considerable social, cultural, and economic gain.

At the same time, Venice's system of patronage created a highly competitive environment, in which *literati* and musicians vied for support among a relatively large number of possible patrons. In addition, as many commentators have pointed out, Venice was paradoxically a highly restricted social environment, especially for a city lacking many of the traditional court structures found in other Italian city-states.[32] This led to a highly risky yet potentially rewarding environment in which the constant performance of self as a public persona was of utmost importance. As Martha Feldman notes, Venetian literature in the *cinquecento* was shaped by a heightened awareness of "high" and "low" stylistic categories (exemplified by the literary theory of Pietro Bembo), and Venetian *literati* exploited the boundaries between these categories in a constant attempt to fashion personas in the competitive environments of the Venetian salons.[33] Feldman describes how, in doing so, Venetian writers used "dialogic" genres – from fictionalized gatherings such as Doni's *Dialogo*, to dedications and published letters (such as the letters of Pietro Aretino) – fusing Petrarchan tropes, techniques from Classical rhetoric, and print technology in an attempt to fashion identities.[34] In general *cinquecento* Venice offered a social environment that was ideal for the type of *performative* presentation of self that I suggest is reflected in the printed intabulations of Gabrieli and Merulo.

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[28] As pointed out by Gibson, see "How Hard an Enterprise," 59; Greenblatt, *Renaissance Self-Fashioning,* 7.
[29] Gibson, "How Hard an Enterprise," 60.
[30] Feldman, *City Culture,* 16-17. For more on Parabosco, see H. Colin Slim. "Parabosco, Girolamo" *Grove Music Online*. *Oxford Music Online*, accessed August 3, 2017, http://www.oxfordmusiconline.com.libproxy2.usc.edu/subscriber/article/grove/music/20862.
[31] Feldman, *City Culture,* 17.
[32] Feldman; *City Culture,* 10.

Conditions for Self-Fashioning: ***Audience***

Venice's network of patrons formed a musically literate readership that would be receptive to the degree of notational nuance that I argue for in printed intabulations. I also presuppose personal relationships between keyboardists and their patrons, relationships that hinge upon an appreciation of the musical skills – both in performance and in musical knowledge – of the keyboardist. While detailed accounts of keyboard performances in private salons don't exist, there is enough evidence to easily suggest that they took place.[35] San Marco's organists – who were typically counted among the most highly-valued musicians of Venice – demonstrate links with key patrons in Venice, and the evidence certainly suggests that these organists can be linked to academies and other social circles. For example, interlocutors in Anton Francesco Doni's *Dialogo della musica* (1544) include two keyboardists, the San Marco organist Girolamo Parabosco, and the *piacentino* keyboardist Claudio Veggio (whose ricercars were examined in Chapter 2). Their inclusion demonstrates the links between social spaces like the one represented in the *Dialogo* and *cinquecento* keyboardists; it also demonstrates the exceedingly high status that keyboardists held within these spaces.[36]

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[33] See Feldman, *City Culture,* 51-62, for an account of Parabosco playing within these categories in dedications written for his patron Gottardo Occagna. In doing so, Parabosco not only exploits and transgresses stylistic boundaries, but draws his patron into the "dialogue" as part of the process.
[34] Ibid., 47-82.
[35] Eleanor Selfridge-Field, citing Molmenti, mentions private concerts at the Cà Zantani that included the San Marco organists Annibale Padovano, Girolamo Parabosco, and Claudio Merulo; see Eleanor Selfridge-Field, *Venetian Instrumental Music* (New York and Washington: Praeger Publishers, 1975), 49-50.

The discussions portrayed in Doni's *Dialogo* also demonstrate the high level of musical literacy among aristocratic circles in the city, and I suggest that these circles can be aligned with a recently identified class of early modern readership, one that is highly relevant for the present argument. In a recent article, Anthony Newcomb points to the increasing use of scores (*partiture*) for *artificioso* works as indicative of an intellectual subculture that came to value a sort of abstract complexity in music; in another recent study, Naomi Barker associates what seems to be the same subculture with what she calls *musica erudita*.[37] Both Barker and Newcomb point to a specific reading public – found in the humanist-intellectual academies in the early modern period – that valued complex works like ricercars precisely for their esoteric, *artificioso* qualities. While Barker and Newcomb's studies are both focused on a sort of Roman-Neapolitan axis (or, for Newcomb, a Ferrarese-Roman-Neapolitan axis), I would like to suggest that some elite aristocratic circles in Venice may have formed a similar subset with a similar set of aesthetic and intellectual values. For example, slightly earlier in the century Venetian academies had provided fertile ground for the knotty, dense polyphonic style of Adrian Willaert – with its heightened level of attention to text setting and its possible use of esoteric musical citations – as well as for the bold chromatic experimentation of Willaert's successor Rore.[38] It is notable that two of the earliest printed *partiture* – the notational format that forms the nucleus of Newcomb's study – came from the presses of Gardano and suggest Venetian musical connections; significantly they are designated for lute and keyboardists, and for "studiosi" of counterpoint, respectively.[39] In addition, although Newcomb seems to set the Venetian keyboard school apart as being "less contrapuntally rigorous and *artificiosi"*[40] than its Roman-Neapolitan cousins, he also admits that IKT *hid* polyphonic detail by its nature (that is, through its algorithmic alteration of polyphony) – therefore, some Venetian ricercars are more contrapuntally complex than they appear to be on the page.[41] It is notable that Diruta's famous account of Andrea Gabrieli and Claudio Merulo's organ "duel" in San Marco (cited in full below) describes their playing as "artificioso."[42]

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[36] Antonfrancesco Doni, *Dialogo della musica*. For a study on specific figures represented in the dialogue, see James Haar, "Notes on the 'Dialogo della Musica' of Antonfrancesco Doni" *Music & Letters* 47 (1966): 198-224.

[37] For Newcomb, certain printed scores held an authoritative concept of "work" that challenges traditional views of early notation; these were intended to present complex *artificioso* works such as ricercars in a form for reading and study. Rather than a modern version of score reading in which the reader uses the score to visualize and comprehend the entire work at once, Newcomb suggests that early-modern score reading, at least in this case, may have been grounded in appreciating specific "notational relationships" and instances of artifice and complexity. Or, as he puts it, for "the ability to recognize and appreciate unusual examples of musical artifice in the notation on the page." Newcomb, "Notions of Notation," 7.

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[38] See Feldman, *Madrigal in Venice.*

[39] Cipriano de Rore, *Tutti i madrigali di Cipriano di Rore, a quattro voci* (Venice: Gardano, 1577). Angelo Gardano, ed., *Musica de diversi autori. la bataglia francese et canzon delli ucelli insieme alcune francese, partite in caselle per sonar d'instromento perfetto: novamente ristampate* (Venice: Angelo Gardano, 1577, facsimile reprint Bologna: Forni Editrice, 1971).

[40] Newcomb, "Notions," 17.

[41] In addition, certain Venetian ricercars belie this assertion: see Padovano's *Ricercar del sesto tono* (1556) or Gabrieli's *Ricercar del primo tono* (1605), which feature extensive rhythmic modification of their single subjects through contrapuntal devices such as augmentation, diminution, and fragmentation; as Rebecca Edwards points out, Merulo was one of the first composers to compose ricercars with four subjects, a genre that was taken up by the composers of the Ferrarese-Roman-Neapolitan school that were discussed by Newcomb. See Rebecca Edwards, ""Merulo [Merlotti, Merulus], Claudio," *Grove Music Online. Oxford Music Online,* accessed on June 13, 2018. http:////www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000040699.

[42] As I will attempt to prove shortly, intabulations of vocal music display a type of *artificioso* composition of their own.

Conditions for Self-Fashioning: ***Motive***

As Newcomb suggests, social-intellectual environments in the *musica erudita* encouraged the composition of complex, *artificioso* keyboard music. These environments – with limited sets of interests and aesthetic values – would have suggested a very particular pathway for advancement for the ambitious keyboardist-composer. Specifically, a heightened emphasis on a perceived intellectualism, with a musical emphasis on artifice and complexity, would have encouraged keyboardists to adopt a stance of learnedness in their compositions. That is, not only would organists taking part in Venetian salons have self-fashioned or crafted personas to gain economic and cultural capital, the particular strategies used for advancement would have been molded to the interests of a highly intellectual environment that valued and promoted a *culture* of learnedness. Their strategies of self-fashioning would lead them to aspire to not only being merely good players, but to being well-rounded *musici* as well.[43]

The high value placed on keyboard playing in sixteenth-century Italy is well known: perhaps one of the best-known examples of this is the account of Giulio Segni halting a political discussion at the Vatican through his playing, in a mode that echoes the famous account of the lutenist Francesco da Milano performing for a group of Milanese noblemen.[44] And, the status of organists was of particular importance in Venice, due to the unique musical establishment at San Marco and the prominent role that organists held there. The Capella Marciana itself was used as a means of propaganda, as Rebecca Edwards notes; due to the prominence of the organ and its players in the Capella, it is easy to tie organists directly to the propaganda associated with the

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[43] A similar point is made by Victor Coelho regarding the role of intabulations in "elevating" the status of lute players; see Coelho, "Revisiting," 49.

[44] H. Colin Slim, "Francesco da Milano (1497-1543/44): A Bio-Bibliographic Study: 1" *Musica Disciplina* 18 (1964): 63-84; see esp. 79-80.

"myth of Venice."[45] As Randall E. Goldberg points out, the fictionalized dialogue that forms the bulk of Diruta's treatise *Il Transilvano* conveniently happens to begin on Ascension Day, a major event in Venetian civic mythology, and can be easily read within the lens of propaganda.[46] At the end of the *Prima Parte* of his treatise, Diruta explicitly links this Venetian propaganda, citing the "renowned church of San Marco," with an account of a dueling Merulo and Gabrieli:

> Searching through the different towns, I came at last to this most serene city of Venice. Hearing in the renowned church of San Marco a contest of two organs being played antiphonally with so much ingenuity and elegance, I was transported beyond myself. Eager to meet these two champions, I stopped at the door where I saw Claudio Merulo and Andrea Gabrieli coming out. Both were organists of San Marco. Having devoted myself to them, I decided to emulate them, especially Signor Claudio.[47]

Despite the rising fame of organists in sixteenth-century Italy, however, the old medieval attitude that viewed players of instruments as at the bottom of the hierarchy persisted. Shades of this attitude are clearly seen in Galileo's famous statement on organists in his *Dialogo* (1584):

> Those like Annibale Padovano who have known how to play and write well are very few in comparison to the total number of keyboard players. In all of Italy, where the number is greater than in any other part of the world, I do not believe in any way they exceed four in number. Among them I would count Claudio da Coreggio, Giuseppe Guami, and Luzzascho Luzzaschi. Who the fourth is I shall declare another time. The reason why these satisfy with both the pen and their playing is this. They first had many, many years under the discipline of the first men of the world in that profession and had many opportunities. They have seen

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[45] Rebecca Edwards writes, "The emphasis on prestige and expansion during the course of the sixteenth century has been previously noted by students of San Marco, and it has become increasingly clear that Capella Marciana was seen and used as a tool for state propaganda." Rebecca Edwards, "Claudio Merlo: Servant of the State," 29.

Edwards also points to the role of organ playing – both in duets, solos, and with other instruments – for large-scale civic ceremonial events, such as the state visit of King Henry III of France. Ibid., 228-9.

[46] Goldberg points out that Zarlino's *Dimostrationi harmoniche* also begins with a good dose of Venetian civic mythology. Randall E. Goldberg, "Where Nature and Art Adjoin: Investigations into the Zarlino-Galilei Dispute, Including an Annotated Translation of Vincenzo Galilei's *Discorso intorno all'opere di Messer Zarlino*" (PhD diss., Indiana University, 2011), 50-51.

[47] "..cercando diversi Paesi, finalmente venni in questa Illustrissima Città di Venetia, & sentendo nel famosißimo Tempio di San Marco un duello di due Organi rispondersi con tanto artificio, e leggiardria, che quali uscii fuor di me stesso, & bramoso di conoscere quei due gran campioni, mi fermai alla porta, dove viddi comparir Claudio Merulo, & Andrea Gabrieli, ambedua Organisti di San Marco, à quali dedicato me stesso, mi diedi à seguitarli, & in particolare il Signor Claudio.." Diruta, *Transilvano,* translation by Bradshaw, *Transilvano,* 1:105.

> and diligently examined all the good music of the famous contrapuntists, acquiring by this means a very refined and exquisite counterpoint. They studied that instrument all the time with greater diligence and assiduity than one can imagine and continue to study and learn. They have been in many parts of the world and worked with many different worthy men of their profession. They have been gifted by nature with a most beautiful genius, fine judgment, felicitous memory, and a forceful and graceful disposition of the hands. They have had the opportunity – deservedly – to serve grand and very rich princes who were not only musically knowledgeable and tasteful but also most generous. You know how important this stimulus is to noble and talented minds.[48]

Galilei declares that the number of organists who "play and write well are very few in comparison to the total number of keyboard players"; in other words, while keyboardists in Italy were apparently a dime a dozen, it is clear that the truly learned ones – the mark of which was, for Galilei, the ability to compose well – were few. In addition, Galilei appeals to a dedication to both musical learnedness ("they have seen and diligently examined all the good music of the famous contrapuntists"…. and that they "continue to study and learn"), and to an influence from nobility (the opportunity to serve "grand and very rich princes.") An aspiration or appeal to noble behavior would have, of course, been a common strategy in early modern self-fashioning.[49]

Unsurprisingly, biographical details of keyboard-composers reveal a common aspiration to be more than "mere" organists. Marco Antonio Cavazzoni's apparent participation in the Spataro correspondence indicates that he was fully able to contribute to the intellectual discussions with Spartaro and other theorists such as Pietro Aaron and Giovanni Del Lago.[50] It is no surprise, therefore, to find that *cinquecento* keyboardist-composers frequently had ties with academies, *literati,* and intellectual spaces, both in Venice and in other Italian centers. For example, Cavazzoni was in the service of Pietro Bembo, who surely provided the composer access to a wider network of intellectuals, humanists, and figures in literature and the visual arts; as Giulio Ongaro shows, Cavazzoni's connections earned him considerable wealth and prestige.[51] The San Marco organist Giulio Segni had ties with painters and writers including Aretino; Warren Kirkendale also suggests that ties with Bembo may have helped Segni obtain his San Marco position.[52] Ties between Bembo and organists extend even further. Girolamo Cavazzoni, Marco Antonio Cavazzoni's son, dedicated his 1543 volume of *Recerchari* to the great humanist.[53] And, as already mentioned, Martha Feldman demonstrates that Girolamo Parabosco – a colorful figure if there ever was one – was also an active member of the network of *literati* who vied for patronage among the Venetian salons, therefore flourishing in traditional musical establishments: namely, as First Organist of San Marco and as a freelancer in the salons. In fact, Parabosco arguably encapsulates the link between keyboard playing and Venetian intellectual spaces.[54]

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[48] Vincenzo Galilei, *Dialogue on Ancient and Modern Music,* translated with an introduction and notes by Claude Palisca (New Haven & London: Yale University Press, 2003), 343.

[49] See Wistreich, *Warrior,* 221-38, for a description of the function of noble behavior – described through the word "honor" – as a necessary performative behavior in sixteenth-century courtly society.

[50] Cavazzoni was a recipient of two letters, from the theorist Gioavnni Spataro, collected in the volume. According to references in the extant letters, there were at least three letters written by Cavazzoni, now lost. See Bonnie J. Blackburn, Edward E. Lowinsky, and Clement A. Miller, ed., *A Correspondence of Renaissance Musicians* (Oxford: Clarendon Press, 199), xx-xxi.

Conditions of Self-Fashioning: ***Medium***

Self-fashioning in the Renaissance can be situated within the center of a collision between the new technology (and subsequent cultural shifts) associated with print on the one hand, and pre-existing cultures of manuscript production and dissemination on the other. Rather than a case of the former simply supplanting the latter, print and manuscript cultures uneasily occupied shared functional spaces throughout the sixteenth century. The research of Stanley Boorman, for example, has demonstrated that there was significant overlap in the way that prints and manuscripts were both produced and used.[55] At the same time, of course, many of the obvious differences between the two – particularly with regard to dissemination and reception – were immediately felt.

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[51] Giulio Ongaro, "Sixteenth-Century Patronage at St Mark's, Venice." *Early Music History* 8 (1988): see esp. 97; 108.

[52] Warren Kirkendale, "Ciceronians versus Aristotelians on the Ricercar as Exordium, from Bembo to Bach." *Journal of the American Musicological Society* 32 (1979): 18.

[53] Ibid.

[54] See Feldman, *City Culture,* 16-21, and 85-87, for more on connections between Parabosco and Venetian literary sources.

In the case of print, one may well assume that the myriad decisions related to creating, assembling, and printing volumes of music were primarily driven by market considerations. However, this may not always be the case. It must be remembered that printing technology was a recent phenomenon, and that volumes were often prepared by their creators – and, by extension, received and used – as if they were manuscripts rather than as mass-produced commodities.[56] In the case of Venice, Jane Bernstein points out that academies typically purchased printed volumes for their membership; there were often close relationships between printing houses and Venetian academies.[57] These personal relationships, forming a network of social connections that included composers and keyboardists as well, suggest a reception and use of print that may not have been far removed from that of manuscripts. In fact, for Venetian publishing houses, international book fairs and sellers may only represent one context for which volumes were produced; in some cases local outlets were equally important.[58]

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[55] See, for example, Stanley Boorman, "Printed Music Books of the Italian Renaissance from the Point of View of Manuscript Study," in *Studies in the Printing,* 2587-602.

[56] The fact that printed volumes were carefully crafted in a manner not at all dissimilar to manuscript preparation is a point raised frequently in the work of Stanley Boorman; see for example, his essays collected in the volume *Studies in the Printing, Publishing and Performance of Music in 16th Century,* cited above; in particular see the essays "Petrucci's Type-Setters and the Process of Stemmatics," and "Printed Music Books of the Italian Renaissance from the Point of View of Manuscript Study."

[57] Jane Bernstein, *Print Culture,* 94, 15.

[58] Boorman writes, "The Venetian, therefore, was looking for several types of outlet: the artistic and cultural centres of northern Italy, the patrons and friends of a lesser composer, and a general diffuse international audience." Boorman, "The Music Publisher's View," 414.

Therefore, while the larger European book market might be the initial thing one thinks of with regard to printed music in the sixteenth century, keyboard volumes might also have been designed with local contexts in mind. Local social environments, such as the salons and academies in Venice, in which keyboardist-composers flourished, may have been just as much an influence on musical style as any market factors. Despite the well-known dissemination of Venetian keyboard music throughout *oltremontani* markets and book fairs, localized interactions – specifically, personal connections between patrons and keyboardists – may have had a more pressing influence when it came to shaping elements such as compositional choice and musical style.[59]

This point was recently raised by Rebecca Cypess in her study of Biagio Marini's printed volumes of string music. Cypess points to the use of family names of patrons as titles of pieces in Marini's *Affetti musicali* (1617), arguing that Marini intended to cite past, private performances.[60] Despite being in a commercial print that Marini ostensibly created for economic gain, the titles – and, arguably, specific musical decisions made by the composer – reflect the influence of Marini's local social environment. In similar fashion, Claudio Merulo's first two books of intabulated *canzoni* consist entirely of pieces – in this case, intabulations of the composer's own instrumental part-book pieces – with titles named after families; Charles

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[59] The influence of patronage on musical style in sixteenth-century composition is well-established. For example, Anthony Newcomb points to the sharp contrast between Marenzio's Eighth and Ninth books of madrigals; see Newcomb, "Notions," 20-21. Specific to intabulations, Polk and Coelho describe the style of a given intabulation – which again the authors compare to a literary translation – as decided by the "target," or audience. This notion of "target" could include wider markets as well as the localized environments of specific patrons of academies. See Polk and Coelho, "Instrumentalists," 215.

[60] That is, Marini sought to "record events of the past, to preserve them for posterity and reflection among the people who took part in them, and to present a public record of them for emulation by others who bought the collection. Purchasers of Marini's book who were not directly involved in either his concerti or the publication could recreate Marini's concerti, either by playing the music themselves or by commissioning others to play for them, thus approximating the original social-musical experience in the company of another set of listeners." Rebecca Cypess, *Curious and Modern Inventions*, 56-57.

McDermott suggests that the majority of these names refer to either families in Parma or "courtesans at the Farnese palace" (Merulo came from Correggio, an Emilian town, and returned to the region after his time at San Marco, entering the service of the court in Parma around 1584).[61] I suggest that all of the intabulations examined in this chapter can be seen in a similar light: on the one hand intended for the commercial market, but on the other hand influenced by (or even, as in the case of Marini, designed to refer to) specific local social-intellectual conditions established by a network of patrons who the composer knew personally. And, once again, this suggests a function for IKT prints that may well have been more manuscript-like, especially when read within local contexts.

The notion that IKT prints functioned and were received like manuscripts is supported by the fact that IKT's notational conventions operate in both print and manuscript sources. As production techniques in single-impression print and manuscript copying were obviously diverse, this general similarity in notational conventions is significant; needless to say, many of the notational details that go into keyboard notation are easier to accomplish by writing by hand than by single-impression printing.[62] In addition, based on what is known generally with regard to the production of printed music in the sixteenth century, we have every reason to assume that publishing houses such as Scotto and Gardano based their keyboard prints on pre-existing manuscripts, probably prepared by the composer or perhaps someone working in an editorial capacity.[63] There is no reason to assume that a publishers such as Gardano would not have had access to, say, Gabrieli's manuscripts when preparing his editions.

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[61] Charles M. McDermott, "The Canzoni d'Intavolatura d'Organo of Claudio Merulo: A Guide to Improvised Oranmentation" (Ph.D. diss., University of California, Berkeley, 1979), 138; see also Rebecca Edwards, "Merulo, Claudio."

[62] As Boncella points out, "Gardano and Vincenti, however, used ties and rests more sparingly than did their Roman colleague probably because of the greater effort require to indicate these details in movable type, a less flexible printing method than engraving." See Paul Anthony Luke Boncella, "The Classical Venetian Organ Toccata (1591-1604): An ecclesiastical genre shaped by printing technologies and editorial policies" (PhD diss: Rutgers The State University of New Jersey: 1991), 131.

In general, printing in notational media that are not in standards formats such as part-books, or Roman chant fonts, seems to have been a highly costly affair.[64] Printing keyboard music in IKT was a particularly expensive and burdensome enterprise; as Jane Bernstein points out

> Both lute and keyboard editions must have been very expensive to produce. Only three keyboard editions survive from the period of Antonio Gardano's tenure at the press, and neither Girolamo Scoto nor his heirs appears to have issued any editions using keyboard intavolatura.[65]

Therefore, the instances in which an intabulator and publisher strive to include notational detail – detail that may be difficult or burdensome to include with single-impression printing – are highly important. Every added tie or flipped stem meant a small amount of additional work for the publisher, and these instances represent a resistance against IKT conventions – its agency and its algorithmic filtering effect. Notational details that violate IKT convention to show details of voice leading must be taken as significant. The level of precise detail indicates a certain refined and exclusive mode of reception – one that was perhaps more akin to how we traditionally think of manuscripts. [66]

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[63] Bernstein points out that this was standard practice for publishers. See Bernstein, *Print Culture,* 31.

[64] Anthony Newcomb points out that printing scores was very expensive. Newcomb, "Notions of Notation," 10.

[65] Bernstein, *Print Culture,* 68.

[66] Having said that, the reception of written-down keyboard music has to be seen as affected by medium: while I've already suggested that prints and manuscripts overlapped in many ways, as print technology rapidly took over many of the traditional functions of manuscript production and dissemination, it seems logical that some manuscripts could potentially take on an especially elite and rare status. There are some indications of this in the realm of *cinquecento* keyboard music, although a clear picture is hard to discern given the relatively scant number of manuscripts that survive to the present day. One could cite manuscripts such as the Bourdenay Codex and British Library Ms. Add. 30491, which point to a close-knit and elite fetishization of artifice and complexity – notably the keyboard music in these manuscripts are, for the most part, in *partitura.* For more on the Bourdenay Codex ricercars, see Anthony Newcomb, "The Anonymous Ricercars of the Bourdeney Codex," in *Frescobaldi Studies*, ed. Alexander Silbiger (Durham, NC: Duke University Press, 1987), 97-123. For a modern edition of the Bourdenay Codex ricercars, see Giaches Brumel, *The Ricercars of the Bourdenay Codex,* ed. Anthony Newcomb (Madison,

Conditions of Self-Fashioning: *Authorship* and the Intabulations of Merulo and Gabrieli

Ultimately, however, the act of printing music was, on some level, a *public* gesture, in that printed volumes projected the music – and the name – of a composer into a larger public sphere. However, at the same time the act of printing can be seen as a strategy for advancement within *local* networks of patronage in which the composer worked. It is notable that both Andrea Gabrieli and Claudio Merulo are authors of two large-scale posthumous multiple-volume publications of keyboard music.[67] In both cases, it appears that the project was initially conceived during the composer's lifetime and was subsequently overseen by a relative of the composer after his death. In the case of Andrea, this relative was his famous nephew Giovanni; in Merulo's case, it was his (eleven-year-old!) grand-nephew Giacinto.[68]

Biographical details of both composers suggest that self-fashioning theory may be useful in explaining the impetus behind these posthumous series. Specifically, it suggests a reading of both as a form of monumentalizing, of either the composer himself or, in a larger sense, of the family legacy. In the case of Claudio Merulo – an artist who enjoyed connections with some of the most prominent *literati* and humanists in Venice and enjoyed the fruits of an extensive network of patronage – the reasons for self-fashioning may be much more readily apparent.[69]

WI: A-R Editions, 1991). For a facsimile reprint of the British Library manuscript, see Alexander Silbiger, ed., *London, British Library, ms. Add. 30491* (New York: Garland, 1987).

[67] In addition, the printed music of the Paduan composer Sperindio Bertoldo (1591) – also examined in this chapter – is also posthumous and published in more than one volume. For a facsimile and modern edition, see Sperindio Bertoldo, *Opere per tastiera (Venice 1591),* ed. Luigi Collarile (Colledare: Andromeda Edition, 2005).

[68] As Merulo's grandnephew Giacinto would have only been eleven years old at the time of publication of Merulo's *Libro secondo* of canzonas, his precise role in the endeavor must be left open to question. McDermott and Cunningham speculate that his inclusion was "perhaps an attempt on the part of the publisher to authenticate the contents of the volumes." See Claudio Merulo, *Canzoni d'intavolatura d'organo,* ed. Walker Cunningham and Charles McDermott (Madison, WI: A-R Editions, 1992), viii.

[69] See Edwards, "Merulo Servant of the State."

Rebecca Edwards has shown that Claudio Merulo also received patronage through the web of intellectual academies in Venice. As Edwards notes, Merulo's career grew from

> a network of creative, intellectual and financial contacts which enabled the composer to benefit from a system of musical patronage whose indistinct lines of demarcation and overlapping constituencies served to promote the fulfillment of his practical aims.[70]

In fact, Edwards' research suggests that Merulo exploited personal ties with humanistic patrons and *literati* even before arriving in Venice in 1555, Merulo is shown to have early associations with the humanist Antonio Zantani, who held house concerts with prominent Venice-based musicians such as Parabosco and the San Marco organist Annibale Padovano, in addition to Merulo.[71]

Merulo's close associations with Venetian humanists, literati, publishers, and patrons not only reveal the composer's networks of contacts and his ability to exploit them; in addition, they surely suggest an aspiration to achieve an equal footing in cultural and intellectual status. It is no accident that Merulo's name appears as one of the four organists in the statement by Galilei quoted above; in fact, Galilei, in another book, derides Zarlino for depicting Merulo in a kind of quasi-student role in his *Discorso. . intorno all'opere di Messer Gioseffo Zarlino:*

> The most refined Mr. Claudio [Merulo] of Coreggio now occurs to me, and although he is modesty itself, I cannot believe that he would have heard some of these simplicities without laughing together with the others whom Zarlino introduces in his discussions, to whom he has done the greatest wrong by placing them in the predicament of men who have need of learning through demonstration the best-known things.[72]

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[70] Ibid., 31. Indeed, Merulo eventually gained the title of "cavaliere," which, as Edwards points out, "placed him on the same aristocratic level as Zuane da Legge, who had been his patron as Procuratore at San Marco for many years." See ibid., 290-91.

[71] See Selfridge-Field, *Venetian Instrumental Music,* 49-50 (cited above). For more on Merulo's connection with Zantani, see Edwards, "Merulo," 214-20.

[72] "Mi souuien'hora del gentilissimo Messer Claudio da Coreggio, & quantunque egli sia l'istessa modestia, non posso credere ch'egli habbia udito alcune di queste semplicità senza ridersene insieme con gl'altri che introduce il Zarlino ne suoi ragionamenti; ai quali ha fatto un grandissimo torto, con mettergli in predicamento di huomini

Galilei's criticism of Zarlino speaks to Merulo's learned status: in reality, the composer would certainly "ridersene insieme con gl'altri" at Zarlino's simplistic discussion.[73] However, it also speaks to the *danger* of Merulo being perceived as somewhat lesser than the others intellectually, a danger suggested by both Zarlino's portrayal as well as Galilei's need to defend the organist from it. Regardless, Merulo's social connections paid off in the end: he eventually gained the title of *Cavaliere*.[74]

In the case of Andrea Gabrieli, however, the reasons are not as clear. In contrast to Merulo, there is not much evidence for his participation in either literary-intellectual circles or being active within Venetian patronage networks. In fact, revised biographical details have corrected a conflation with another figure named Andrea Gabrieli, resulting in a significant and unfortunate reduction of prestige for the composer.[75] In fact, Gabrieli now stands out for his lack of connections when compared to the majority of *cinquecento* organists; rather, he is known for his prominent role as teacher of instrumental composers (starting with his nephew Giovanni).[76] In contrast to Merulo, Andrea and Giovanni Gabrieli may have used the former's printed volumes to *elevate* Andrea's name after his death, particularly in the hyper-intellectual social circles already cited. Although Andrea was no longer alive to witness this ongoing process of

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c'habbino bisogno d'imparare per dimostratione le cose notissime..." Vincenzo Galilei, *Discorso… intorno all'opera di Messer Gioseffo Zarlino da Chioggia* (Florence: Giorgio Marescotti, 1589), 61, accessible on imslp.org: http://imslp.org/wiki/Discorso_intorno_all'opere_di_messer_Gioseffo_Zarlino_(Galilei%2C_Vincenzo), accessed on June 13, 2018. Translation by Randall E. Goldberg, "Where Nature and Art," 53.

[73] Ibid.

[74] Merulo's knighthood was granted by Duke Ranuccio Farnese of Parma. See Edwards, "Merulo, Servant of the State," 286, 290-91. As Edwards points out, "placed him on the same aristocratic level as Zuane da Legge, who had been his patron as Procuratore at San Marco for many years."

[75] See Martin Morell, "New Evidence for the Biographies of Andrea and Giovanni Gabrieli," *Early Music History* 3 (1983): 101-22. Documents presented by Morell suggest a later birthdate for the composer; in addition, they suggest that he could not be the Andrea Gabrieli who was the grandson of the humanist Triofone Gabrieli, member of the *Accademia della Fama.*

[76] David Bryant, "Gabrieli, Andrea" *Grove Music Online. Oxford Music Online,* accessed on June 13, 2018. http:////www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000040692.

self-fashioning, his nephew Giovanni – long presumed to be the editor behind the project of publishing his uncle's keyboard music – was.[77]

Therefore, it would seem as if the precise motives for self-fashioning between the two composers are somewhat different, even as in the end the result – that is, the vehicle of the self-fashioning, their keyboard music – was largely the same. It is especially interesting to note the parallel between the two projects, both being published largely posthumously and both being large-scale, multi-volume series. In addition, it has long been suspected that Gabrieli's volumes were a reprint of music published during the composer's lifetime. Even as this has not been generally accepted as fact, the inclusion of a volume of Gabrieli's keyboard music in Merulo's proposed series (see below) suggests that both composers were surely behind the conception of these projects, both of which began *before* the composers' deaths. In the end, both series were brought to completion with the involvement of the composer's families. In fact, in the case of Gabrieli, it seems as if his nephew Giovanni may have engaged in some self-fashioning of his own. Giovanni may have published his uncle's organ music in an attempt to gain income, a need that Martin Morell has shown was acute,[78] and part of Giovanni Gabrieli's strategy in bringing his uncle's music to light may also have involved engaging in a type of monumentalization of the family name: using the prints to highlight his uncle's *artificioso* playing – combining the skills of *sonare in fantasia,* virtuosic playing, musical understanding, and composition – to social circles with which Andrea may not have had extensive ties with. Highlighting his uncle's keyboard music in this manner would help to raise his own name. Giovanni's famous preface to the 1587 *Concerti* – in which he praises his uncle's name and works in an overly effusive manner that almost gives a sense of desperation, and declares himself "little less than a son" to Andrea – seems to simultaneously elevate and exploit his familiar connection.[79]

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[77] See David Bryant, "Gabrieli, Giovanni," *Grove Music Online, Oxford Music Online,* accessed on August 5, 2017, http://www.oxfordmusiconline.com.libproxy1.usc.edu/subscriber/article/grove/music/40693.

[78] See Martin Morell, "New Details," 117-20.

The Cases of Claudio Merulo and Andrea Gabrieli: Intabulator as Author

Part of the *artificioso* playing of Andrea Gabrieli and Claudio Merulo surely involved the performance and arrangement of other composers' works. It is noteworthy that intabulations comprise a major part of Gabrieli's series, and a significant part of Merulo's. Merulo's *Terzo libro* (1611) is comprised of elaborate intabulations of four vocal chansons, and Gabrieli's *Libro quinto* (1605) and *Libro sesto* (1605) are also dedicated entirely to intabulations of vocal works; in addition, the *Terzo libro de ricercari..* (1596) – primarily made up of Gabrieli's own keyboard ricercars – includes intabulations of vocal music. While volumes printed earlier in the century contained either a few intabulations (e.g., the printed volumes of Marcoantonio and Girolamo Cavazzoni, 1523 and 1543, respectively), or were exclusively dedicated to intabulations of the composer's *own* works (e.g. Jacques Buus's 1549 *Recerchari*), dedicating a print of keyboard music exclusively to intabulations of another composer's works – with the name of the intabulator occupying the same space (both literally and figuratively) as composer – was new.[80]

I would argue that both Andrea and Merulo demonstrate a role of intabulator as "author." This can be seen in the language used on the title page of Andrea's books of intabulations*;* for example, the title page of the *Sesto Libro* states: *"CANZONI ALLA FRANCESE / PER SONAR SOPRA ISTROMENTI DA TASTI / Tabulate dall'Eccellentiss. Andrea Gabrieli; Gia Organista*

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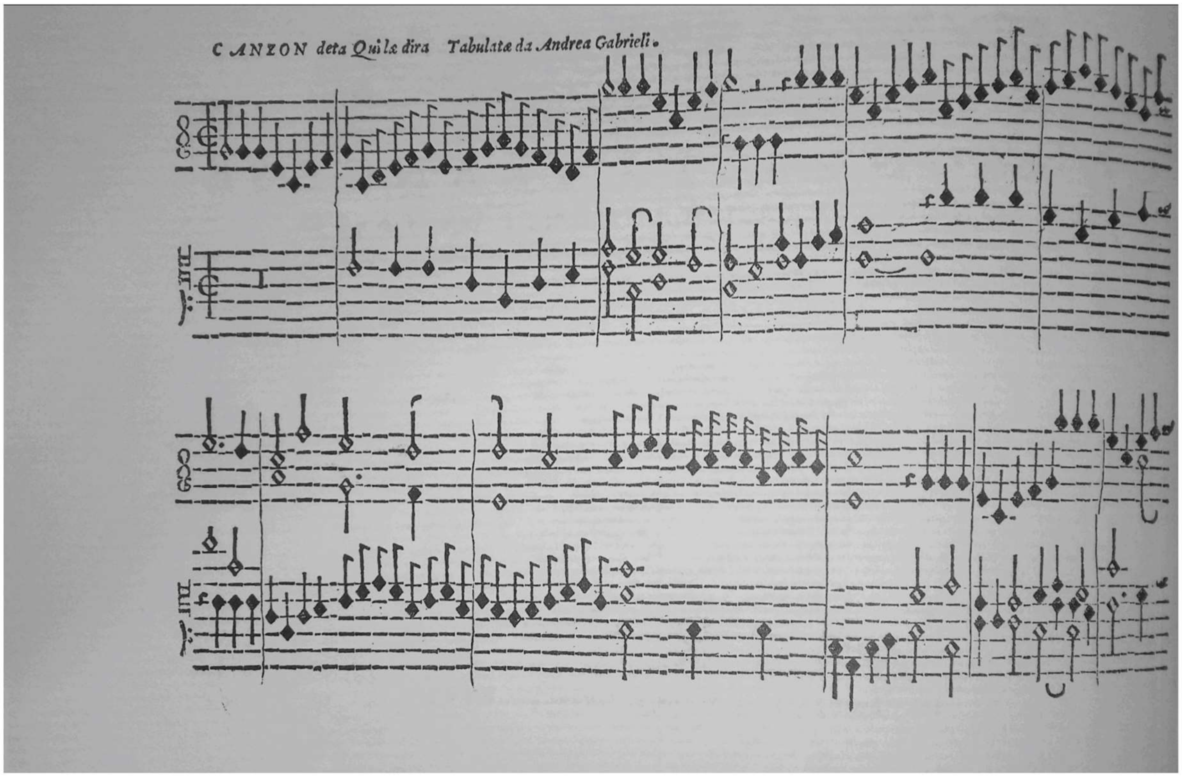
[79] Giovanni and Andrea Gabrieli, *Concerti di Andrea et di Gio. Gabrieli Organisti... Libro Primo et Secondo* (Venice: Angelo Gardano, 1587). The quote is found in the preface to the Cantus book; accessed on March 1, 2015, http://ks.imslp.net/files/imglnks/usimg/0/05/IMSLP84142-PMLP171814-Gabrieli_ConcertiBook1_2_Canto.pdf.

[80] It is worth noting that the first printed volume of music in IKT, Antico's *Frottole* (1517) consists entirely of intabulations, but here the intabulators are anonymous. Andrea Antico, *Frottole intabulate per sonare organi libro primo* (Rome: Antico, 1517; facsimile ed. Bologna: Forni, 1970).

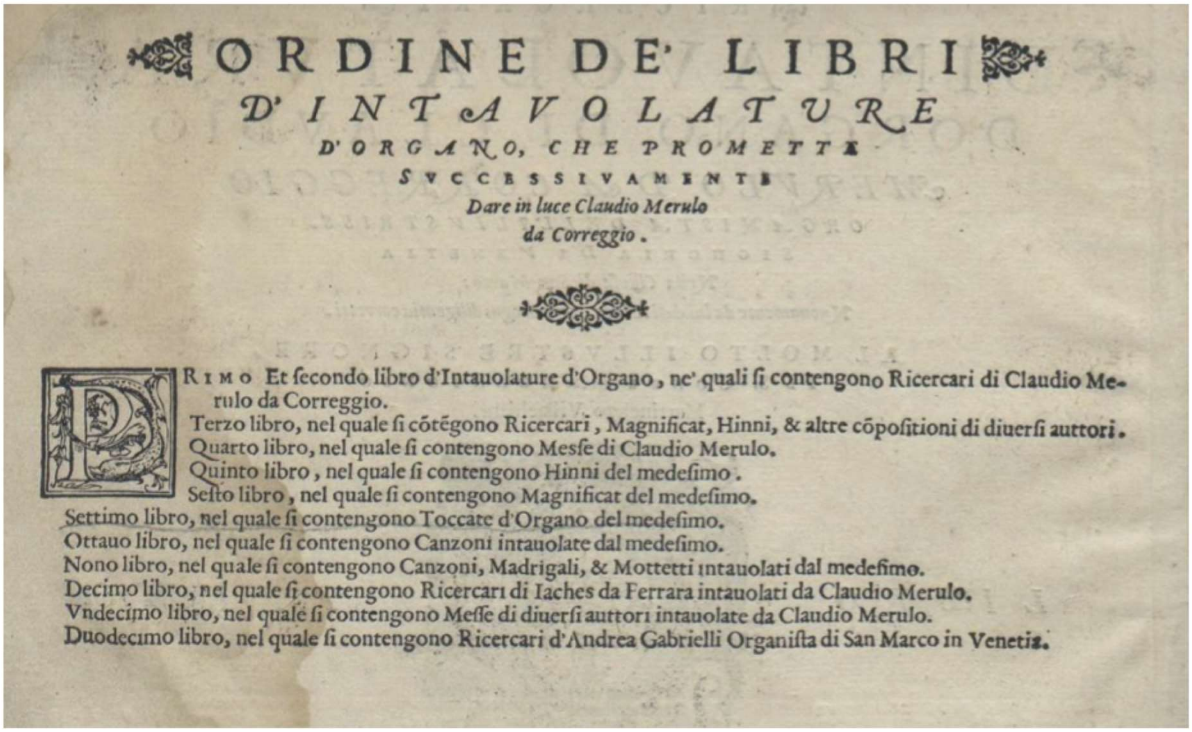
in S. Marco in Venetia." The title mentions the status of Gabrieli – typical for a commercial printed volume of the time, but notable is Gabrieli's authorial identification as "intabulator" ("tabulate dall'Eccellentiss. Andrea Gabrieli.") This is cast into greater relief in the volume itself. For the identification of the first piece, the composer of the original vocal work is not included (this, of course, is not at all atypical), but Gabrieli's name is, again highlighted in his role as intabulator ("*Tabulata da Andrea Gabrieli*"). (See **Example 3.3**)

Example 3.3 Facsimile from GABRIELI 1605b, 0v.



This concept – of intabulator as *author* – can also be seen in Merulo's large-scale project (abandoned when the composer gave up his printing enterprise) to publish multiple volumes of keyboard music. The list of volumes that were to be produced was included in Merulo's 1567 volume of *Ricercari* (**Example 3.4**). Again notable is the prominent position of Merulo's intabulations of works of other composers.[81] Merulo highlights his seemingly important role as intabulator, which is similar to Andrea's role as intabulator on his own title page. While the series begins with volumes dedicated to Merulo's own works, volumes nine through eleven appear to consist of *others'* works intabulated by Merulo. (Interestingly, the twelfth volume, which would have consisted of ricercars by Andrea Gabrieli, doesn't mention Merulo in a capacity as intabulator: it seems as if Gabrieli would have intabulated his own ricercars!) It is within this context that the notion of intabulator-as-author – demonstrative of the "bibliographic ego" – makes sense.

Example 3.4 Facsimile from Claudio Merulo, *Ricercari d'intavolatura d'organo* (Venice: [n.p], 1567).



ORDINE DE' LIBRI
D'INTAVOLATVRE
D'ORGANO, CHE PROMETTE
SVCCESSIVAMENTE
Dare in luce Claudio Merulo
da Correggio.

PRIMO Et ſecondo libro d'Intauolature d'Organo, ne' quali ſi contengono Ricercari di Claudio Merulo da Correggio.
Terzo libro, nel quale ſi cōtēgono Ricercari, Magnificat, Hinni, & altre cōpoſitioni di diuerſi auttori.
Quarto libro, nel quale ſi contengono Meſſe di Claudio Merulo.
Quinto libro, nel quale ſi contengono Hinni del medeſimo.
Seſto libro, nel quale ſi contengono Magnificat del medeſimo.
Settimo libro, nel quale ſi contengono Toccate d'Organo del medeſimo.
Ottauo libro, nel quale ſi contengono Canzoni intauolate dal medeſimo.
Nono libro, nel quale ſi contengono Canzoni, Madrigali, & Mottetti intauolati dal medeſimo.
Decimo libro, nel quale ſi contengono Ricercari di Iaches da Ferrara intauolati da Claudio Merulo.
Vndecimo libro, nel quale ſi contengono Meſſe di diuerſi auttori intauolate da Claudio Merulo.
Duodecimo libro, nel quale ſi contengono Ricercari d'Andrea Gabrielli Organiſta di San Marco in Venetia.

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[81] See Edwards, "Merulo, Claudio."

From Sounding Image to *Dotta Partitura*: A Model for Interpreting Intabulations in IKT

The notion of intabulator-as-author, alongside a concomitant rise in status of keyboard intabulation, is key for a reading of self-fashioning in *cinquecento* keyboard music. Although intabulations have traditionally been viewed as "second-class citizens," there are many signs indicating that they constituted an important and sophisticated art in the sixteenth century, demonstrated by the complexity of the intabulation processes described in treatises such as Diruta's and Galilei's, and by the artfulness and complexity of the intabulations themselves. Their important status is also demonstrated by the major part they occupy in Gabrieli and Merulo's series – again, whole volumes consist entirely of them – and I would argue that their inclusion indicates not only that they were popular, but that they were important vehicles for demonstrating the keyboardist's art and skill. In fact, the notion that IKT itself could be used as a way to represent the multifarious aspects of the keyboardist's art is key to the present theory, as IKT's tendencies could be exploited to demonstrate musical persona through the very process of intabulating.

To begin, I would like to return to the notion of an intabulation in IKT as a type of frozen performance. If intabulations can be potentially viewed in this way, as I suggested earlier, their users could engage with them in a variety of ways: a user could recreate the performance, in real time, through playing them; a reader could also recreate the performance in his or her head. A reader could also *view* the frozen performance in a more general sense, as well: admiring it as a kind of *object d'art*, the signs and symbols of the notation painting a mental image of a more generalized aesthetic experience of listening.

In this sense, intabulations should be thought of as a kind of "sounding image” of a performance. The term “sounding image” is partly inspired by Cristle Collins Judd's notion of "hearing through the eyes,"[82] and in a similar vein to Judd's description, IKT could also be "read" in addition to being "heard." The functioning of IKT intabulations as sounding images depends on IKT’s conventions, and the roots that these conventions have in playing (see Chapter 1). If seen as a prescriptive notation, IKT compels the player to mimic the motions of the intabulator-composer in an act of replication; the instrument on which the player plays replicates the sound of the initial performance that was frozen onto the tablature. In this sense, an intabulation is a *sonic picture* of the performance. IKT’s rules automatically remove extraneous details of counterpoint and voice leading. These do not add pertinent information to the *image* of the performance – they can only be understood visually, through score analysis, not through listening.

At the same time, as seen in Example 3.1 at the beginning of this chapter, IKT’s use of mensural notation allows the intabulator the possibility of breaking notational convention to show voice leading and contrapuntal detail, pushing against the algorithmic action of IKT’s conventions. If taken to a far enough extreme, these conventions could be broken to the point where the contour of every individual voice of the model could be clearly seen, through the alteration of stem directions (which are normally controlled by IKT convention), the addition of ties, rests, and so on. If this were the case, the tablature would function more like a score, not like a sounding image. I would like to identify this second, score-like tendency as IKT as *dotta partitura* (learned score), which should be seen as forming a dichotomy with the sounding image tendency. The tendencies of sounding image and *dotta partitura* can work on a local level – that is, in individual instances or sections in an intabulation – or globally, defining an entire intabulation as a general aesthetic tendency.

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[82] The phrase is found in Judd’s subtitle (*Reading Renaissance Music Theory: Hearing Through The Eyes*).

The functioning of intabulations as sounding images is aptly demonstrated by the musical examples in Vincenzo Galilei's lute treatise *Il Fronimo* (1584). Typical for the time, the treatise takes the form of a Platonic dialogue between student and teacher; the discourse of the two interlocutors is frequently enlivened with musical examples, which are – appropriately for a treatise on lute intabulation – usually notated in Italian lute *intavolatura.* Notable, however, is the way in which Galilei integrates the examples within the dialogue. At times these examples are intended to be purely *read*, to demonstrate technical features of counterpoint or intabulation. However, at other times they are presented as sounding pieces of music (**Example 3.5**)[83]: Here Galilei is attempting to use the *intavolatura* excerpts as recordings; he needs his reader to play (or imagine playing) them to complete the process. In his writing he treats them not as scores to be analyzed, but as sounding objects – or, from a modern perspective, as recordings. (One could argue that, if Galilei had had access to modern presentation software such as PowerPoint or Prezi, he might have recorded his examples and embedded them within his text.)

While Galilei's intabulations are musical examples in a treatise, their functioning does not need to be limited to this context – after all *Fronimo* is capped off with a *mazzetto,* or “bouquet” (as Galilei calls it), of intabulations that do not function as examples. Individual intabulations found in printed volumes of lute or keyboard music could conceivably be used in a similar fashion. They are *pictures* of a performance, sounding images that invite the reader to actualize the performance, or to imagine – literally, to create a mental image of – the actualization of a performance. The concept of sounding images can be further grounded in a historical context as well. As Leslie Korrick shows, Galilei makes frequent comparisons with the visual arts in his various treatises (e.g. "mazzetto" in *Fronimo*); in addition, Korrick shows that Galilei's aesthetic stance positions visual arts and music on an equal basis, by putting the sense of sight on equal footing with that of hearing.[84] A fruitful analogy can be made, therefore, between IKT and other

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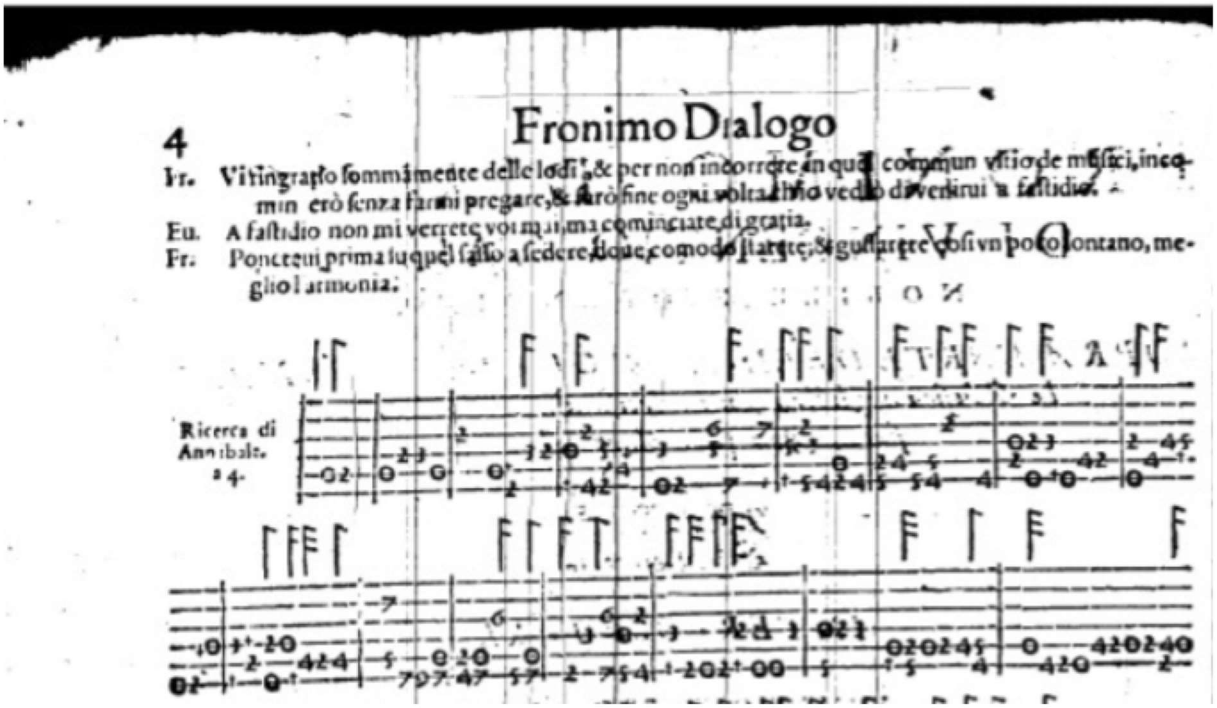
[83] The ways in which Galilei's examples function in his treatise match exactly Judd's description; see her analysis of Morley at the beginning of *Reading,* 3-10. Galilei’s text reads: “Fr. Vi ringrato sommimente delle lodi, & per non incorrere in quell commun vizio de musici, incomincerò senza farmi pregare, & faro fine ogni volta ch’io vedrò divenirvi a fastidio. Eu: A fastidio non mi verrete voi mai, ma cominciate di gratia. Fr. Ponetevi prim su quell sasso a sedere, dove comodo starete, & gustaretecosi un poco lontano, meglio l’armonia.” “**Fr.** I thank you in the highest degree for your praise; and in order not to fall into that common vice of musicians, I will begin without being begged, and will stop when I see that I am beginning to bore you. **Eu.** You will never bore me. But please begin. **Fr.** First, sit down over there on that stone where you will be comfortable and, being at a little distance, you will enjoy the harmony better." Translation by MacClintock; *Fronimo,* 32:

Example 3.5 Excerpt of dialogue from Galilei's *Fronimo.* Note the functioning of the musical example as a "sounding image." From facsimile of Galilei, *Fronimo,* 4.



4 Fronimo Dialogo

Fr. Vi ringratio ſommamente delle lodi, & per non incorrere in quel commun vitio de muſici, incomin cerò ſenza farmi pregare, & farò fine ogni volta ch'io vedrò di venirui a faſtidio.

Eu. A faſtidio non mi verrete voi mai, ma cominciate di gratia.

Fr. Poneteui prima ſu quel ſaſſo a ſedere, doue comodo ſtarete, & guſterete coſi vn poco lontano, meglio l'armonia.

Ricerca di Annibale. 4.

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[84] Leslie Korrick, "Lomazzo's *Trattato... della pittura* and Galilei's *Fronimo:* Picturing Music and Sounding Images in 1584," in *Art and Music in the Early Modern Period: Essays in Honor of Franca Trinchieri Camiz,* ed. Katherine McIver (Aldershot: Ashgate, 2003), 193-221.

tablature notations and many of the various small-scale graphic art forms published by Venetian houses throughout the *cinquecento*, which likewise attempt to depict reality through print technology.[85]

The function of a printed volume of keyboard music as a material *objet d'art,* and of an intabulation as a sounding image of a performance, can be observed in the beautifully produced book of keyboard music by Marco Antonio Cavazzoni, published by Vercelens in Venice in 1523. **Example 3.6** shows an excerpt from Cavazzoni's intabulation of an unknown chanson called *Perdonne moi*. Cavazzoni's privilege – cited earlier in Chapter 2 – speaks of a "new form of tablature." [86] On the surface, Cavazzoni's tablature notation does not appear substantially different from that used by Antico in his book of intabulated *frottole* of 1517 (the only extant book in IKT before Cavazzoni's). *Playing* through both tablatures, however, reveals that much more attention has been paid to vertical alignment in Cavazzoni's print: the tablature voices in Antico's print frequently fail to line up, whereas Cavazzoni's do in near-perfect fashion. On the one hand, this is obviously meant to facilitate playing the tablature; on the other hand, it also presents a clearer *picture* of the performance, aiding the reader in the task of mental recreation.

Certain musical features of Cavazzoni's intabulation support the notion that it represents a sounding image of Cavazzoni's performance of a vocal work. For example, the texture is highly keyboardistic, suggesting a highly idiomatic adaption. The voice leading in measures 2-3 of the example only gives a sketch of a full *a4* texture; in addition, the contrapuntal 7-6 suspension in the left hand is implied rather than written out fully. In addition, many of its musical features can be linked to improvisation; tellingly, many of these (already examined in Chapter 2) are typically seen in contemporaenous preludial ricercars and liturgical settings. In addition, many specific figures and gestures are typical to Cavazzoni, suggesting that they may be commonplaces – here I refer explicitly to the notion of a commonplace book (but in a figurative sense, not a literal one.)[87] In general, the intabulation reveals a stylistic and compositional affinity with Cavazzoni's

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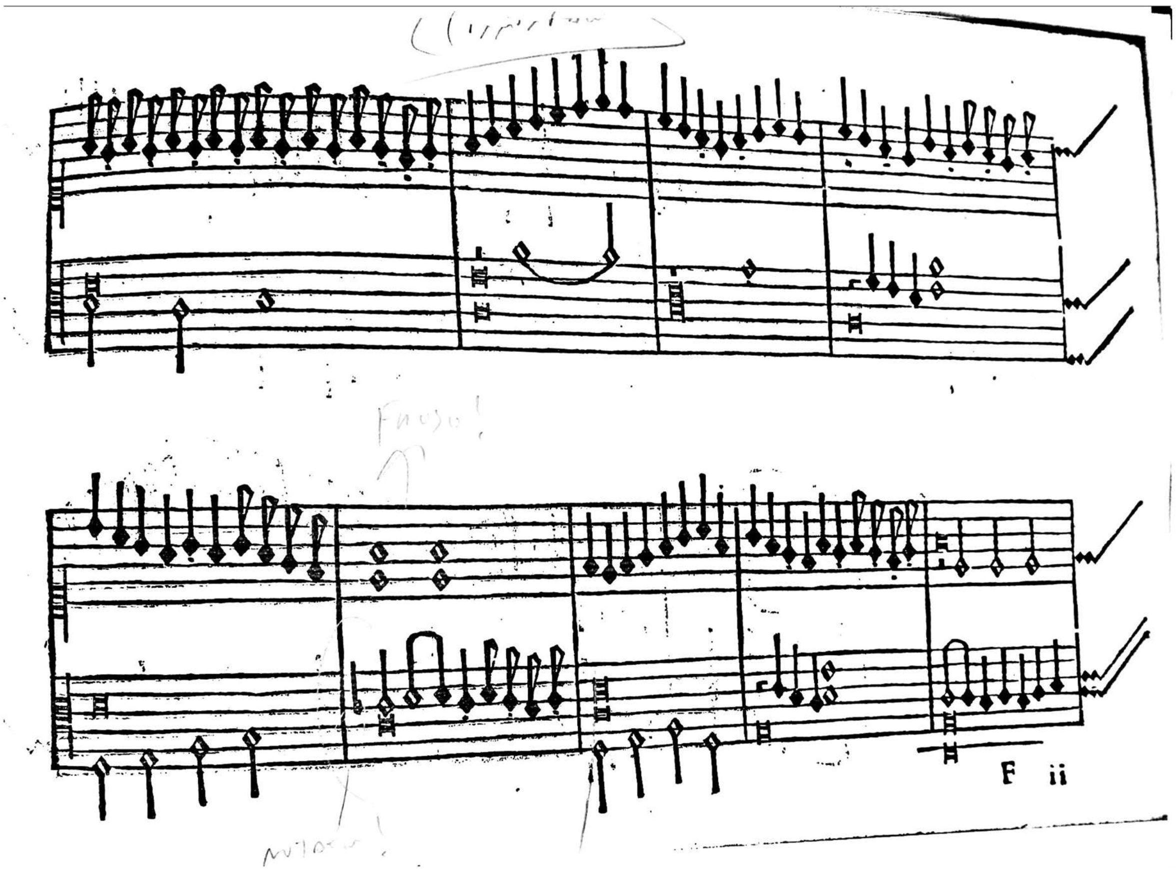
[85] See, for example, the print genres explored by Bronwen Wilson in her monograph *The World in Venice: Print, the City and Early Modern Identity* (Toronto: University of Toronto Press, 2005).

[86] Richard Agee, "The Venetian Privilege and Music-Printing in the Sixteenth Century." *Early Music History* 3 (1983), appendix, no. 10. As Bernstein points out, composers often worked closely in the printing process as a way of preventing errors; one is tempted to see the added natural sign in the sixth measure of the example – Cavazzoni otherwise uses dots to signal *ficta* – as a possible addition (of course, it could easily have been added by a user of the print as well). See Bernstein, *Print Culture,* 107.

Example 3.6 Excerpt of Marco Antonio Cavazzoni, *Perdonne moi,* from CAVAZZONI M 1523.



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[87] I use the term "commonplace" carefully, given the care with which musicologists have applied the concept to Renaissance music. By my use of the term, I mean that certain musical figures, such as specific cadence formulations, may have been "collected" and developed in the mind, and used in performance by improvising keyboardists. While there be some basis to draw an analogy with humanist commonplace traditions, I do not intend to draw a specific comparison. For more on Renaissance music and commonplaces, see Peter Schubert, "Musical Commonplaces in the Renaissance," in *Music Education in the Middle Ages and the Renaissance,* ed. Russell Eugene Murray, Susan Forscher Weiss, and Cynthia J. Cyrus (Bloomington: Indiana University Press, 2010), 161-92.

other keyboard music, suggesting that all are reflections of the composer's skill in *sonare a fantasia.* I would suggest that these improvisational stylistic elements, combined with the seemingly loose adherence to the model, indicate *aural* engagement rather than written engagement with the vocal model, highlighting the skill of the performer over fidelity to musical structure. In general, intabulations that feature these elements would seem to support their conception as sounding images, reflective of performance rather than a writing-based, compositional process.

That these improvisational features can be linked to a generally *loose* adherence to a vocal model is supported by another intabulation in the volume, *Plus ne regres* (based on Josquin's *Plusieurs regretz*), as well as by the two intabulations by Marco Antonio's son Girolamo in his 1543 *Intavolatura cioè recercari… Libro primo* (no extant model exists for *Perdonne moi*). Leon Chisholm's recent analysis of *Plus ne regres* shows that Cavazzoni only adheres to the model in the loosest of fashions; as Chisholm puts it

> the keyboard arrangement does not adhere to the chanson's structure. Indeed, its structure suggests that its composition was not so much the result of a careful study of Josquin's chanson as it was the fruit of *aural memories* [my emphasis] that the chanson had left in Marcantonio's ears…. The piece does not seem to have been produced by transliterating the five parts of the chanson into *intavolatura*, perhaps via the intermediary step of a transcription into open score, the process of intabulation as described in the contemporaneous *Fundamentum* of Hans Buchner and, later, in Girolamo Diruta's *Il Transilvano*.[88]

In this, Cavazzoni's intabulations are similar to his son Girolamo's, which are perhaps best described as *imitatio* works based on vocal models rather than intabulations, at least as according to the generic understanding of "intabulation" today.[89] Stylistically speaking, Girolamo's intabulations sound somewhat like ricercars; in fact, they only differ from his exercises in the latter genre in that they are shorter and adopt some of the formal gestures of vocal chansons, such as an overall ABA form. Again, the stylistic link with ricercars makes sense if we view these *imitatio* intabulations as sounding images of largely improvised performances of their models. While there is no evidence for specific instances of what we might call improvised "intabulations" – that is, *extempore* solo instrumental performances based on the "aural memories" (to use Chisholm's phrase) of vocal compositions – it is certainly easy to imagine that they took place. In Marco Antonio Cavazzoni's printed volume, large-scale *ricercari* stand as preludes for vocal intabulations that immediate succeed them in the same tone; this practice is also seen in early *cinquecento* lute books. (One wonders if the famous account of Francesco da Milano extemporizing for a group of nobles, mentioned earlier, was followed by an improvised "intabulation.") Recent research on lute music has suggested that a large portion of the "free" fantasia repertoire may actually be loosely based on vocal models; all of this evidence suggests that playing vocal works fundamentally and profoundly informed the development of improvisatory playing skills in other genres.[90]

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[88] Chisholm, "Mechanization," 28-9.

[89] Leon Chisholm seems to challenge this assertion. Chisholm analyzes *Plus ne regrez* from an experiential perspective, comparing the sensational experience of singing the chanson as a group of singers to that of playing it

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on a keyboard instrument, instead of giving a traditional text-based analysis comparing chanson to model. In addition, he points out that the lack of adherence to elements of the chanson’s polyphony can be explained if the process of intabulation is viewed as performance: an improvisation on the aural memories of the chanson. For example, the few elements that Cavazzoni maintains from his model are those that are easily heard. Nonetheless, it should be pointed out that, if indeed the result of the aural memories of the chanson rather than a written process of intabulation, as Chisholm argues, Cavazzoni had a pretty bad memory – when compared to the intabulations of Gabrieli and Merulo, his intabulation only alludes to his model in the slightest way, whereas the Venetian intabulations always stick to basic formal and contrapuntal structures, even if surface features are often altered. See Chisholm, “Mechanization,” 27-38, for his analysis of *Plus ne regrez.*

Chisholm seems to minimize the differences between Cavazzoni’s loose treatment and the more rigid adherence to the model seen in the Venetian intabulations, as he goes on to briefly examine Andrea Gabrieli’s intabulation of Willaert’s chanson “Qui la dira”: “Since Marcantonio's arrangement of Plusieurs regretz is not based closely on formal aspects of the chanson, it is worth examining the intabulation of another chanson featuring a canon. Andrea Gabrieli's much later intabulation of the five-voice setting *Qui la dira la peine de mon coeu*r by Willaert approaches the model as a formal template.” Ibid., 38.

[90] This is a growing field of scholarship in lute music. See, for example, Stefano Mengozzi, “Is This Fantasia Parody? Vocal Models in the Free Compositions of Francesco da Milano,” *Journal of the Lute Society of America* 23 (1990): 7-17. For a general brief introduction to this field of research see, Coelho, “Revisiting,” 50-51.

From Sounding Image to *Dotta Partitura:* The Issue of Fidelity

While not enough evidence exists to get anything near a complete picture, it is curious that, while the intabulations of the Cavazzoni tend towards *imitatio,* intabulations published later in the century, such as those of Merulo, Gabrieli, and Bertoldo, show much greater fidelity to the formal structures of their models. This shift positions the "standard" late sixteenth-century intabulation as moving away from sounding image and towards *dotta partitura.* In fact, the typical late sixteenth-century keyboard intabulation has to be described as a mixture of both. Modifications tend to be more surface-oriented, with the general formal structure of the model – and the majority of its original polyphony – serving as a scaffolding for *passaggi.*

This stylistic shift towards fidelity may suggest an increased role for written intabulation practices and, for that matter, the use of scores in preparing vocal music for instrumental media.[91] Bertoldo's intabulation of *Petite Fleur* seen earlier (**Example 3.2** above), can be taken to establish the basic parameters for late-sixteenth century intabulations: it demonstrates fidelity to the form of the chanson, but there are several isolated surface alterations to the model's polyphony – typically to facilitate a keyboardistic texture. As writers such as Leon Chisholm and Victor Coelho have suggested, traditional analytical approaches towards intabulations have perhaps relied too heavily on the degree of a given intabulation's perceived reliance on the model. A more accurate view may be found in a model such as that described in the Introduction. In this scenario, the form and skeletal framework of an intabulation would result from reducing the model's texture. An intabulation may be seen as a series of layers comprised of varying degrees and types of surface ornamentation; moments of recomposition strongly suggest that much of the polyphony of the *model* – particularly the faster-moving notes – was understood to be part of these surface layers, and subject to recomposition.[92] This collapses the distinction between "surface" ornamentation and structural changes to the model taken by the intabulator.

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[91] Interestingly both Diruta and Galilei imply the use of "preparatory" scores for making intabulations. Diruta's first steps in intabulation (discussed already in Chapter 1) involve making a score from part-books. Göllner shows that preparatory scores were used in lute intabulation, although this practice – and, for that matter, the nature and notation of the score – was in no way universal. See Marie Louise Göllner, "On the Process of Lute Intabulation in the 16th Century," in *Ars iocundissima: Festschrift für Kurt Dorfmüller zum 60. Geburtstag,* ed. Horst Leuchtmann and Robert Münster (Tutzing: Hans Schneider, 1984), 83-96.

While there is not enough extant evidence extant to suggest anything near a complete picture, it would seem that *printed* intabulations increasingly demonstrate greater structural fidelity to their models as the sixteenth century progressed, following a pathway that is parallel to that of the ricercar, which shifted from the freer, improvisatory preludial ricercar to the stricter imitative ricercar in which the identity of every voice is maintained throughout. Both developments suggest the increasing authority of writing music down, and of an aesthetic ideal of vocal counterpoint. In fact, if we take the intabulations of Marco Antonio and Girolamo Cavazzoni as evidence for an earlier practice of "ricercar-style" intabulations, it would be seem that these pieces became their own genre by the end of the century: the *imitatio* ricercar. This genre is seen in the published keyboard works of Andrea Gabrieli, in which four pieces whose titles begin "*Ricercar sopra..*" immediately follow intabulations of four vocal works: *Con lei foss'io* (*Libro Sesto*, 1605); *Martin menoit*; *Osus au coup*; *Pour ung plaisir* (*Libro Quinto,* 1605). It is almost as if Andrea is neatly dividing his art into two categories: intabulations that adhere to the structure of their model but provide ample surface ornamentation and alteration, and

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[92] Adding complexity to this theoretical model is the fact that intabulators often worked within the *tablature voices* – the "new" voices created by the vertical array of notes on the staves, supported by IKT conventions such as stem direction and unison practice – rather than the actual voices of the model. The form of the song -- the basic scaffolding – is adhered to largely because it represents this deepest constructional layer. This theoretical model suggests that the degree to which an intabulation does or doesn't adhere to the form of its model may be best described as simply an element of ornamentation, rather than as an absolute.

(imitative) ricercars that freely take on the points of imitation and re-work them, as in an *imitatio* Mass.[93]

In a sense, Gabrieli's two types of vocally-derived genres – the intabulation that demonstrates textual fidelity and the "free" ricercar based on material from the model – are analogous to the two models suggested here: sounding images and *dotte partiture.* They also parallel the earlier "free" intabulation type and the textually faithful later intabulation type. The intabulation-ricercar split would also seem to imply a conceptual distinction between ornamental approaches to playing vocal music on keyboard and freer, "fantasia"-based approaches. It may be tempting to tie the former to writing – one can imagine the keyboardist improvising *passaggi* over an undecorated IKT score – and the latter to a lack of reliance on writing (the keyboardist again improvising from "aural memories.") However, there is no reason to assume that a highly-skilled composer-intabulator such as Andrea Gabrieli or Claudio Merulo – both of whom would improvise as a daily part of their work as organists – would abandon the practice of playing from "aural memories" in favor of glossing IKT scores of undecorated intabulations.

The question as to why the formal structure of the model became increasingly important in printed intabulations is key: the two poles that form the bedrock of the self-fashioning theory presented in this chapter – intabulations as sounding images vs. intabulations as *dotte partiture* – are fundamentally connected to it. *Dotte partiture* reveal the intabulator breaking IKT convention to show structure, and sounding images seem to revert back to the older "fantasia" style, in which the purpose of the model seems to be, at least from a modern perspective, inspirational rather than structural.

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[93] It is striking that Claudio Merulo's printed volume of *imitatio* Masses contains works based on two chansons – Lasso's *Susanne un jour* and Crecquillon's *Oncques amour* – that Merulo also intabulated for keyboard in his *Terzo Libro.* See Claudio Merulo, *Missarum quinque vocum.. Libre Primus* (Venice: Figl A. Gardano, 1573). As Clericetti pointed out, Gabrieli's *ricercari ad imitatione* are stylistically comparable to Masses; one wonders how much overlap existed between the two genres in the phases of compositional process. See "*Martin menoit son porceau au marché*: Due intavolature di Andrea Gabriel," in Musicus perfectu*s: Studi in onore di Luigi Ferdinando Tagliavini 'prattico & specolativo' nella ricorrenza del LXV compleanno* (Bologna: Pàtron, 1995), 166.

It would seem that two elements are crucial in explaining the shift: the growing influence of writing-based practices, and the elevation of the status of intabulations in general. As Polk and Coelho point out, the role of notation and writing music down occupied a greater influence on instrumentalists and instrumental music by the end of the sixteenth century.[94] Print had a profound effect on instrumental practices, and ostensibly manuscript scores and keyboard tablatures – manifestations of the *written* art of intabulation – played an increasingly large role in sixteenth-century instrumental musical culture. This is reflected in the publication of treatises such as Diruta's *Transilvano* and Galilei's *Fronimo,* which depict the art of intabulation as an entirely writing-based exercise. Notably, these treatises are intended for an amateur audience; at the same time, as Dinko Fabris notes, Galilei's treatise is not just for the amateurs, but for the "rari contrappuntisti."[95]Galilei spends a great deal of his treatise on counterpoint, which he declares to be of utmost importance for proper intabulation, suggesting an increasing fetishization of written music and counterpoint at the expense of *sonare a fantasia*. While on the one hand this speaks to the link between intabulation instructions and amateurism, on the other it also reflects the high value intabulations held among the very group of sophisticated amateurs who were patrons of organist-composers such as Gabrieli and Merulo – amateurs who considered themselves experts and who prized the polyphonic subtlety of Willaert, and whose values aligned with those of *musica erudita.* Perhaps the *dotte partiture* tendencies potentially reflect an *anxiety* over the influence of writing, leading intabulators to try to signal to their readers that they possess an understanding of musical structure and "proper" (i.e. vocal) counterpoint.

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[94] Polk and Coelho, *Players,* 208-9.

[95] Dinko Fabris, "Lute Tablature Instructions in Italy: A Survey of the Regole from 1507 to 1759," in *Musical Theory in the Renaissance, A Library of Essays on Renaissance Music* (Burlington, VT: Ashgate, 2013), 35.

It is also evident that, by the end of the century, intabulations became an increasingly valued art form. This is again witnessed by treatises such as Diruta's and Galilei's. In particular, Galilei's *Fronimo* demonstrates the elevation of the practice; in general its level of nuance and detail indicates a "high art" status for intabulations. For example, in discussing his choice to intabulate old works such as Ferrabosco's *Io mi son giovenetta* rather than newer ones, Galilei provides a clear glimpse of intabulation as "high art." (Slightly unsettling for the uninitiated reader, Galilei refers to himself here in the third person; his stand-in interlocutor Fronimo frequently goes out of his way to praise his creator) :

> On the contrary; his art was most revealed by the use of those old and easy canzoni because he intabulated them in such a way that, being heard on man-made instruments and grateful to the ear, they would be praised for the same difficulty as that in decking out an old woman of not very graceful features by means of paint and a rich and beautiful gown; so that, seeing her, the eye would judge her to be young and beautiful. Therefore Galileo, having wished to show in his first book his worth in intabulating music for the Lute, felt it was most suitable to take the pieces that he chose rather than some new and difficult ones or those composed for many voices by the most excellent composers. And if time allowed me to discourse at greater length on the subject, I could show you with the clearest and most vivid reasons that those cantilene, even more than the others which are held in esteem by judicious and learned musicians, are the easiest. And I would also make you see that they cannot be otherwise because the harmonies issuing from notes of a few values, from a small number of parts and from only a few strings, are alone suitable to express human affections; and songs which are deprived of these are of little worth.[96]

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[96] Galilei, *Fronimo*, 47-48, translation by MacClintock, *Fronimo,* 81: "Anzi è venuto à far conoscere maggiormente la sua arte col mezzo di quelle canzoni antiche, & facilì, per esser nell'intavolarle di maniera, che udendole poi negli artificiali istrumenti grate siano all'udito l'istessa difficultà, che sarebbe mediante i belletti, & un ricco, & vago habito, ornare di maniera una Donna vecchia, & di non molte leggiadre fattezze, che vendenvola poi, giovane e bella, l'occhio la guidicasse. Talche havendo volute, Il Galileo, mostrare in quell suo primo libro, quanto valesse cell'intavolar le Musiche nel Luito, fu piu conveniente il tor di quello, che tolie, che delle nuove, & difficili, ò da piu eccellenti Autori à piu voci Composte, & se le brevità del tempo comportasse che piu allungo sopra questo capo discorre vi potessi, vi mostrerei con chiarissime & viue ragioni, che quelle cantilena, qual piu dell'altre in pregio, de giuditoisi e dotti Musici, facilissime sono, & farevi ancor vedere che altramente esser non possono, per esser solo atte a esprimere gli affetti humani, l'armonie che escono da note di alquanto valore."

In addition, several passages reveal an obsession with notational minutiae. To pick one example: Galilei describes the process of repeating semibreves (a basic element of intabulating) in the following terms:

> I, too, many times, not to say always, have not restruck such a note, and there is a convenient example of it in the 16th bar of the tenor part of the above-mentioned canzone. I did it with very good reason, because striking it again brought to delicate ears a je ne sais quoi of sadness. And that is why the contralto – entering immediately after the repetition which came in the fourth part of the Semibreve on that same string – by repeating it several times, did not satisfy the ear, because it did not bring any varied consonance, on which the ear so gladly feeds and in the diversity of which the good and beautiful [quality] of any modern cantilena consists.[97]

These passages suggest a "high art" status to intabulation, and a concomitant high cultural value; they also bring up the specter of anxiety over the growing influence of writing on what was an aural, improvisatory art form. Within this context, the desire on the part of Gabrieli and Merulo (or on the part of their relatives or even publishers) to situate intabulator as *author* makes sense.

Merulo's *Petite Jacquet* as Sounding Image

The evidence suggests a shifting of priorities. In the first part of the century, playing (that is, glossing over) vocal music at the keyboard seems to have been largely a practice of professionals. Their method was grounded in improvisation – in the art of *sonare a fantasia* – using their "aural memories" of the work rather than a reliance on written-down material. However, by the end of the century, factors including the growing influence of a base of sophisticated amateurs – both as patrons and buyers of music – and the new print culture, pushed the practice towards being writing-dependent rather than aural. Professionally produced intabulations would have to reflect skill in *sonare a fantasia,* even as they demonstrated the elevation of intabulation as a *written* practice. Merulo's intabulation of the chanson *Petite Jacquet* serves as a good example to see these various forces at work.

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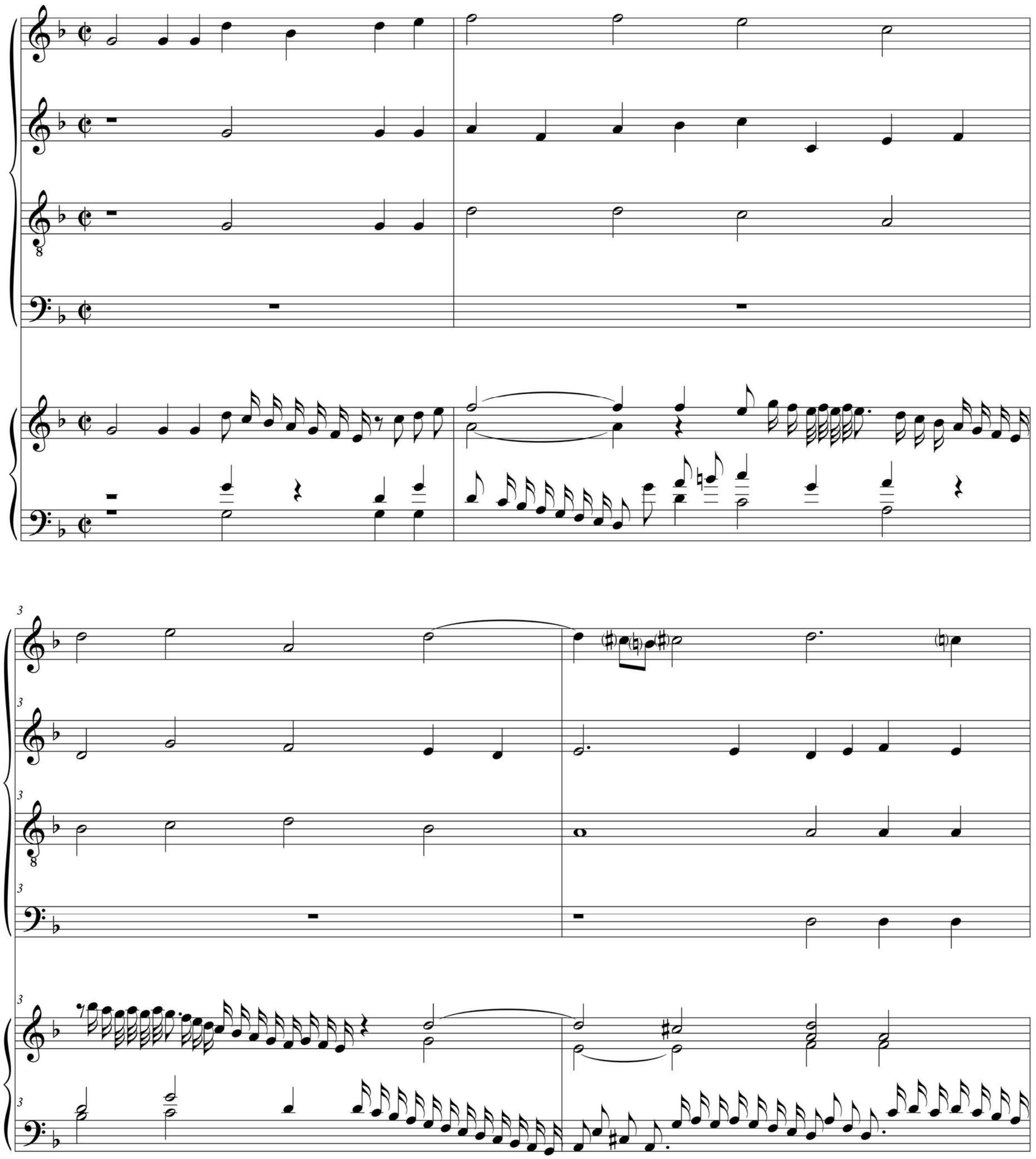
[97] "Hò usato ancora io infinite volte, per non dir sempre, il non ribatter tal nota, & di questo ne havete un'essempio assai accomodato, nella decima sesta casa della parte del Tenore della canzone sopra allegatavi, il che non feci senza molta ragione imperoche ribattendola, apportava alle purgate orecchie non sò che dieristo, & di ciò era cagione la parte del contralto, la quale entrava immediatamente dopo tal ripercussione nell'istessa corda, che veniva nella quarta parte della sudetta semibreve, di maniera che ripercorendola tante volte, non veniva à sadisfare all'udito, per non apportargli alcuna variata consonanza, delle quali tanto volentieri si pasce, nella diversità delle quali, consiste principalmente il bello & buono di qual si voglia moderna cantilena." Galilei, *Fronimo*, 25.

English translation by Carol MacClintock: Vincenzo Galilei, *Fronimo*, trans. and ed. Carol MacClintock, Musicological Studies and Documents, vol. 39 (Neuhausen-Stuttgart: American Institute of Musicology, 1985), 55.

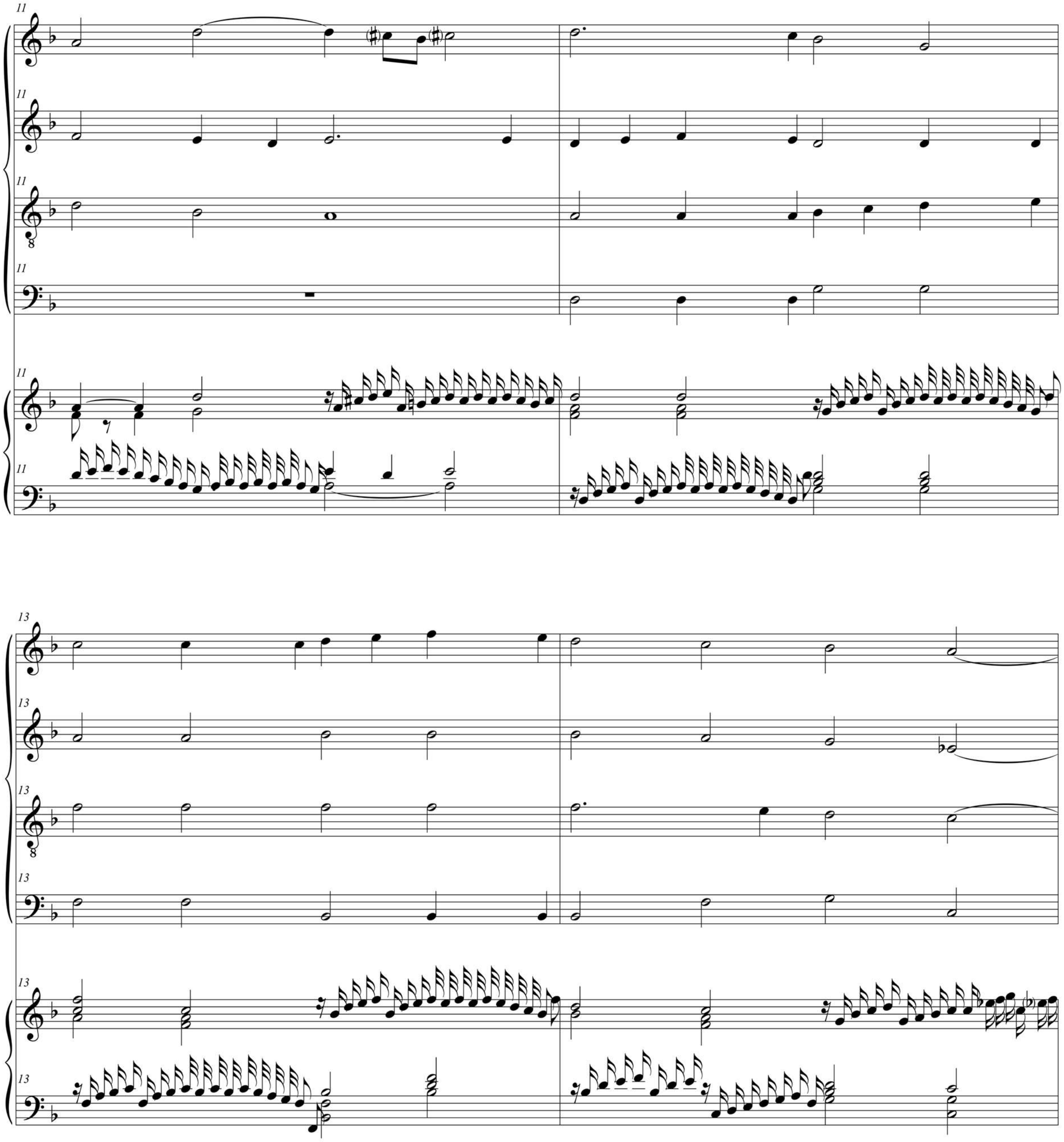
On the surface, Merulo's intabulation adheres little to the structure of its model, and it might easily be labeled a sounding image, one reflective of a free and virtuosic performance. It not only follows IKT conventions that result in hiding details of voice leading, but also features the frequent reworkings of the model's voice leading, in many instances to the point of being outright recomposition. In general, these omissions and alterations to the polyphony are necessitated by the extensive ornamentation: for example, the Altus part of the model in measure 2 is reworked to accommodate the *passaggi* in the other parts (see **Example 3.7**). An entirely new *bastarda*-style ornament is added to the left hand in measure 4; this in turn is related to the opening scalar figure that Merulo quickly adopts as a new motive that he uses imitatively. Merulo often links a *soggetto* in his model with a specific ornamental figure – in this way he creates what might be called superstructures that use the model as scaffolding. Here, however, the new figure is only loosely based on the chanson's imitative point. In measure 2, for example, the ornamental figure is applied to the model’s Tenor – which only has filler material – rather than to the Altus, which contains the chanson’s opening *soggetto*. The ornamental figure is being inserted where it works best on the keyboard, rather than being slavishly applied to the model’s subject. These changes imply that Merulo is improvising quite freely over the model’s harmonic structure, recreating a performance of the chanson not from a score, but rather from his “aural memories.”Further in the piece, Merulo seems to ignore vast swaths of original polyphony in favor of superimposing a typically keyboardistic ornamental scheme, involving the bouncing of an ornamental figure between the two hands (**Example 3.8**): The figuration is typical to *cinquecento* keyboard music, and again reflects *playing,* with the emphasis on the two hands of the player. It is not difficult to imagine it as the product of the improvisational practices of keyboard thinking: this would involve the memorization of the figure and the use of a clichéd

Example 3.7 Merulo, *Canzon A4 Dita Petit Iaquet,* mm. 1-4, from MERULO 1592; Merulo, *Petite Jacquet,* adapted from Merulo, *Canzoni,* ed. Cunningham and McDermott, 129-32.



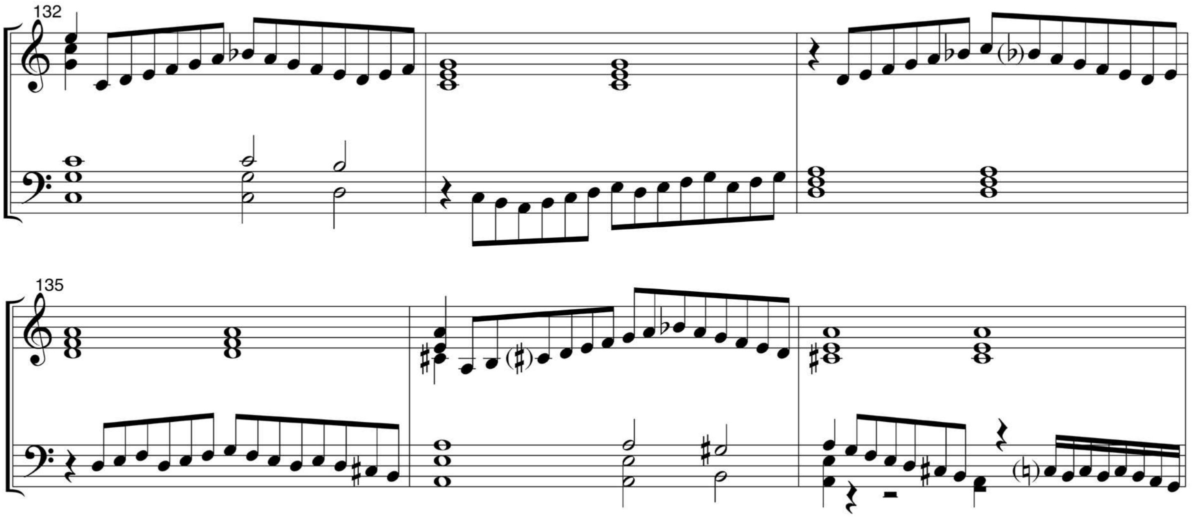
(and fairly simple) scheme, alternating the figure from hand to hand. It is not at all uncommon in Venetian *cinquecento* keyboard music, as can be seen here in a *passemezzo* by Marco Facoli (**Example 3.9**): As in the Cavazzoni intabulation above, these elements – a loose adherence to

Example 3.8 Merulo, *Canzon A4 Dita Petit Iaquet,* mm. 11-14, from MERULO 1592; Merulo, *Petite Jacquet,* adapted from Merulo, *Canzoni,* ed. Cunningham and McDermott, 129-32.



structure alongside stylistic markers of improvisation – suggest a view of the intabulation as a sounding image of an improvised performance. Again, this is supported by the degree to which it ignores aspects of the original polyphony.

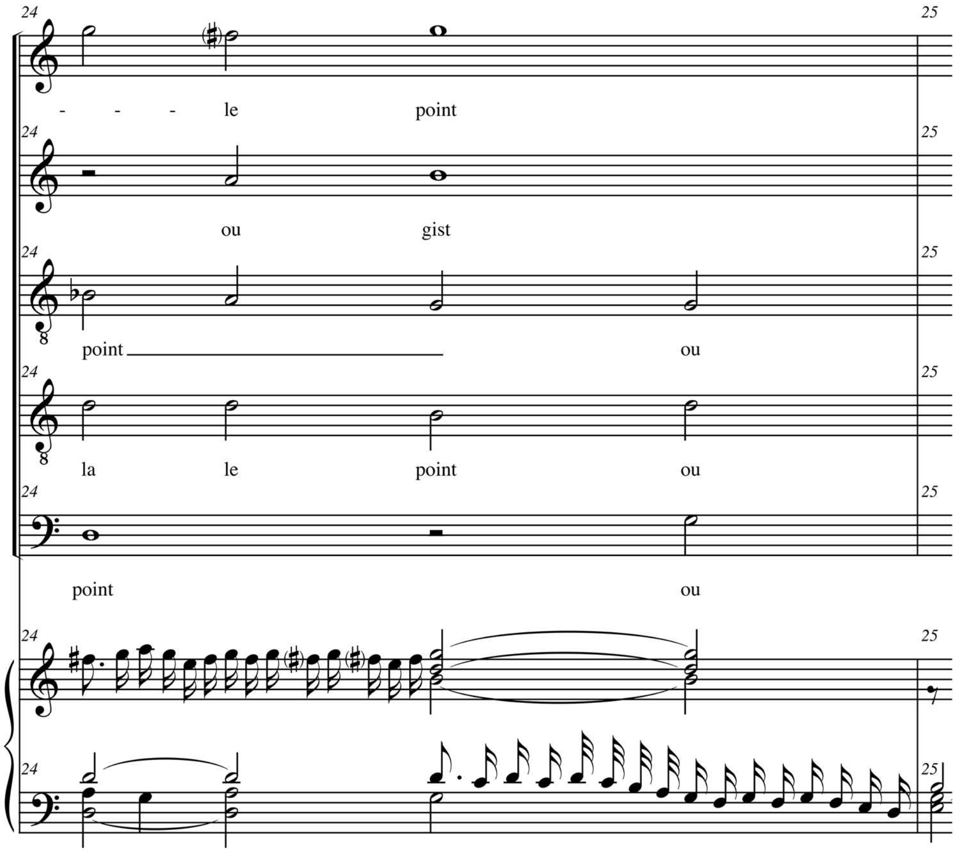
Example 3.9 Facoli, *Passemezzo di nome anticho di Marco Facoli,* mm. 132-137, from *Gb-Lcm ms. 2088.*



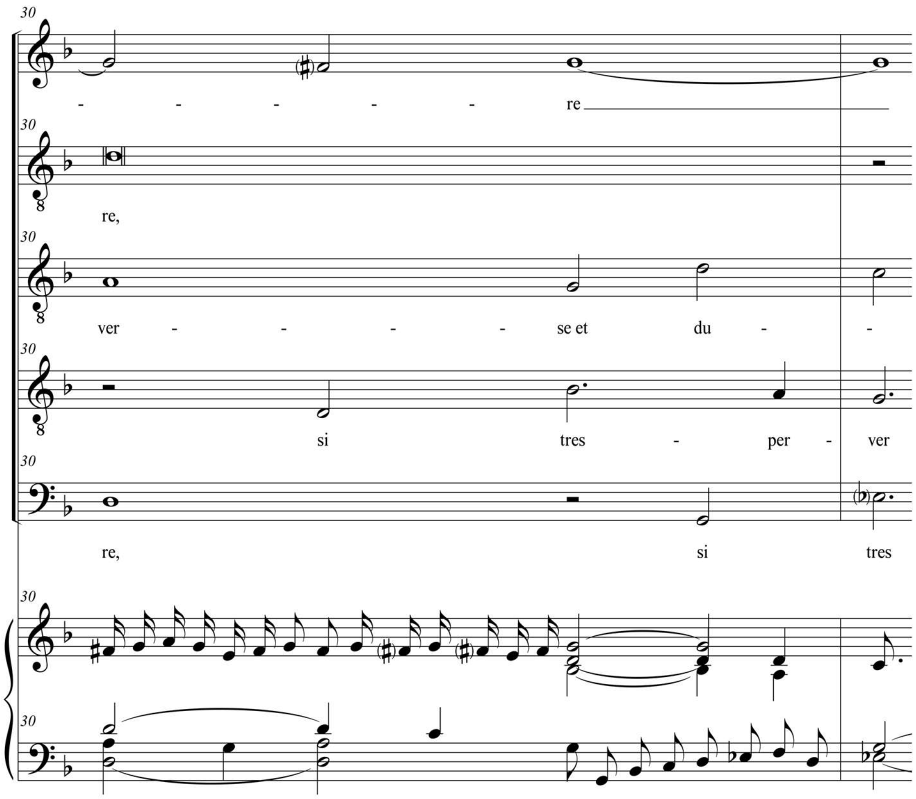
The sounding-image tendency seen in this intabulation is also supported by idiosyncratic elements that readily identify the composer-intabulator to be Merulo. For example, he frequently uses what might be described as a characteristic cadential pattern, one that can be viewed as a stock figure of sorts. Based on what we know about the role of memory in early-modern improvisation, it is entirely plausible that players stockpiled their memories with clichéd figures such as cadences or the alternating-hands scheme seen above; the fact that specific figures can be tied to specific composers suggest that these figures were developed individually and became stylistic signatures. Notably, these are not horizontal, or melodic, figures but fixed contrapuntal patterns that involve a set pattern of stereotyped motion in all voices. For example, a characteristic *ut-re-ut* pattern in the tenor tablature voice is typical for Merulo's cadences (**Example 3.10**). Although there is some slight variation in the surface *melodic* patterns used in the upper tablature voice, the cadential structure is used consistently enough to be considered a

Example 3.10 Selection of cadences from Merulo's intabulations. a) Merulo, *Oncques amour A5,* m. 24, from MERULO 1611; b) Merulo, *Content A5,* m. 30, from MERULO 16111 c) Merulo, *Canzon A4 Dita La Cortese,* m. 26, from MERULO 1592.

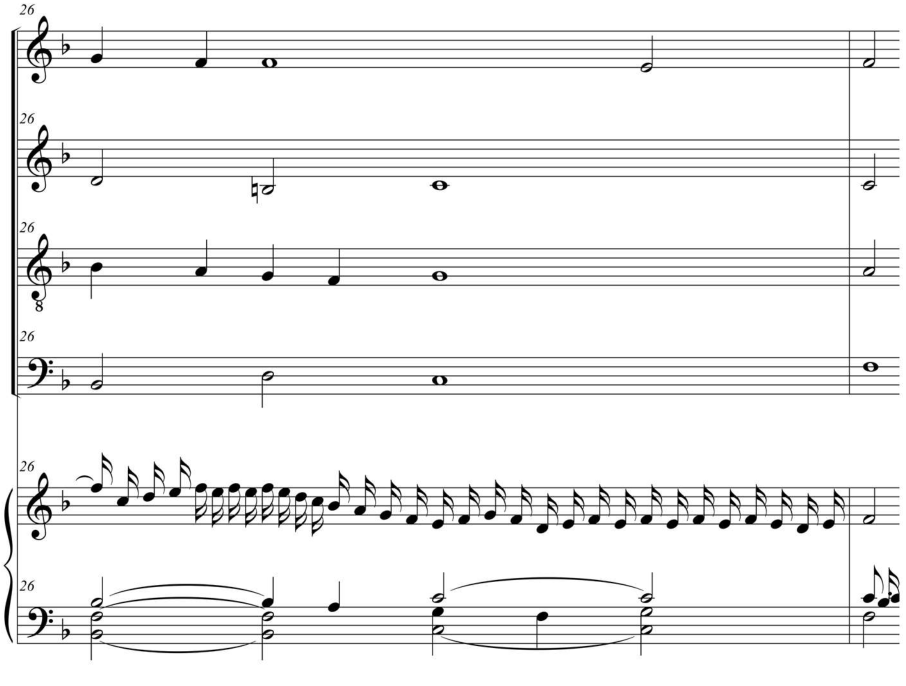
(a)


24
25
- - - le point
ou gist
point ou
la le point ou
point ou

(b)


30
re
re,
ver - - - - se et du - -
si tres - per - ver
re, si tres

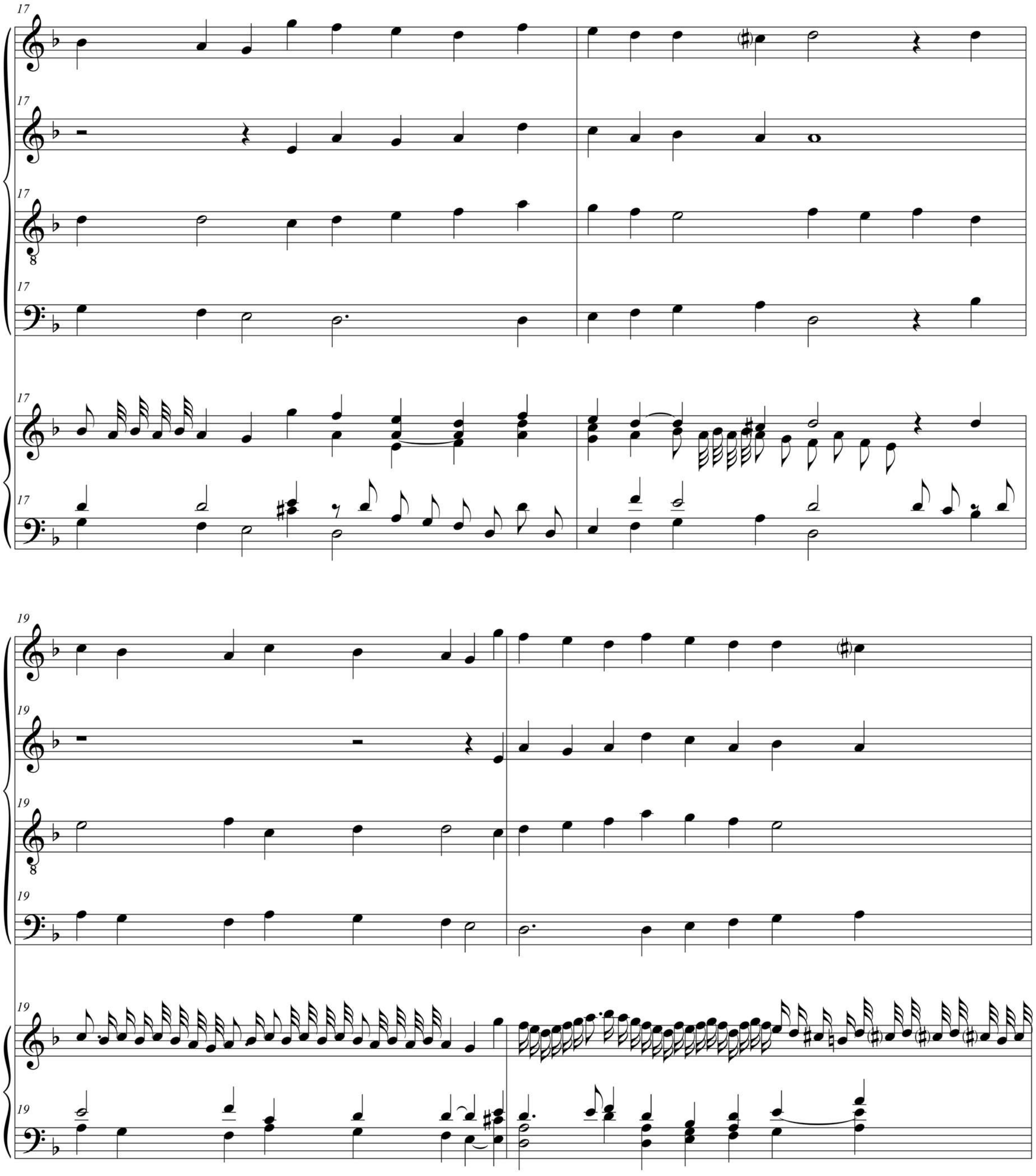
(c)



stock figure. Merulo’s cadences are superimposed over a variety of contrapuntal cadential structures in the model, further suggesting their identification as personal stock figures.

This lends credence to the notion of unwritten practices holding a large role in the creation of Merulo's intabulation, and it further solidifies the notion that that intabulation should be seen as a sounding image of an improvised or semi-improvised performance. Paradoxically, however, elsewhere Merulo goes out of his way to include as much of the model's polyphony as possible, in a way that completely contrasts with the prevailing ethos of the intabulation (**Example 3.11**). In instances such as these, Merulo's apparent desire to include the original polyphony creates textures that are downright awkward to play: the added *e′* to the 7-6 suspension in the left-hand (measure 1) is an unnecessary addition that only makes for a clunkier texture; the tied *a′* in the right-hand of the same measure adds nothing at all to the *performance* of the piece – nor does the tied tenor *e′* at the end of measure 4. In fact, this tie is actually part of an alteration – a recomposition – of the model's polyphony. Overall, this passage seems to strive to show the model's original polyphony; even Merulo's ornamentation manages to include notes that would otherwise be left out (ironically, due to the same ornamentation): witness the ornamental figure that passes between the two hands at the end of measure 2 in Example 11. These instances – unusual when set against the overall ethos of IKT and its conventions – don't necessarily aid the player in performing the piece. For example, IKT generally favors re-striking long notes, not tying them; re-striking facilitates a much more idiomatic texture, as does, for that matter, removing notes from the model that do not work within keyboardistic textures. In fact, the intabulations of two ricercars by Padovano by Bertoldo (see Appendix A) often omit notes from *soggetti* (from our perspective, the core structural element of a ricercar), and Leon Chisholm has demonstrated that intabulators frequently removed notes from structural canons in

Example 3.11 Merulo, *Canzon A4 Dita Petit Iaquet,* mm. 11-14, from MERULO 1592; Merulo, *Petite Jacquet,* adapted from Merulo, *Canzoni,* ed. Cunningham and McDermott, 129-32.



intabulated *chansons,* in order to create keyboardistic textures.[98] In these instances, however,

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[98] See Chisholm's analyses of Cavazzoni's *Plus ne regrez* and Gabrieli's *Qui la dira,* cited above. Chisholm, "Mechanization," 27-41.

Merulo creates an *unidiomatic* texture by retaining notes from the model. The uncharacteristic lack of ornamentation, which otherwise dominates Merulo's texture, adds to the impression of a conscious desire to show polyphonic detail at the expense of idiomatic texture.

Merulo's unidiomatic instances might make more sense if seen as holding another function: to serve as visual *signs* to readers of the intabulation, signs used to demonstrate a certain level of musical understanding on the part of the intabulator-composer. Rather than being related to the performance of the intabulation, notational details that violate IKT convention to show voice leading, such as added ties, incorrect stem directions, and awkwardly voiced chords, could be interpreted as symbols of learnedness, signs that indicate that the intabulator understands and wished to demonstrate the voice leading of his model. Considering notational details as constituting signals of learnedness point to another mode of engagement between intabulation and reader/user. In this, the reader appreciates the intabulation in a broader sense: rather than imagining the music *per se,* they are invited to contemplate and appreciate the highly nuanced and complex nature of the intabulation in general, which in turn reflects not just a simple player skilled in *fantasia* but a learned and "worldly" (to riff on Galilei's description earlier) musician who understands the inner workings of his model. This is not dissimilar to Anthony Newcomb's notion of certain classes of readers using scores to "recognize and and appreciate unusual examples of musical artifice in the notation on the page."[99] Similarly, signs of complexity and notational detail in intabulators may convey more information about the *status* of complexity – a general concept – rather than any specific notational detail. In other words, they convey not so much information about the intabulation but rather about the intabulator.

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[99] Newcomb, "Notions," 7. It also aligns with Cristle Collin Judd's description of the functioning of musical examples in Charles Rosen's *The Romantic Generation,* which, rather than to function as examples tied to the text, create "for the listener/reader the musical world of the Romantic generation, or more to the point… to partake of Charles Rosen's communion with the Romantic generation." Judd, *Reading Renaissance Music Theory,* 4.

Petite Jacquet can be seen as holding elements of both sounding image and *dotta partitura* concurrently. It is almost as if Merulo wants to demonstrate two sides of his intabulatory art: the virtuoso player of *fantasia* and the contrapuntist, who not only has internalized the counterpoint of his model but can even, in a way, supersede it.

Andrea Gabrieli's *Susanne un jour* as *Dotta Partitura*

Merulo's intabulations commonly exploit the tendencies of sounding image and learned *partitura,* both of which can be seen as types of authorial self-fashioning. Before examining them further, however, it may be useful to briefly examine an intabulation that functions as a *dotta partitura* to an unusual degree, Gabrieli's intabulation of Lasso's *Susanne un jour.* Due to the fact that Lasso's *chanson spirituel* is one of the most iconic instrumental models in the sixteenth century, it is no surprise that Gabrieli's intabulation has already been the subject of some analysis: Charles McDermott examined it in an effort to compare it with Merulo's intabulation of the same chanson.[100] Although Gabrieli's intabulations tend to be less elaborate than Merulo's, *Susanne un jour* is notably bare, leading McDermott to call it "probably an incompletely embellished version," and "an accurate approximation of an amateur performance."[101]As McDermott's analysis focuses on ornamentation, I will focus instead on instances that demonstrate Gabrieli violating IKT conventions in order to show polyphonic detail from the model. To cast these instances into further relief, I will also compare Gabrieli's setting to both Merulo's and to an anonymous one found in the Feininger Codex (ca. 1600).[102]

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[100] See McDermott, "Canzoni," 145-53.

[101] McDermott, "Canzoni," 153. McDermott speculates that Gabrieli's version is "incomplete" because "additional ornamentation could be, and presumably was, added even to printed arrangements," although this doesn't entirely make sense as adding *passaggi* often necessitates the reworking of the model's polyphony.

[102] See Alexander Silbiger, ed., *Trent, Museo provinciale d'arte, Biblioteca musicale L. Feininger* (New York: Garland Press, 1987).

While Gabrieli’s intabulations generally follow IKT conventions, many small sections seem to reveal the intabulator resisting their algorithmic actions. In these instances unnecessary notational detail is used to clarify voice leading that is normally hidden by IKT convention. Many of them take the form of added ties; as seen in Merulo's *Petite Jacquet,* these ties do not facilitate playing – if anything, they *hinder* performance, creating awkward situations that seemingly involve finger substitutions or force the hand into unidiomatic positions. These added ties do, however, clarify the voice leading of the model. This can be seen in **Example 3.12** (measures 8-9). Here, the Tenor's tie in measure 8 would force the player to execute a finger substitution, again a technique for which no evidence exists during the sixteenth century. The dotted *b-flat* in the second half of this bar in the inner voice of the left hand is equally cumbersome to play; even the voicing of the E-flat chord on the third beat of measure 9 is somewhat unidiomatic within the context of *cinquecento* keyboard music.

Revealing the voice leading of the model at the expense of idiomatic keyboard technique, these instances push against IKT’s normal practice of *hiding* the voice leading: without the first tie, for example, the reader would think that the *b-flat* on the second beat (the second note in the tie) would be part of the *tablature* tenor part, which is actually a composite “fake” part created from the model's Tenor and Quintus. The tie clarifies the model's voice leading. The dotted *b-flat* in the left-hand at the end of the measure is likewise anomalous to IKT practice. A more normal treatment would see the following *a* included as part of a *basso seguente* part – the bass tablature voice – or even omitted altogether. In fact, this latter option is exactly what we see in Merulo's intabulation[103] (**Example 3.13**). Rests can be used to clarify voice leading too; this function of rests is relatively unusual in IKT – as seen in Chapter 1, the most typical function for rests is as

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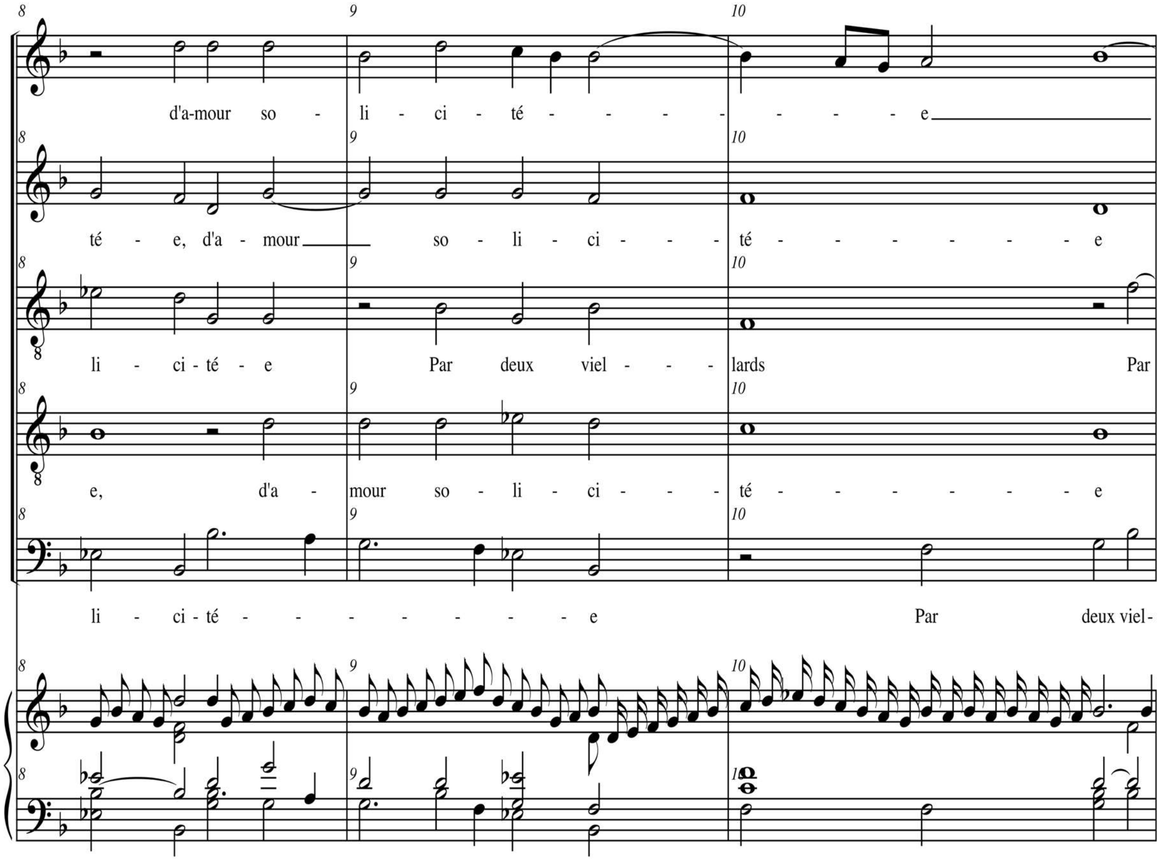
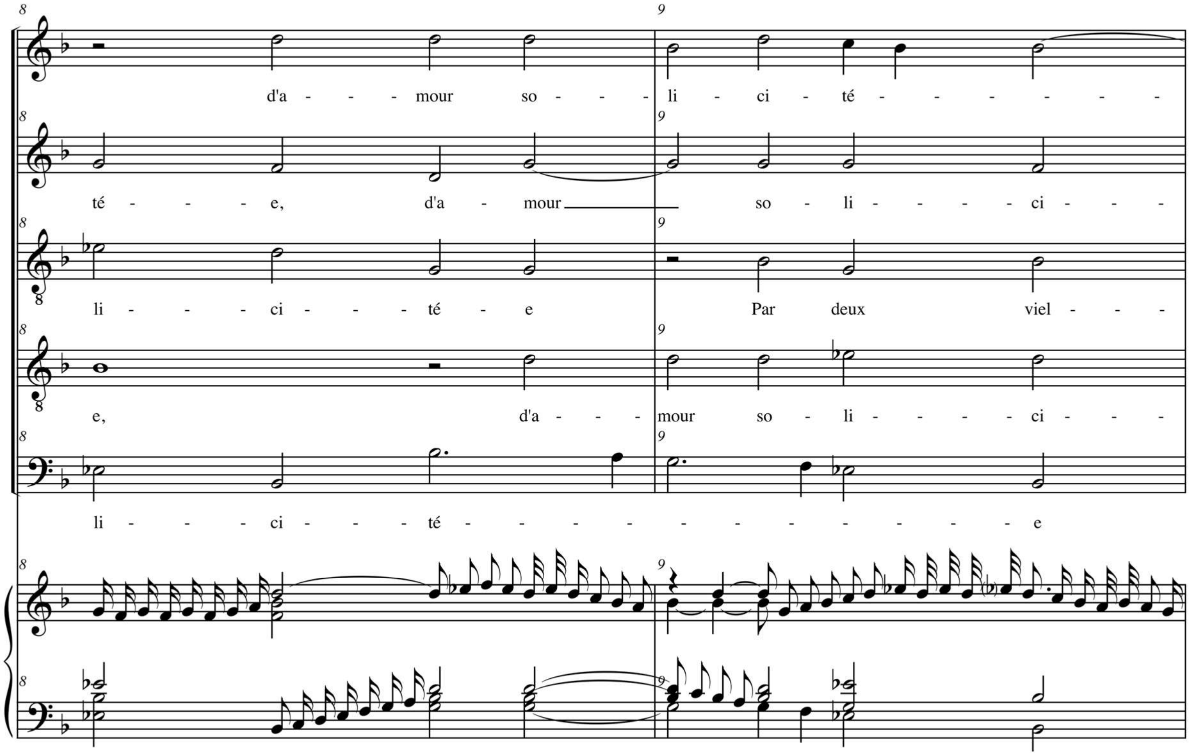
[103] In the Trent Codex – see transcription in Appendix A – the intabulator rewrites the entire harmonic structure here, removing the Tenor *g* entirely to facilitate a B-flat tonality.

Example 3.12 Andrea Gabrieli, *CANZON deta Susanne un iour A Cinque Voci d'Orlando Lasso. Tabulata da Andrea Gabrieli,* mm. 8-10, from GABRIELI 1605a; Lassus, *Susane un jour d'amour solicitée,* adapted from Orlando di Lasso, *Chansons,* ed. Jane Bernstein, vol. 14 of *The Sixteenth-Century Chanson* (New York: Garland, 1987).

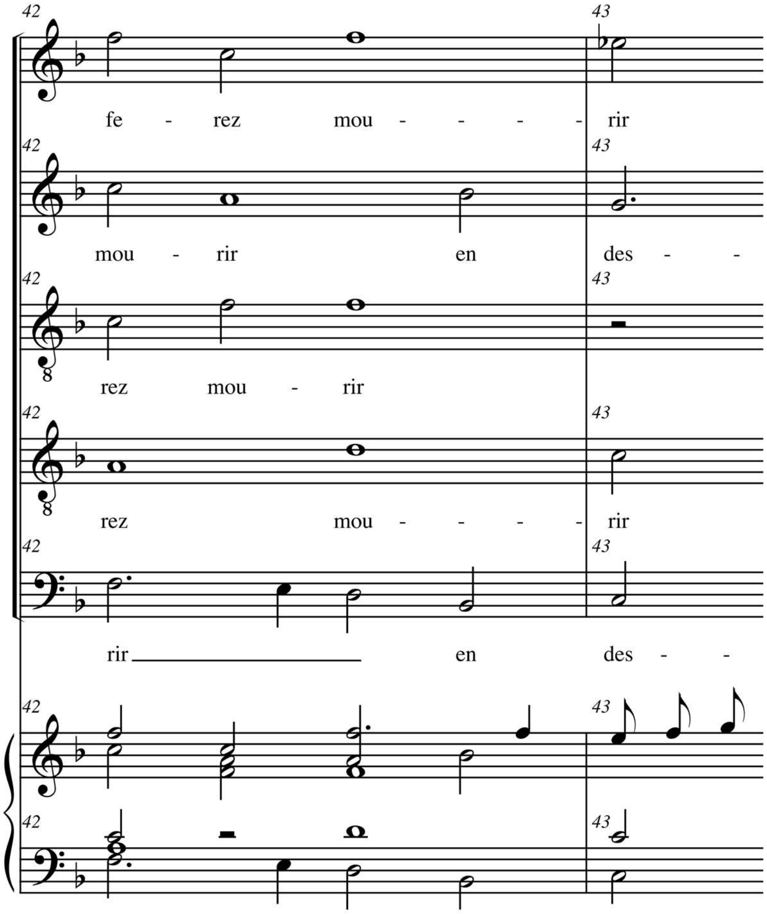

8
9
10
d'a-mour so - li - ci - té - - - - - - - - e
té - e, d'a - mour so - li - ci - - - té - - - - - - - - e
li - ci - té - e Par deux viel - - - lards Par
e, d'a - mour so - li - ci - - - té - - - - - - - - e
li - ci - té - - - - - - - - - e Par deux viel-

pause di mano, signs to instruct the player to remove a finger from a given key. In measure 42 of Gabrieli's intabulation, however, a rest is clearly used to clarify voice leading (**Example 3.14**). Although at first glance the rest in the intabulation's tenor seems to be a typical "fake" tablature rest – part of a tablature-voice tenor line that connects the *c'* to the semibreve *d'* on the second half of the bar – it also signals that the model's *real* part, the Tenor, leaps from *c'* to *f'*. This effect is highlighted by the unidiomatic chords: again, the somewhat unidiomatically voiced chord in

Example 3.13 Merulo, *Susanne un giour, D'Orlando Lasso A5*, mm. 8-9, from MERULO 1611; Lassus, *Susane un jour d'amour solicitée,* adapted from Orlando di Lasso, *Chansons,* ed. Jane Bernstein, vol. 14 of *The Sixteenth-Century Chanson* (New York: Garland, 1987).


8
9
d'a - - - mour so - - - li - ci - té - - - - - - -
té - - - e, d'a - mour so - li - - - - - ci - - -
li - - - ci - - - té - e Par deux viel - - -
e, d'a - - - mour so - li - - - - - ci - - -
li - - - ci - - - té - - - - - - - - - - - - - - e

the right hand in the second half of the bar is a result of slavishly following the voice leading of the model, as is the "embedded" semibreve in the middle of the left-hand chord on the first beat of the bar. As we've already seen, long notes in IKT are frequently restruck, subsuming them into regular chordal motion. Both of these instances go against the grain of normal IKT practice, creating chords that are unidiomatic. The awkward stretch of a tenth between the tablature tenor and bass parts at the end of the bar is also unidiomatic – normal IKT practice doesn't allow for such stretches, and intabulators frequently rework the inner voices in order to remove them.



Example 3.14 Andrea Gabrieli, *CANZON deta Susanne un iour A Cinque Voci d'Orlando Lasso. Tabulata da Andrea Gabrieli,* mm. 42-43, from GABRIELI 1605a; Lassus, *Susane un jour d'amour solicitée,* adapted from Orlando di Lasso, *Chansons,* ed. Jane Bernstein, vol. 14 of *The Sixteenth-Century Chanson* (New York: Garland, 1987).

Again, Gabrieli's irregularities here can be demonstrated by examining Merulo's treatment of the same section[104] (**Example 3.15**).

Gabrieli's tendency towards unidiomatic textures was also noticed by Giuseppe Clericetti, who, as editor of the most recent complete modern edition of Gabrieli's keyboard works, conducted a thorough typographical investigation of Gabrieli's (and Gardano's) prints.[105] Aware of normal IKT conventions, Clericetti noticed several instances, in both intabulations and in free (model-less) works such as toccatas and ricercars, in which Gabrieli bends the rules for the sake

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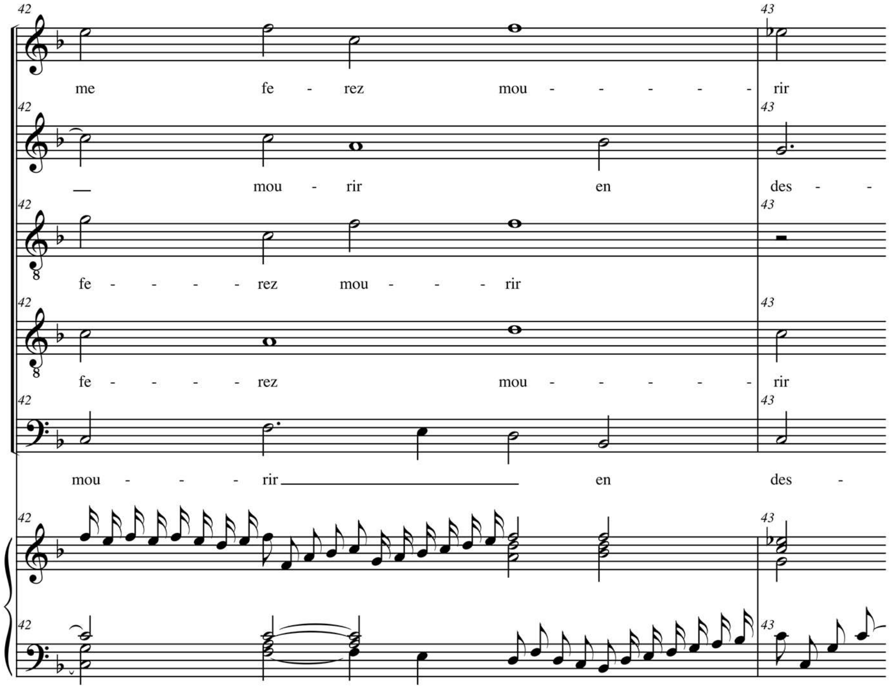
[104] Here the Feininger Codex has an uncharacteristically unidiomatic tie, but the dramatic reduction of the texture is clearly keyboardistic.
[105] See Clericetti, "Criteri."



Example 3.15 Merulo, *Susanne un giour, D'Orlando Lasso A5*, mm. 42-43, from MERULO 1611; Lassus, *Susane un jour d'amour solicitée,* adapted from Orlando di Lasso, *Chansons,* ed. Jane Bernstein, vol. 14 of *The Sixteenth-Century Chanson* (New York: Garland, 1987).

of polyphonic integrity. These include stretches of over an octave, the addition of ties to clarify voice leading, and even instances in which stem directions are drawn "incorrectly" to indicate voice leading.[106] In general, Gabrieli's intabulations tend to favor polyphonic structure when compared to those of other keyboard intabulator-composers.[107] For example, Gabrieli is more apt to use *minute* – the term Diruta uses for non-cadential diminutions – that incorporate notes from voices that are otherwise left out of the intabulation (as seen in Merulo's *Petite Jacquet* above). This practice can be seen in *Susanne un jour* as well (**Example 3.16**). While the long right-hand *passaggio* primarily sticks to the contour of the model's Superiu, at the same time it manages to include the notes from the Altus that are left out. It is almost as if Gabrieli is apologizing for their omission by including them in the *passaggio*. As mentioned in Chapter 1, this practice

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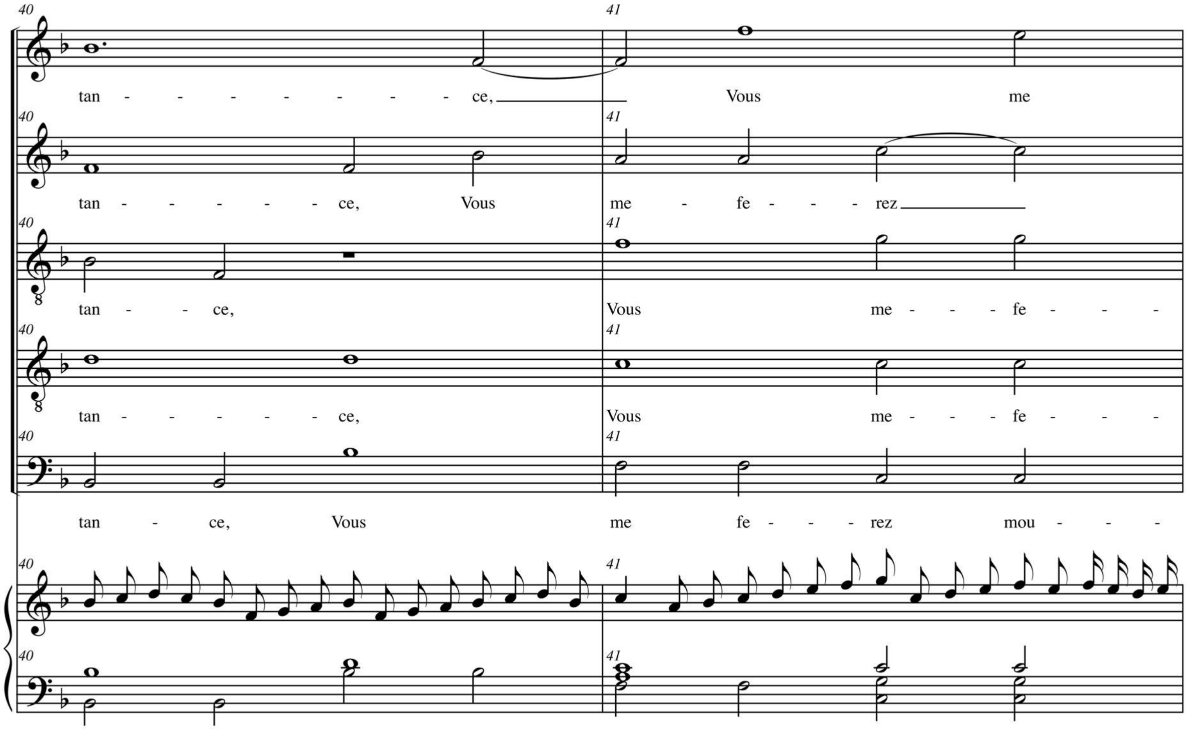
[106] Ibid.

[107] Another fruitful comparison can be made between the intabulations of *Frais et Galliard* by Gabrieli and Bertoldo – see Appendix A.

Example 3.16 Andrea Gabrieli, *CANZON deta Susanne un iour A Cinque Voci d'Orlando Lasso. Tabulata da Andrea Gabrieli,* mm. 40-41, from GABRIELI 1605a; Lassus, *Susane un jour d'amour solicitée,* adapted from Orlando di Lasso, *Chansons,* ed. Jane Bernstein, vol. 14 of *The Sixteenth-Century Chanson* (New York: Garland, 1987).



foreshadows *style brisé* technique in the French school of lute and harpsichord playing that developed in the seventeenth century.

Again, I should stress that all of this constitutes a general tendency; I'm not identifying a distinct category of intabulation. Many of Gabrieli's intabulations tend to include more ornamentation and to be more liberal in reworking the polyphony of their models. In general, however, Gabrieli's intabulations are more literalistic: to wit, Merulo's *Terzo Libro* contains four *a5* chansons, but his intabulations of these chansons are, for the most part, in four parts, as he consistently removes notes from the texture to create what are essentially idiomatic keyboard pieces. But Merulo's intabulations do share with Gabrieli's an intense level of attention to typographical detail. The level of detail is remarkable given the limitations of single-impression printing. Although in making my transcriptions I have attempted to be as faithful as possible to the original printed volume, only viewing a facsimile of the original print can truly do it justice (**Example 3.17).** The process of producing these intabulations must have been painstakingly difficult, and the sheer difficulty of execution in many cases certainly casts the level of notational detail into greater relief; every additional tie or dot was presumably another step for the publishing house. Again, it would seem that every notational detail and nuance has to be taken as potentially meaningful. For example, in his survey of Gabrieli's printed editions, Clericetti points out that the stem directions are more or less random when notes appear by themselves in a staff, but tend to follow IKT convention when there are multiple notes in a staff, demonstrating that Gabrieli (and Gardano) carefully considered stem directions as part of IKT convention.

Truly Prescriptive? The Limitations of Single-Impression Printing

At the same time, while the process of single-impression printing was rather remarkable in what it *was* able to accomplish, some technical limitations had to be accepted, and these limitations should always be taken into consideration when examining music printed in IKT.[108] Giuseppe Clericetti's research on Andrea Gabrieli, already cited above, shows a strong tendency on the part of Gabrieli (and his publisher Gardano) to be highly specific in notational detail, which at the same time is tempered by an often frustrating lack of consistency. (Anyone who has worked closely with sixteenth-century prints has noticed this).[109]At the same time, as Boncella notes, the engraved volumes of Merulo's toccatas (and, for that matter, the *Toccate* of Frescobaldi

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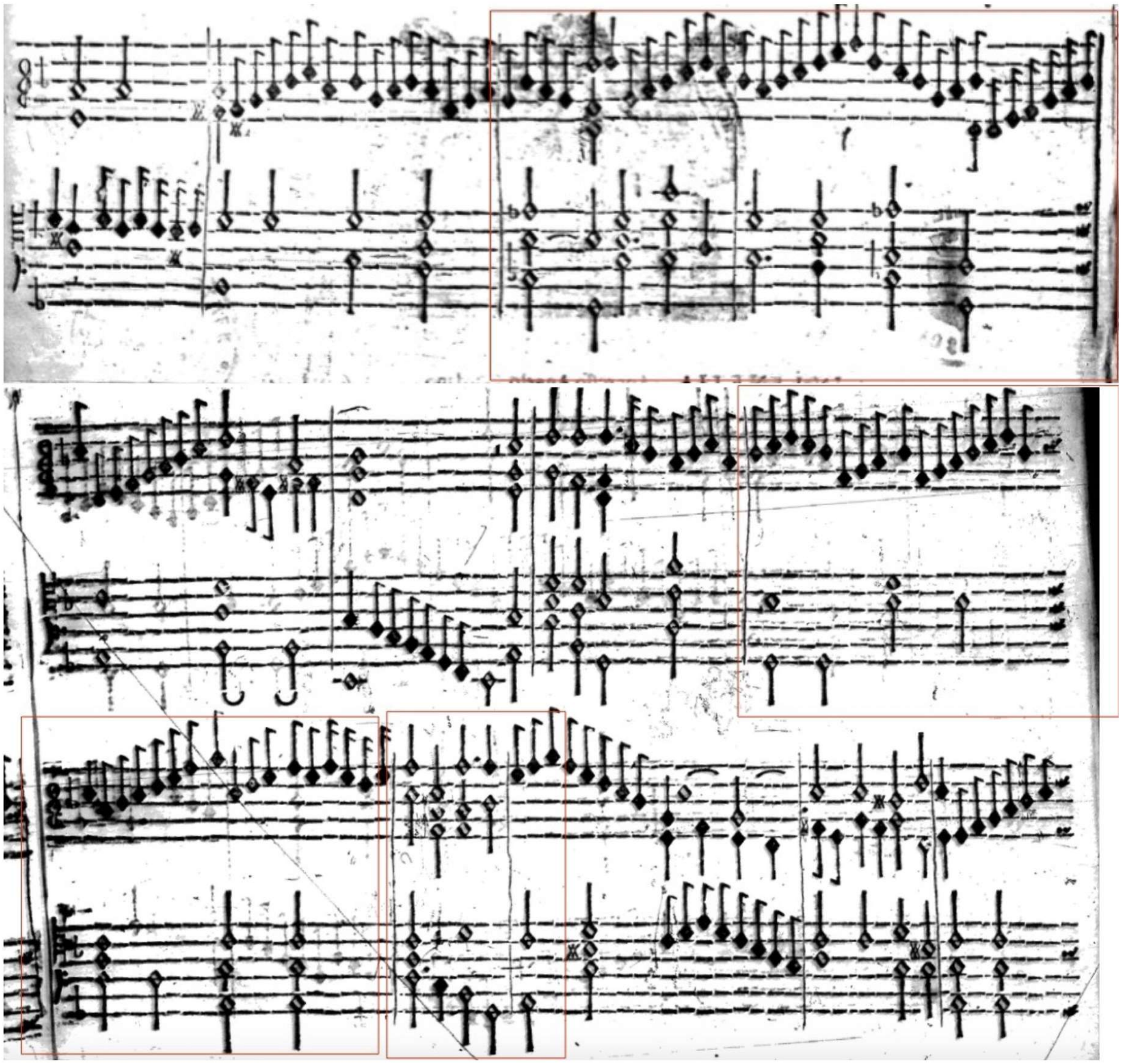
[108] Although Boncella argues that single-impression printing was capable of replicating the same level of detail seen in manuscript and engraved sources, his survey shows that single-impression prints often stop short of the same level of detail, even as the *intention* of the publisher is clear. For example, an instances in which multiple rests would ideally be used as instructions to remove fingers from keys, a single rest gives the general impression – the engraved version will show all of the rests, presumably as adding rests is not as difficult as in single-impression printing, whereas the single-impression will give only one. See Boncella, "Venetian Organ Toccata," 131-36.

[109] See Guiseppe Clericetti, "Criteri."

Example 3.17 Andrea Gabrieli, *CANZON deta Susanne un iour A Cinque Voci d'Orlando Lasso. Tabulata da Andrea Gabrieli.* Facsimile from GABRIELI 1605a, 1r; 3r.



published in the first half of the seventeenth century) reveal the *limitations* of single-impression printing: in essence these volumes are literally printed manuscripts, allowing their composers to express full notational possibility, including a precise level of notation detail – particularly with regard to possibilities of beaming fast notes – that single-impressions can only suggest.[110]

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[110] See Boncella, "Venetian Organ Toccata," 135-36.

Therefore, the limitations of single-impression printing technology suggest that much of the notation has to be taken as a kind of ideal rather than as truly prescriptive. Of course, this would seem to fly in the face of one of the principal arguments of the present dissertation: that IKT was a prescriptive notation (like lute *intavolatura*), not a descriptive one (like the mensural notation used to print polyphony in part-books). If IKT was meant to be prescriptive, why would we have to accept many of its typographical details as gestures that can only aspire to the level of precision seen in manuscript and engraved sources? In printed music, the limitations of technology provide an answer; it seems obvious that, for the most part, printed intabulations strove towards the ideal of being prescriptive even as they are somewhat limited by sixteenth-century technology. And, along similar lines, IKT's conventions also function as general tendencies rather than absolutes (see Chapter 1), in both manuscript and printed sources. As IKT uses mensural notation, it is both descriptive and prescriptive: IKT intabulations often demonstrate obvious errors or lack of ficta, and it is, of course, a truism that users of IKT volumes were not *forced* to follow the notation exactly. In fact, the act of actually playing through intabulations from the original notation reveals a great deal about the functioning of IKT as an ideal: many *intavolature* attempt to be as readable as possible, but small errors and instances where notes do not line up vertically are common.

In other words, many IKT volumes are not immediately readable in practice. In fact, most intabulations require a few read-throughs before the player can execute them perfectly. Therefore an examination of a given volume of printed music has to be conducted concurrently on two different levels: the general *tendency* towards striving to show specific details (or not) of notation, and, on specific *instances* in the musical text – in some cases, these areas actually clash. For example, a given intabulation, or even a print, may in a global sense strive towards breaking

IKT conventions to show polyphonic detail, but may seem to fall back towards IKT conventions in some instances, in an almost subconscious manner. In other cases, a given print may generally follow IKT conventions but not entirely so, in a manner that perhaps suggests that typographical considerations prevented the publisher from being as specific as he may have been.

Gabrieli's Susanne un Jour as *Dotta Partitura*: Fashioning a Sense of Musical Understanding

Read in this light, Gabrieli's tablatures do show a tendency towards *dotta partitura* over sounding image. I would argue that *Susanne un jour*, in the notational irregularities highlighted above, strives in many ways to be a *partitura* – a full score that seems to reveal the voice leading of the model. Interestingly enough, in his lute treatise *Fronimo* Galilei also strives to show polyphonic detail by bending the rules of lute tablature notation. (In fact, Galilei's treatise contains a lengthy section on counterpoint, which Galilei apparently felt was necessary for learning to intabulate). For example, he invents a sign – a cross – to

> signify that the finger should be held firm in that place and shows that the part should not move, but it is used by me with such art that each skilled contrapuntist and lute player must see, by its use, how the dissonances are accommodated and resolved, and how that parts are joined together; and they may consider in detail all the artifice and value to be found there, not less than if they had before them the notes themselves arranged in the manner that you see in the Duo. And further, they may with the greatest ease extract from it these same notes, distinct in the quality and quantity of the part from which the intabulation was drawn by me, and use them for any purpose.[111]

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[111] Galilei, *Fronimo,* trans. MacClintock, 44. "non vuol solo significare come in molt'altre il tener fermo in quell luogho il ditto, & manifestare che quella parte duo egl'è non si muove, ma vi è da me accomodato con tal arte, che può ciascuno perito contrapuntista, & sonator di liuto col suo mezzo, scorger come in esse siano accommodate & resolute le dissonanze, & come siano conlegate insieme le parti, & considerare minutamente tutto l'artificio & quanto di buono in esse si ritrova: non meno che s'egli havese inanzi l'istese note spartite nella maniera che si vedono nel Duo sudetto, & in oltre può agevolissimamente trarne l'istesse note distinte in quella quantita, & qualita, di parte, dale quali esse intavolature furno da me tratte, & servirsene dipoi per qual si voglia suo comodo." Galilei, *Fronimo,* 14.

Galilei's cross was invented to clarify voice leading, and to ensure that the model's polyphony was treated with fidelity. In addition, Galilei stresses the role of proper (i.e., vocal) counterpoint in instances where the intabulator decides to recompose or rework the original polyphony. In an instance in which he addresses the reworking of the polyphony of a model, he writes:

> You should also take care never to commit such awkward writing as some do, leaning on the weak excuse of facilitating the hand. / These do the greatest harm to the composer of the cantilena and should be accommodated in this way, and even when, for whatever reason, one might want to play them in the manner shown, at least the should be written correctly, which is this way.[112]

Galilei provides two examples – both representing a reworking of a model – but the second demonstrates “correct” counterpoint. The overall aesthetic of Galilei's treatise can help explain Gabrieli's notational irregularities. Both share a tendency to place value on preserving the polyphony of an intabulation's model, trying, in a sense, to use IKT as a true *partitura*. As seen earlier, Galilei designated his treatise for “rari contrappunti,” and I would argue that Gabrieli's intabulations can be seen as intended for a similar class. Of course, as noted earlier, Anthony Newcomb identified this association between *partiture* and "rari contrappuntisti,” arguing that the *partitura* format – expensive and difficult to print – was used to demonstrate specific moments of artifice and compositional skill to a select readership. These moments could only be appreciated visually, as they were too obscure to be actually heard. It is interesting to consider Newcomb’s *artificioso* circles from the perspective of self-fashioning. Composers could ostensibly exploit *partiture* to fashion artistic personas of learned *musici.* For example, as part of his argument, Newcomb cites the *Secondo Libro* of keyboard music by Giovanni Maria Trabaci

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[112] Galilei, *Fronimo*, 70, trans. Carol MacClintock. “Vi dovete guardare ancora non commettere mai tali inconvenienti che fogliono alcuni commettere, appoggiandosi alla debole scusa di facilitar la mano… I quali fanno inguitia grandissima a gli autori, di esse cantilena, & si devono accomodare cosi, & quando pur per quai si voglia rispetto gli volessero sonare della maniera mostrata, scrivergli almeno come hanno da stare che questo è il modo.” Galilei, *Fronimo,* 38.

(1615); in this volume Trabaci provides a table of countrapuntal devices – *inganno,* diminution, stretto, and the like – that he uses in his ricercars, complete with signs in the score to show where they are being used. I would argue that Trabaci's print suggests a case of self-fashioning through his music: his signs are included to demonstrate his ingenuity and learnedness to his reader.

In similar fashion, Gabrieli as composer-intabulator is also practicing a form of self-fashioning, by pushing his intabulations towards a *partitura*-like format and function. Like Trabaci’s highlighting of his instances of *artificioso* counterpoint*,* Gabrieli’s details are only to be appreciated visually, not aurally. By including elements of voice leading that contradict IKT practice, Gabrieli also reveals himself to be a learned *musico.* This is especially the case if the multiple levels of mimesis mentioned earlier are considered. The amount of detail in the tablature forces the *player* of Gabrieli's intabulation to mimic the artful motions that Gabrieli the *musico* would take himself; they get to simultaenously relive and recreate Gabrieli's performance and his musical thinking, as both performer and listener. If considered a form of "iconic" notation, Gabrieli’s intabulation *refers* the reader to Gabrieli’s status as an intellectual musician, the signs of the notation not serving as literal indications but general ones, giving the reader a closer sense of the *ethos* of Gabrieli's art – in this way they function as signs of learnedness in the same way that Trabaci's do. Gabrieli's notational details function on a symbolic level, signaling contrapuntal skill and understanding on the part of the intabulator, and through his attention to detail his intabulations demonstrate a level of complexity and *artificioso* in and of themselves.

Merulo's Self-Fashioning: Technical Detail as Virtuosity

This idea of intabulation – and specifically, notational detail – as a demonstration of musical artifice reaches its peak with the intabulations of Claudio Merulo. Merulo is much more liberal when it comes to altering the polyphony of his model, as seen in *Petite Jacquet* above. However, Merulo's recomposition contains a level of contrapuntal artfulness that draws upon many of the same visual signs that Gabrieli uses. These notational details contribute to the overall *artificioso* quality of Merulo's intabulations, with their multiple layers of ornamentation and the subsequent recomposition necessitated by that ornamentation. Merulo's visual signs give the *impression* of a faithful following of the model's original polyphony, but are in fact often related to his own reworkings, the polyphony he superimposes on his model. This polyphony often becomes autonomous. In this sense, Merulo intabulations function simultaneously as sounding images and *dotte partiture.*

Merulo's art as intabulator is perhaps best demonstrated by the intabulations of four five-part chansons in his *Terzo Libro* (1611). These chansons are already somewhat atypical for intabulations: most of Gabrieli's intabulations, for example, adapt as models simpler, four-part chansons with frequent homophonic sections, following both the advice of Galilei (see above) and a "standard" repertoire of vocal models exemplified by prints such as Gardano's *Musica de diversi autori* (see note 42 above).[113] Apart from the ubiquitous *Susanne un jour,* Merulo chooses three chansons by Crecquillon that are squarely in the Netherlandish motet style, featuring dense webs of imitation and far fewer sections of homophony.

Merulo's intabulations feature a high level of attention paid to notational detail; this can be seen in **Example 3.18.** Merulo's score is littered with ties; most of these are used to clarify the

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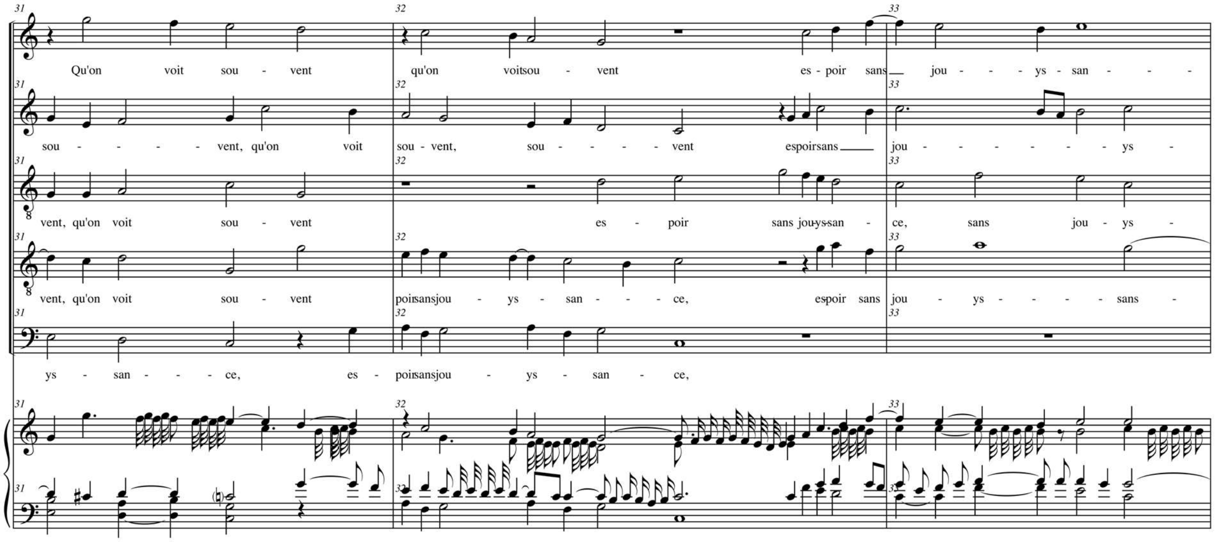
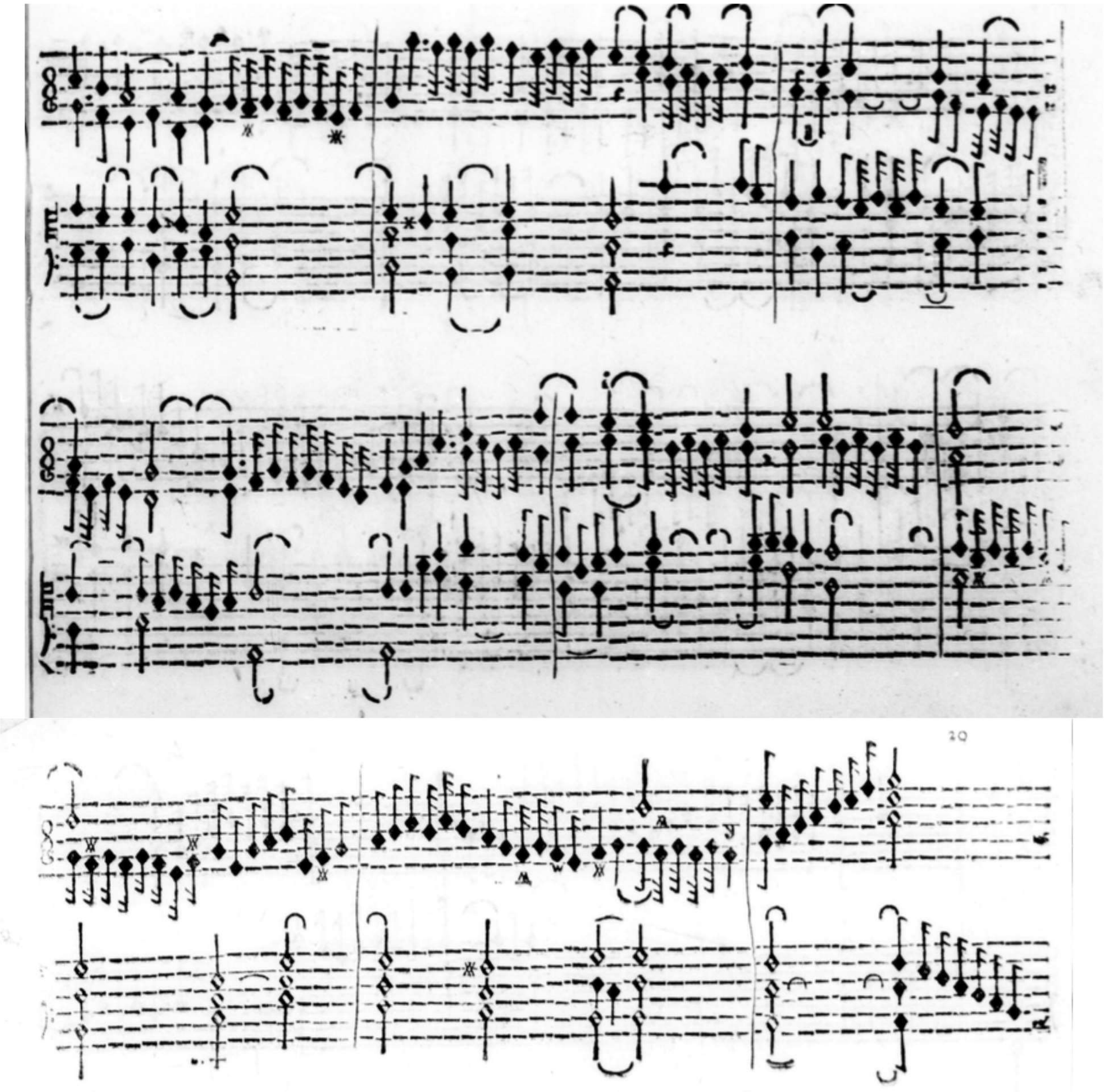
[113] Gabrieli's models also tend to be commonly found in other sixteenth-century books of intabulations (lute and keyboard).

Example 3.18 Claudio Merulo, *CREQUILLON. Onques Amour A 5*, mm. 31-36, from MERULO 1611; Crecquillon, *Oncques amour ne fut sans grand langueur*, adapted from Thomas Crecquillon, Cantiones Quator Vocum, ed. Barton Hudson, et. al., vol. 63, part 19 of Corpus mensurabilis musicae ([Germany]: American Institute of Musicology, 2000).


31
32
33
Qu'on voit sou - vent qu'on voitsou - vent es - poir sans jou - - - ys - san - - -
sou - - - - vent, qu'on voit sou - vent, sou - - - - vent espoirsans jou - - - - - - - ys -
vent, qu'on voit sou - vent es - poir sans jou-ys-san - ce, sans jou - ys -
vent, qu'on voit sou - vent poirsansjou - ys - san - - - ce, espoir sans jou - ys - - - - sans -
ys - san - - - - ce, es - poirsansjou - ys - san - ce,

motion of voices against other voices, and in this Merulo seems to strive to be as faithful towards Crecquillon's dense polyphony as possible. At the same time, Merulo's subtle ornamental additions demand much typographical attention. The sheer complexity of printing can again be best demonstrated by viewing a facsimile of the original (**Example 3.19**). Beyond the overall complexity, a few other details are worth noting. In measure 33 two extra *e*'s are added in the

Example 3.19; Claudio Merulo, *CREQUILLON. Onques Amour A 5.*; from facsimile of MERULO 1611, 19-20.



second half of the second beat in the right hand; while these additions are minor, they demonstrate Merulo's keyboard thinking, in that they show him *composing* in tablature voices rather than reworking the voices of the model. Merulo is exploiting the very functioning of IKT to create them: the line of ornamentation that begins on the previous measure's *g′* "travels" – as in *bastarda* practice – to a new note in a new voice (the *e′*), but this new voice does not exist in the model. It is easy to see why Merulo adds them: Crecquillon's texture here thins out in a way that works perfectly well for vocal music, but not so well on the keyboard. Thus the first added *e′* gets an upwards stem that links it to the following *g′*; the line is essentially a *seguente* part formed of the Superius and Alto of the model, and the added *e′*s do not work if considered to be polyphonic parts of the model. Interestingly enough, later in the same measure Merulo *violates* IKT convention in a brief instances (measure 33), to show the 7-6 suspension at the end of the measure. The first note of the suspension – the *c″* – is given an "incorrect" stem direction. IKT conventions would demand that it have an upwards stem, but instead it has a downwards stem to clarify the fact that it belongs contrapuntally to the Altus's suspension rather than to the Superius.

Another notable thing is seen in this example. Ties are added in the left hand in measure 35 that seem to violate IKT convention in order to clarify voice leading. However, a comparison between intabulation and model shows that the clarifying ties are added to *wrong* notes – that is, "fake" tablature voices – rather than to the model's parts. The first tie is added to the *b* in the left hand – a note that is not in the model at all – and the same goes for the *d′* ties at the end of the measure. These ties are therefore part of Merulo's *new* polyhpony, not the original polyphony, and Merulo's new counterpoint includes blatant parallel fifths that are not in the model, even as a by-product of voice crossings – these parallel fifths are common in *cinquecento* keyboard music, but are of course not allowable in vocal counterpoint. As seen in Gabriel's *Susanne un jour*, ties are typically added to *clarify* the voice leading of the model; in fact, we see Merulo do this himself in this intabulation (see measures 8-9). However, their addition in this particular instance leads the reader to assume that the model is at "fault" for the parallels – we have seen that IKT conventions typically create visual parallels caused by voice-crossings. In other words, Merulo is sneaking in his own parallel fifths under the guise of IKT convention, while seemingly trying to convince the reader that they are a product of voice crossings in Crecquillon's chanson, by adding fake ties to indicate "proper" voice leading that doesn't actually exist. It is almost as if the ties were added by Merulo to *deceive* the reader of his intabulation.

Rather than deception, however, I would argue that these ties demonstrate an instance of Merulo attempting to fashion a persona of learned *musico*. In earlier music from the *cinquecento,* in Marco Antonio Cavazzoni and in the Castell'Arquato material examined in Chapter 2, for instance, parallel fifths and octaves are a matter of course. Here, however, Merulo seems to feel the need to hide them, perhaps a need created by a sense of anxiety: printing has made it more likely that his reader may have access to the part-books or even a *partitura* of his model.

Self-fashioning theory explains many of the intabulation decisions take by Merulo. For example, *Oncques amour* is filled with many instances of these "fake" ties, which can be seen, for example, in measure 25 (**Example 3.20**). Here we see the same procedure: Merulo has re-written the inner voices and added ties to notes that do not appear in the model. These ties demonstrate Merulo's artfulness on two levels: on the one hand they once again signal contrapuntal understanding[114]; on the other hand, if read by a performer, they force the performer to adopt a particularly artful performance, with a subtle reduction of texture on beats two and four. This again speaks to the multi-layered functioning of IKT's mimesis; in addition, Merulo shows himself to be a highly skilled performer and a highly skilled composer.

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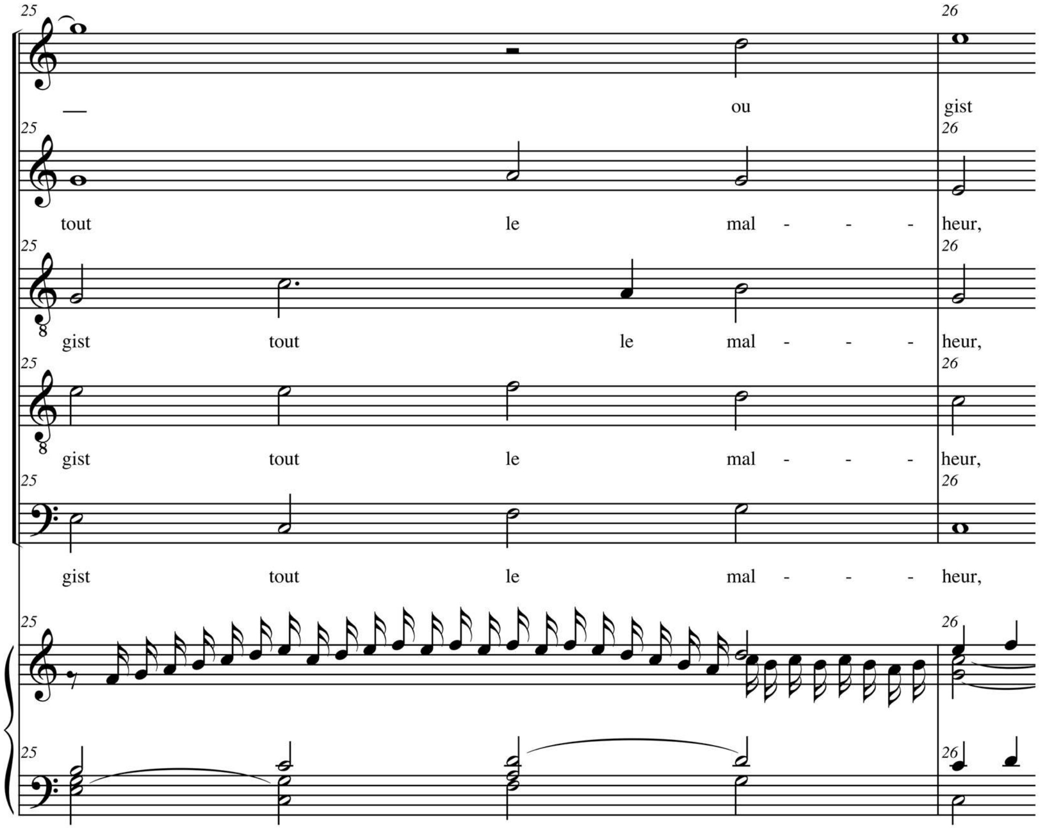
[114] Albeit an understanding of his own counterpoint, not Crecquillon's – in fact, the first tie disguises Crecquillon's voice leading; his Quintus motion from *g* to *c′* is obscured by it.

Example 3.20 Claudio Merulo, *CREQUILLON. Onques Amour A 5*, mm. 25, from MERULO 1611; Crecquillon, *Oncques amour ne fut sans grand langueur*, adapted from Thomas Crecquillon, Cantiones Quator Vocum, ed. Barton Hudson, et. al., vol. 63, part 19 of Corpus mensurabilis musicae ([Germany]: American Institute of Musicology, 2000).


25
26
—
ou
gist
tout
le
mal - - -
heur,
gist
tout
le
mal - - -
heur,
gist
tout
le
mal - - -
heur,
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tout
le
mal - - -
heur,

Thinking in Tablature Voices

As mentioned, Merulo's alterations are frequently grounded in the logic of tablature voices – the "new" voices that are visually created by the vertical array of the notes in the tablature, and by IKT conventions such as stem direction practice – in that individual notes and ties seem to be added following the direction and contour of the tablature voices rather than those of the model.

While tablature voices are created automatically by IKT convention, many of Merulo's compositional choices seem to be driven by and work within their logic. Merulo's intabulations therefore offer a window on a process in which IKT's algorithmically applied rules could function as a compositional workshop: if one were to take Merulo's tablature voices and transcribe them into part-books or a full score, a relatively new composition would emerge.

Several instances can be demonstrated that show this process. Take, for example, the following instance in *Oncques amour* (**Example 3.21**). Here, IKT's stem practices create parallel octaves and fifths at the end of measure 37 in the left hand. The parallel fifths are a result of voice-crossings in the model: the *g*-to-*a* motion in the tenor is not "real," as it is a composite part formed of the Tenor and Quintus of the model. Merulo once again uses notation to try and demonstrate this phenomenon: the two notes receive *seperate* stem directions in the tablature, going against normal IKT functioning (which would typically give the notes the same stem directions, allowing the tablature voice to stand as it is.)[115] However, while the fifths are present in the model, at least aurally, the near-parallel octave is not. The *d'* in the left hand on the first beat of measure 38 is added by Merulo, ostensibly to create a more keyboardistic texture. Once again, Merulo is using a keyboard figure typical in *cinquecento* music – one that is at the same time a violation of vocal counterpoint – but shielding it from scrutiny by signaling that the "infraction" is in fact the result of IKT convention.

In the same example, the tie seen in the left hand in the second half measure 38 only functions as part of a tablature voice, connecting notes from two separate voices in the model (the Tenor and the Altus). As in the examples seen above, it is awkward to play, and does not even result in the reduction of texture as seen earlier. In fact, given what we know about early

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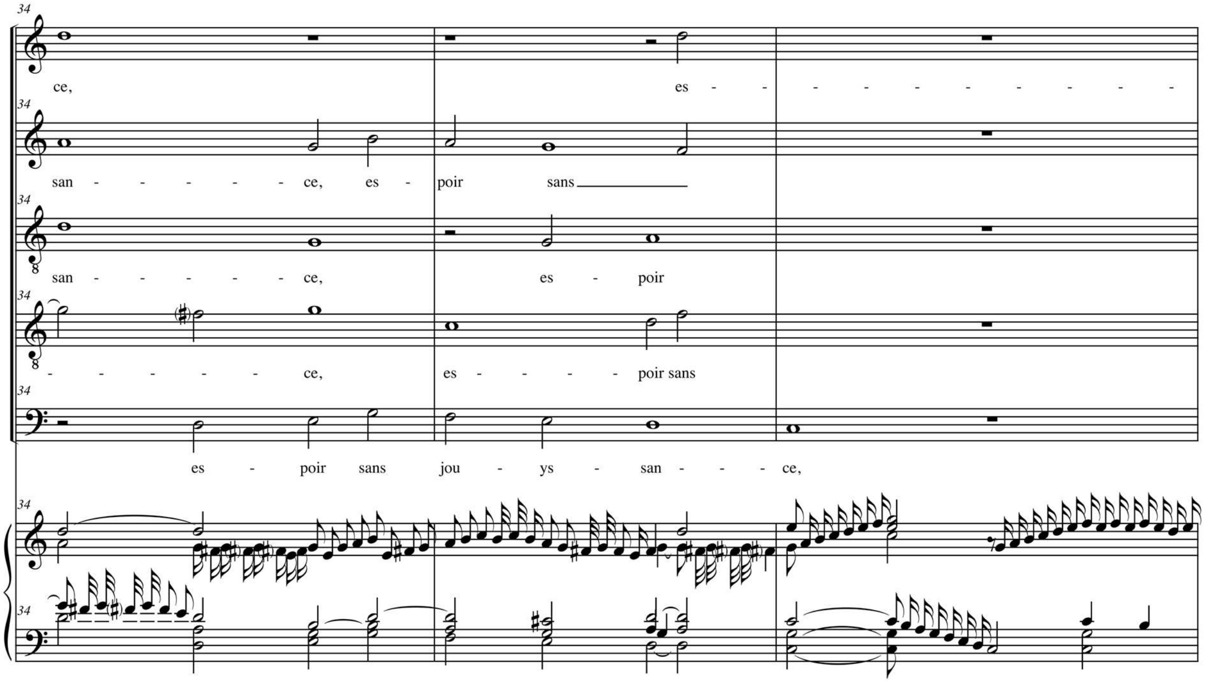
[115] It is interesting to note that, as Boncella points out, IKT paints a sonic image: the "parallels" don't exist abstractly -- as counterpoint -- but aurally, and the notation reflects this. See Boncella, “Venetian Organ Toccata,” 128.

Example 3.21 Claudio Merulo, *CREQUILLON. Onques Amour A 5*, mm. 37-38, from MERULO 1611; Crecquillon, *Oncques amour ne fut sans grand langueur*, adapted from Thomas Crecquillon, Cantiones Quator Vocum, ed. Barton Hudson, et. al., vol. 63, part 19 of Corpus mensurabilis musicae ([Germany]: American Institute of Musicology, 2000).


34
ce, es - - - - - - - - - - - - - -
san - - - - - - ce, es - poir sans
san - - - - - - ce, es - poir
- - - - - - ce, es - - - - - poir sans
es - poir sans jou - ys - san - - - - ce,

modern Italian keyboard performance practice, thinning the texture was not typical; instead players were advised to restrike tied notes, especially on plucked keyboard instruments, in order to not leave the instrument "empty" (i.e., to maintain a fuller texture.)[116] I would argue that Merulo included the tie solely to give the reader a sense of his skill as a contrapuntist: the counterpoint in question in this case is the "new" counterpoint created by Merulo's expert exploitation of the tablature voices.

The theoretical concept of thinking in tablature voices goes a long way in explaining Merulo's overall intabulation procedure. In **Example 3.22** we see an ornamental cadential figure

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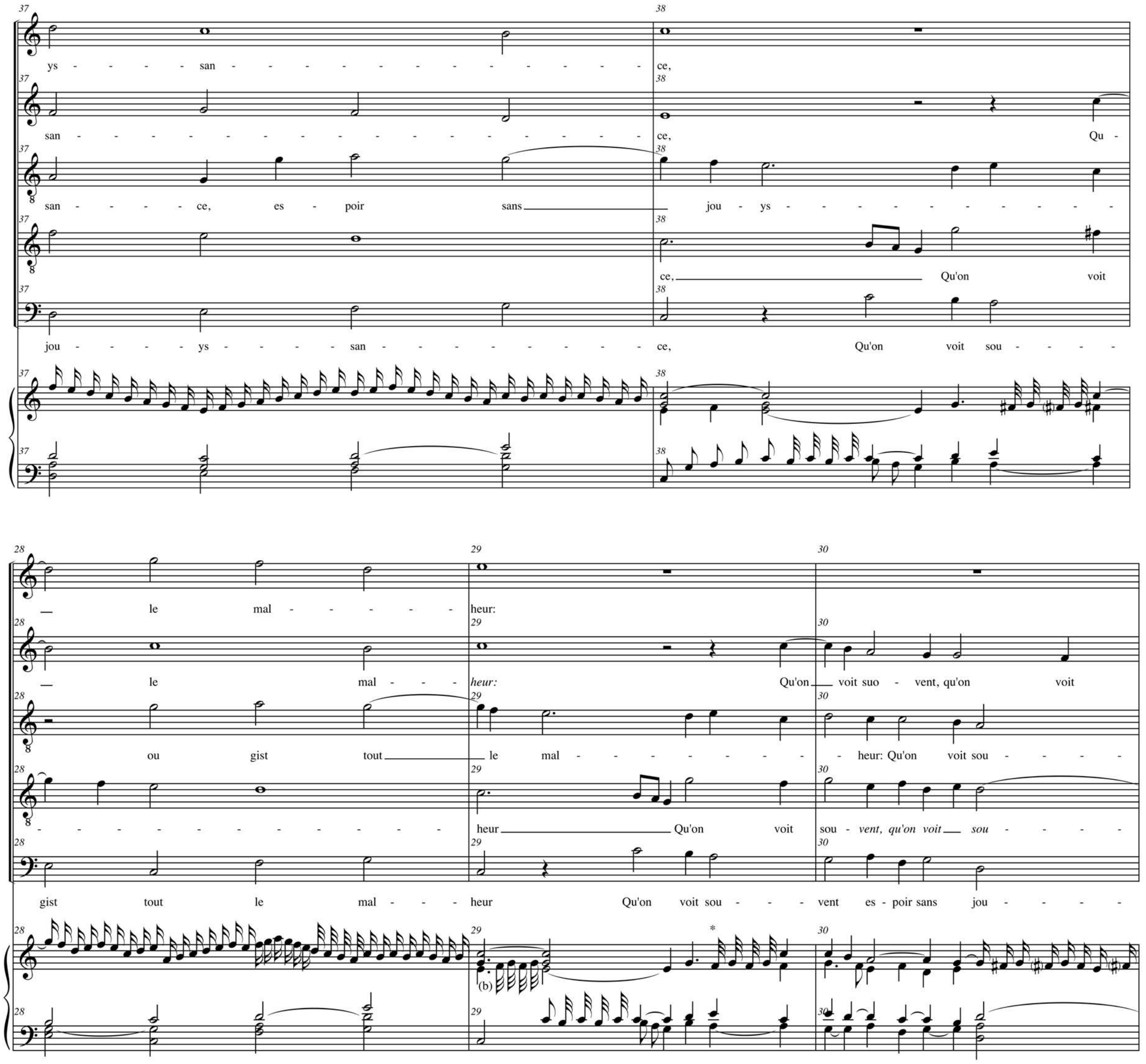
[116] See L.F. Tagliavini, “The Art of 'Not Leaving the Instrument Empty': On Early Italian Harpsichord Playing,” *Early Music* 11 (1983): 299–308.

Example 3.22 Claudio Merulo, *CREQUILLON. Onques Amour A 5*, mm. 26-30, from MERULO 1611; Crecquillon, *Oncques amour ne fut sans grand langueur*, adapted from Thomas Crecquillon, Cantiones Quator Vocum, ed. Barton Hudson, et. al., vol. 63, part 19 of Corpus mensurabilis musicae ([Germany]: American Institute of Musicology, 2000).


37
38
ys - san - ce,
san - ce, Qu -
san - ce, es - poir sans jou - ys -
ce, Qu'on voit
jou - ys - san - ce, Qu'on voit sou -
28
29
30
le mal - heur:
le mal - heur: Qu'on voit suo - vent, qu'on voit
ou gist tout le mal - heur: Qu'on voit sou -
heur Qu'on voit sou - vent, qu'on voit sou -
gist tout le mal - heur Qu'on voit sou - vent es - poir sans jou -
(b)

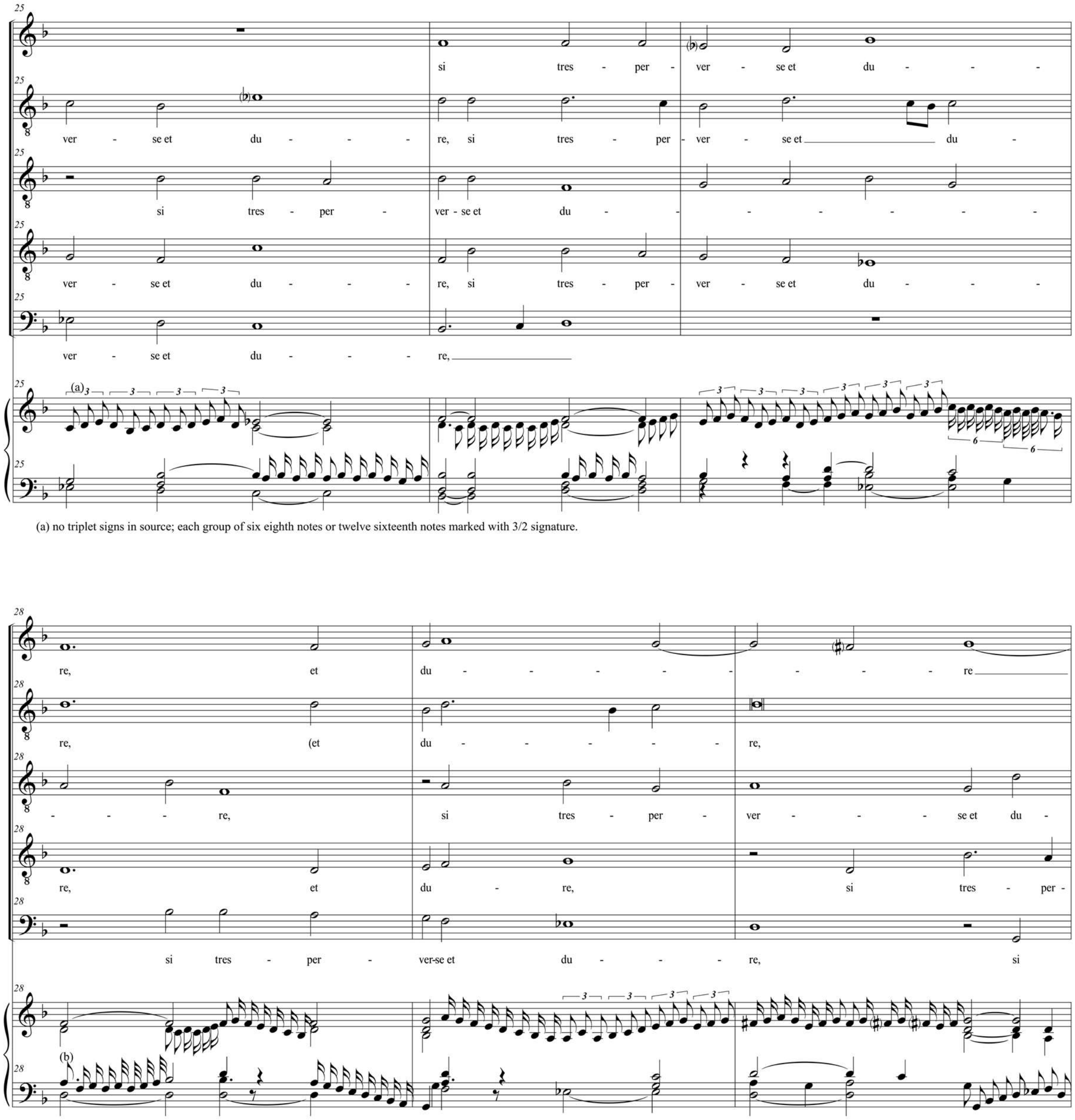
(b) *e'* and *g'* don't have dots in source.

that only exists in the tablature voices: the trill in the left hand of measure 27 – complete with *ficta f#′* – conects the Tenor *f′* to the Altus *g′*. The *ficta* addition, as well as the cadential trill, would not work if the chanson were sung among a group of singers: the *f#′* would be patently incorrect within the context of the Tenor's motion, and the trill would be left hanging, without a reasonable contrapuntal resolution. It *only* makes sense within the context of the keyboard tablature voices. The concept of tablature voices helps to explain many of the irregularities seen here. For example, the added ties in measure 28 belong to tablature voices, not real ones: they support the extensive alterations made to accomodate the *passaggio* in the right hand, which is a form of recomposition. Merulo's subtle recomposition in measure 29 also makes sense if considered part of a tablature voice: the *c'* on the second beat of the left hand is taken from the Bassus but moved back by a semiminim, and then melded seamlessly with the Tenor's falling eighth notes to create a keyboardistic figure.

Merulo is therefore playing within the space that exists between the "real" voice leading of the model, and the tablature voices that are created automatically by IKT convention. The automatic, "natural" creation of these tablature voices by IKT conventions is exploited by Merulo to effect further changes. This is especially true of Merulo's ornamentation practice. As seen earlier, Merulo is fond of creating ornamental superstructures that sit atop the scaffolding of the model. These superstructures are often based on tablature voices – extracted from the model as the foundation for new composition – and draw attention to Merulo's own contrapuntal skill.

Merulo's extensive style of ornamentation can be seen clearly in the intabulation of *Content ou non,* also from the *Terzo Libro*. Typically, it features *bastarda*-style figures – in which an ornament travels from one voice to another – as well as *minute* that subtly touch upon notes that are omitted as part of the intabulation process. Both can be seen in **Example 3.23**. In the second half of measure 28, the long scalar gesture connects the Superius *f'* to the Bassus *g* (while overshooting by an octave) in *bastarda* fashion. Related to *bastarda* practice, the *minuta* in the next measure travels from the Superius *a'* to the Tenor *g* and back, while also managing to touch upon the Quintus *b-flat*, which was ostensibly omitted to create room for this very ornament. If one were to imaging Merulo's process here, it is easy to speculate that he might

Example 3.23 Claudio Merulo, *CREQUILLON. Content A 5,* mm. 25-30, from MERULO 1611; Crecquillon, *Content ou non*, adapted from Thomas Crecquillon, *Cantiones Quator Vocum*, ed. Barton Hudson, et. al., vol. 63, part 19 of *Corpus mensurabilis musicae* ([Germany]: American Institute of Musicology, 2000).


25
si tres - per - ver - se et du - - - -
ver - se et du - - - - re, si tres - per - ver - se et du -
si tres - per - ver - se et du - - - - - - - -
ver - se et du - - - - re, si tres - per - ver - se et du - - - -
ver - se et du - - - - re,
(a)
3
6
28
re, et du - - - - - - - - re
re, (et du - - - - - - re,
- - - re, si tres - per - ver - - - se et du -
re, et du - re, si tres - per -
si tres - per - ver-se et du - - - - re, si
(b)

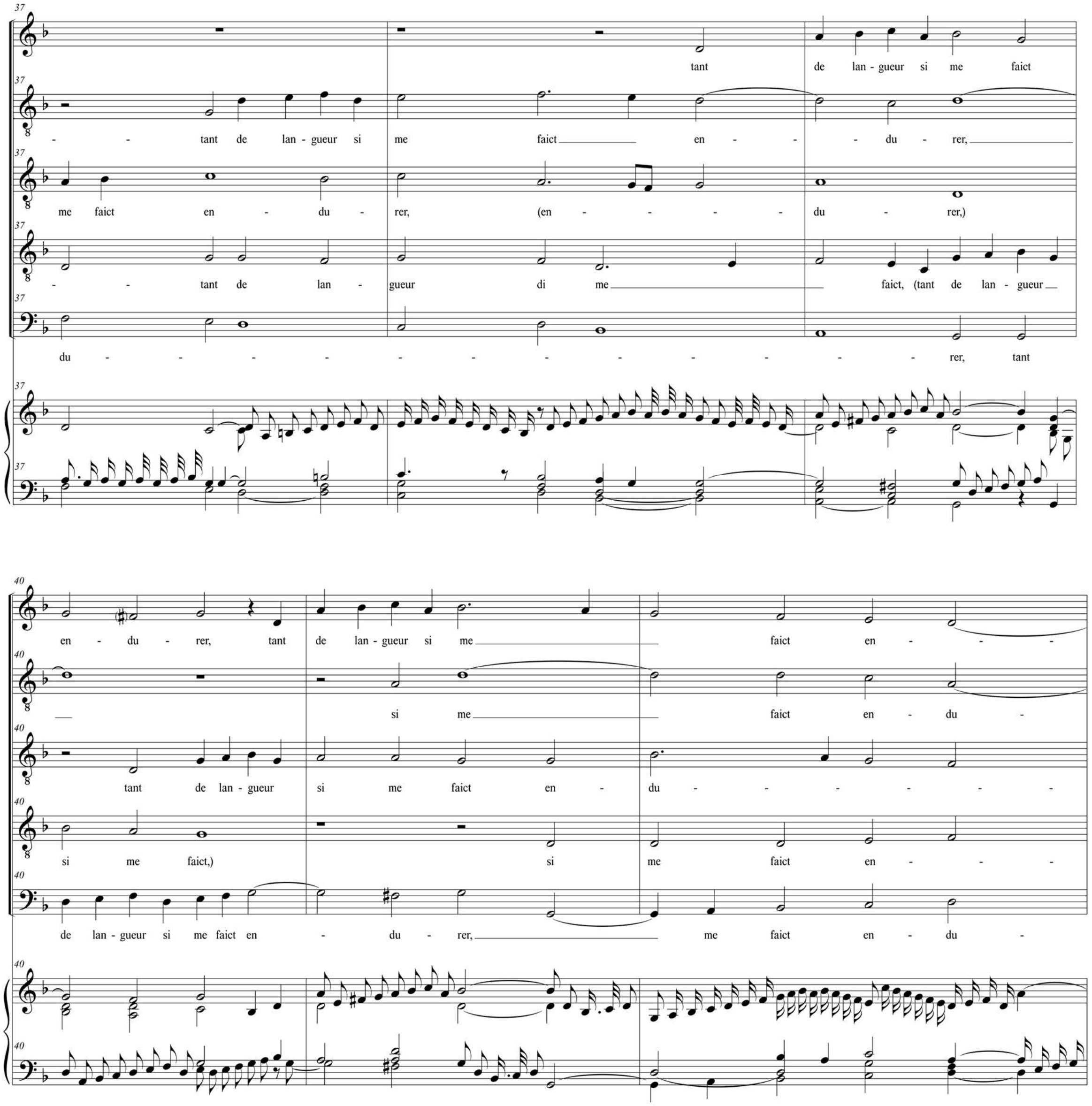
(a) no triplet signs in source; each group of six eighth notes or twelve sixteenth notes marked with 3/2 signature.

(b) first beat, left hand, note values doubled in source.

have improvised these ornaments over the *tablature voices* created by IKT practice. All of the notation follows IKT convention in hiding details of voice leading (see the accompaniment in the left hand of measure 27, for example), and the ornaments are freely applied over the chords created by IKT's vertical segmentation, rather than strictly following any polyphonic voice. As mentioned in Chapter 1, these vertical arrays often seem to be processed on a minim-by-minim basis. Interestingly enough, this model works equally well if the creation of Merulo's intabulation is seen as a *written* process or a *mental* one. The tablature voices reflect the way a player conceives of the music *aurally,* and the written tablature voices reflect this: in this way IKT represents a mental image of keyboard thinking.

Merulo's exploitation of tablature voices show IKT's functioning as a kind of tablet for new composition. This is particularly clear in instances in which Merulo uses the model as a scaffolding for his own ornamentational superstructures. In **Example 3.24**, Merulo superimposes a faster-moving ornamental figure over Crecquillon's imtative point; on the one hand this clarifies Crecquillon's polyphony, but on the other hand Merulo's ornamentation takes on a life of its own. In several instances (see, for example, measures 32, 35, and 36), the ornamental figure is superimposed over contrapuntal material in the model that is *not* the original motive. Rather than slavishly connecting Crecquillon's figure with the new ornamental one, Merulo freely inserts the figure where it will fit, using the tablature voices as the structural foundation. As Merulo's new point of ornamentation takes on a life of its own, the composer's exploitation of the tablature voices increases: in measures 38-39, the accompaniment in the left-hand *looks* complicated – and, more importantly, like something that might belong to the original polyphony. However, it is entirely Merulo's invention: the *g'-f#'* 7-6 suspension is perfectly idiomatic to the keyboard, and represents the algorithmic adoption of Crecquillon's vocal polyphony for keyboard. Most importantly, the notational detail that Merulo adds – the ties, the careful consideration of stem direction, the rests – amplifies the feeling that Merulo's polyphony can stand next to Crecquillon's on its own terms. This demonstrates Merulo's self-fashioning on two levels: if one

Example 3.24 Claudio Merulo, *CREQUILLON. Content A 5,* mm. 37-42 from MERULO 1611; Crecquillon, *Content ou non*, adapted from Thomas Crecquillon, *Cantiones Quator Vocum*, ed. Barton Hudson, et. al., vol. 63, part 19 of *Corpus mensurabilis musicae* ([Germany]: American Institute of Musicology, 2000).


37
tant de lan - gueur si me faict
- - tant de lan - gueur si me faict en - - - du - rer,
me faict en - du - rer, (en - - - - - du - rer,)
- - tant de lan - gueur di me faict, (tant de lan - gueur
du - - - - - - - - - - - - - rer, tant
40
en - du - rer, tant de lan - gueur si me faict en - - -
si me faict en - du -
tant de lan - gueur si me faict en - du - - - - - - -
si me faict,) si me faict en - - -
de lan - gueur si me faict en - du - rer, me faict en - du -

did not know the original polyphony, one might assume that the detail refers to the model, generating appreciation for Merulo's knowledge of the model and its counterpoint. To the savvy reader, however – one who *did* know the polyphony inside and out – the detail points to Merulo's *compositional* skill. To both types of reader, the level of detail and the virtuosity and artfulness of the ornamentation demonstrate Merulo the virtuoso keyboardist and Merulo the great *musico.*

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Although these notational details all operate on a small-scale and subtle level, this does not diminish their significance; again, the level of typographical and notational detail in Claudio Merulo's volumes foreshadow the heightened level of detail he was able to achieve in his two *libri* of engraved toccatas. The fact that his intabulations and toccatas strive towards the same level of notational detail and artifice indicate the "high art" status of his intabulations. In addition, Newcomb's definition of *artificioso* composition – for Newcomb, these are exclusively contrapuntal works that demonstrate contrapuntal devices – may again be too narrow: the subtle level of detail in Merulo's intabulations indicate their status as a similar type of composition, to be appreciated by an analogous type of readership with an analogous mode of engagement.

Merulo's intabulations therefore represent an element of persona-construction on behalf of the composer. They play within the space between *sonare a fantasia* and the learnedness that is exemplified by the use of *partiture* of the late sixteenth and early seventeenth centuries. Composers willfully exploited the nature of IKT – its conventions and its filtering process – to demonstrate aspects of their musical, keyboardistic *personas* to their readership. While individual composers may have heightened different aspects (for example, not thoroughly examined in this chapter are the highly virtuosic intabulations by Gabrieli, which can take on the feeling of a *perpetuum mobile* in what a past generation of scholars rather contemptuously dismissed as the "colorist" style), their self-fashioning and its functioning – its medium, motive, authorship, and the like – were essentially the same.

In a sense, this self-fashioning can serve as a test case, one that can be conceivably be applied to other notational mediums and other genres. The overall dynamic created by IKT's filtering on one hand, and the way that composers exploited or pushed against it on the other, could explain other musical-stylistic features – features that may traditionally be assumed to be purely under the domain of compositional agency.

Conclusions

Of all areas of Western music history, notation is the one perhaps at the greatest danger of falling victim to a kind of teleological narrative. This is understandable; after all, we typically encounter modern notation every day, both as scholars and as performers, and its general appearance, its typographical features, and its functioning all appear normal to us. In contrast, historical notation can seem abnormal, with strange or primitive typographical features and archaic functioning. In spite of recent trends towards preserving aspects of historical notation in making modern editions – retaining original note values rather than halving them, for instance, the act of making a modern edition forces historical notation to fit in the framework of modern notation, even as individual features may nod to historical practice.

If nothing else, the exploration of Italian keyboard tablature conducted in this dissertation highlights the significant gaps between modern notational practices and a particular historical one. It cautions against adopting one-size-fits-all descriptions and analytical approaches when it comes to examining any historical notational system. An exploration of a particular historic system ultimately becomes, on some level, an exploration of differences.

The study of IKT also highlights how essential it is to have at least a superficial knowledge of the inner workings and conventions of a given notational format. It is not enough to consider the “music itself” as a kind of universal object, one that can be ontologically separated from the logic of the notation that transmits it. Instead, notation and musical style are intrinsically linked. This can be observed from both practical and conceptual perspectives. From a practical perspective, the data that are transmitted by historic notational features often contains specific performance instructions, such as the IKT rule that the staff a note is on should indicate which hand plays it. While these sorts of instructions are more readily seen in music found in manuscripts or engraved prints, in which irregular beaming patterns strongly suggest a function of indicating phrasing, even in the single-impression keyboard prints of Gardano and Vincenti, in which fast notes lack beaming due to technological limitations, details transmit important performance information. In fact, all of IKT's conventions can be read as doing so. As demonstrated in this dissertation, the conventions of IKT operate in prints and manuscripts alike. It is therefore problematic that some modern editions continue to be made in ignorance of IKT's conventions; an examination of modern editions of music printed in IKT show that this is often the case.[1]

In addition, many details of IKT can be seen as transmitting important that operates on a broader, conceptual level. These data might not actively influence any particular performance decision, but they rather open a window of sorts that reveals the way that the scribe, publisher, or composer *thought* about the music – for example, whether their musical conception was chord-driven, or polyphonic, or somewhere between the two. In this sense, reading historic notation can be viewed as an archeological act, allowing us, on some level, to enter the mind of the original creator, or at least to simulate it, by going through the same mental processes of reading and execution as a sixteenth-century player would have done.

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[1] For example, the IKT stave/hand rule is often ignored, even in recently printed volumes such as CEKM's edition of keyboard music from Castell'Arquato. See H. Colin Slim, ed., *Keyboard Music at Castell'Arquato*, vol. 3, ed. H. Colin Slim, CEKM 37 (Middleton, WI: American Institute of Musicology, 2003), ix

Performing music from historic prints and manuscripts need not be the only archeological act available to present-day performers and scholars. It is my hope that some of the practices explored in the present dissertation – such as the hypothetical *sonare a consonanze* and the subtle nuances of intabulation practice – will invite the exploration of these techniques as *praxis,* not as abstract scholarly exercises. While Bruce Haynes's call for a body of *new* music created by historic practice – Period composing, as he calls it – has not, as of yet, taken off as a prominent phenomenon in early music, at the very least the adoption of historically grounded improvisational and compositional methods can serve as important tools, ones that allow present-day performers to become more fluent and to gain a deeper understanding of the music they play.[2] If anything, the practices examined here could allow us to become better *improvisers,* which would in turn move us closer to the mindset of our historic counterparts. Used in this way, these techniques can result in what Haynes calls "serendipity": the "joyful phenomenon of making happy and agreeable discoveries unintentionally."[3] It is my hope that this dissertation may invite its readers to take the initial steps towards this happy state.

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[2] Bruce Haynes, *The End of Early Music* (Oxford: Oxford University Press, 2007), 7.

[3] Ibid.

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I-CARcc Castell'Arquato, Archivio della Chiesa collegiata ("Castell Arquato")

I-Fl Florence, Biblioteca Medicea Laurenziana Ms. Acquisti e Doni 641 ("Layolle Manuscript")

I-Fmba Florence, Museo Bardini Ms. 967 ("Bardini Manuscript")

I-Nc Ms. Mus. str. 48 ("Naples 48")

I-Trmp Trent, Museo provinciale d'arte, Biblioteca musicale L. Feininger, n.s ("Feininger Codex")

I-Vnm: Ms. It. IV 1227 ("Venice 1227")

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APPENDIX

INTABULATION MODELS FOR SELECTED INTABULATIONS FROM PRINT AND MANUSCRIPT SOURCES

APPENDIX: SOURCES AND EDITORIAL NOTES[1]

1. Anon., (Ancor che col partire) (fragment)

Sources:
Intabulation: Ca, fascicle 4a, 14v.
Model: Rore, *Ancor che col partire,* adapted from Cirpriano de Rore, *Opera omnia,* ed. Bernhard Meier, vol. 14, part 4 of *Corpus mensurabilis musicae* (Rome: American Institute of Musicology, 1969).

2. Anon., Anchor che co'l partire. Madrigale a4. di Cipriano de Rore. Tabulato da Andrea Gabrieli

Sources:
Intabulation: GABRIELI 1596, 32r-34r.
Model: Rore, *Ancor che col partire,* adapted from Cirpriano de Rore, *Opera omnia,* ed. Bernhard Meier, vol. 14, part 4 of *Corpus mensurabilis musicae* (Rome: American Institute of Musicology, 1969).

3. Anon., A[ncor che col partire]

Sources:
Intabulation: La, 6v-7v.
Model: Rore, *Ancor che col partire,* adapted from Cirpriano de Rore, *Opera omnia,* ed. Bernhard Meier, vol. 14, part 4 of *Corpus mensurabilis musicae* (Rome: American Institute of Musicology, 1969).

5: measure not legible in facsimile.
15: measure not legible in facsimile.
20: second half of measure not legible in facsimile.

4. Sperindio Bertoldo, Ricercar del Terzo Tuono

Sources:
Intabulation: BERTOLDO 1591b, 20-23.
Model: Annibale Padovano, *Il primo libro de ricercari a quattro voci* (Venice: Gardano, 1556).

18: Right hand, dot on second beat, tenor tablature voice in source.

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[1] See the author's personal website for additional intabulation models.

26: Right hand, third beat, *c'* is whole note in source.
34: Left hand, fourth beat, *B* missing stem in source.
35: Left hand, second beat, *G* missing stem in source.
37: Left hand, third beat, *c'* missing stem in source.

5. Anon., *O s'io potessi Donna*

Sources:
Intabulation: La, 3r-6r.
Model: Berchem, *O s'io potessi Donna,* adapted from Jacques Arcadelt, *Opera omnia,* ed. Albert Seay, vol. 31, part 2 of *Corpus Mensurabilis Musicae* (NP: American Institute of Musicology, 1970).

4: Last beat not clear in facsimile.
6: Right hand, last half of measure not clear in facsimile.
13: Right hand, third beat not clear in facsimile.
53: Right hand, first beat not clear in facsimile.

6. Gabrieli, *Canzon Francese detta Orsu. Di Jacob. A Quatro voci.*

Sources:
Intabulation: GABRIELI 1605b, 22r-26r.
Model: Crecquillon, *Or sus a cop, qu'on se resveille!*, adapted from Thomas Crecquillon, *Opera omnia,* ed. Laura Youens and Barton Hudson, vol. 63, part 16 of *Corpus mensurabilis musicae* (NP: American Institute of Musicology).

7. Anon., Se p[er] colpa del vo[stra] fiero sdegno

Sources:
Intabulation: Ca, fascicle 5, 22v-23r.
Model: Arcadelt, *Se per colpa*, transcription from *Il primo libro di madrigali d'Archadelt, a quatro con nuova gionta impressi* (Venice: Gardano, 1539).

3: Left hand, *d'*s on first and third beat are *c'*s in source.
19: Right hand, fourth beat unreadable.
40: Right hand, alto and soprano tablature voices don't line up vertically.
43: Right hand, third beat *g* breve in source.

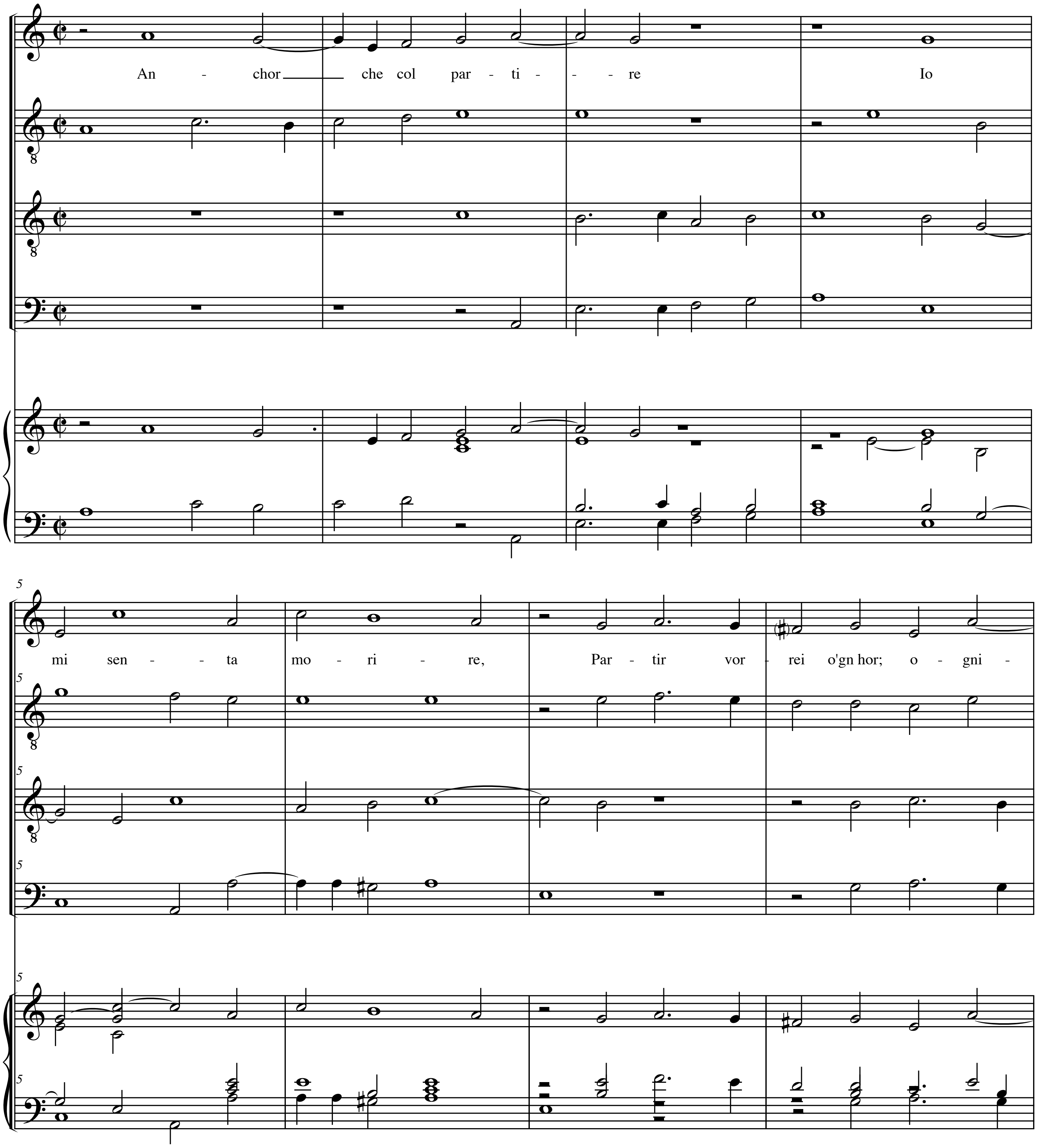
8. Anon., Susanna

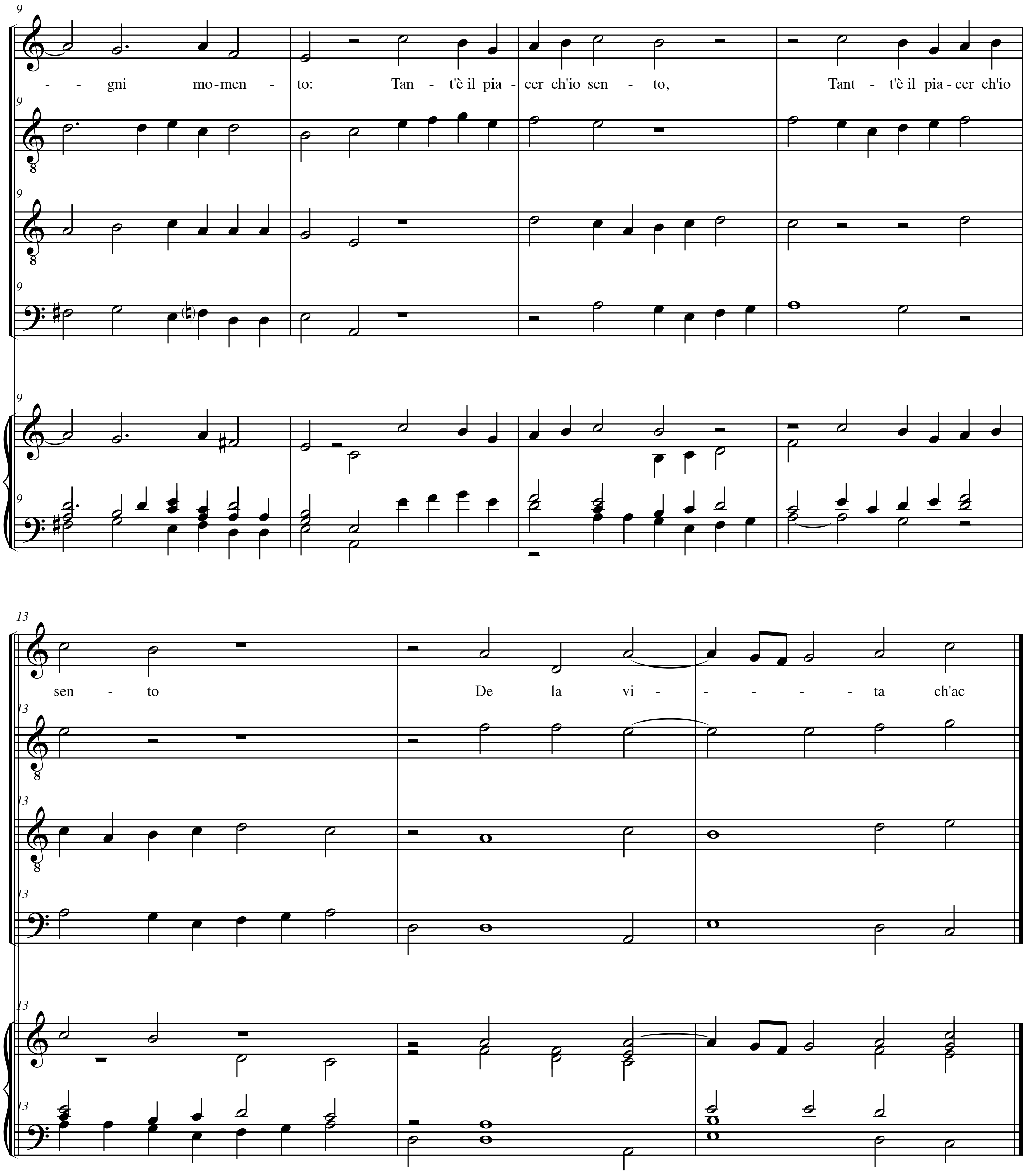
Sources:
Intabulation: Tr, 39r.
Model: Lassus, *Susane un jour d'amour solicitée,* adapted from Orlando di Lasso, *Chansons,* ed. Jane Bernstein, vol. 14 of *The Sixteenth-Century Chanson* (New York: Garland, 1987).

5: Right hand, third beat, *f'* and *a'* are eighth notes in source.
5: Left hand, second beat, dotted *c'* is quarter note in source.
6: Right hand, second beat, *b♭'* is half note in source.
16: Right hand, second beat, *f#'* is quarter note in source.
21: Right hand, fourth beat, sixteenth note passage notated with eighth notes in source.
22: Left hand, third and fourth beats, eighth note passage notated with sixteenth notes in source.
26: Right hand, third beat, *g'* is *f'* in source.
30: Right hand, first beat, *a'* is *b♭*' in source.
32: Left hand, fourth beat, sixteenth notes are eighth notes in source.
42: Right hand, third beat, dotted quarter note is beamed with sixteenth-note passaggio in source.
42: Right hand, third beat, *f'* and *e'* are eighth notes in source.
46: Right hand, second beat, *f"* has dot in source.
46: Right hand, fourth beat, *c"* is sixteenth note in source.
52: Right hand, second beat, notes crossed out in source.
55: Right hand, third and fourth beats, *d'*s are sixteenth notes in source.
59: Right hand, second beat, *a'* has dot in source.
60: Left hand, sharp sign on *b* in source.
61: Right hand, second beat, *c"* is *d"* in source.
65: Left hand, second beat, *b* has sharp sign in source.
68: Right hand, second beat, *c"* is quarter note in source.
69: Left hand, first and second beats, eighth notes notated as sixteenths in source.
74: Right hand, first beat, beam missing between *f"* and *g"*.
74: Right hand, third and fourth beats, eighth note parallel sixth passage notated with sixteenths in source.
75: Right hand, second beat, *f'* is eighth note in source.

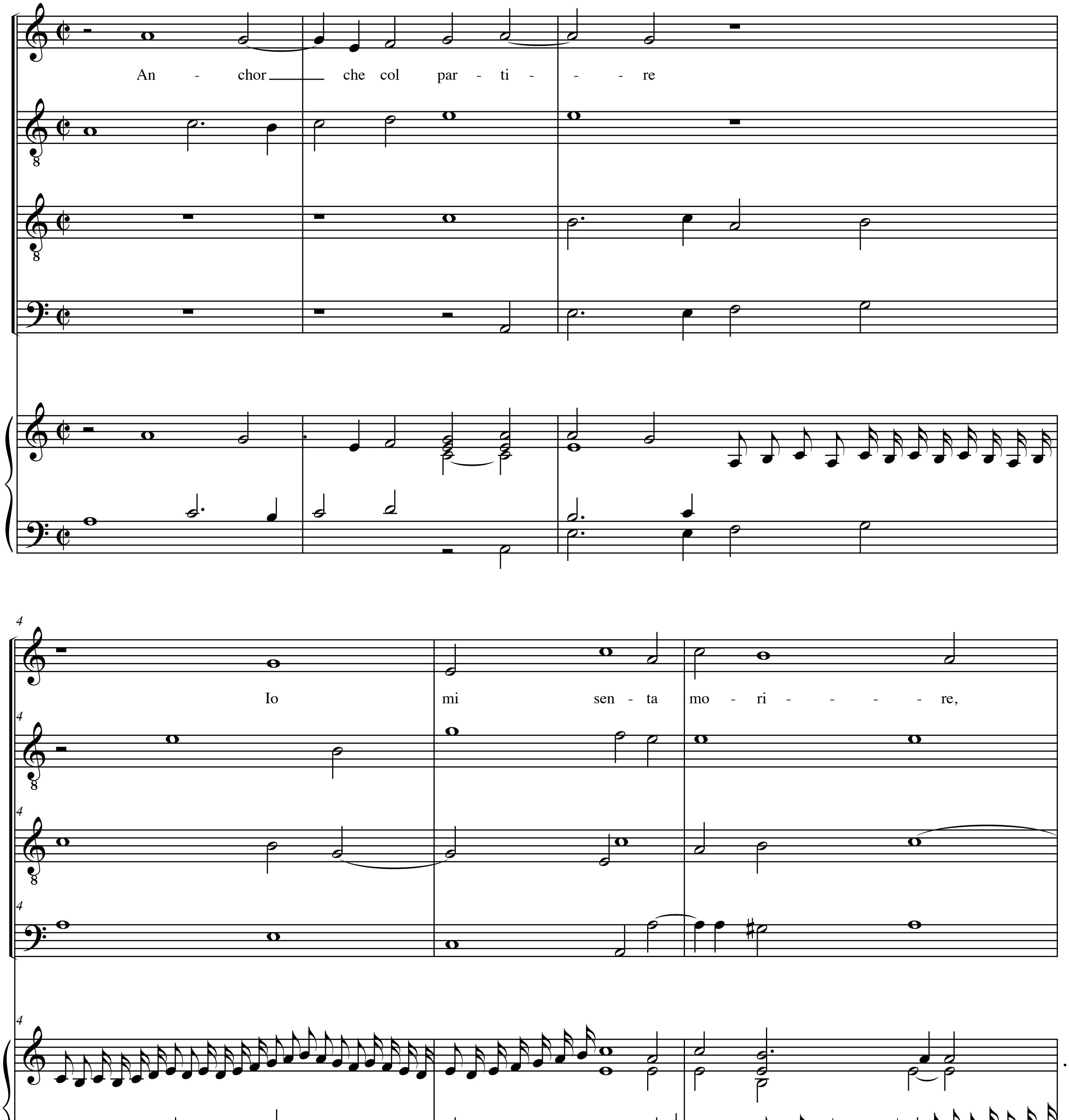
Anon.
Ca fascicle 4a
14v

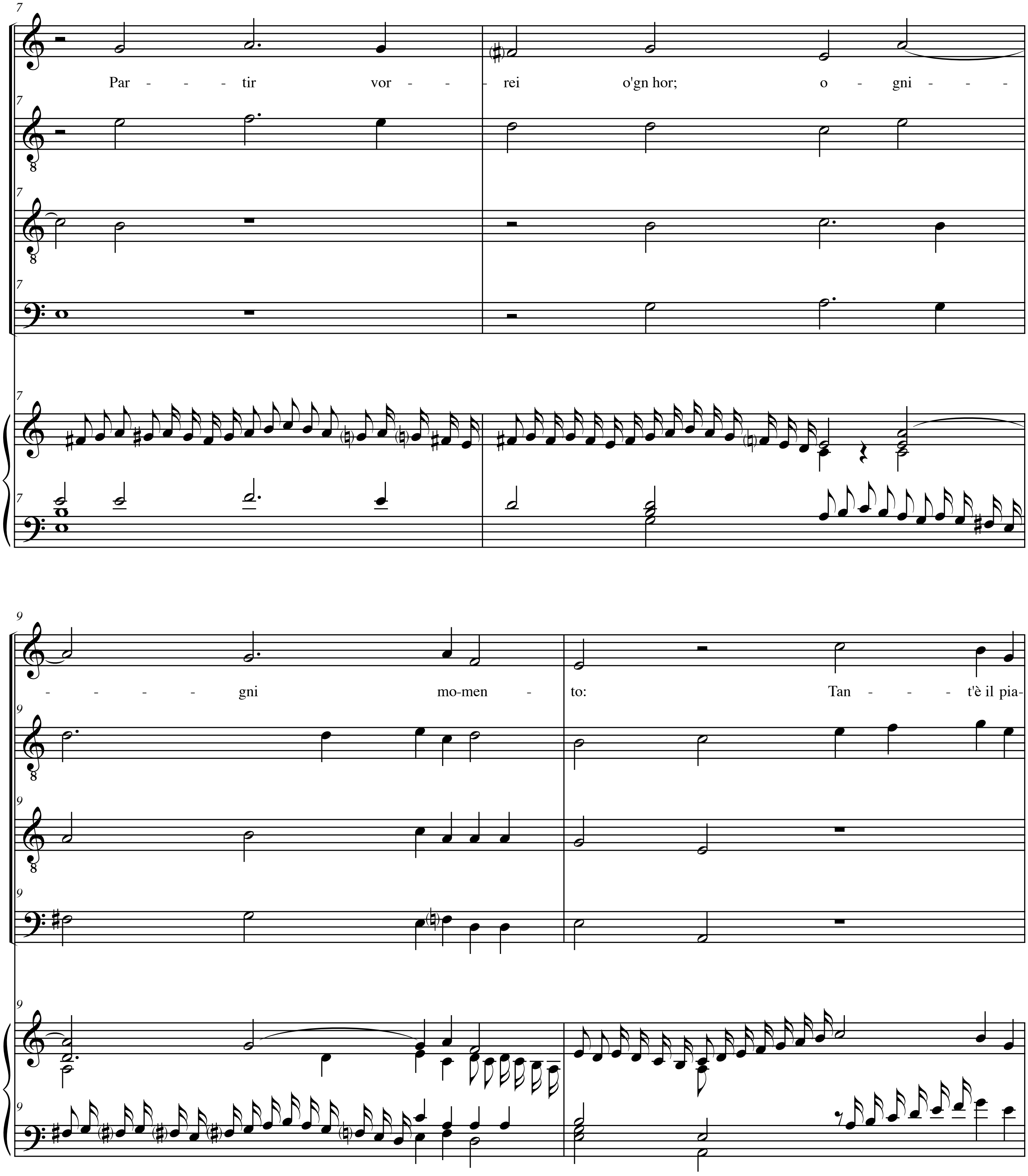
1. (Ancor che col partire) -- fragment

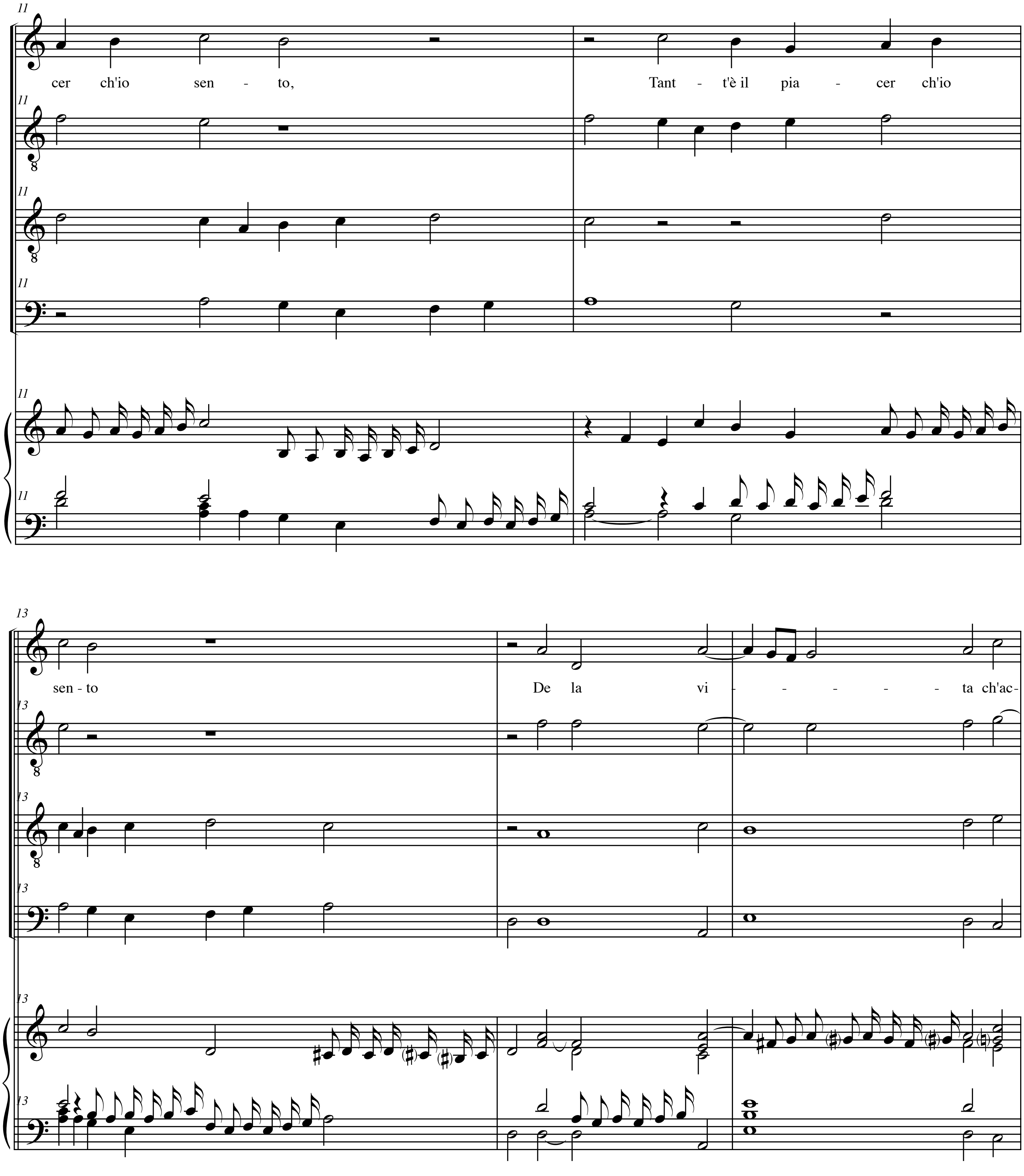

An - chor che col par - ti - - - re
Io
mi sen - - ta mo - ri - re,
Par - tir vor - rei o'gn hor; o - gni -
5
8

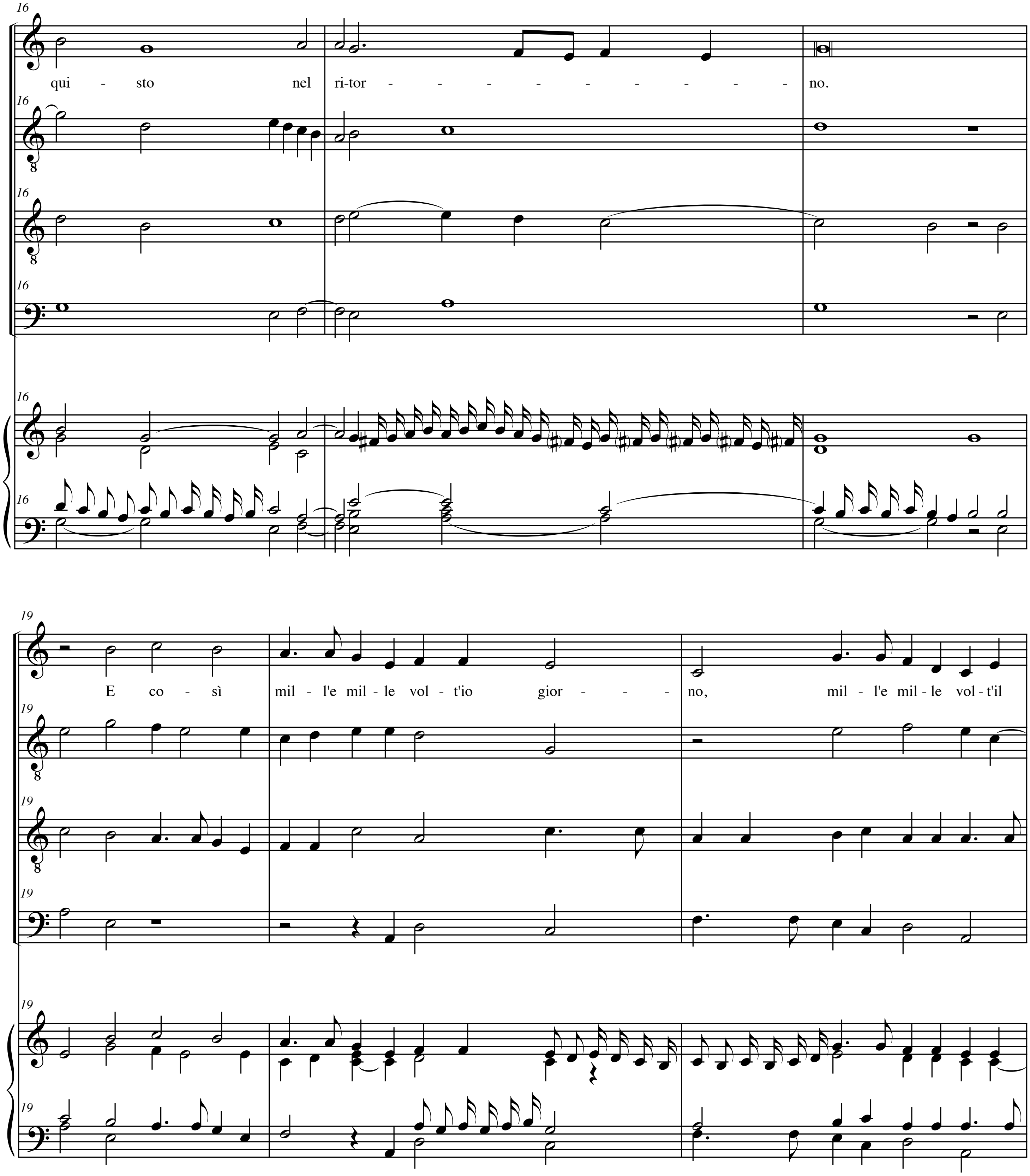

9
- - gni mo-men - to: Tan - t'è il pia - cer ch'io sen - to, Tant - t'è il pia-cer ch'io
13
sen - to De la vi - - - - - ta ch'ac

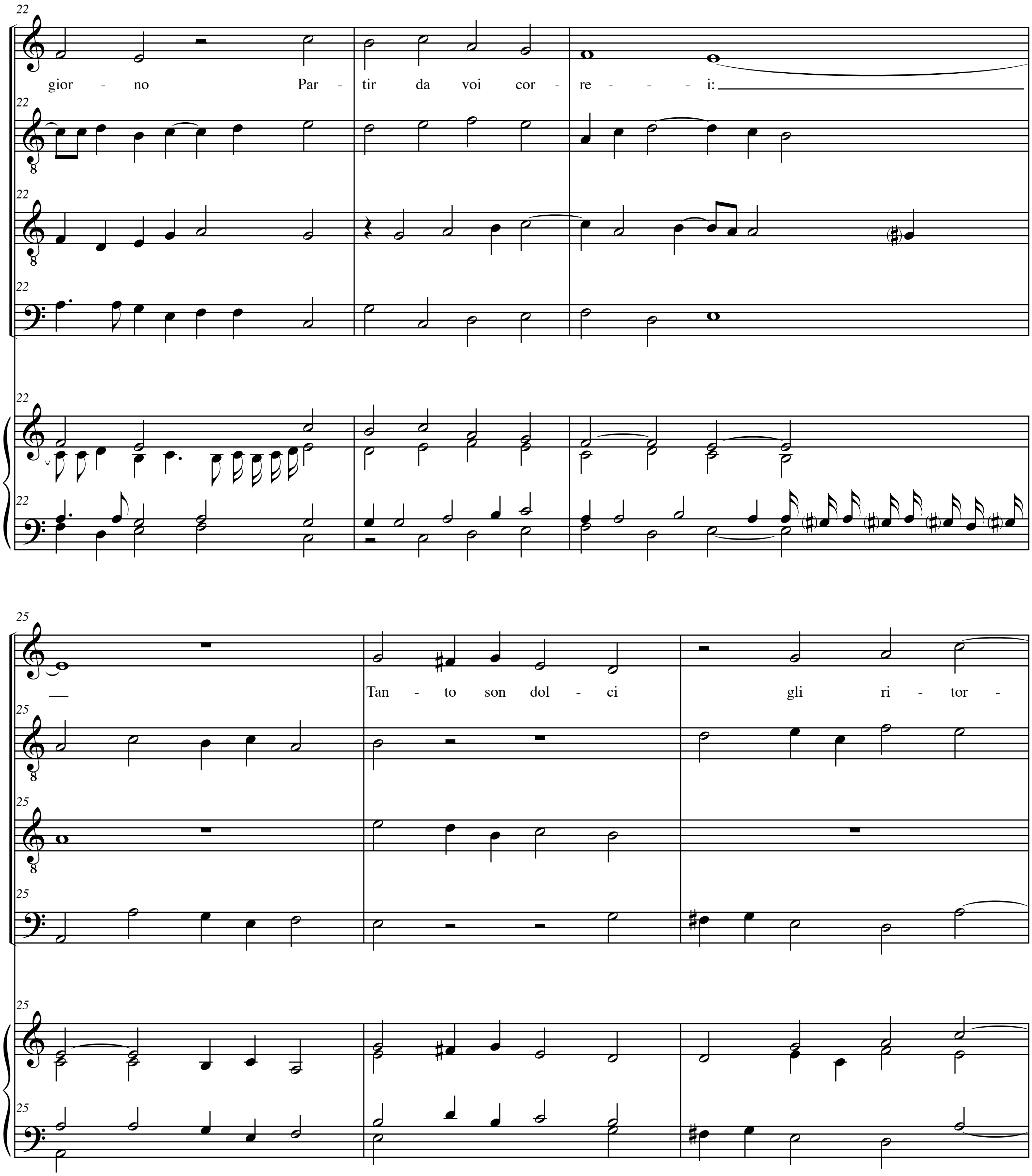
2. Anchor che co'l partire. Madrigale a4.di Cipriano de Rore. Tabulato da Andrea Gabrieli

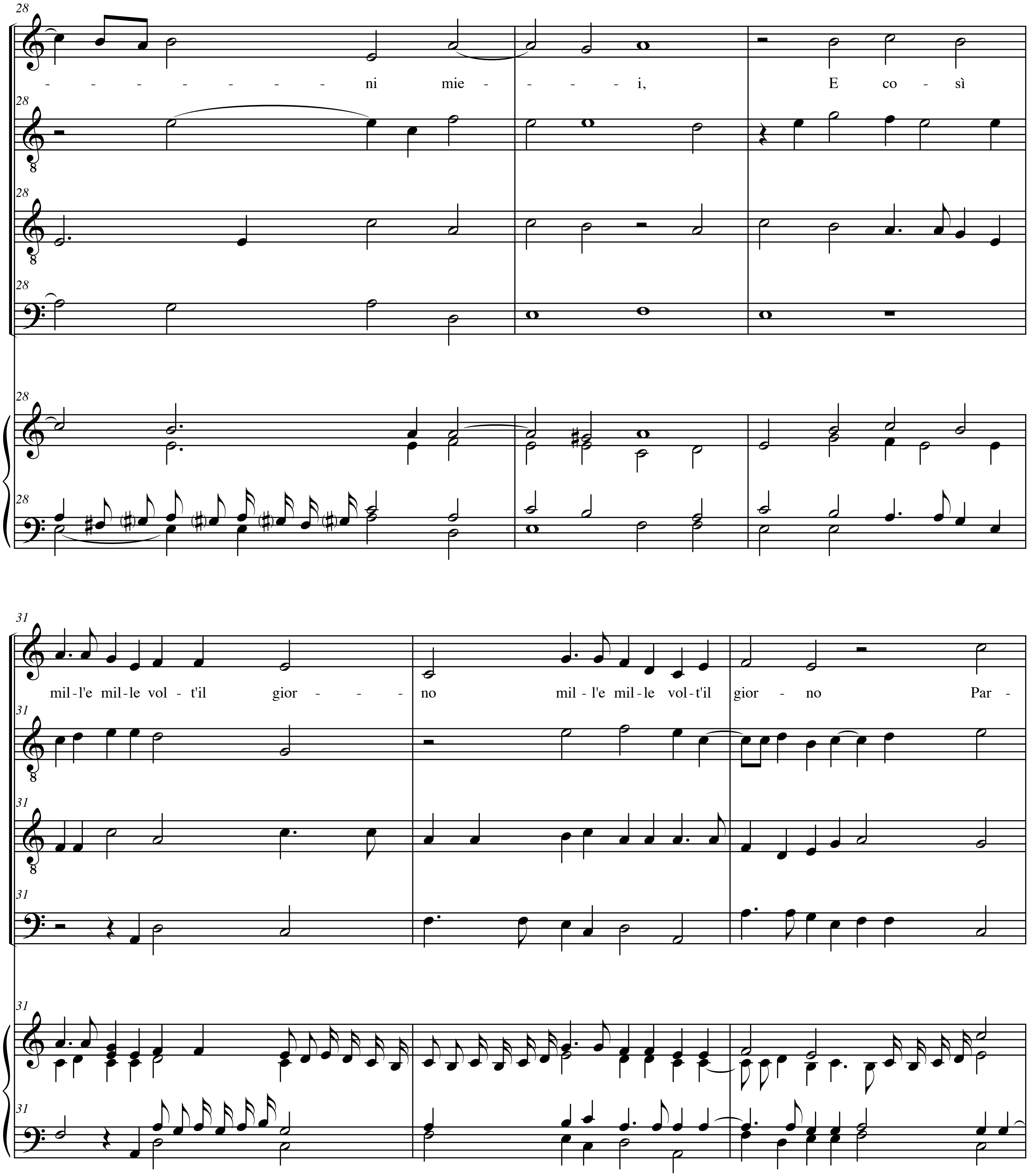

An - chor che col par - ti - - - re
4
Io mi sen - ta mo - ri - - - - - re,

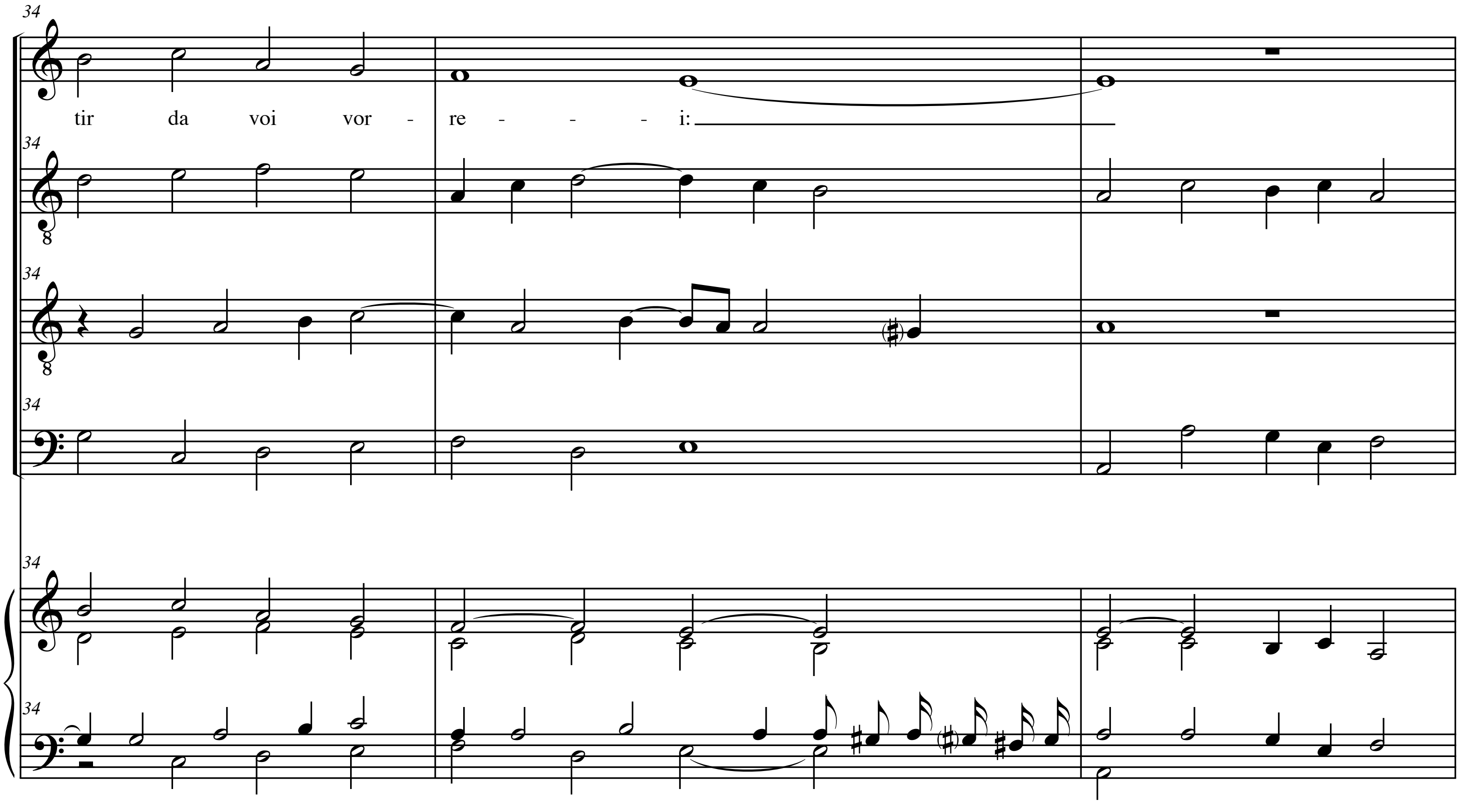

7
Par - - - tir vor - - - rei o'gn hor; o - gni - - -
9
- - - - gni mo-men - to: Tan - - - t'è il pia-

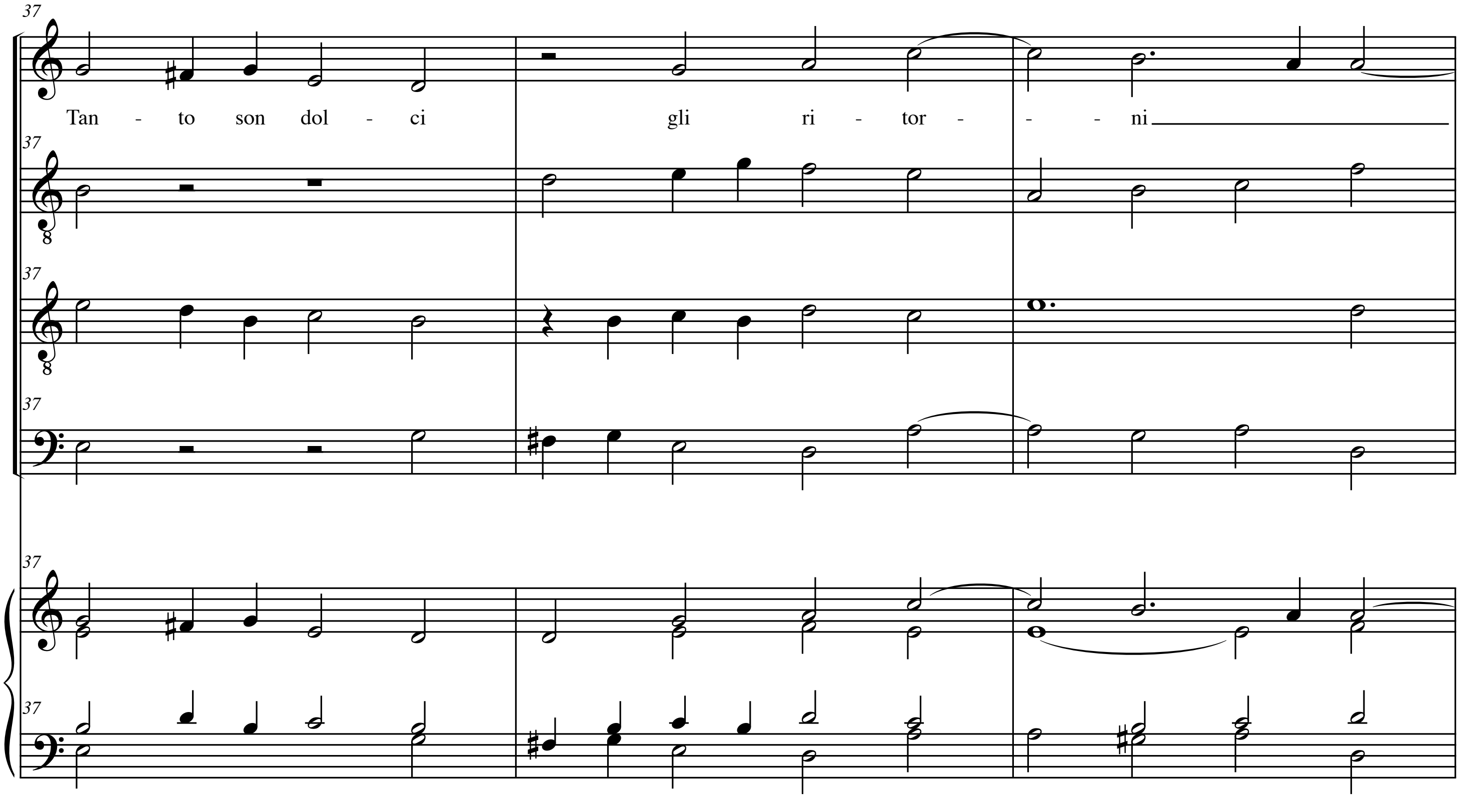

11
cer ch'io sen - to,
Tant - t'è il pia - cer ch'io
13
sen - to
De la vi - - - - - ta ch'ac-

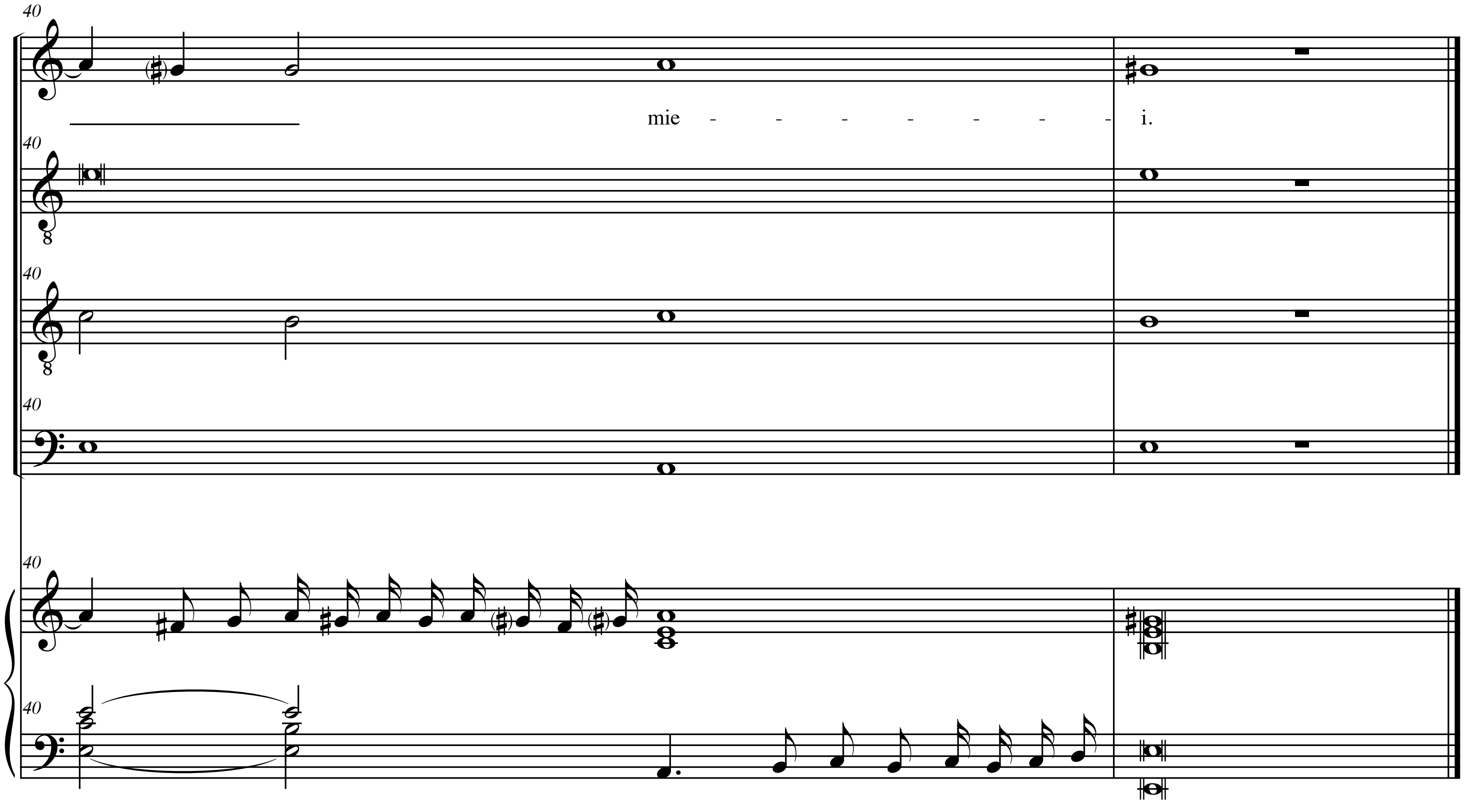

16
qui - sto nel ri-tor - - - - - - - - - - no.
19
E co - sì mil - l'e mil - le vol - t'io gior - - - no, mil - l'e mil - le vol - t'il


22
gior - no Par - tir da voi cor - re - - - i:
25
Tan - to son dol - ci gli ri - tor -


28
- - - - - - - - ni mie - - - - i,
E co - sì
31
mil-l'e mil-le vol-t'il gior - - - no
mil-l'e mil-le vol-t'il gior - no
Par -

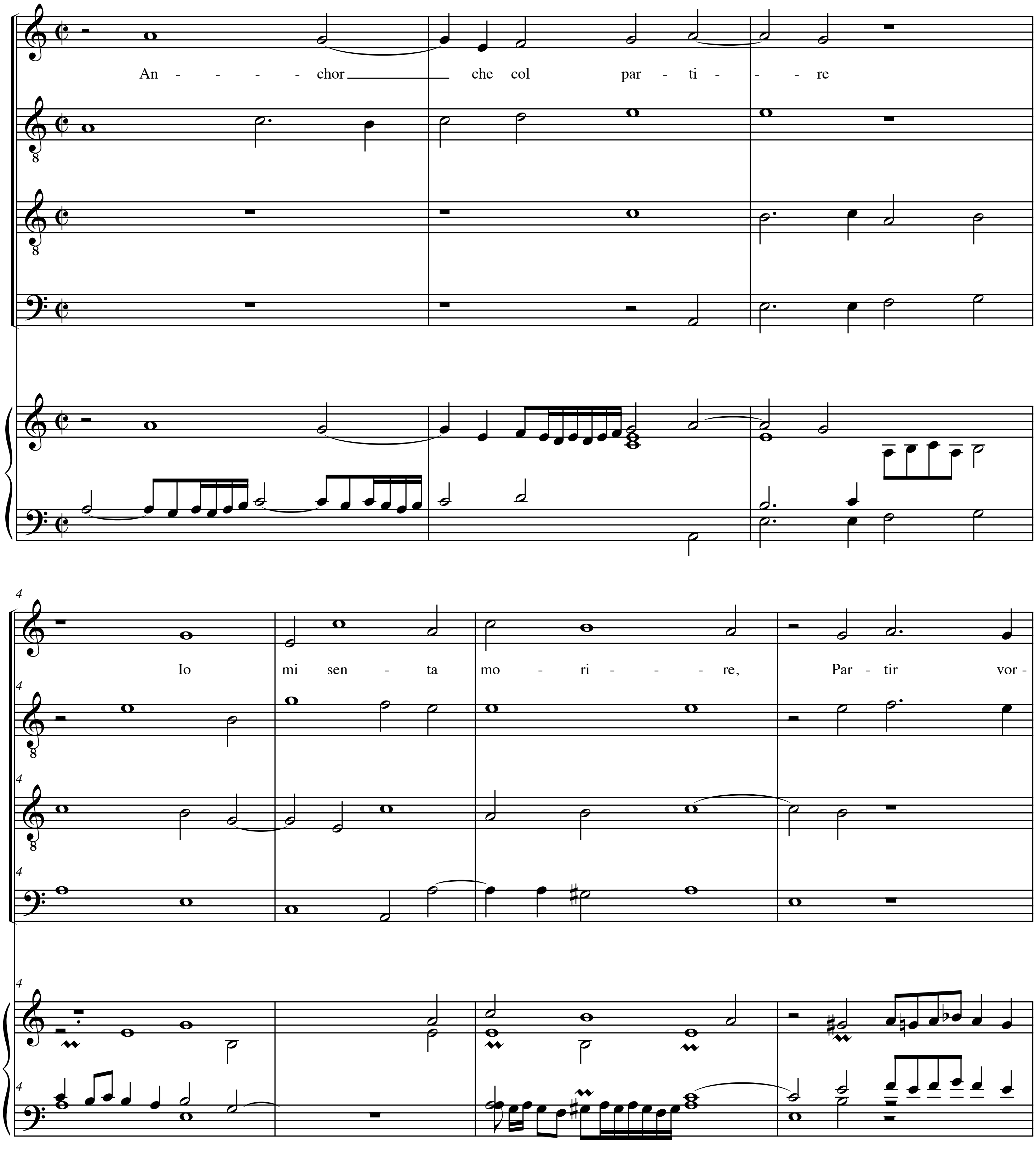

tir da voi vor - re - - - i:


Tan - to son dol - ci gli ri - tor - - - ni

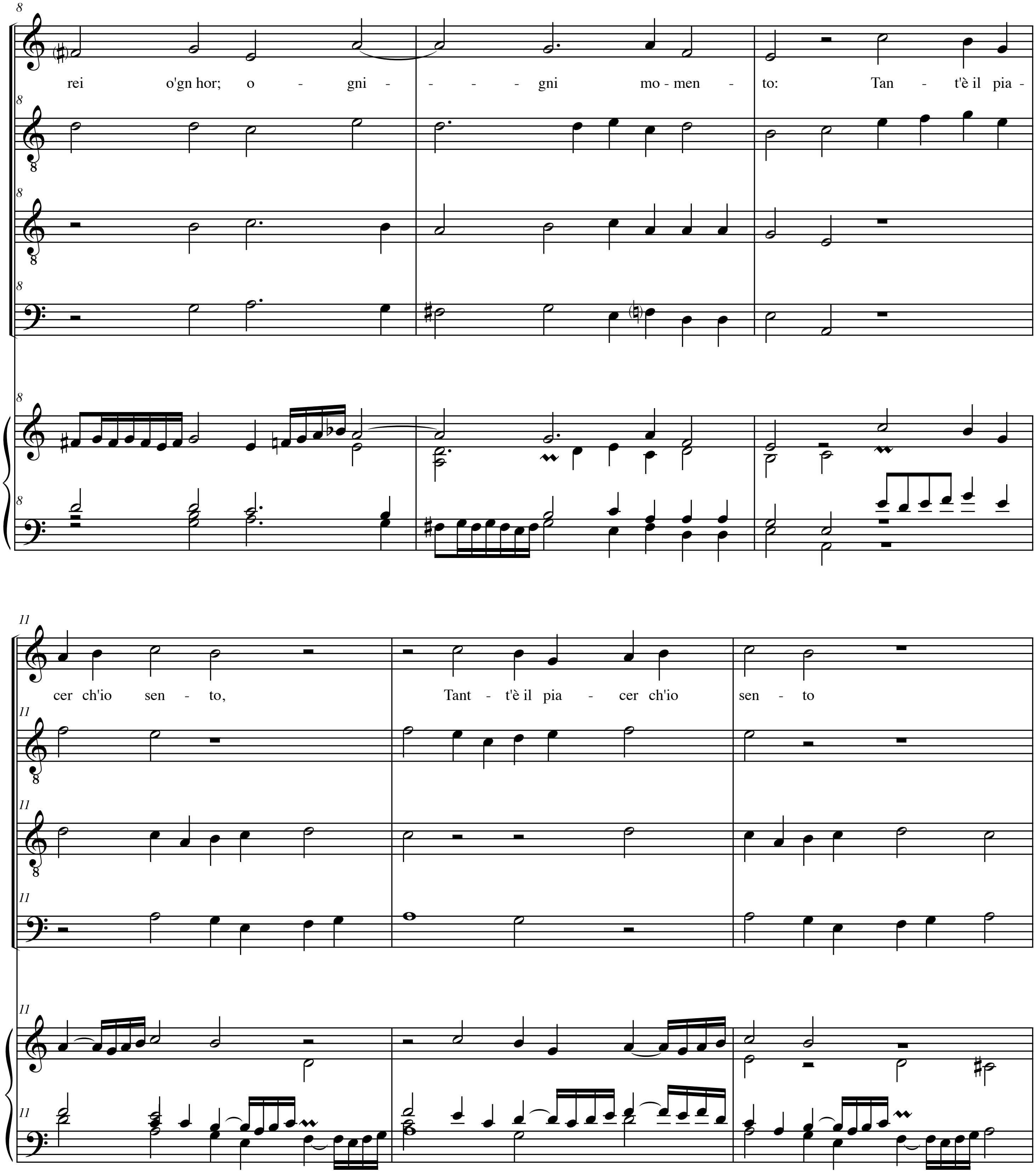

mie - - - - - - - - i.

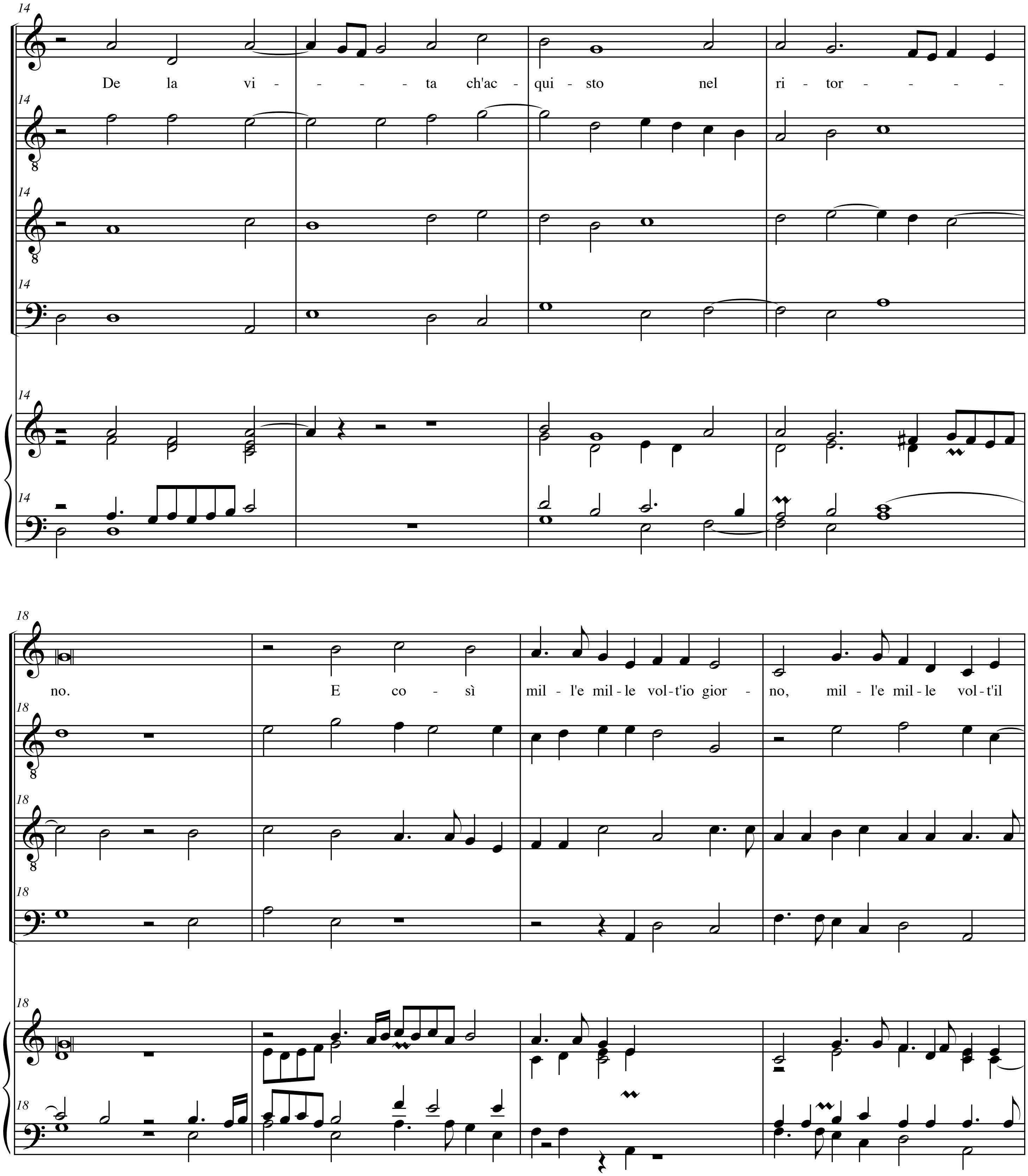
Anon.
La.
6v-7v.

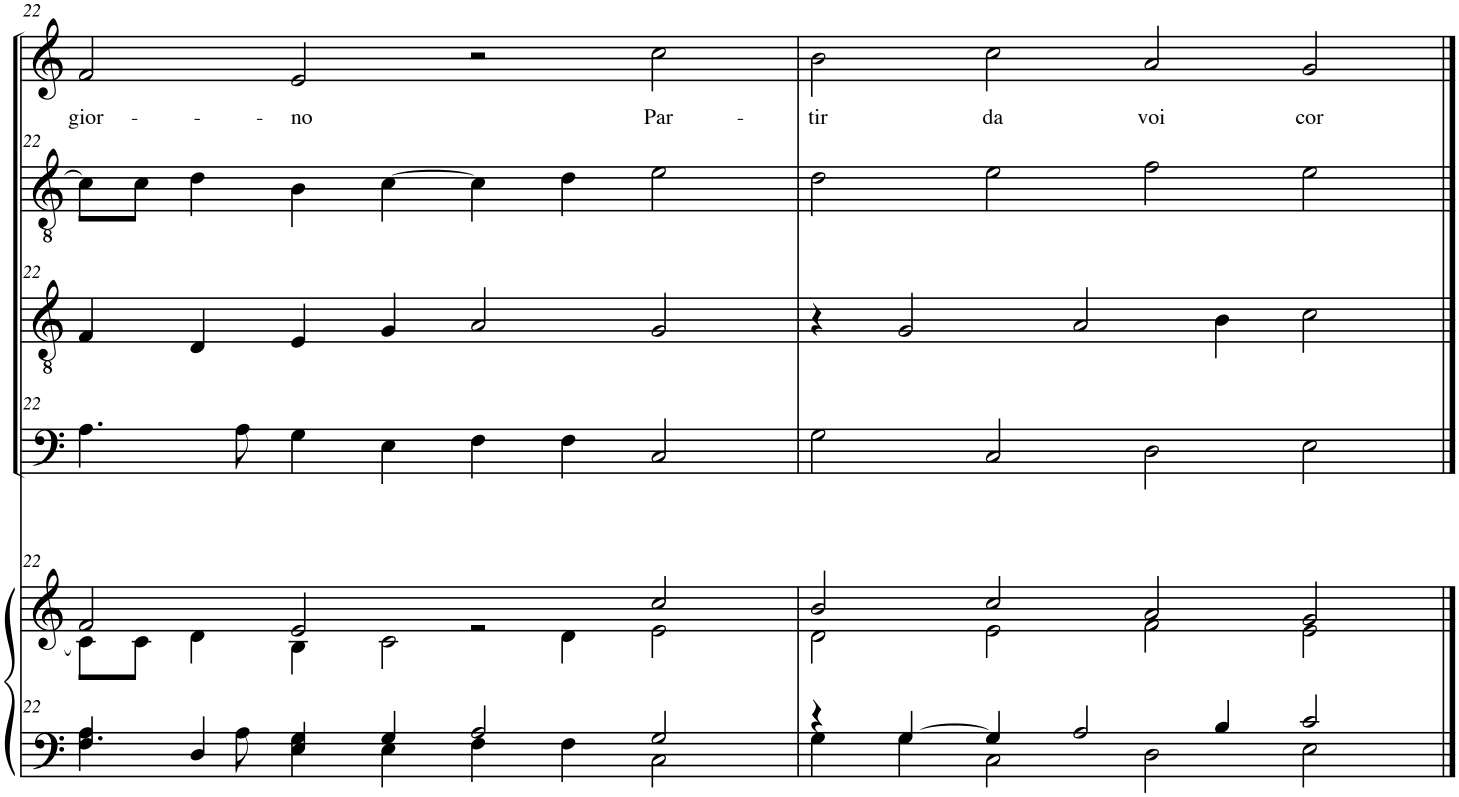
3. A[ncor che col partire] (fragment)



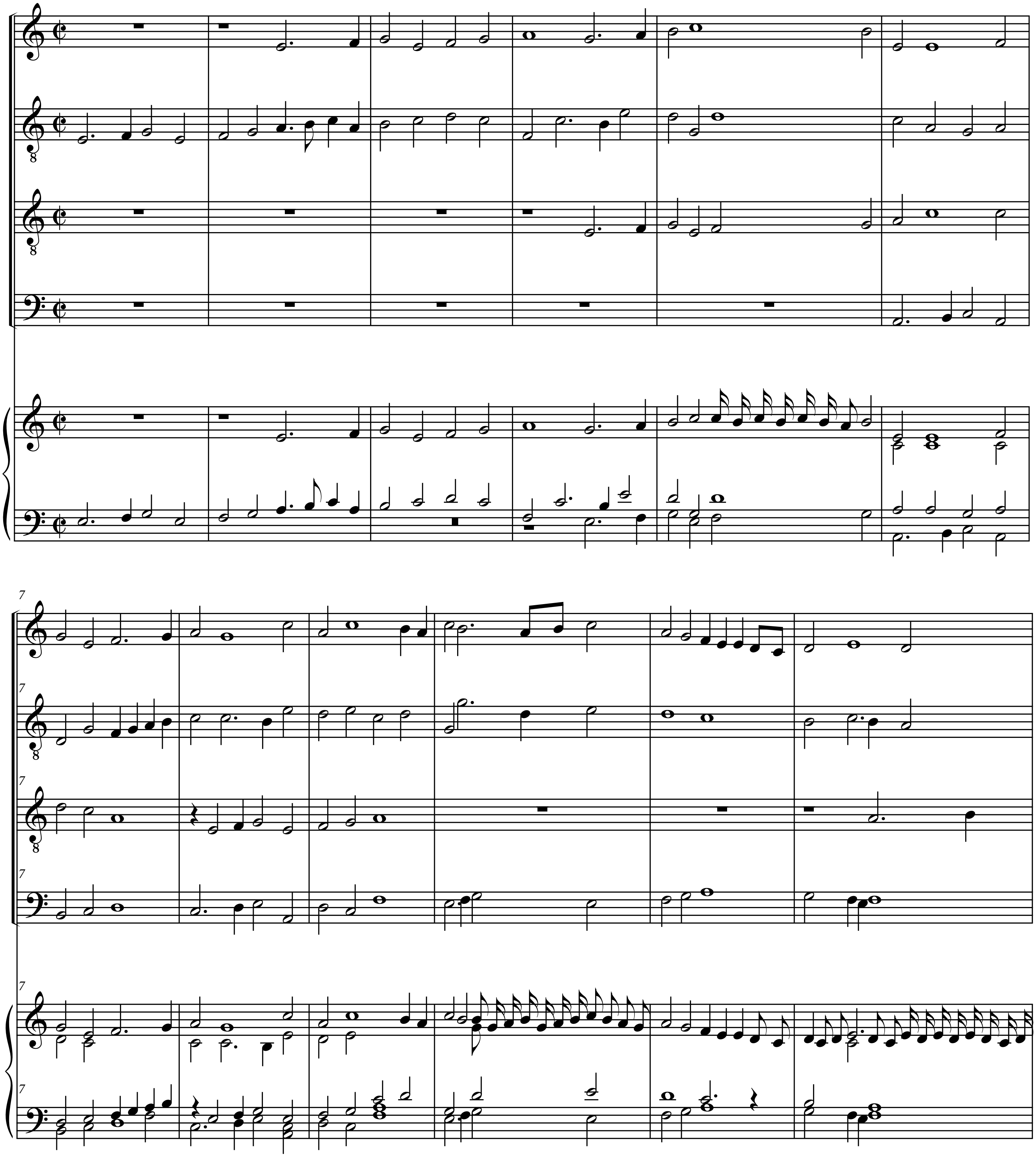
An - - - - chor che col par - ti - - re
4
Io mi sen - ta mo - ri - - - re, Par - tir vor -

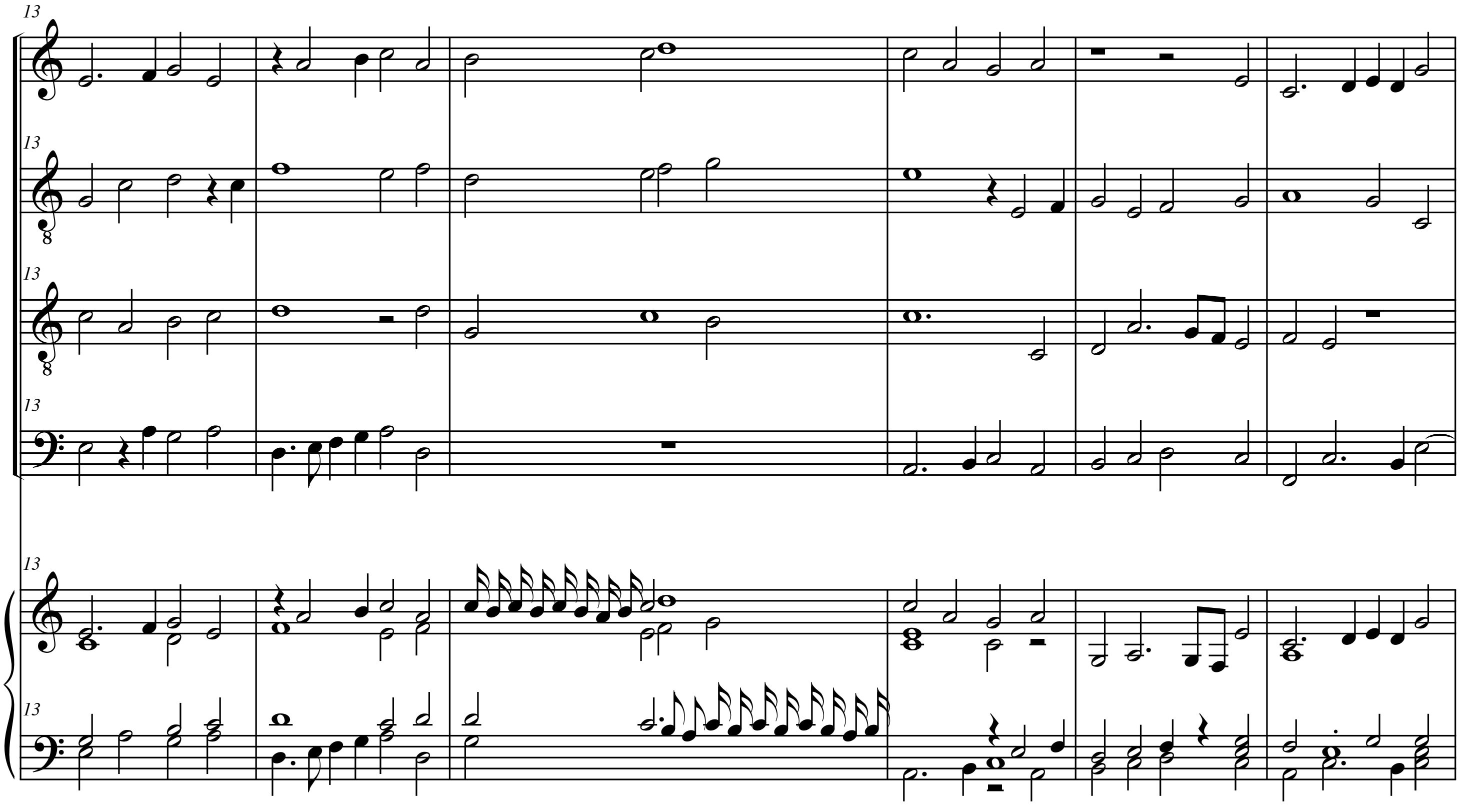

8
rei o'gn hor; o - gni - - - - gni mo - men - to: Tan - t'è il pia -
11
cer ch'io sen - to, Tant - t'è il pia - cer ch'io sen - to

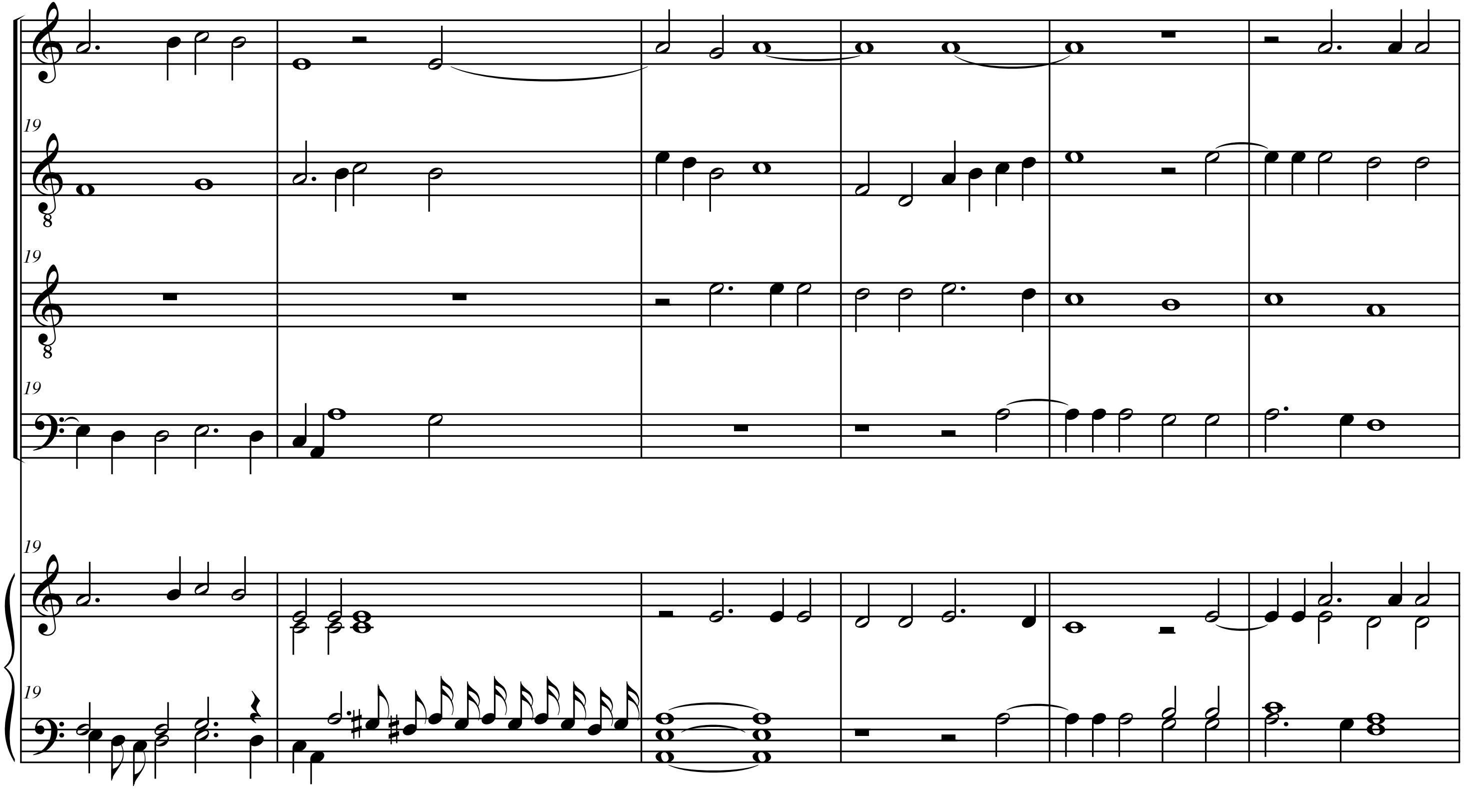

14
De la vi - - - - ta ch'ac - qui - sto nel ri - tor - - - - -
18
no. E co - sì mil - l'e mil - le vol - t'io gior - no, mil - l'e mil - le vol - t'il

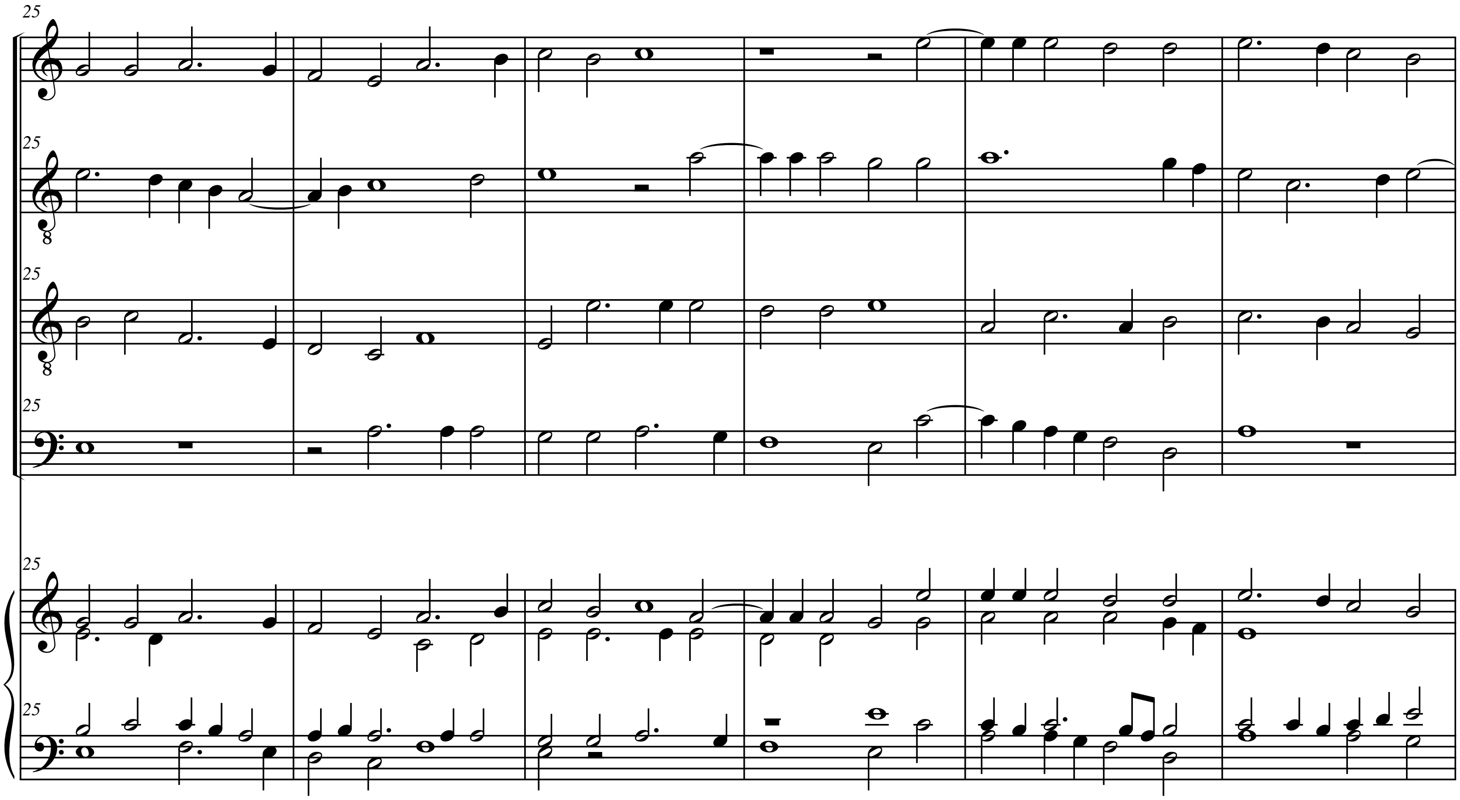

22
gior - - - no Par - tir da voi cor

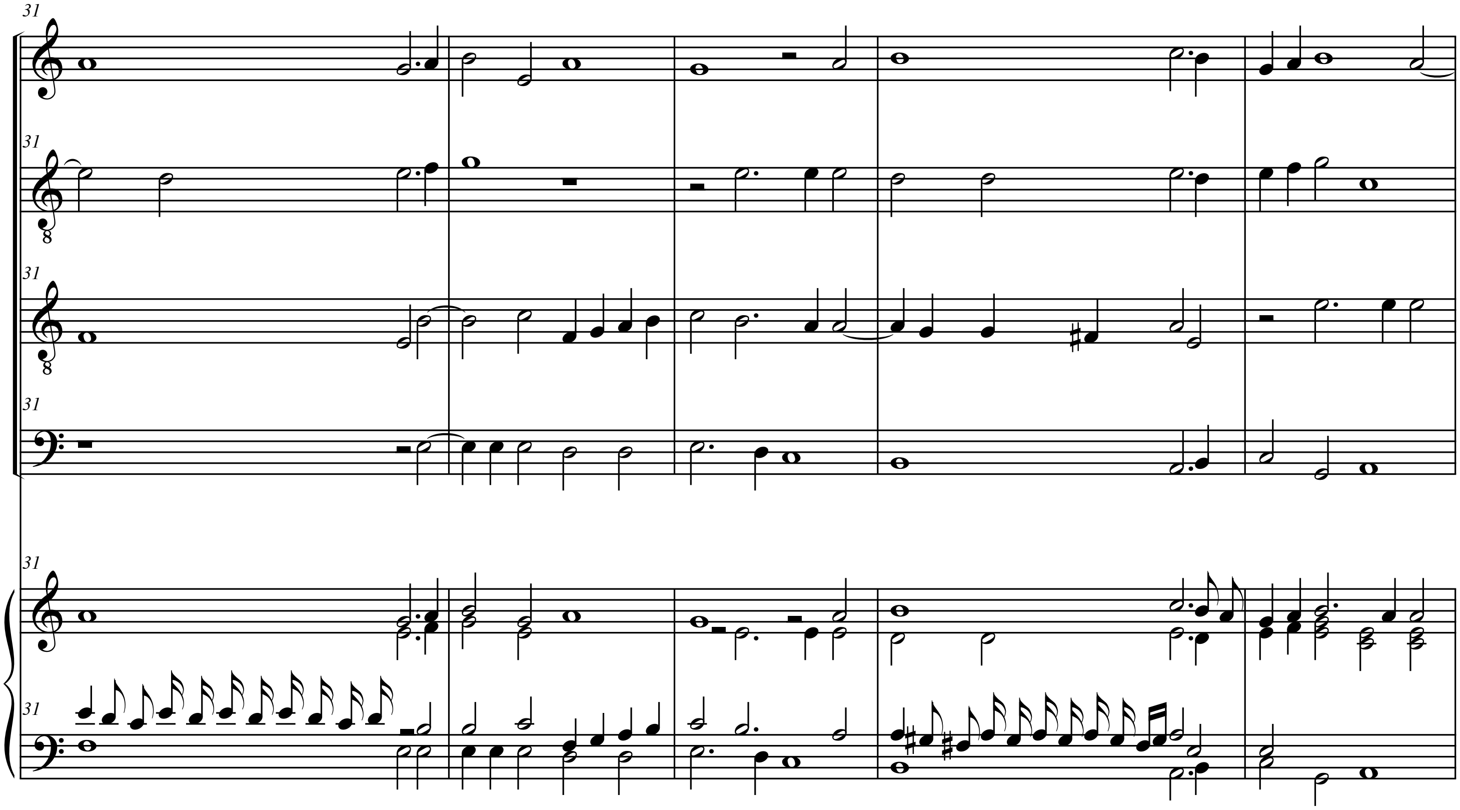
4. Ricercar del Terzo Tuono

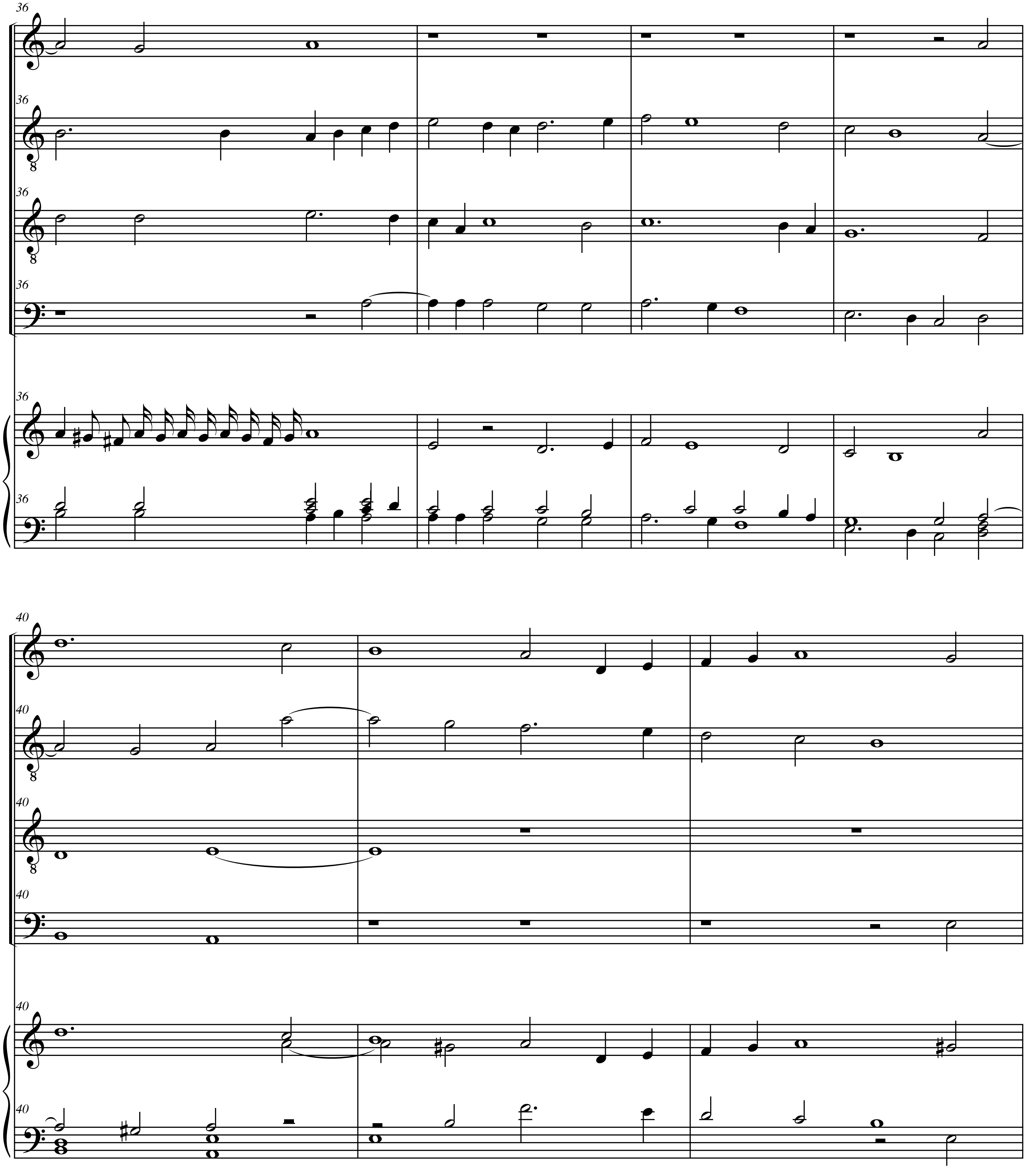


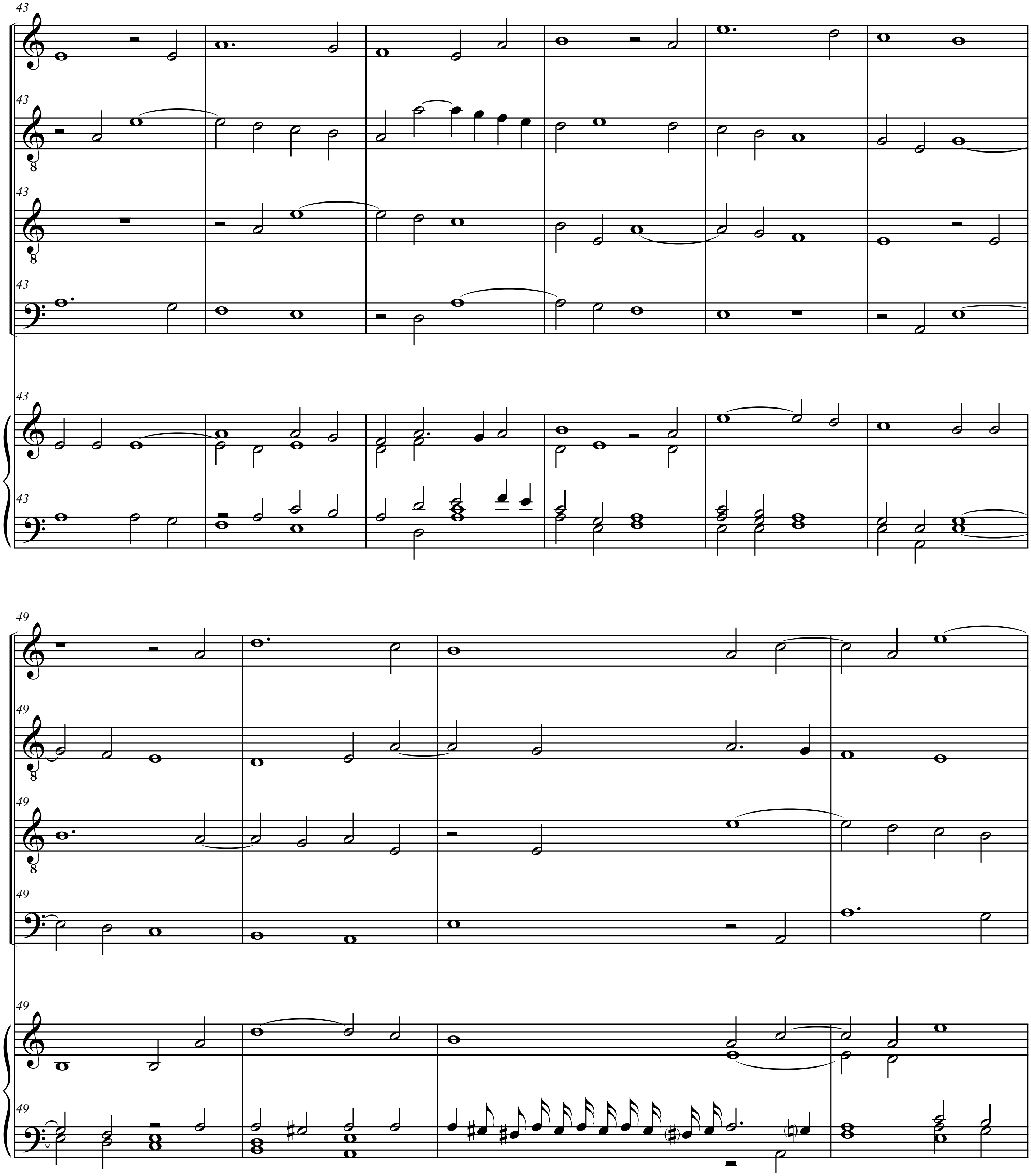


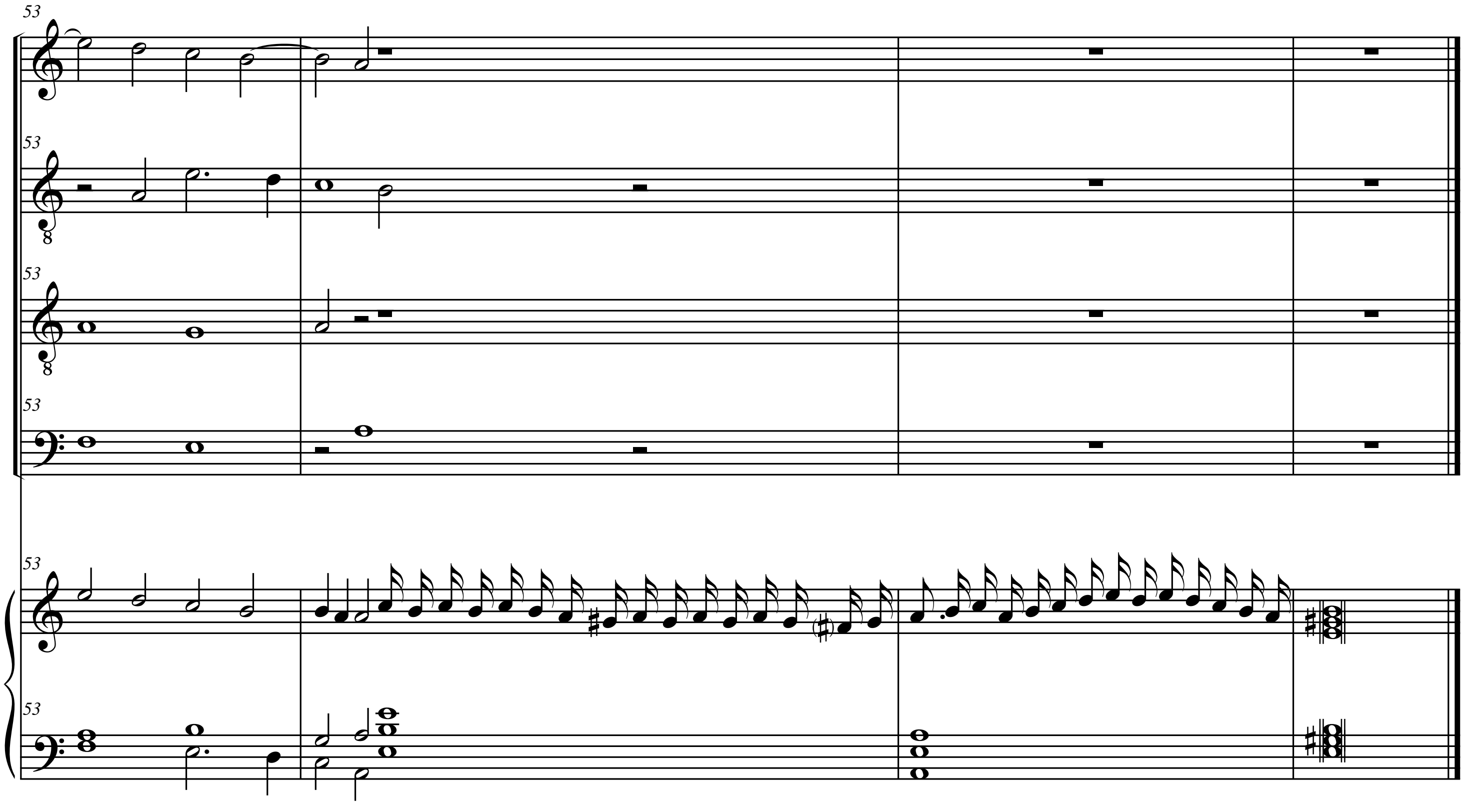






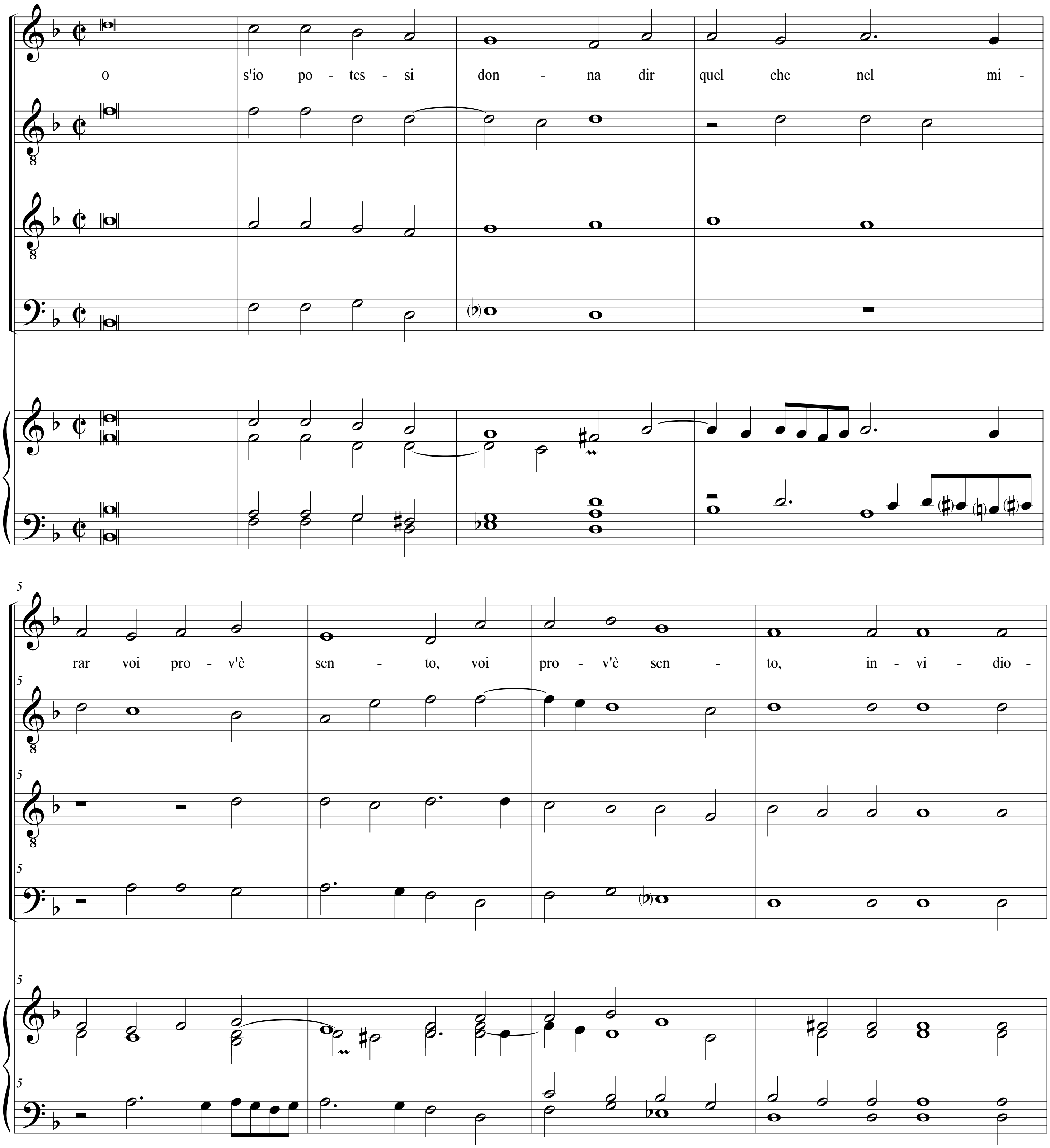


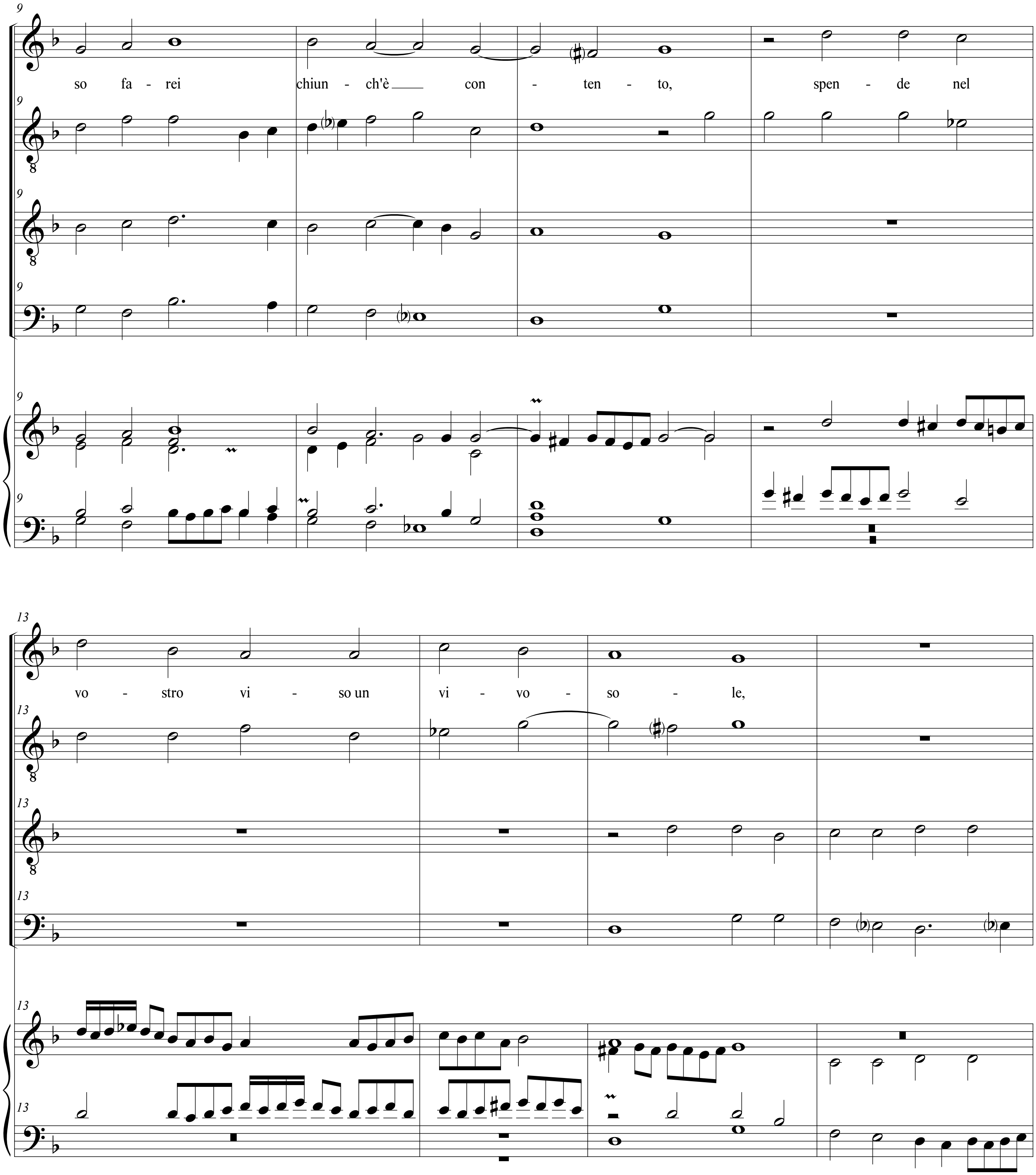


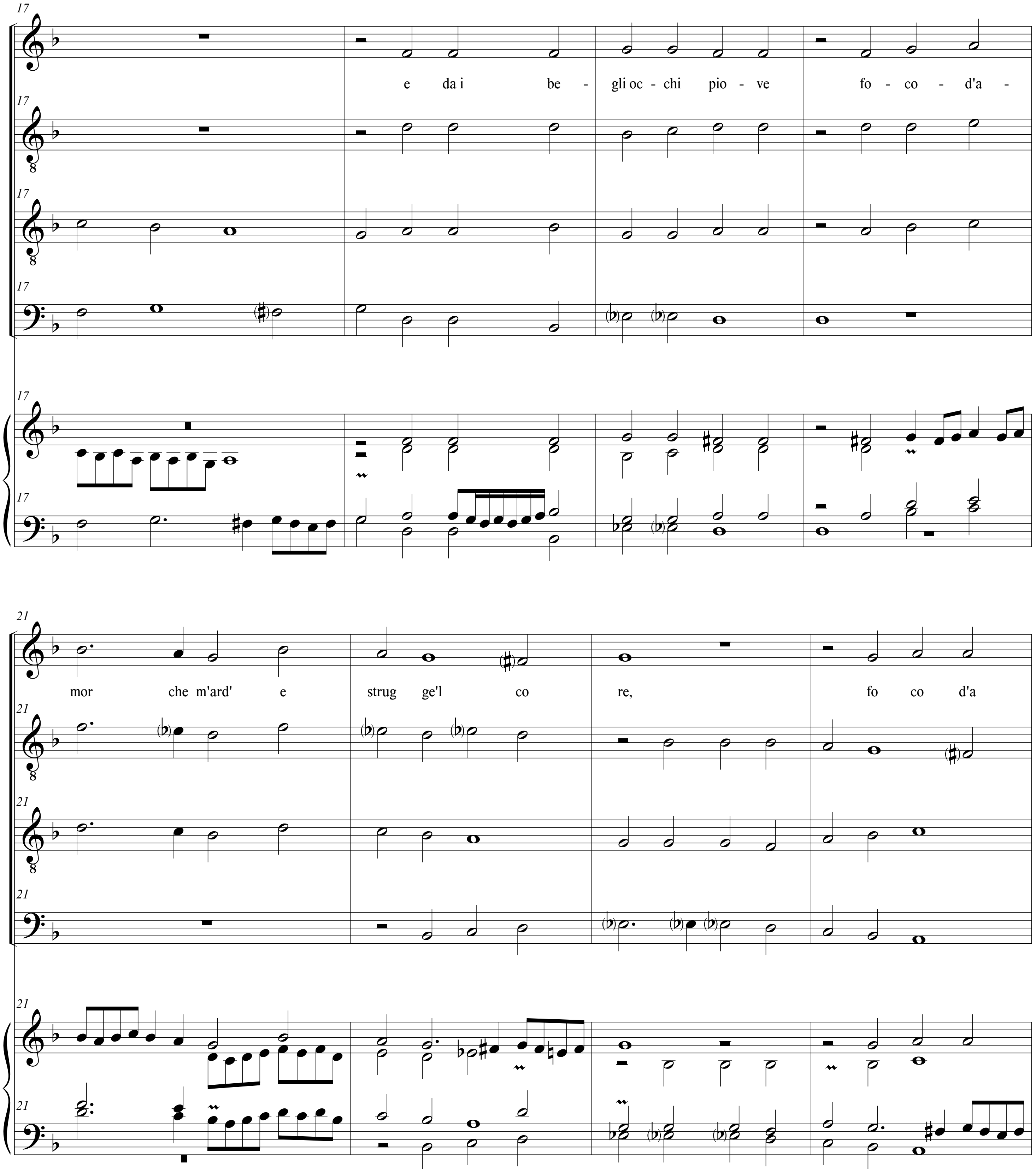


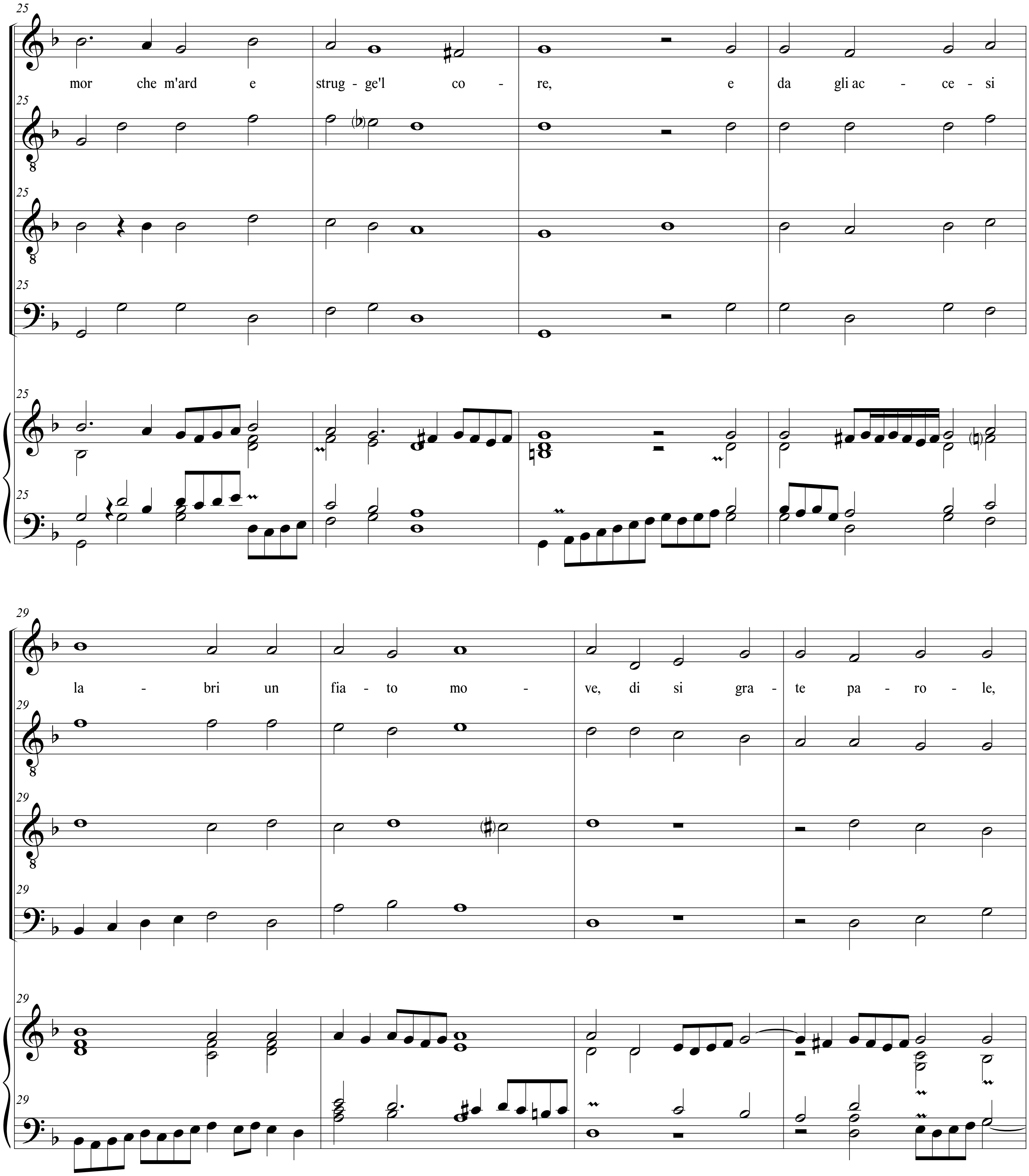
Anon.
La 3r-6r.

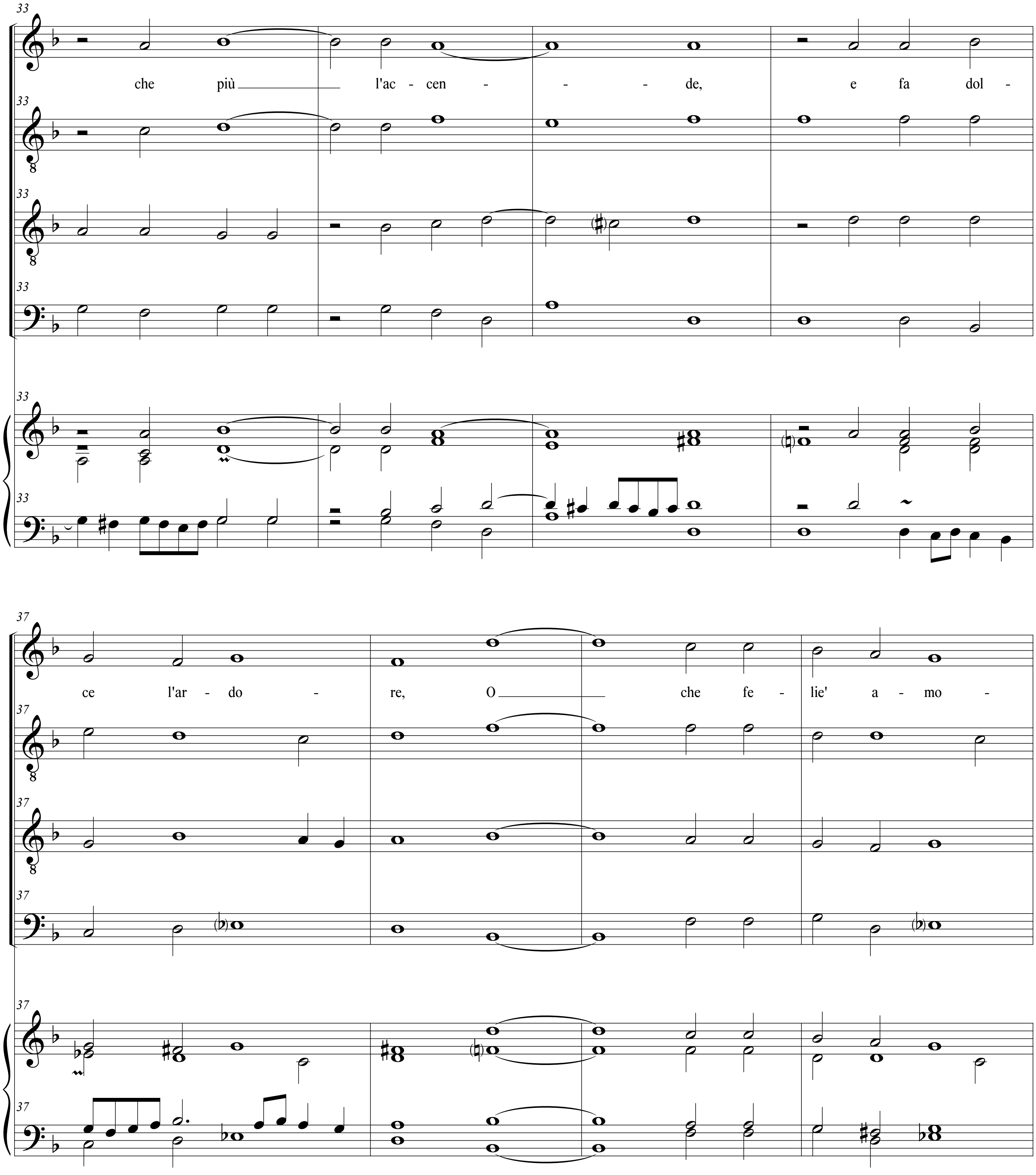
5. O s'io potessi Donna

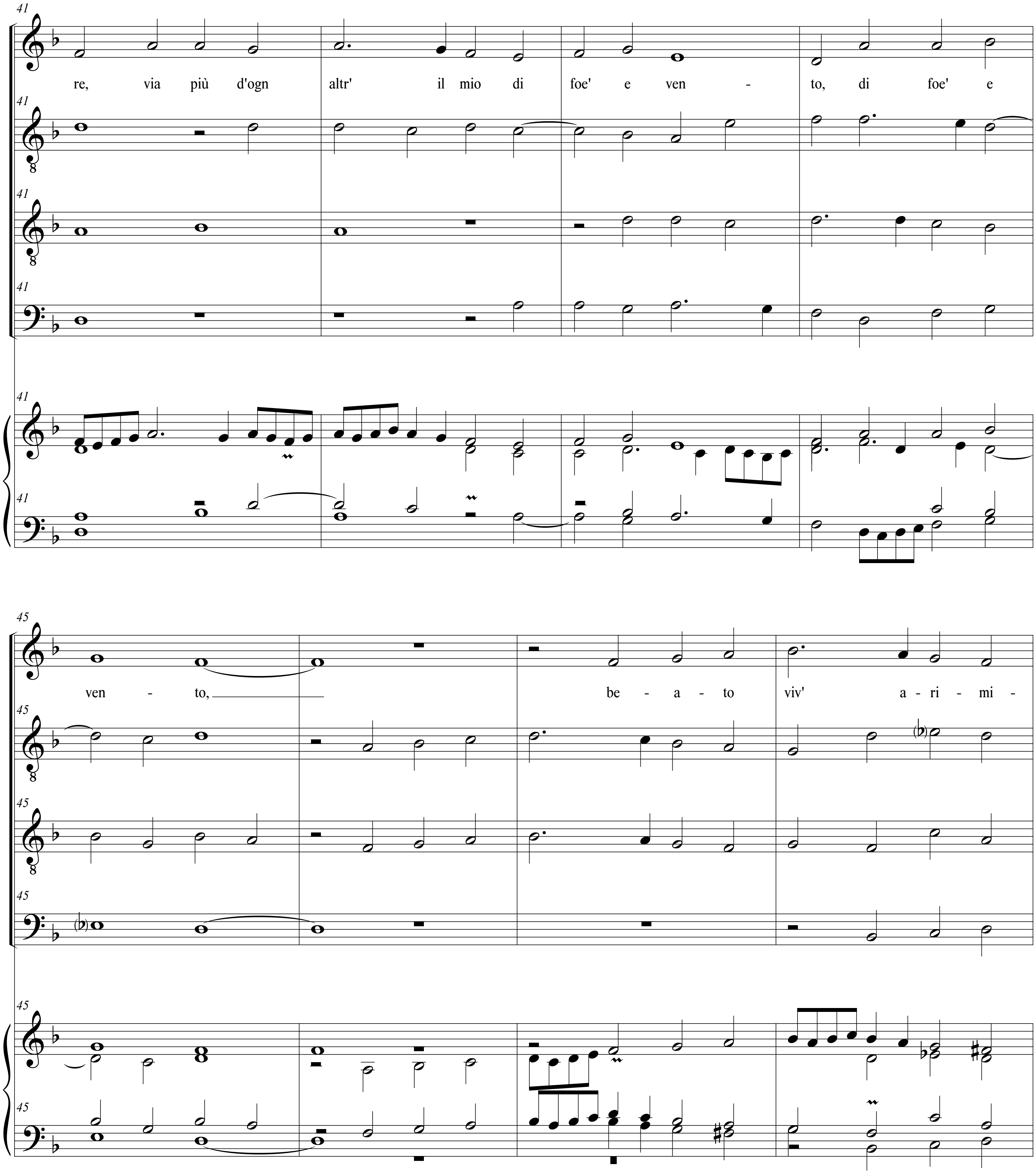

O s'io po - tes - si don - na dir quel che nel mi -
rar voi pro - v'è sen - to, voi pro - v'è sen - to, in - vi - dio -
5

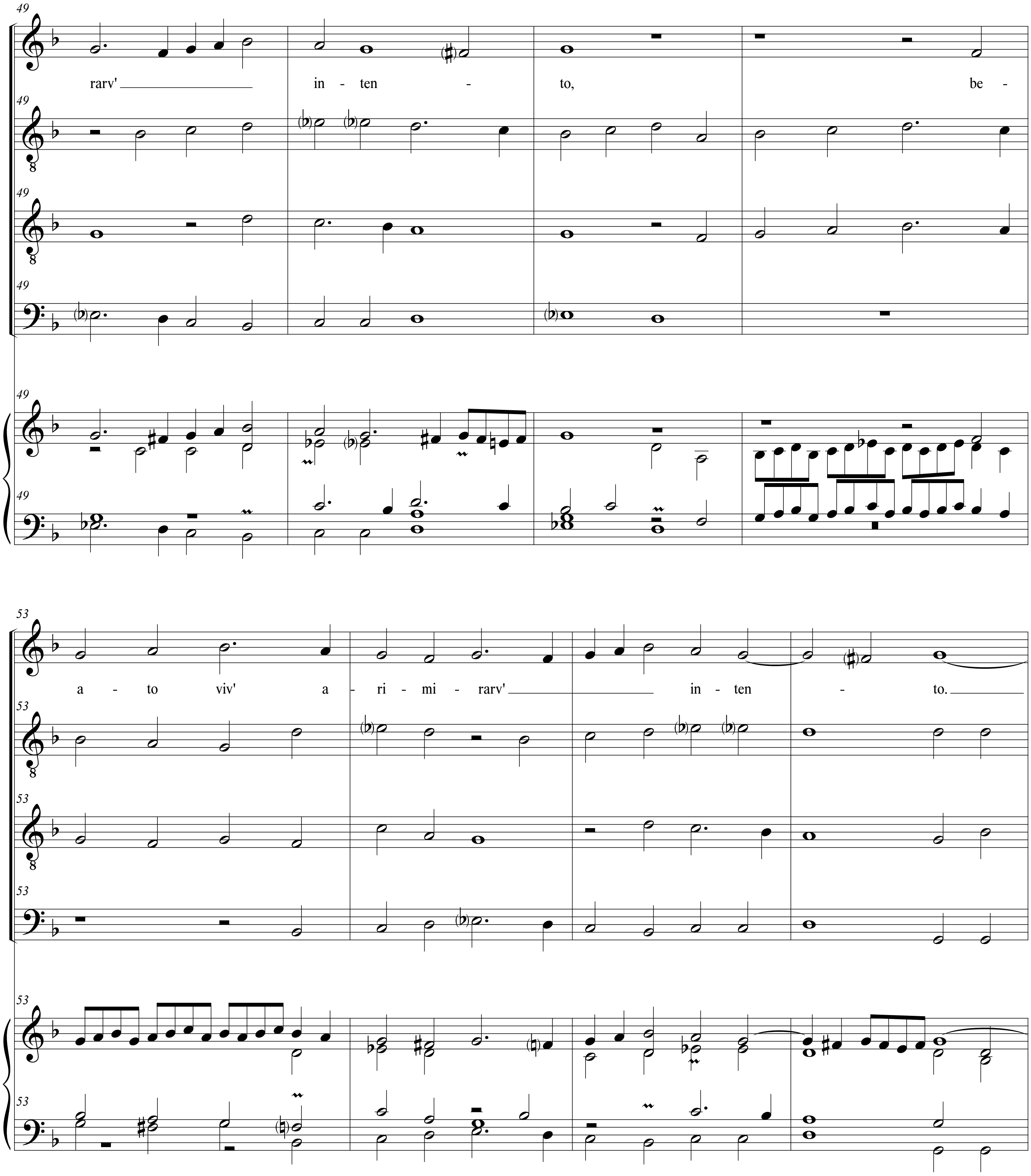

9
so fa - rei chiun - ch'è con - ten - to, spen - de nel
13
vo - stro vi - so un vi - vo - so - le,

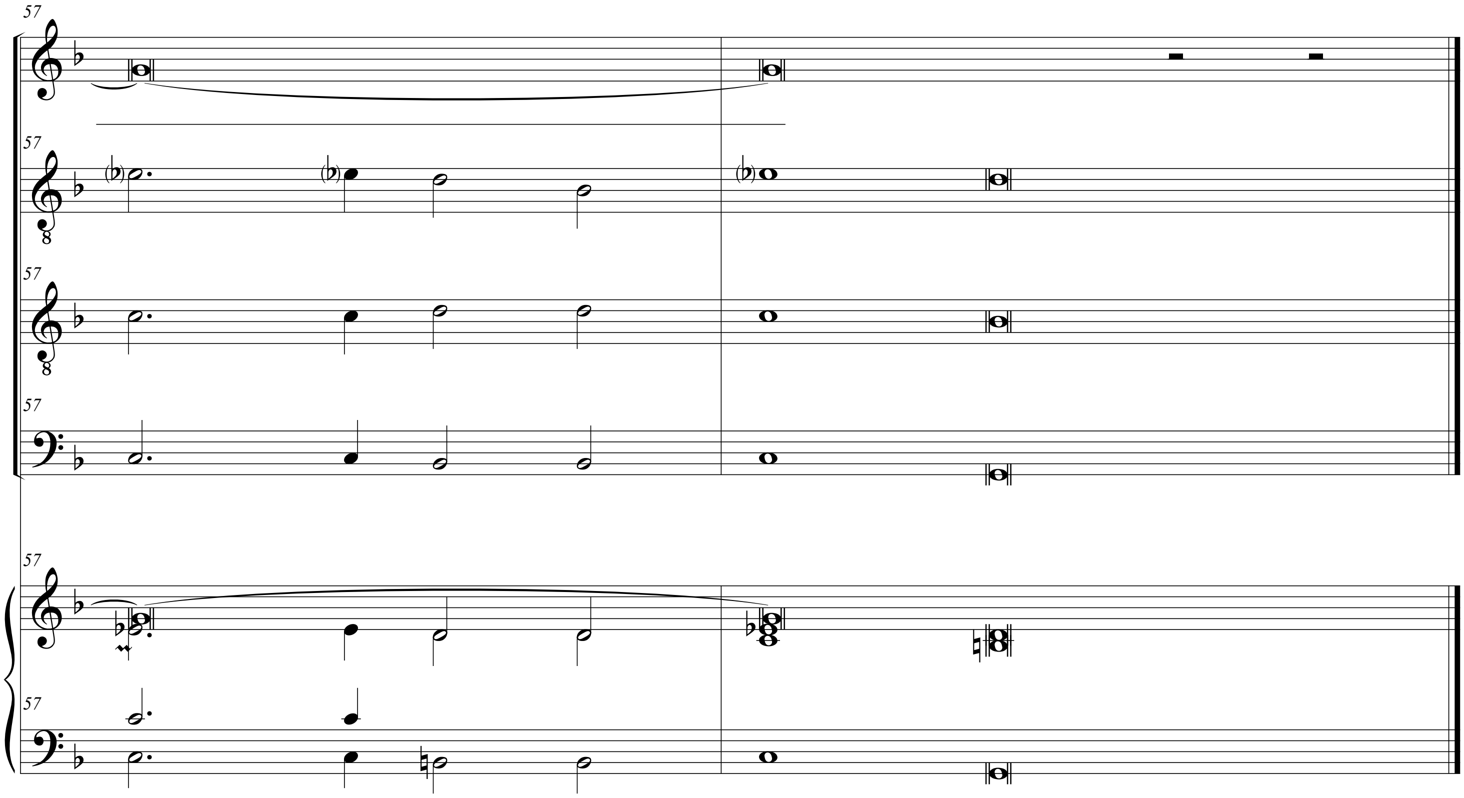

17
e da i be - gli oc - chi pio - ve fo - co - d'a -
21
mor che m'ard' e strug ge'l co re, fo co d'a


25
mor che m'ard e strug - ge'l co - re, e da gli ac - ce - si
29
la - bri un fia - to mo - ve, di si gra - te pa - ro - le,

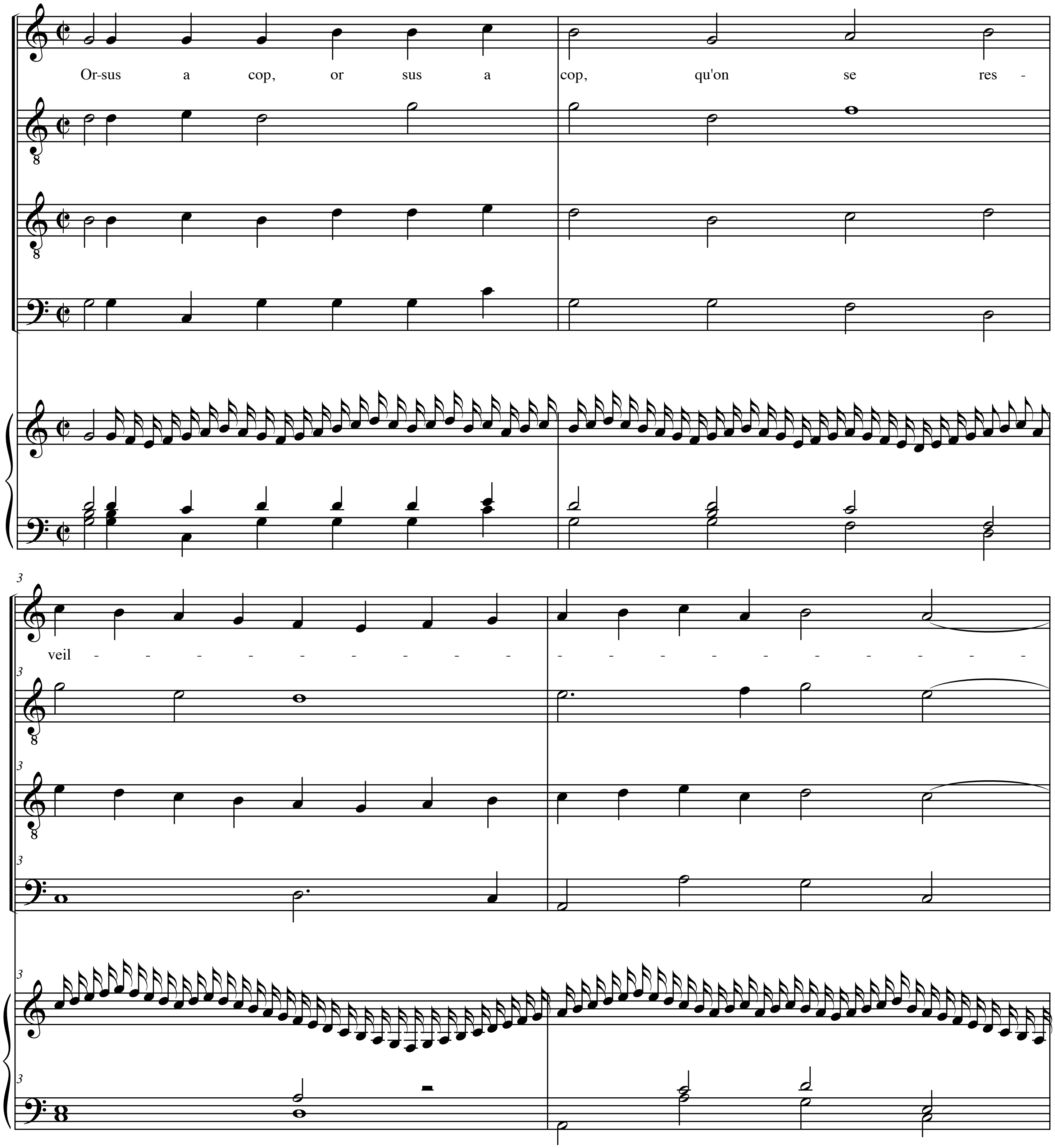

33
che più l'ac - cen - - - de, e fa dol -
37
ce l'ar - do - re, O che fe - lie' a - mo -

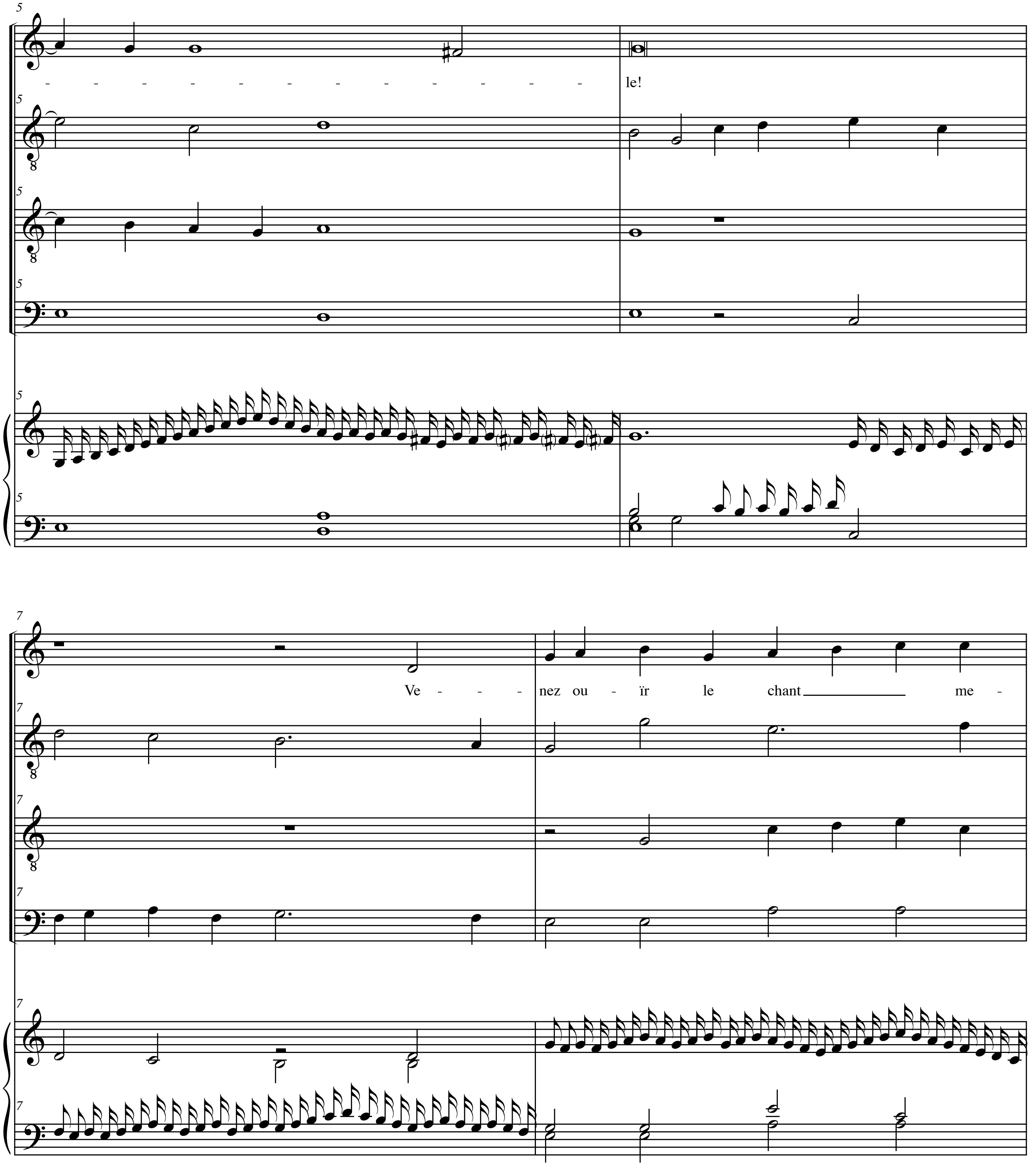

41
re, via più d'ogn altr' il mio di foe' e ven - to, di foe' e
45
ven - to,
be - a - to viv' a - ri - mi -
(♭)

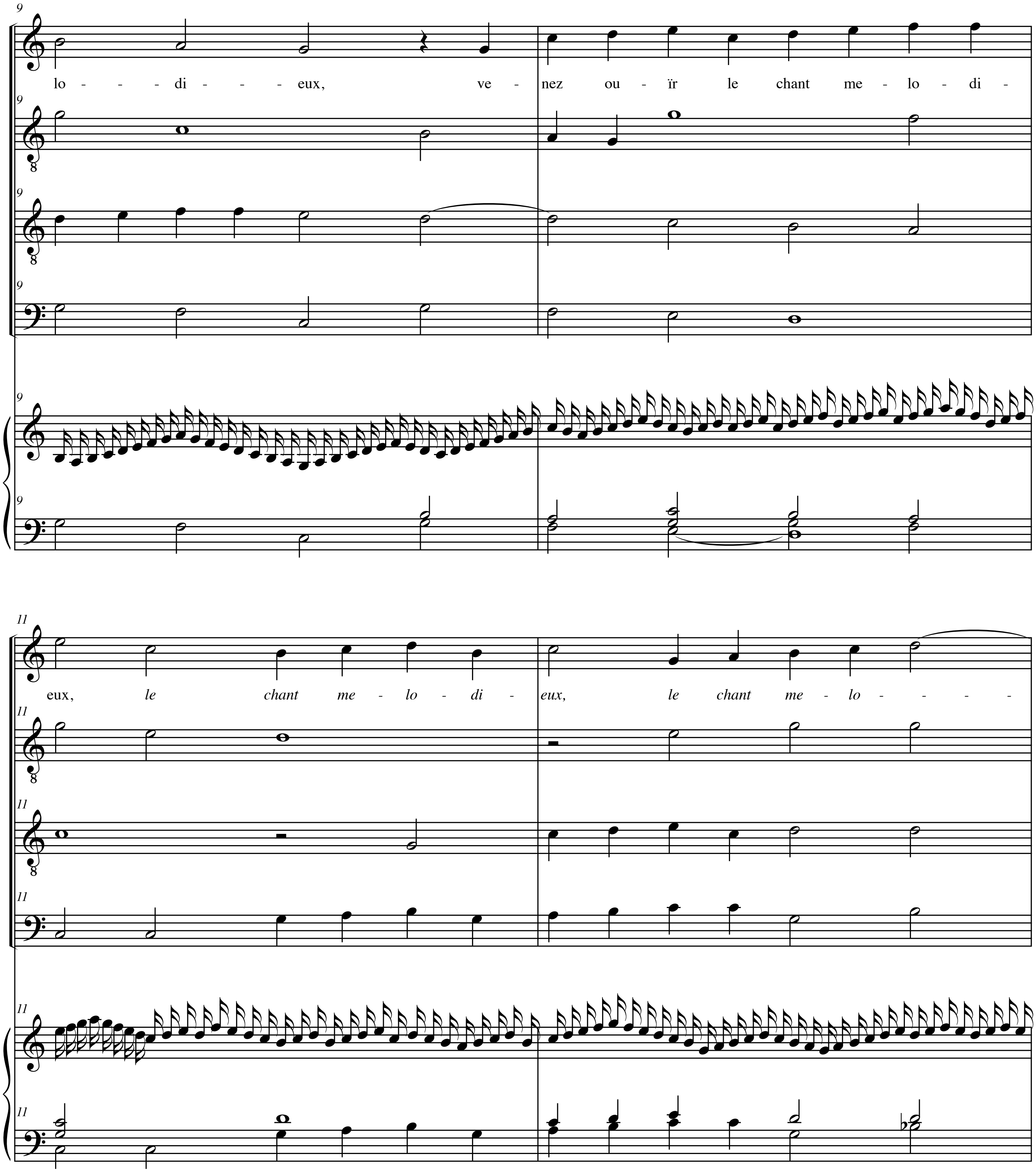

49
rarv' in - ten - to, be -
53
a - to viv' a - ri - mi - rarv' in - ten - to.

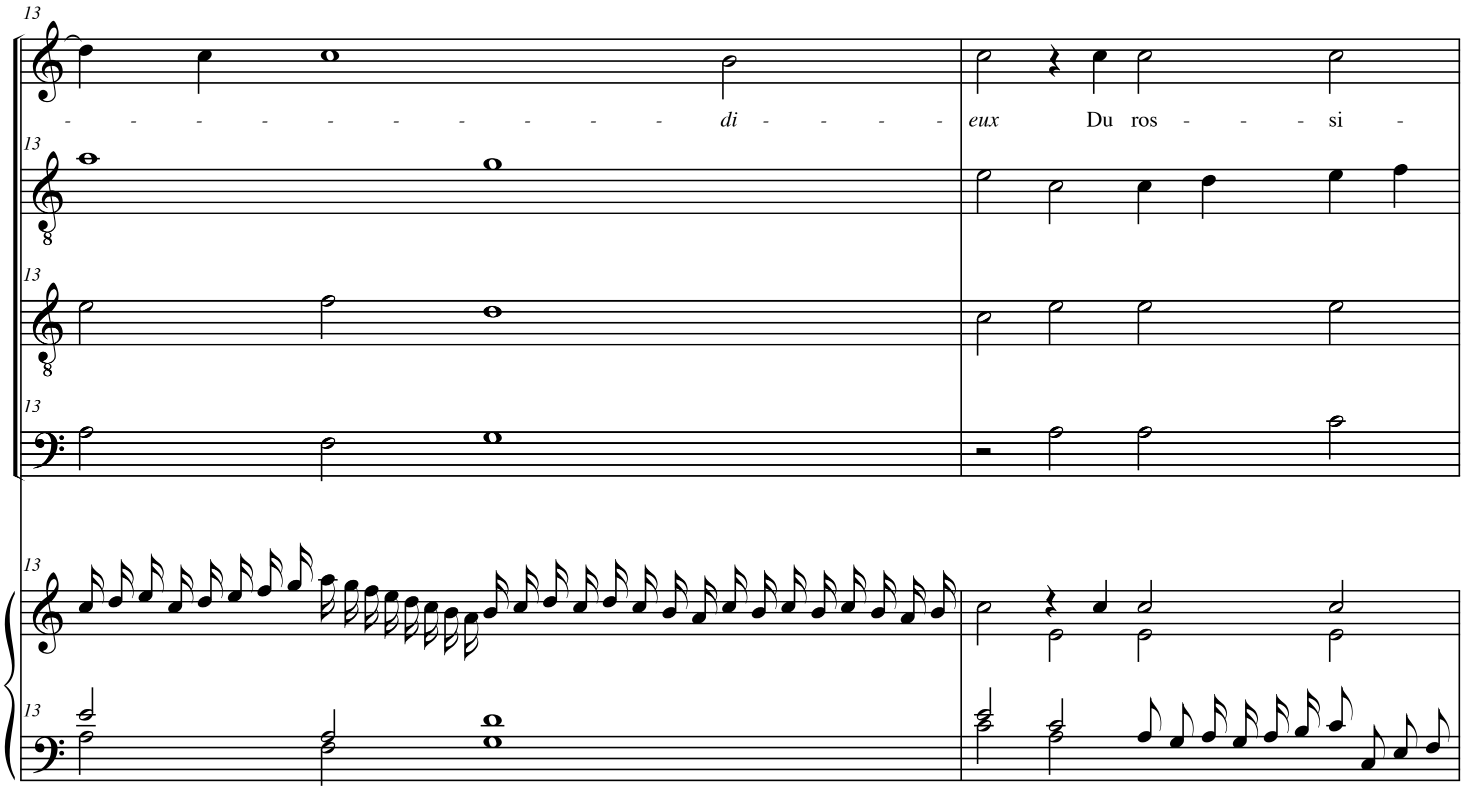

(♭)
(♭)
(♭)

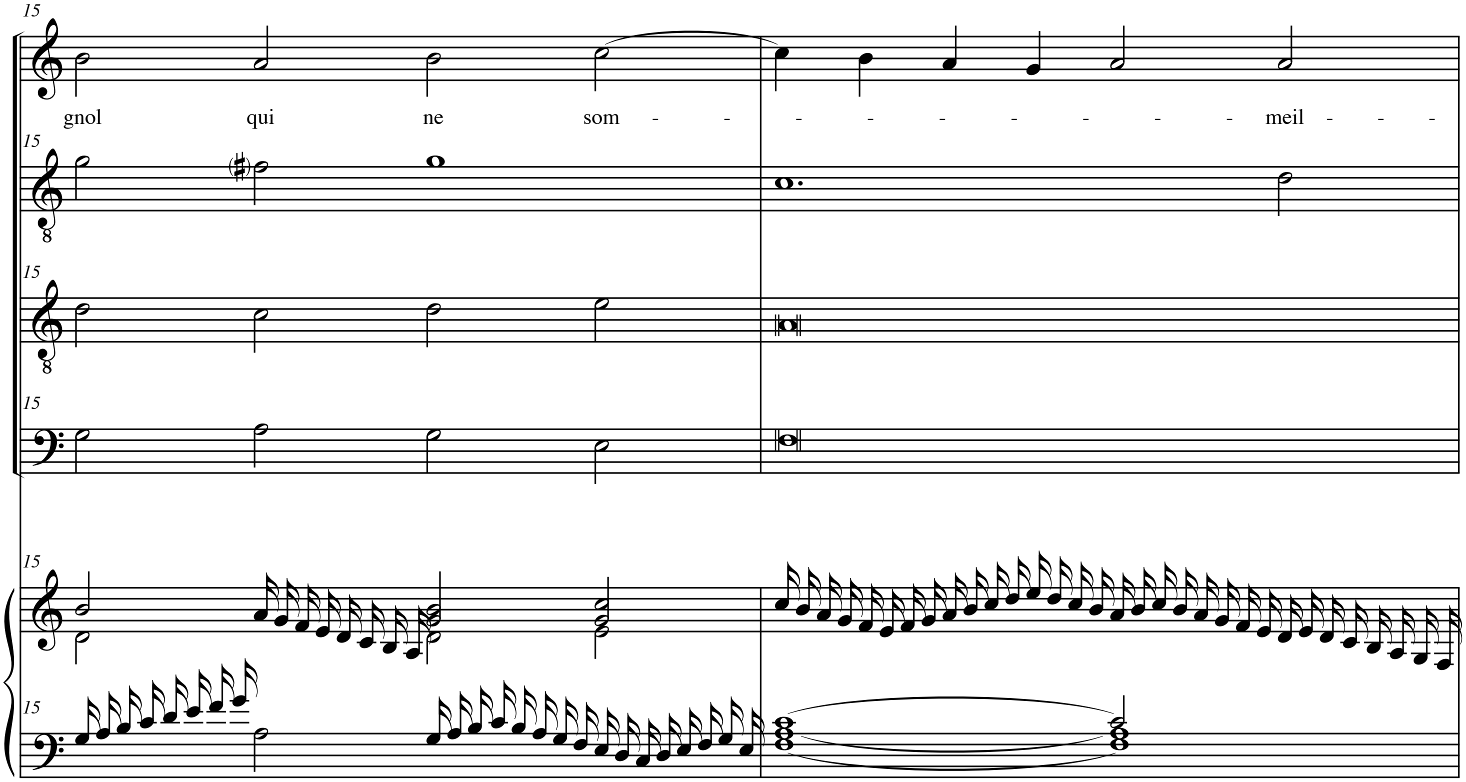
6. Canzon Francese detta Orsu. Di Iacob. A Quatro voci.

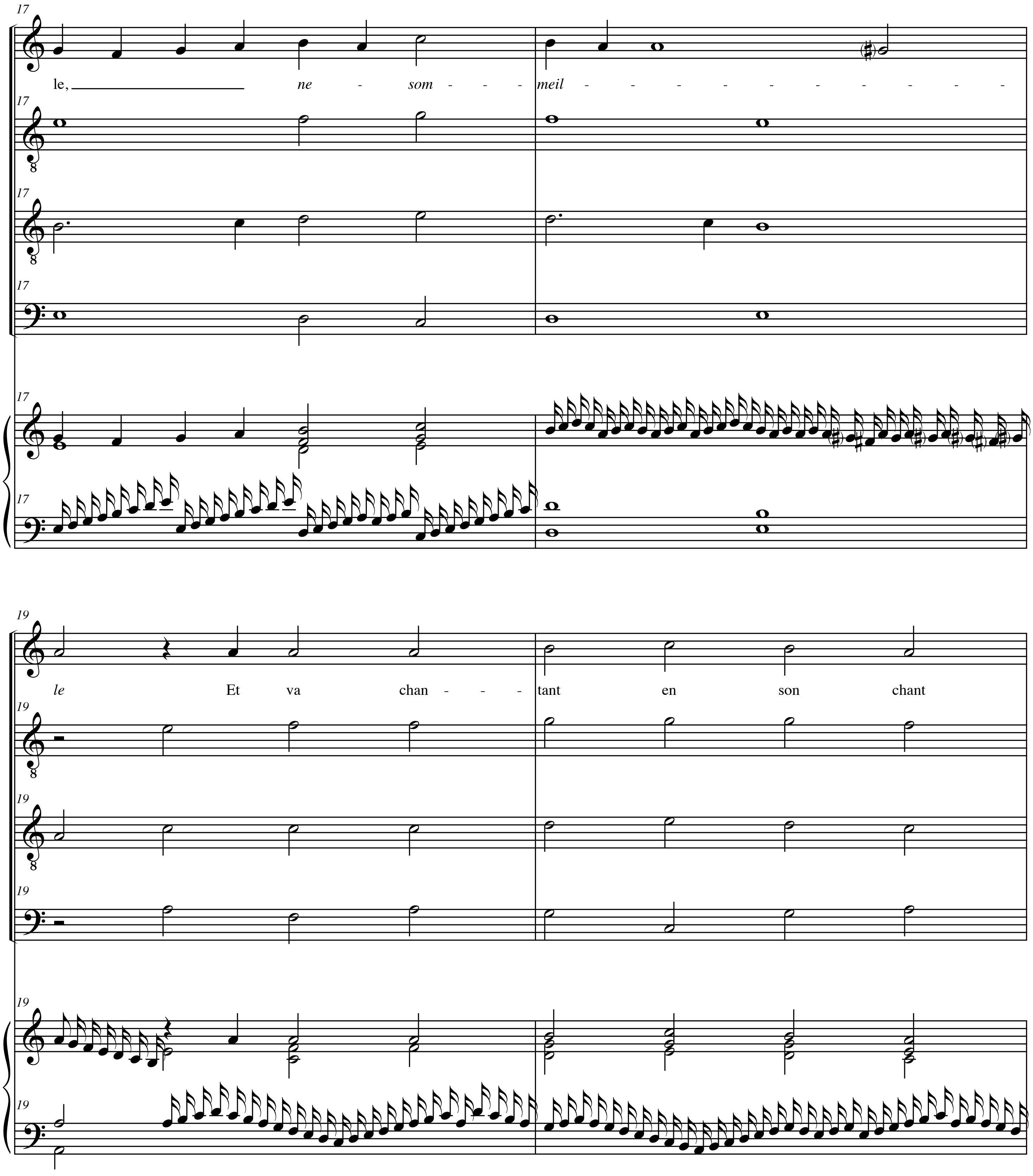

Or-sus a cop, or sus a cop, qu'on se res - veil -
8
3

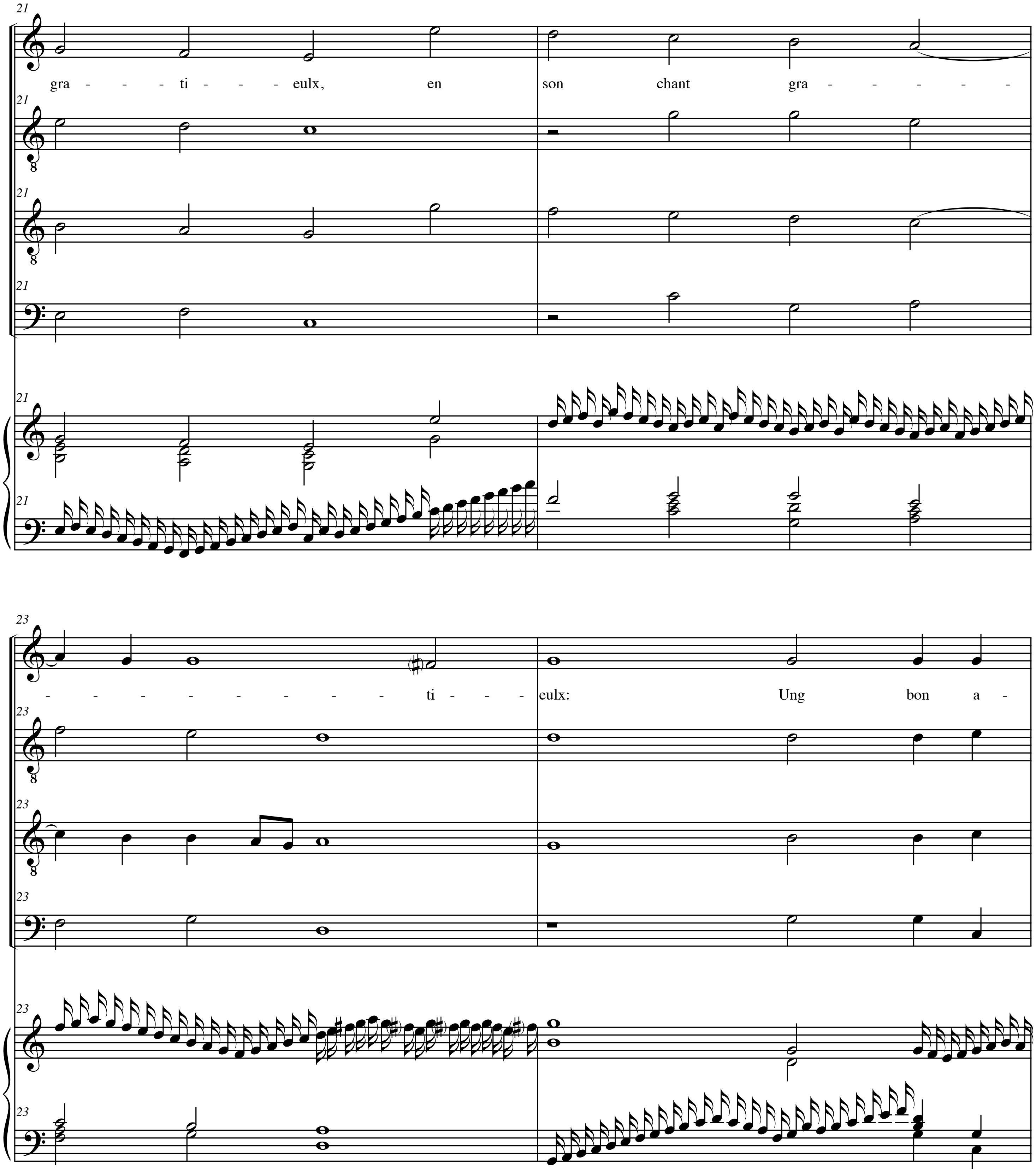

5
le!
7
Ve - nez ou - ïr le chant me -

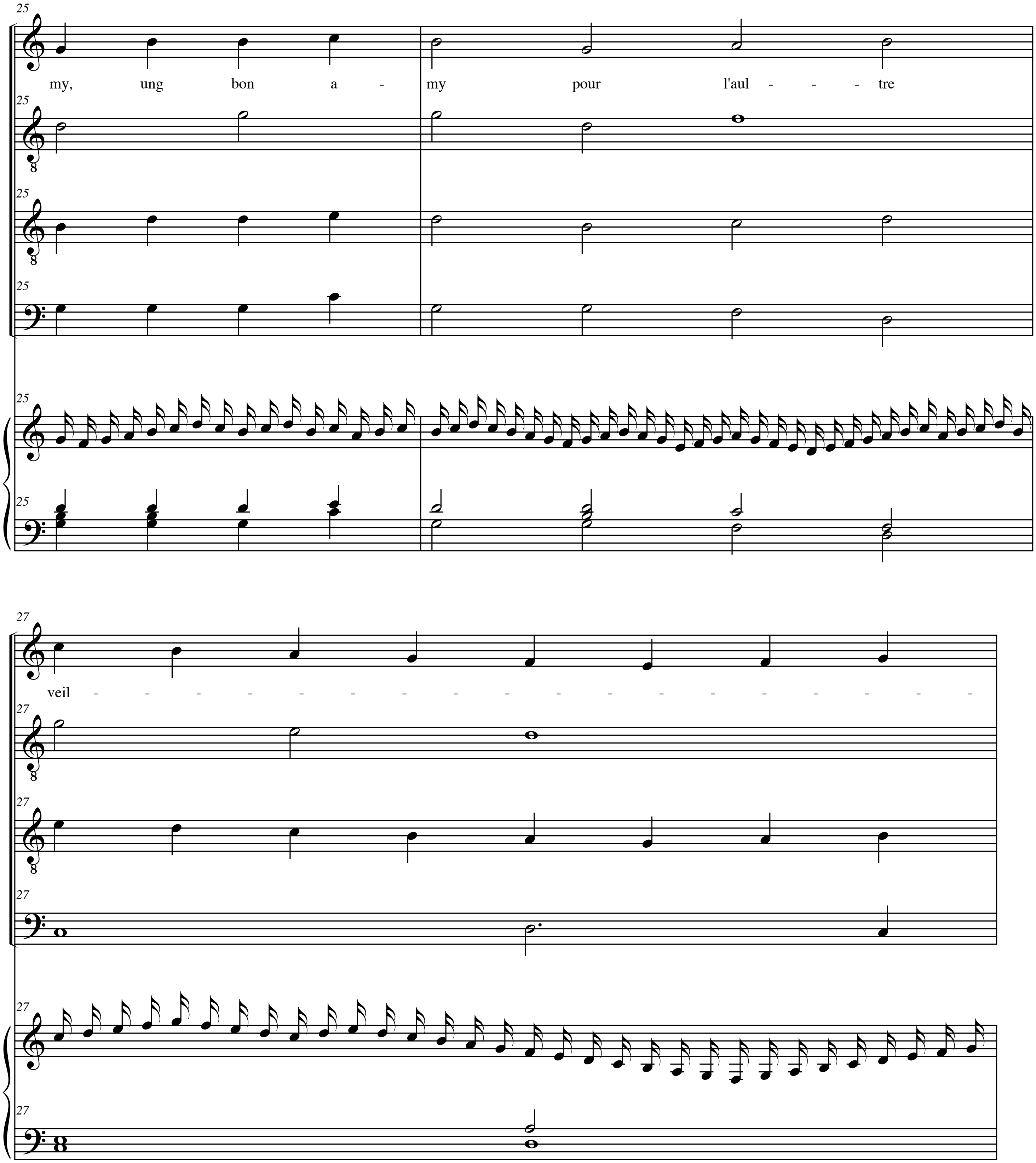

9
lo - - - di - - - eux, ve - nez ou - ïr le chant me - lo - di -
11
eux, le chant me - lo - di - eux, le chant me - lo - - - -

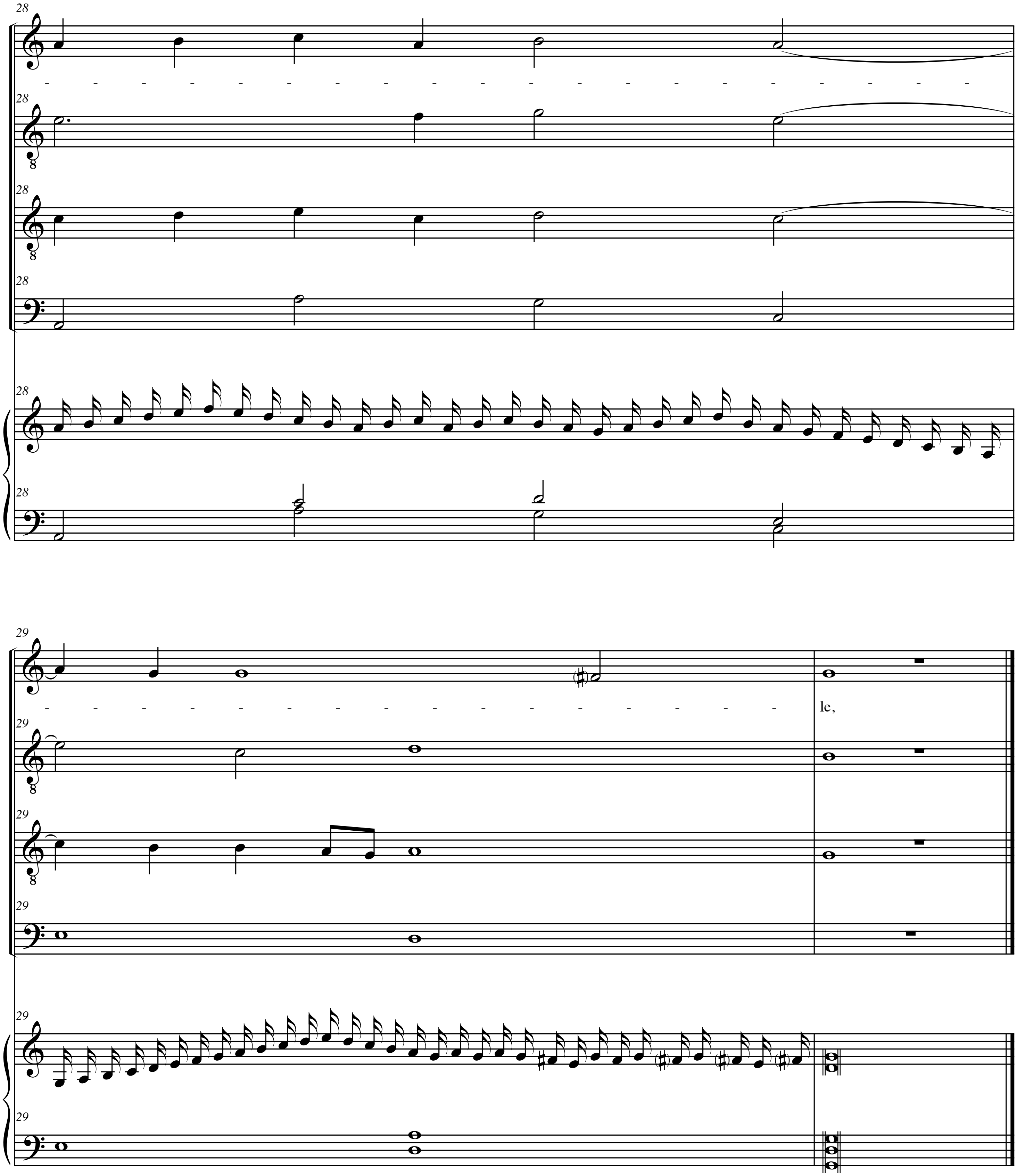

13
- - - - - - - - - - - di - - - - - eux Du ros - - - - si -


15
gnol qui ne som - - - - - - - - - - - meil - - -

17
le, ne - som - - - meil - - - - - - - - - - - - -
19
le Et va chan - - - tant en son chant

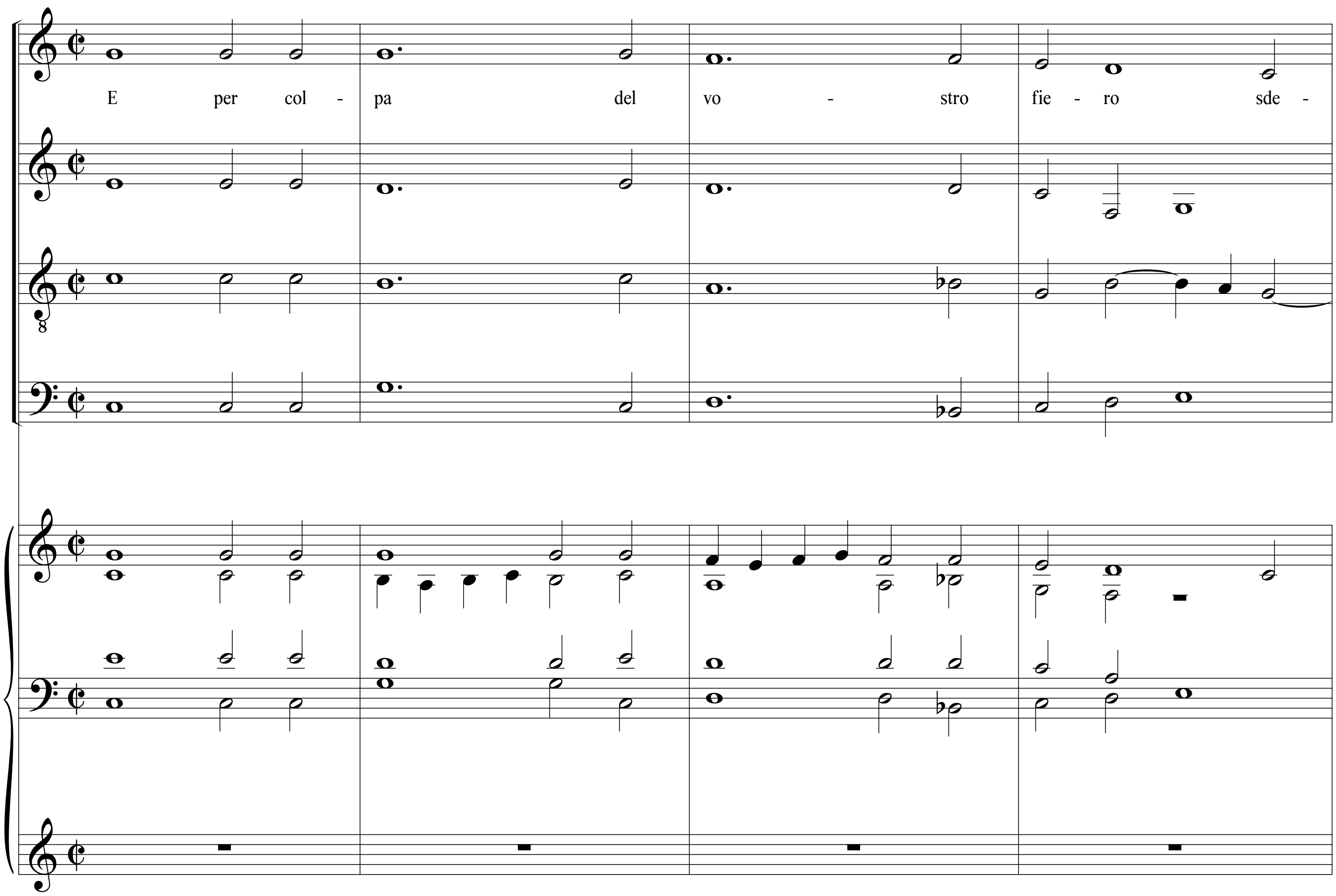

21
gra - - - ti - - - eulx, en son chant gra - - - - - -
23
- - - - - - - - - ti - - - eulx: Ung bon a -

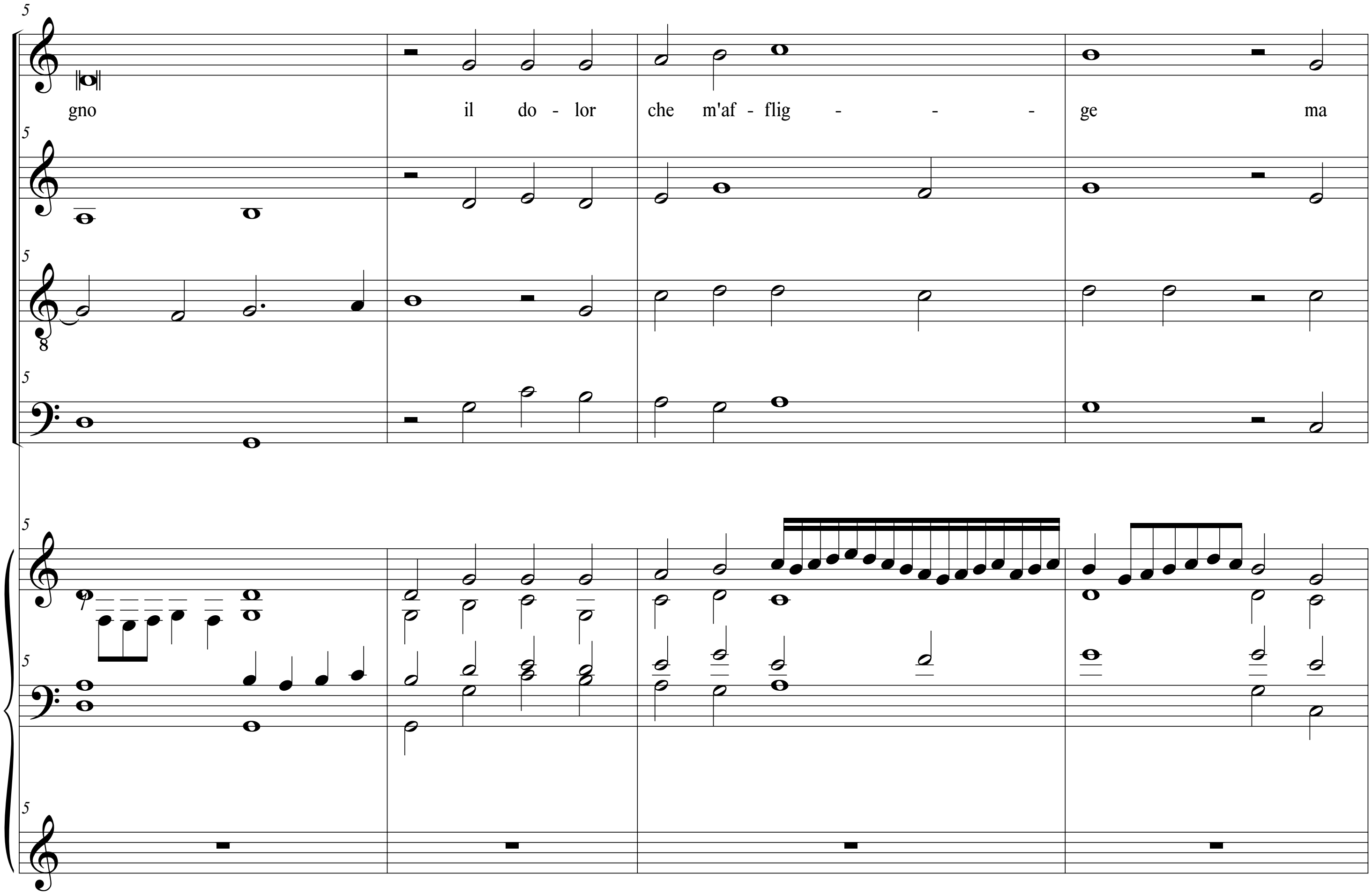

25
my, ung bon a - my pour l'aul - - - tre
27
veil -

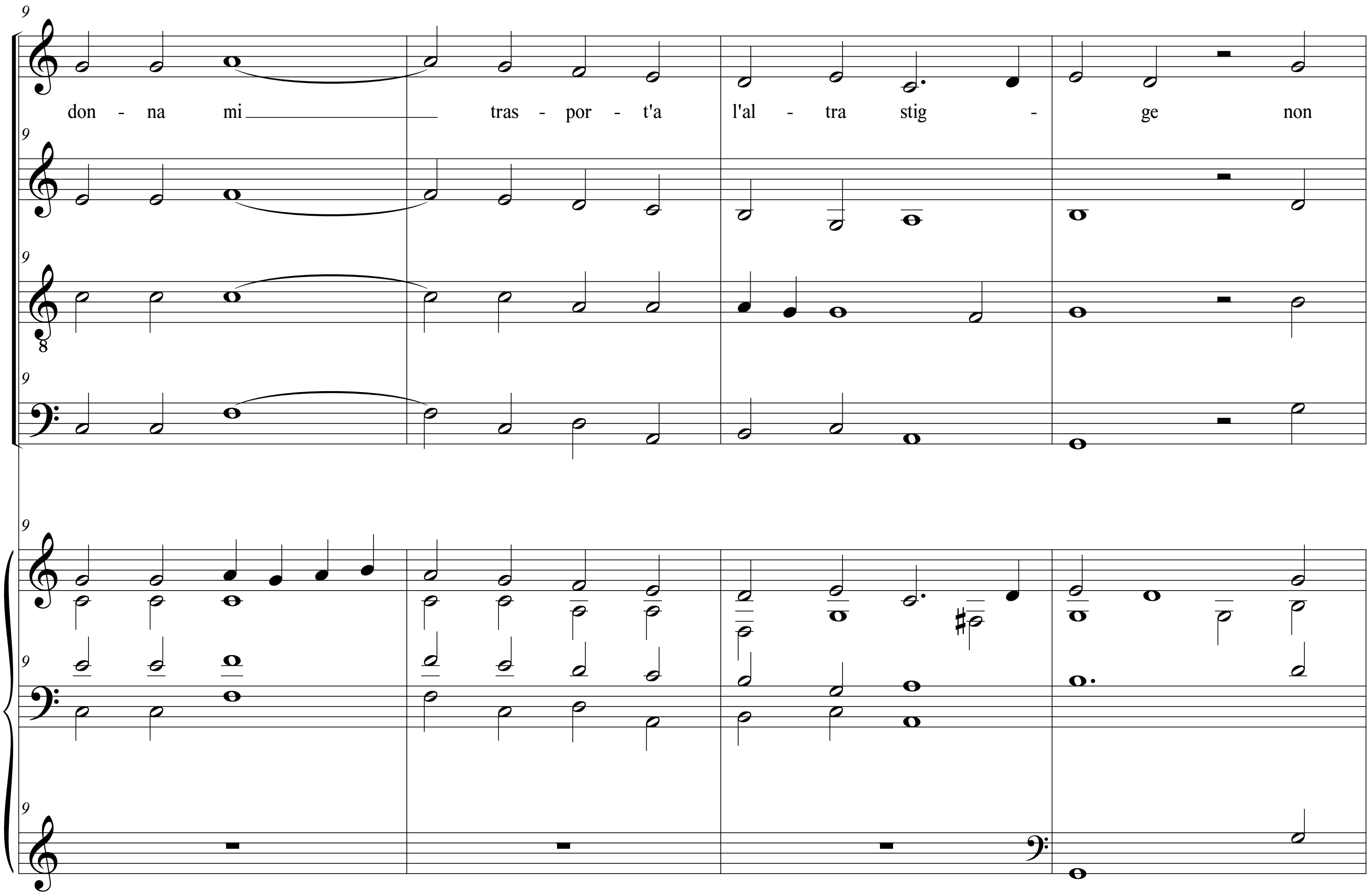

le,

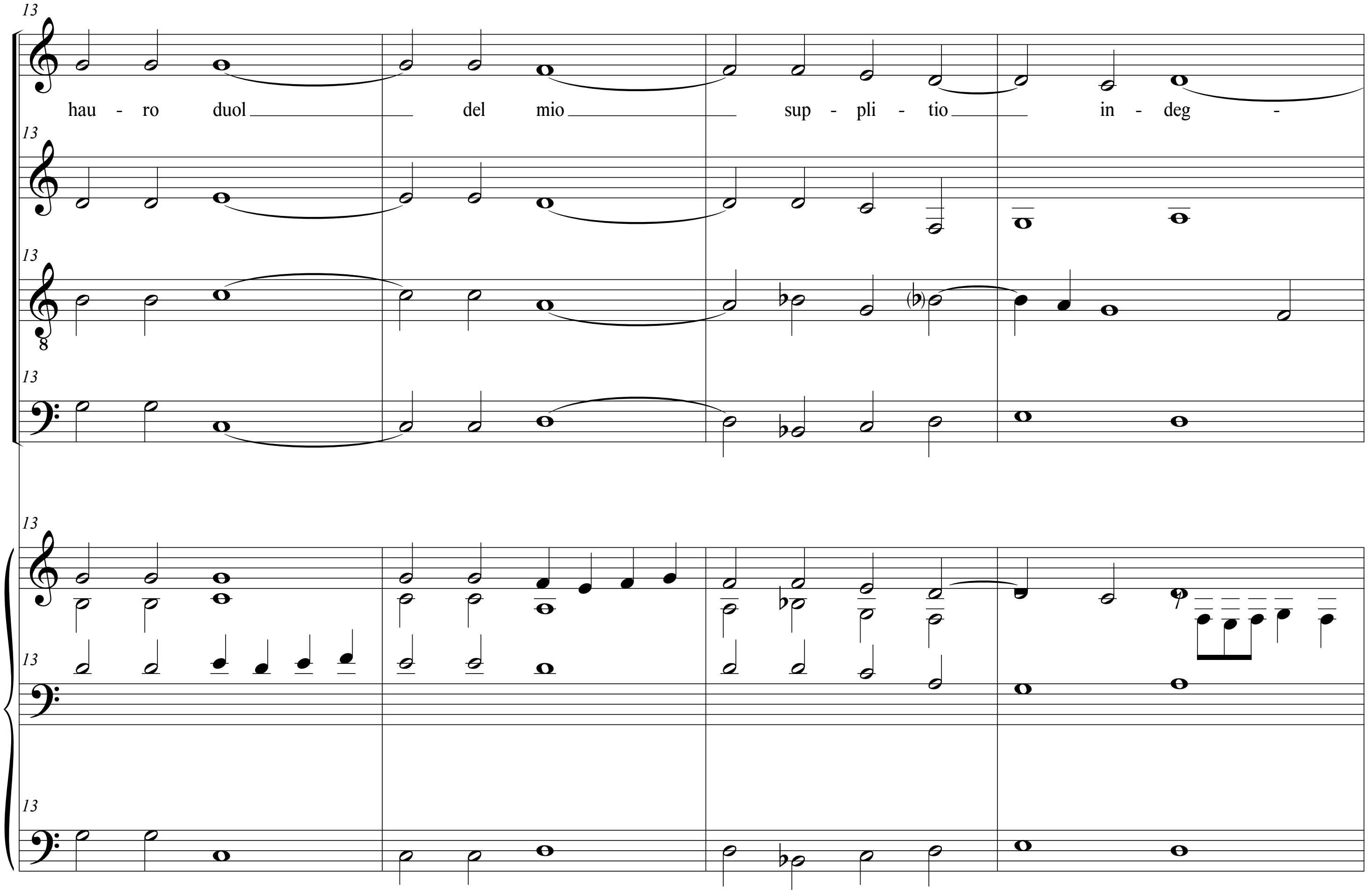
Anon.
Ca fascicle V
22v-23r

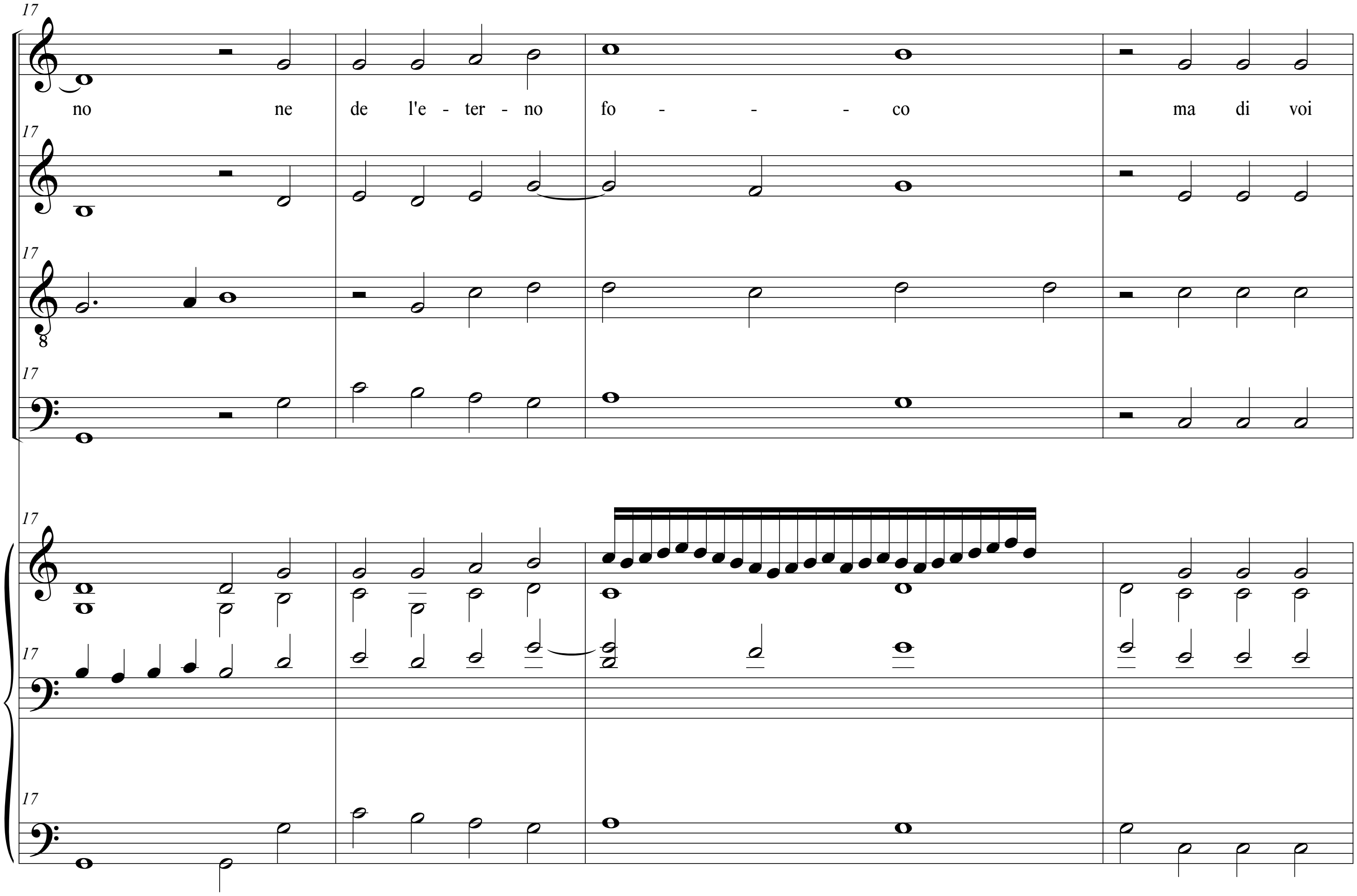
7. Se p[er] colpa del vo[stra] fiero sdegno

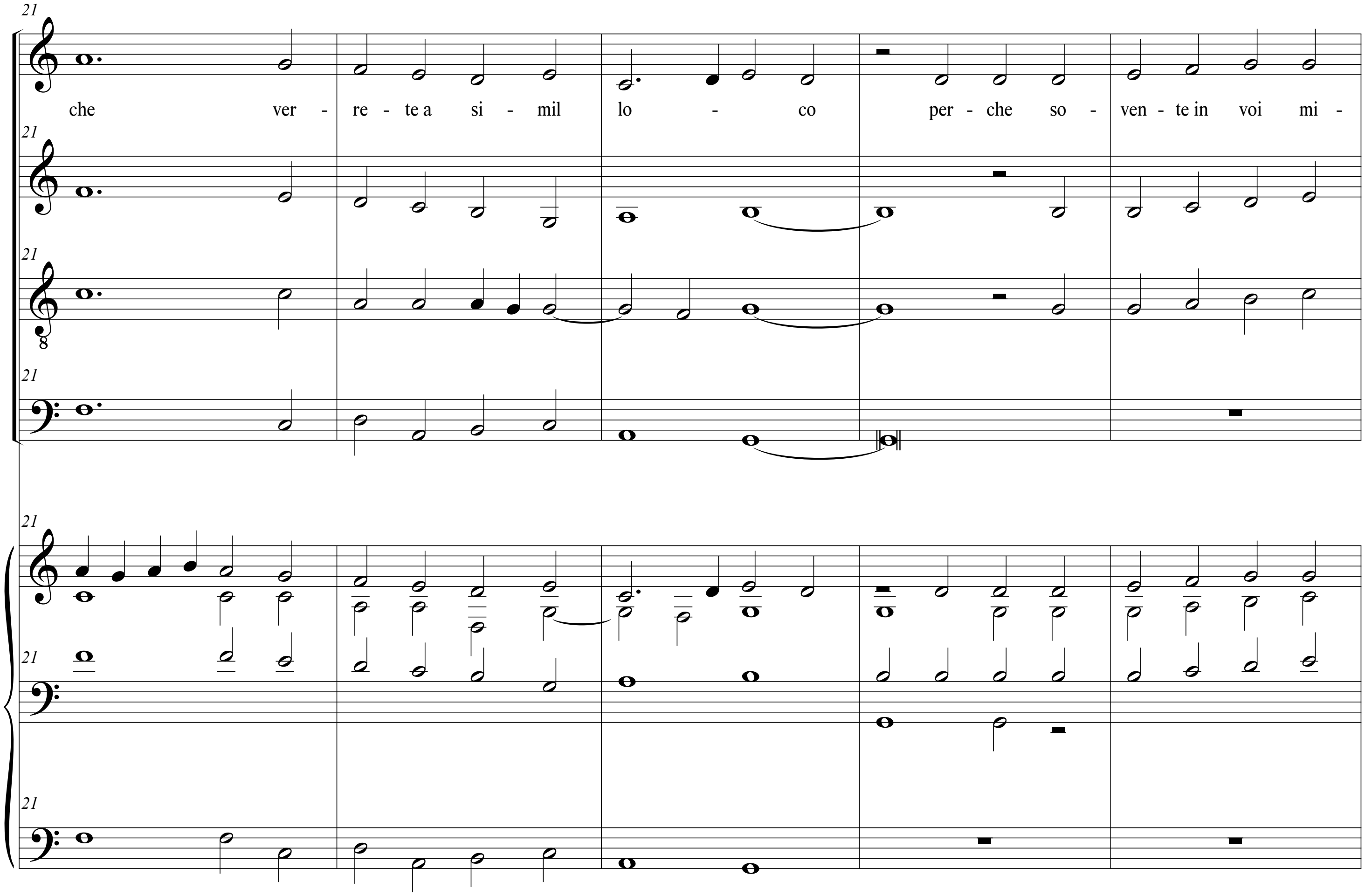

E per col - pa del vo - stro fie - ro sde -

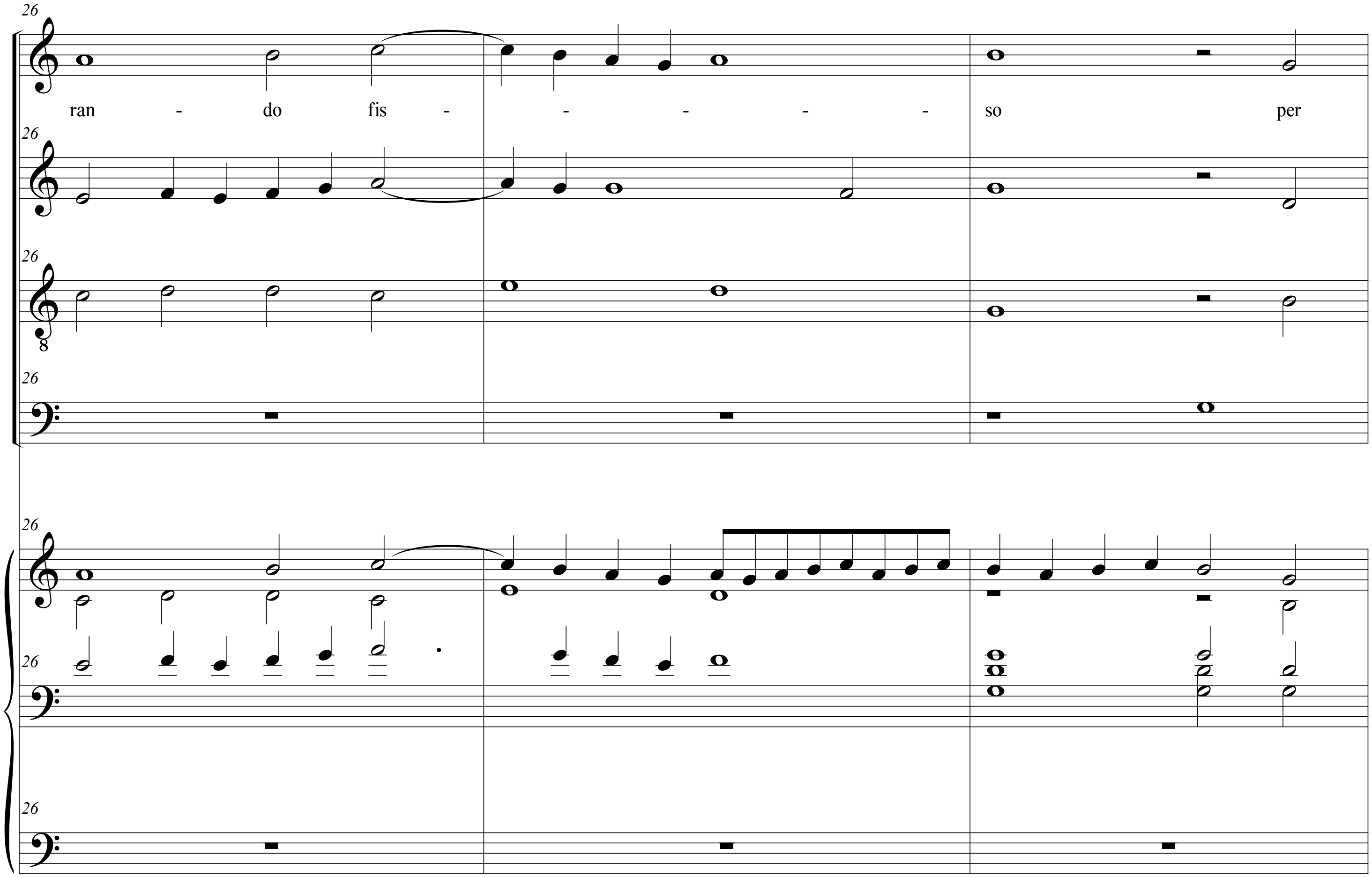

5
gno
il
do
-
lor
che
m'af
-
flig
-
-
-
ge
ma
8

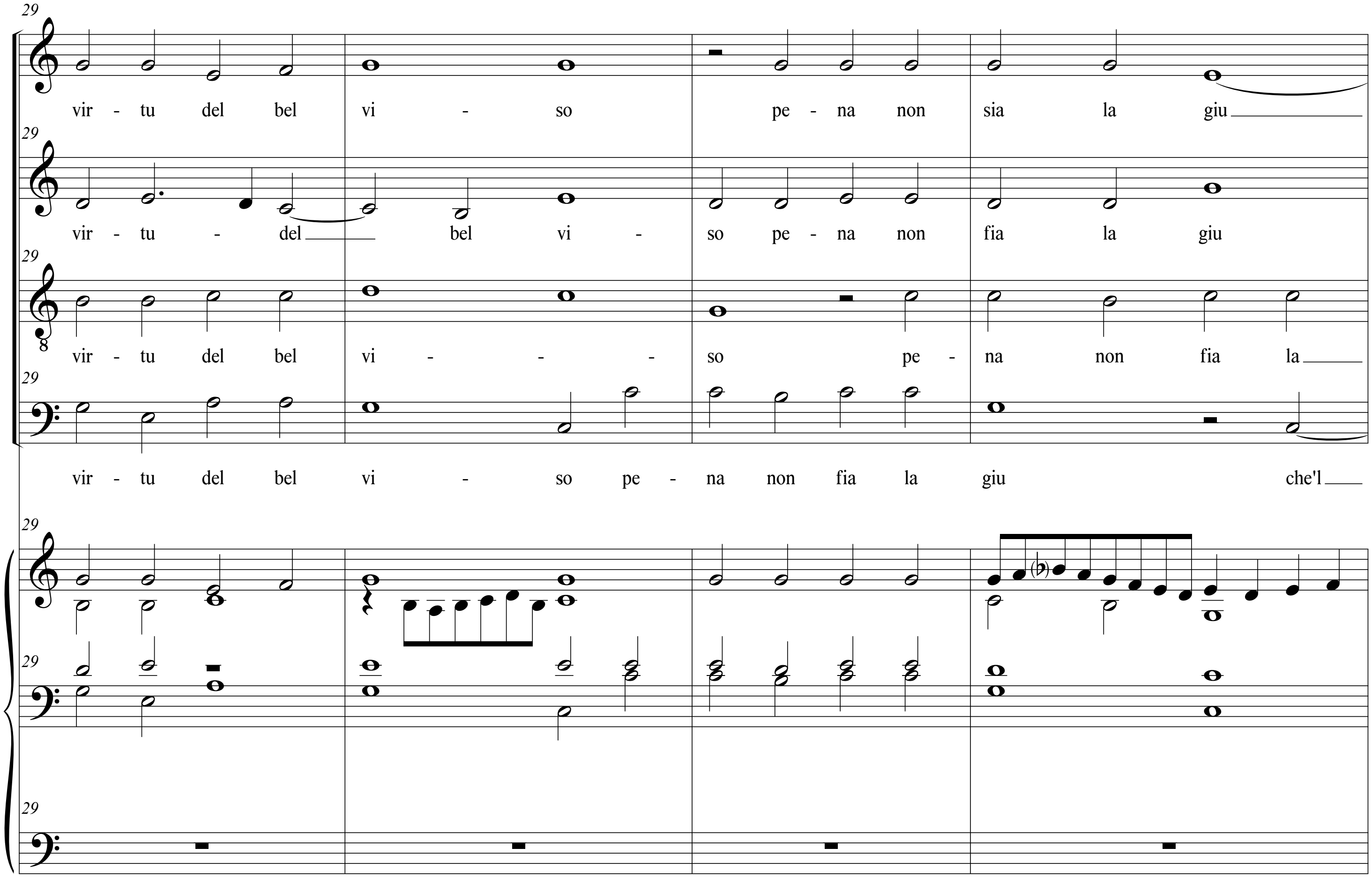

9
don - na mi tras - por - t'a l'al - tra stig - ge non
8

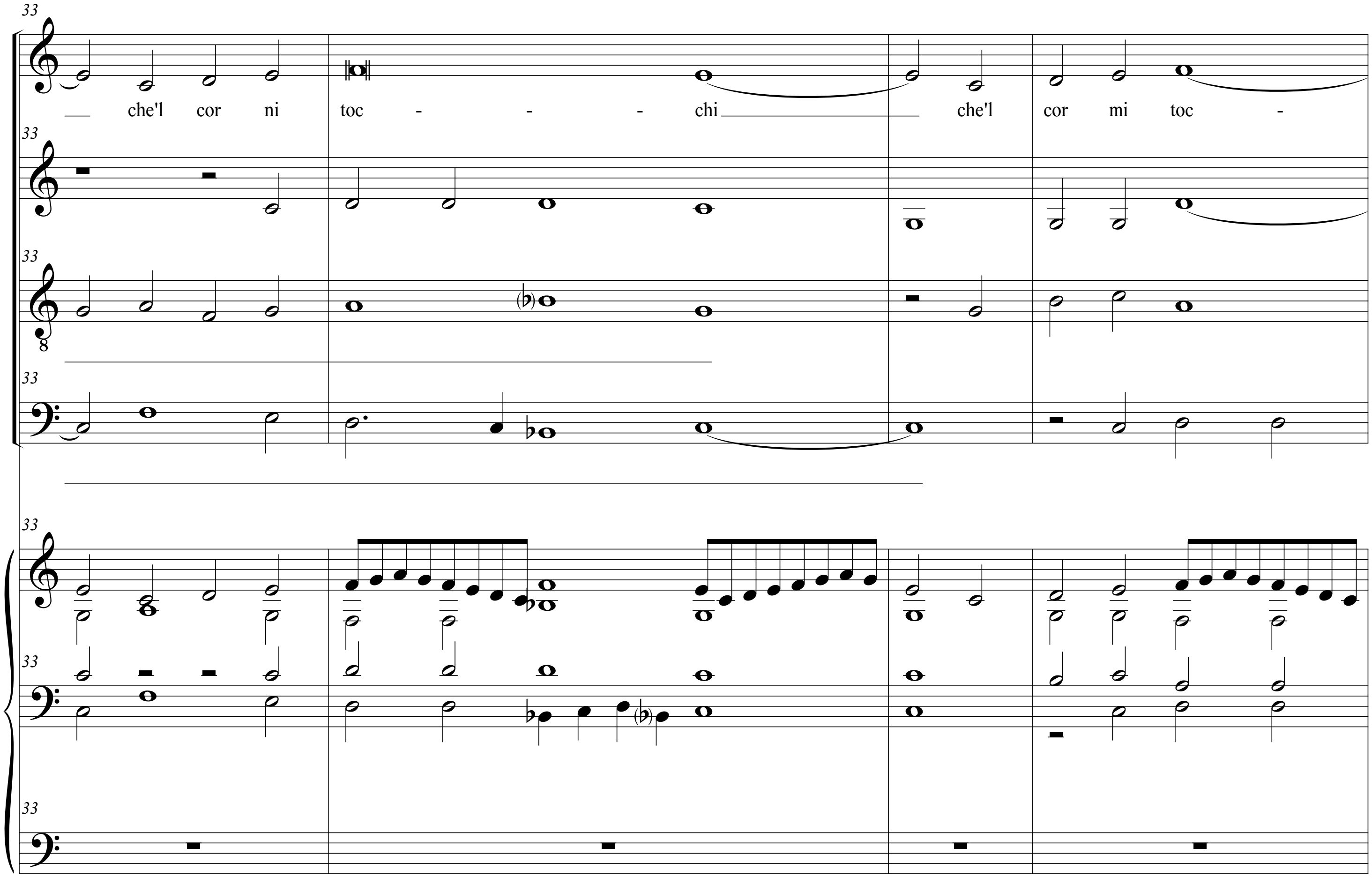

13
hau - ro duol del mio sup - pli - tio in - deg -
8

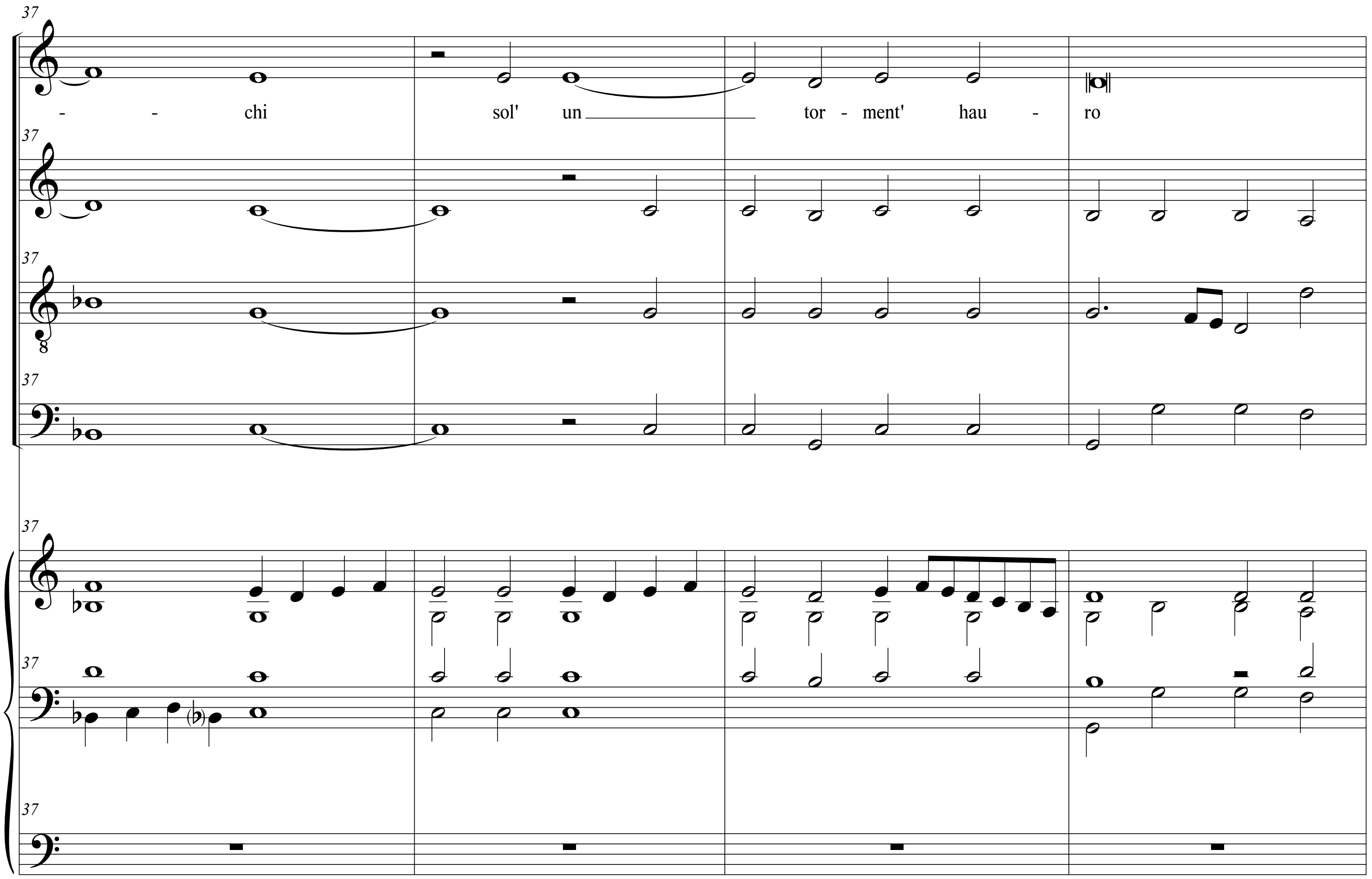

17
no
ne
de
l'e
-
ter
-
no
fo
-
-
-
co
ma
di
voi
8


21
che ver - re - te a si - mil lo - co per - che so - ven - te in voi mi -
8

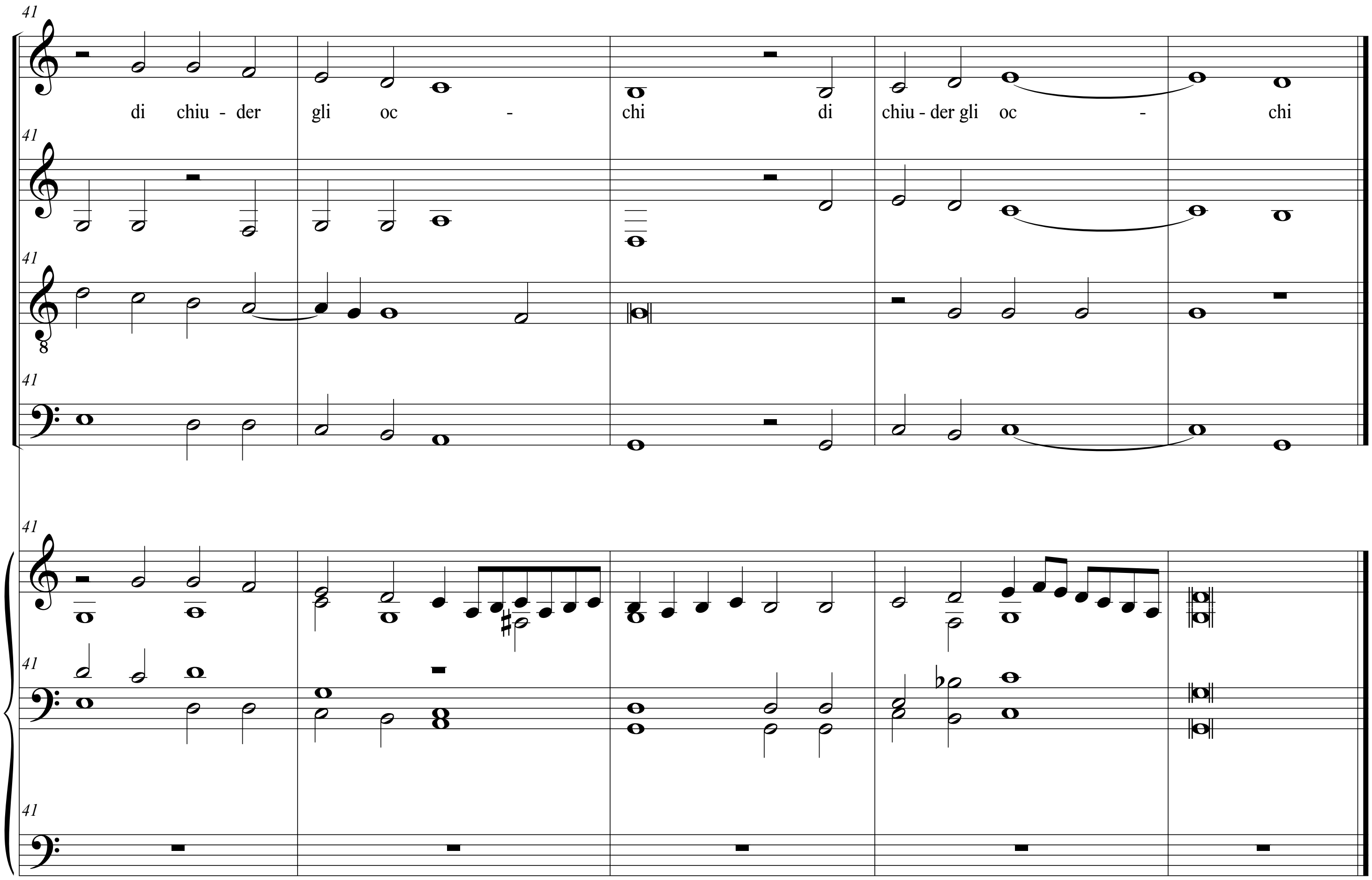

26
ran
-
do
fis
-
-
-
-
-
so
per
26
26
8
26
26
26
26


29
vir - tu del bel vi - so pe - na non sia la giu
vir - tu - del bel vi - so pe - na non fia la giu
vir - tu del bel vi - - - so pe - na non fia la
vir - tu del bel vi - so pe - na non fia la giu che'l


33
che'l
cor
ni
toc
chi
che'l
cor
mi
toc
(♭)
8

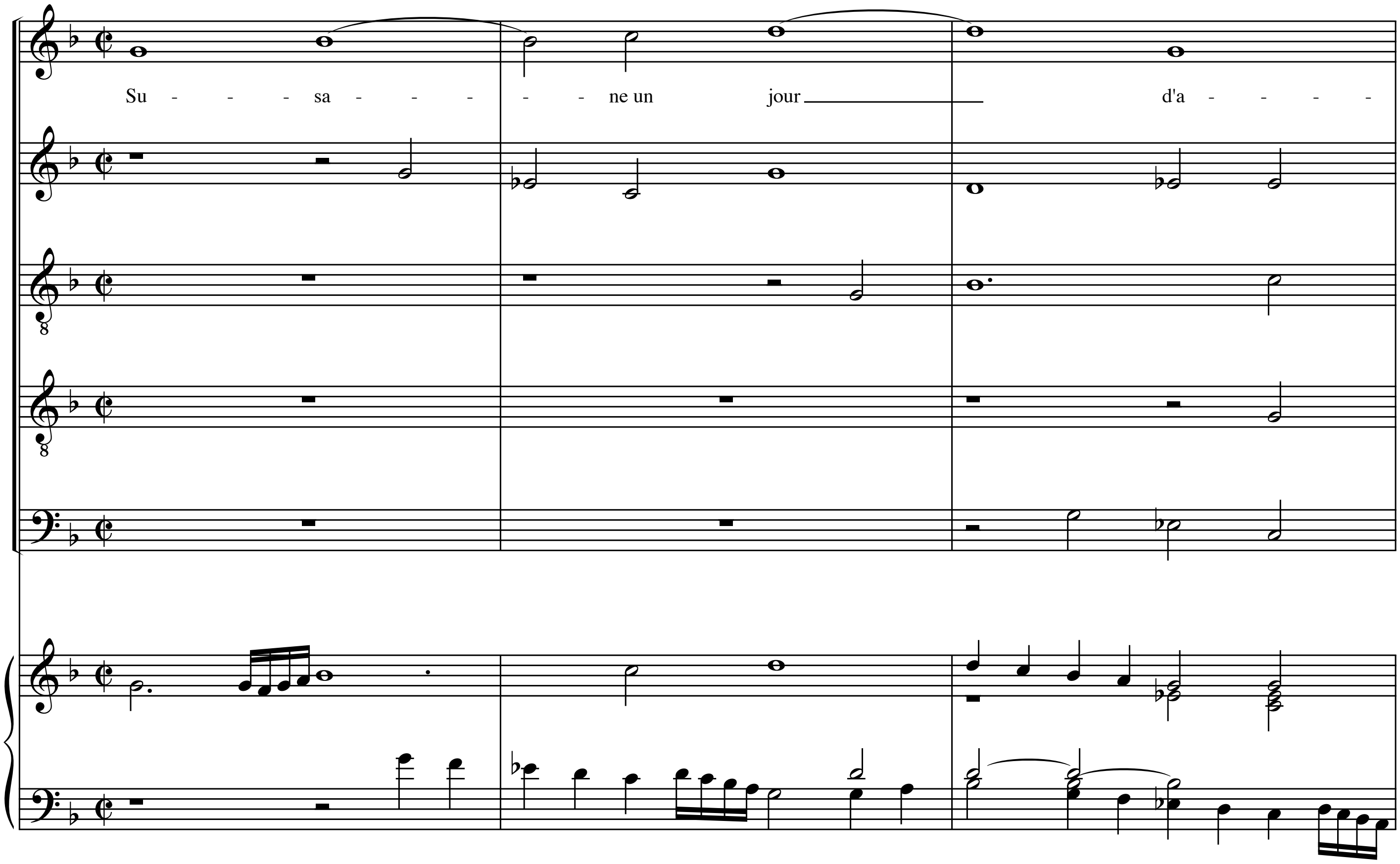


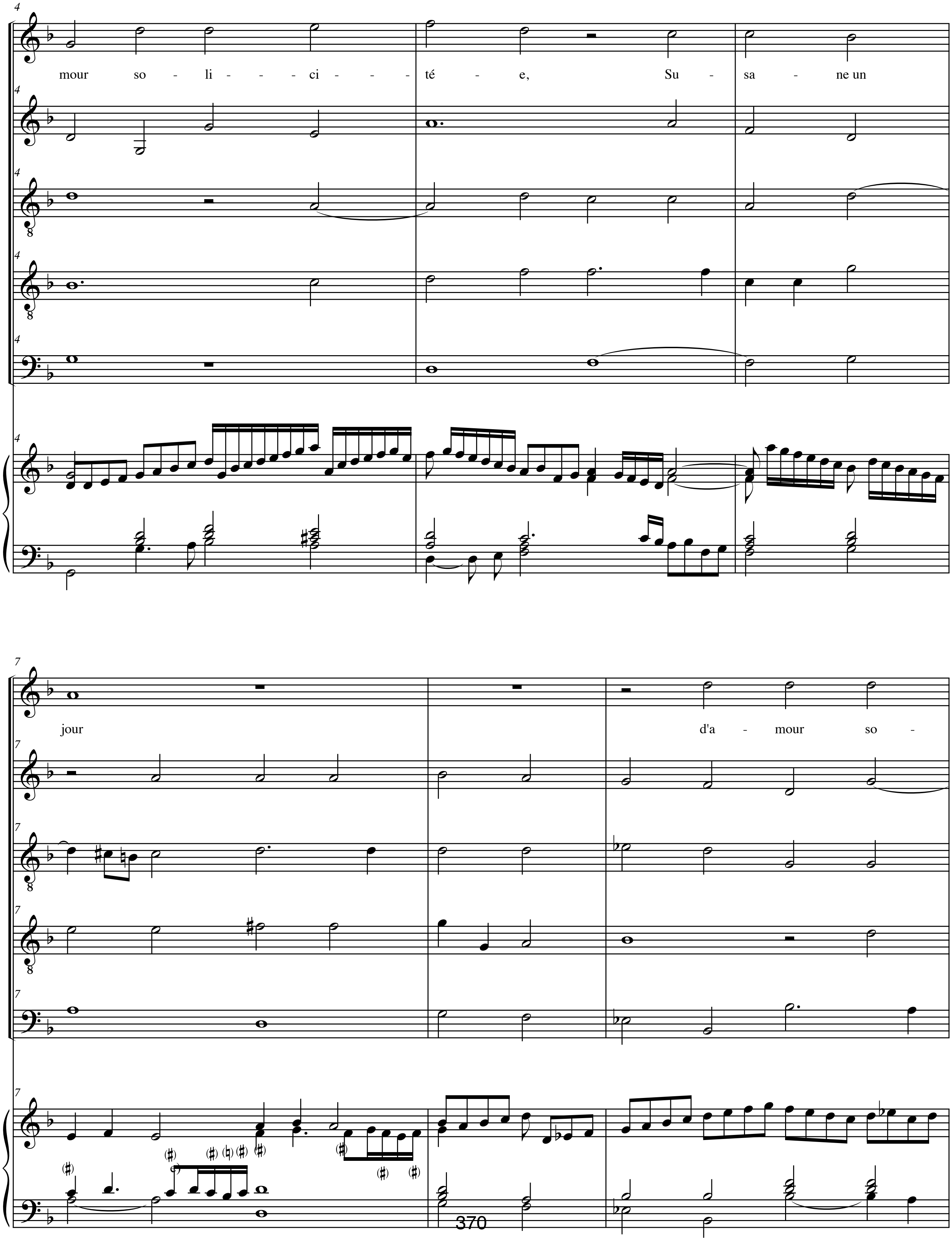
- - chi sol' un tor - ment' hau - ro

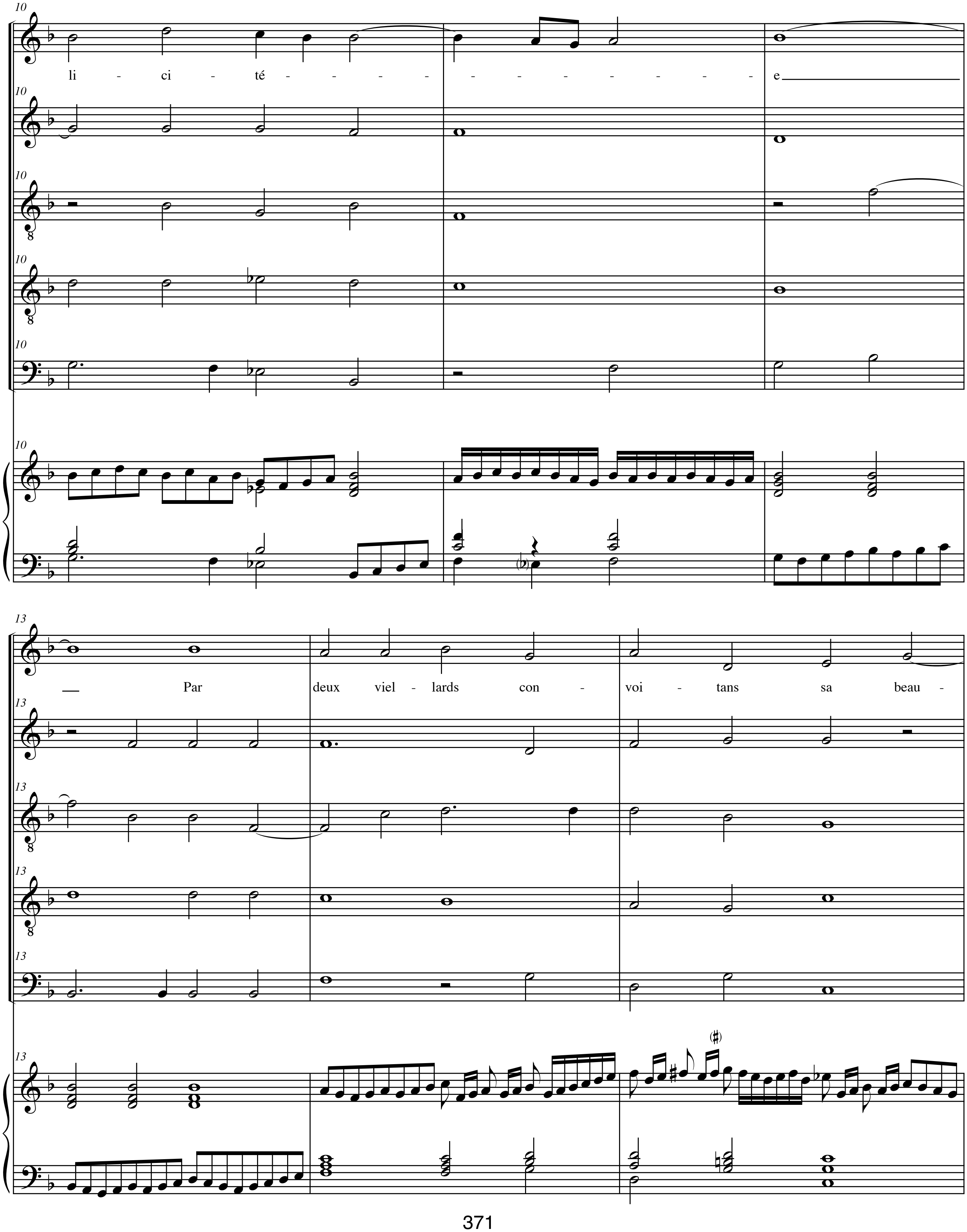

41
di chiu - der gli oc - chi di chiu - der gli oc - chi

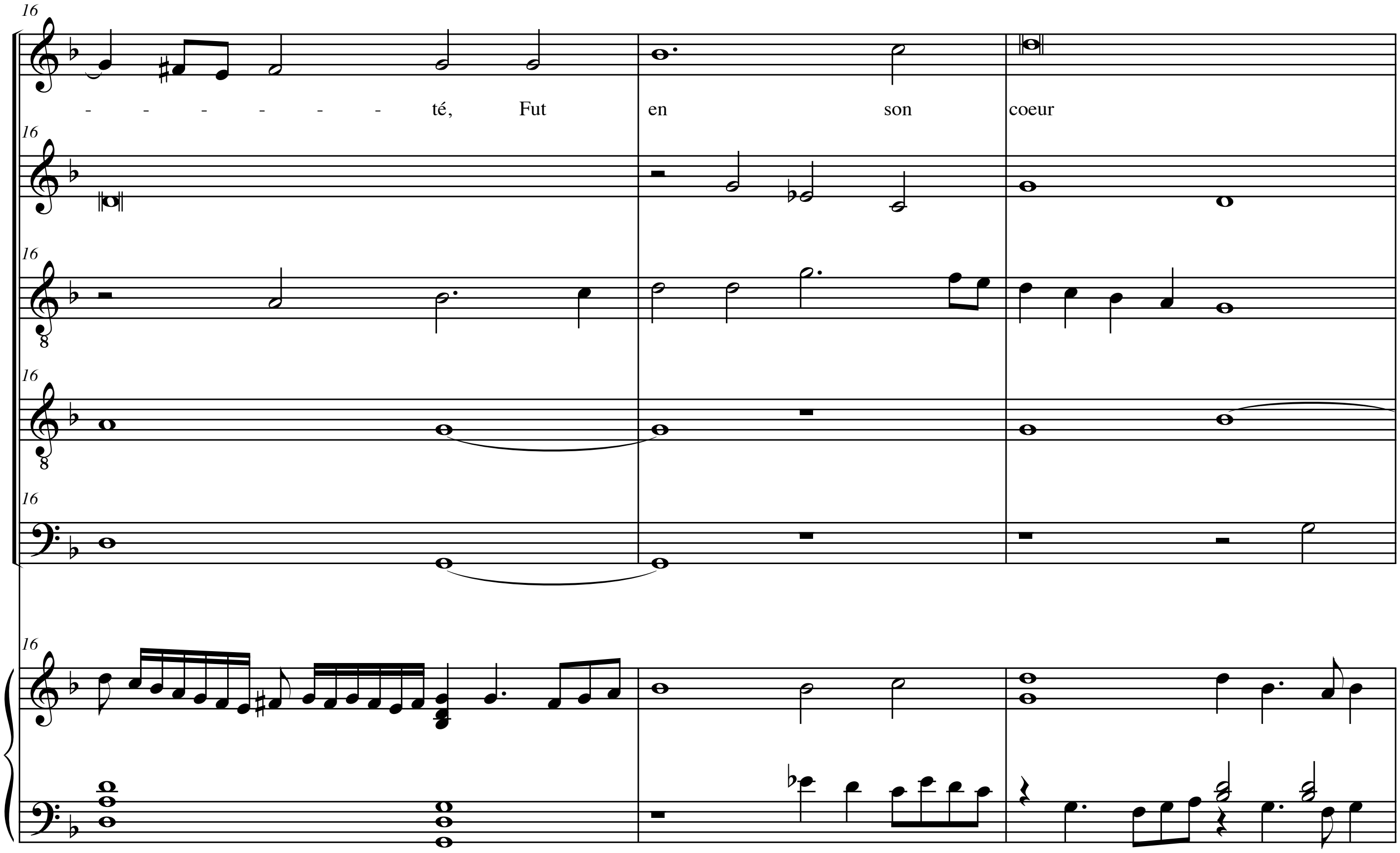
8. Susanna

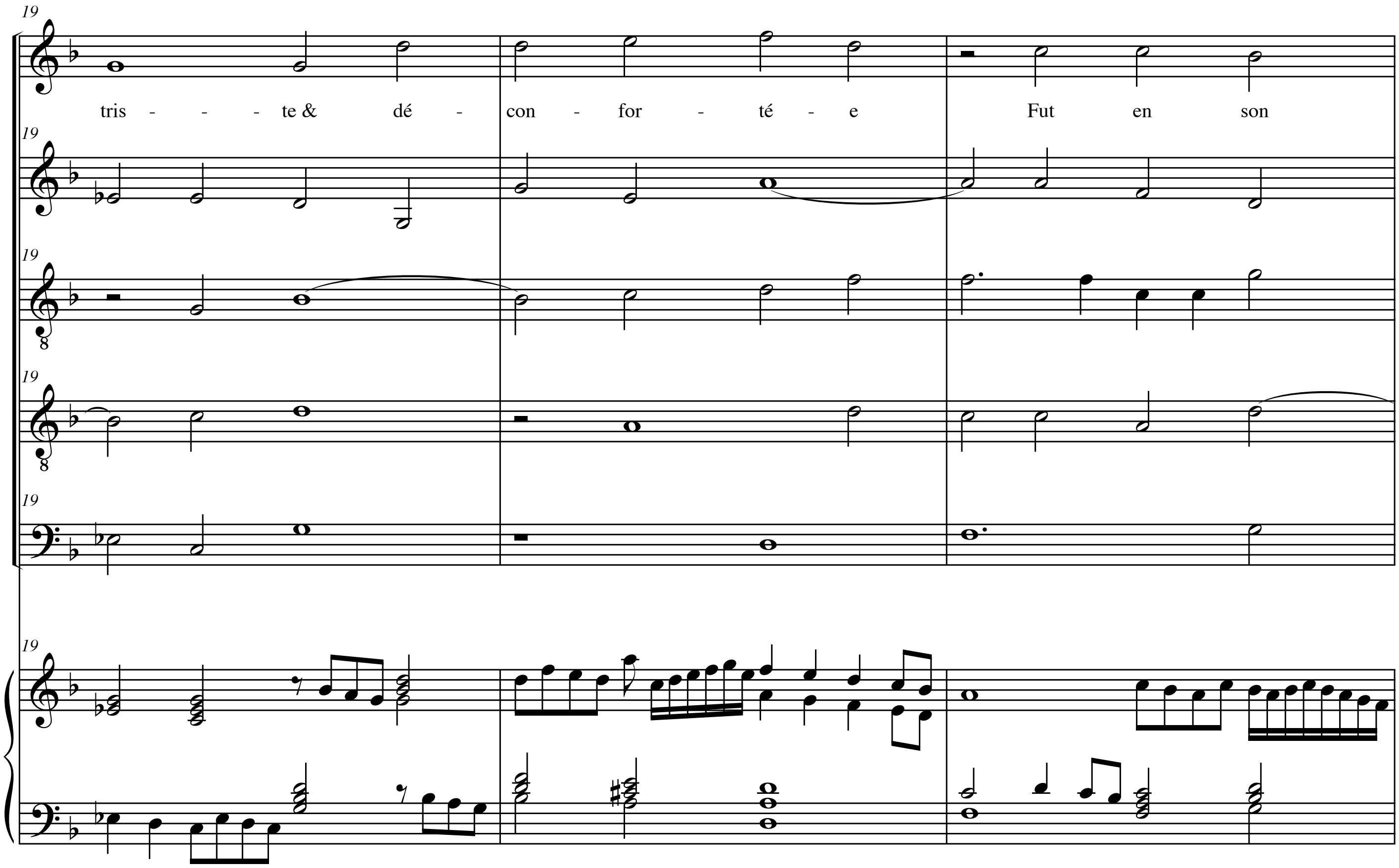
Anon.
Tr, 39r.

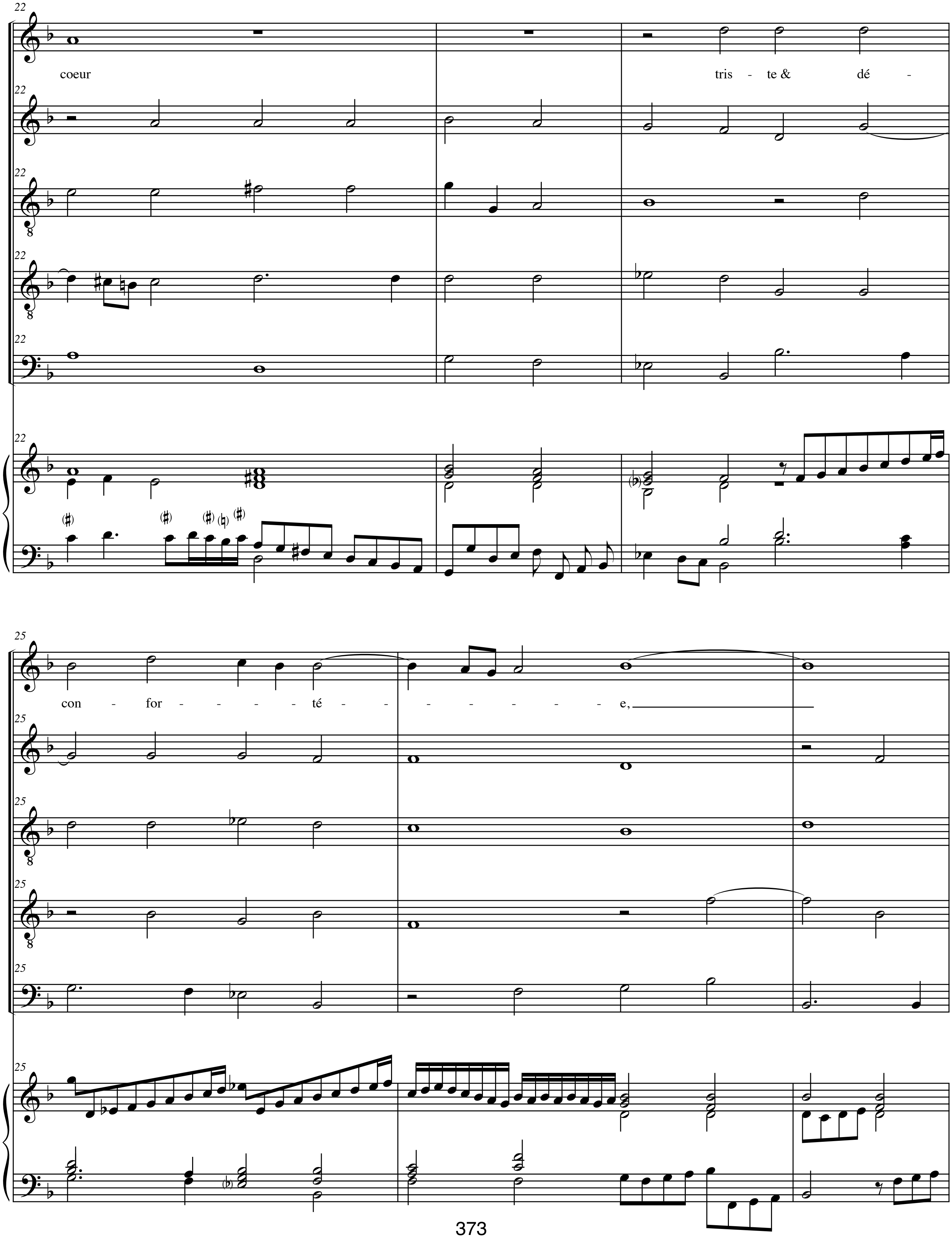

Su - - - sa - - - - - - ne un jour d'a - - - -

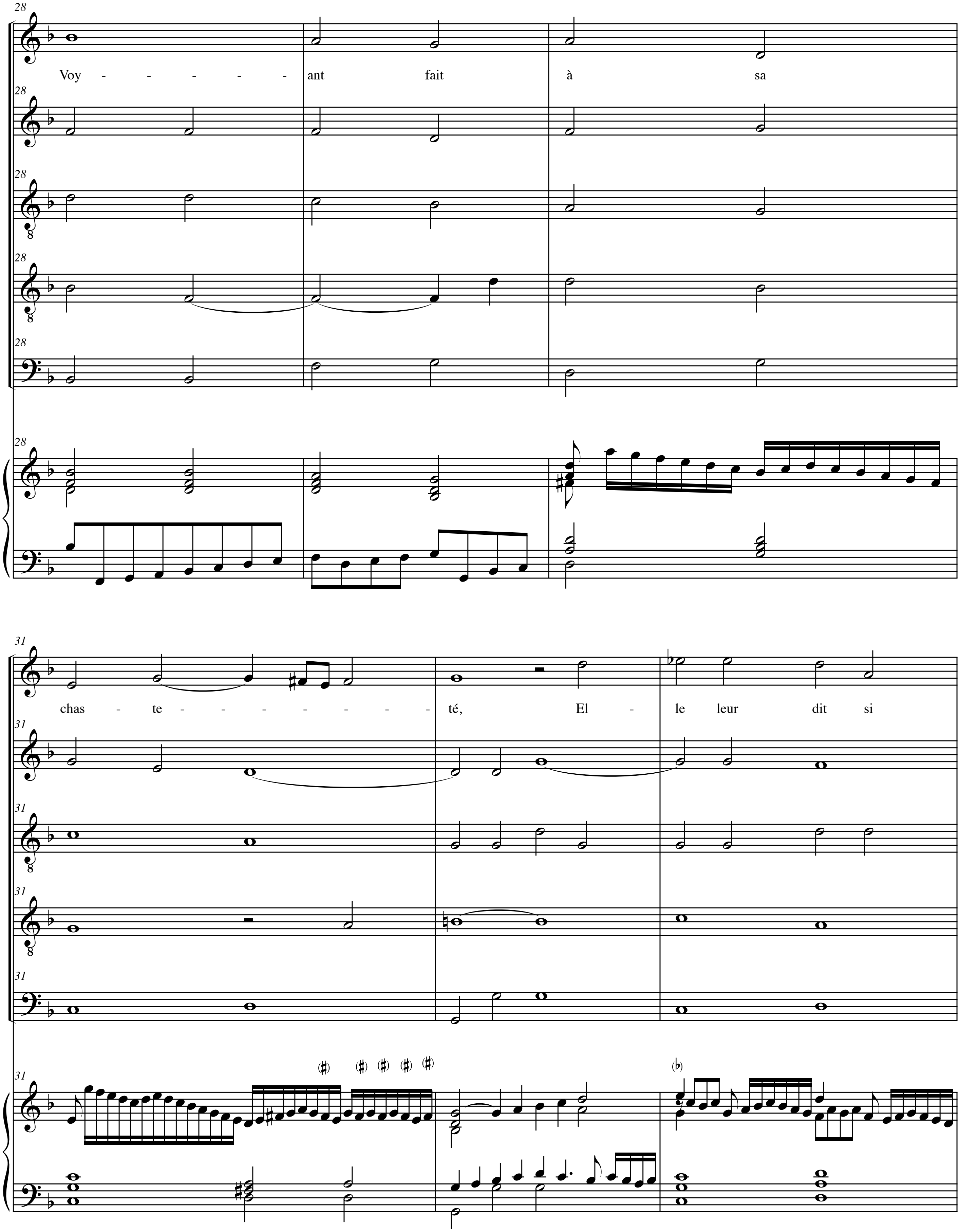

4
mour so - li - - - ci - - - té - e, Su - sa - ne un
7
jour d'a - mour so -

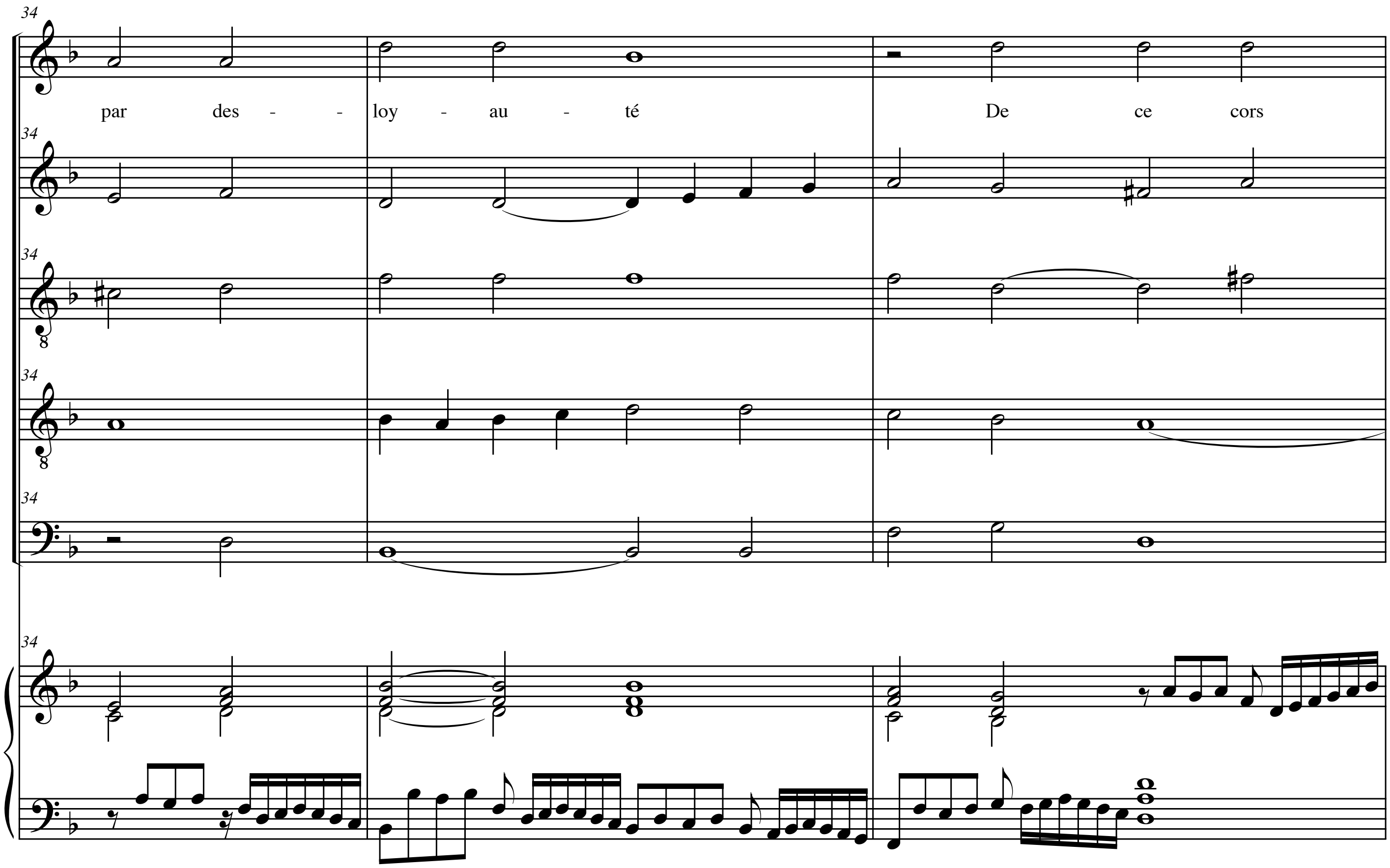

10
li - ci - té - - - - - - - - - - - - e
13
Par deux viel - lards con - voi - tans sa beau -
(♯)

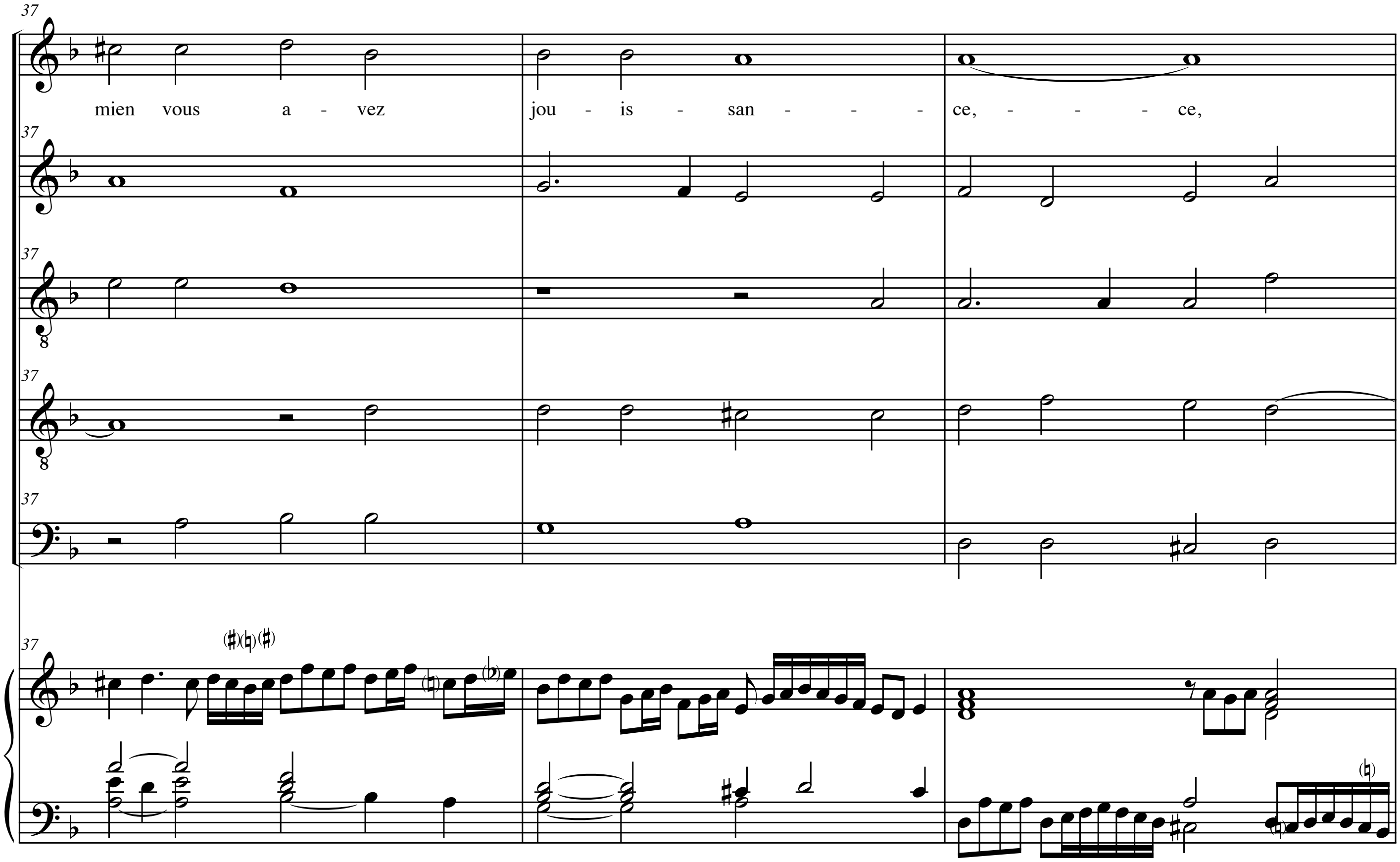

16
- - - - - - - té, Fut
en son
coeur

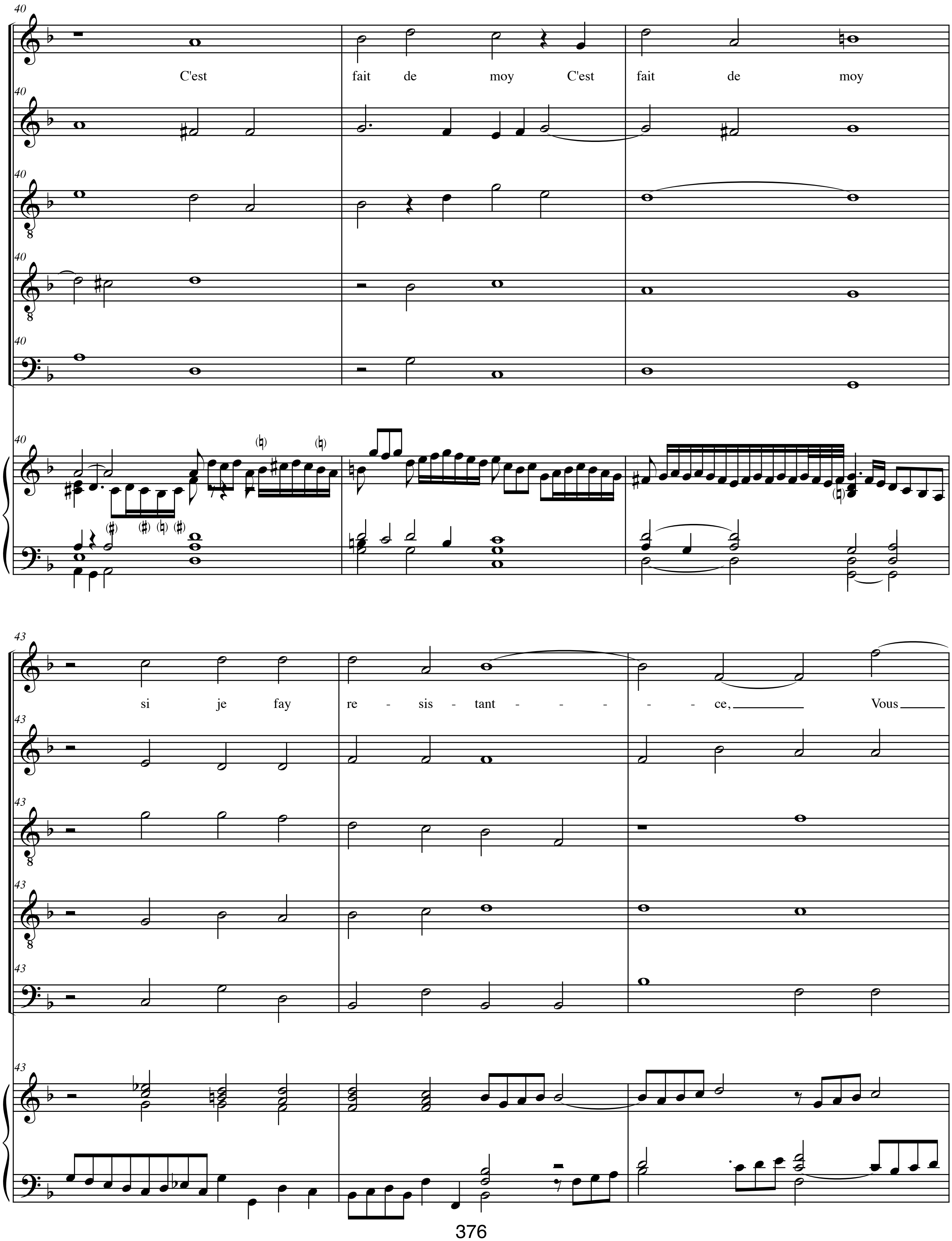

19
tris - - - te & dé -
con - for - té - e
Fut en son

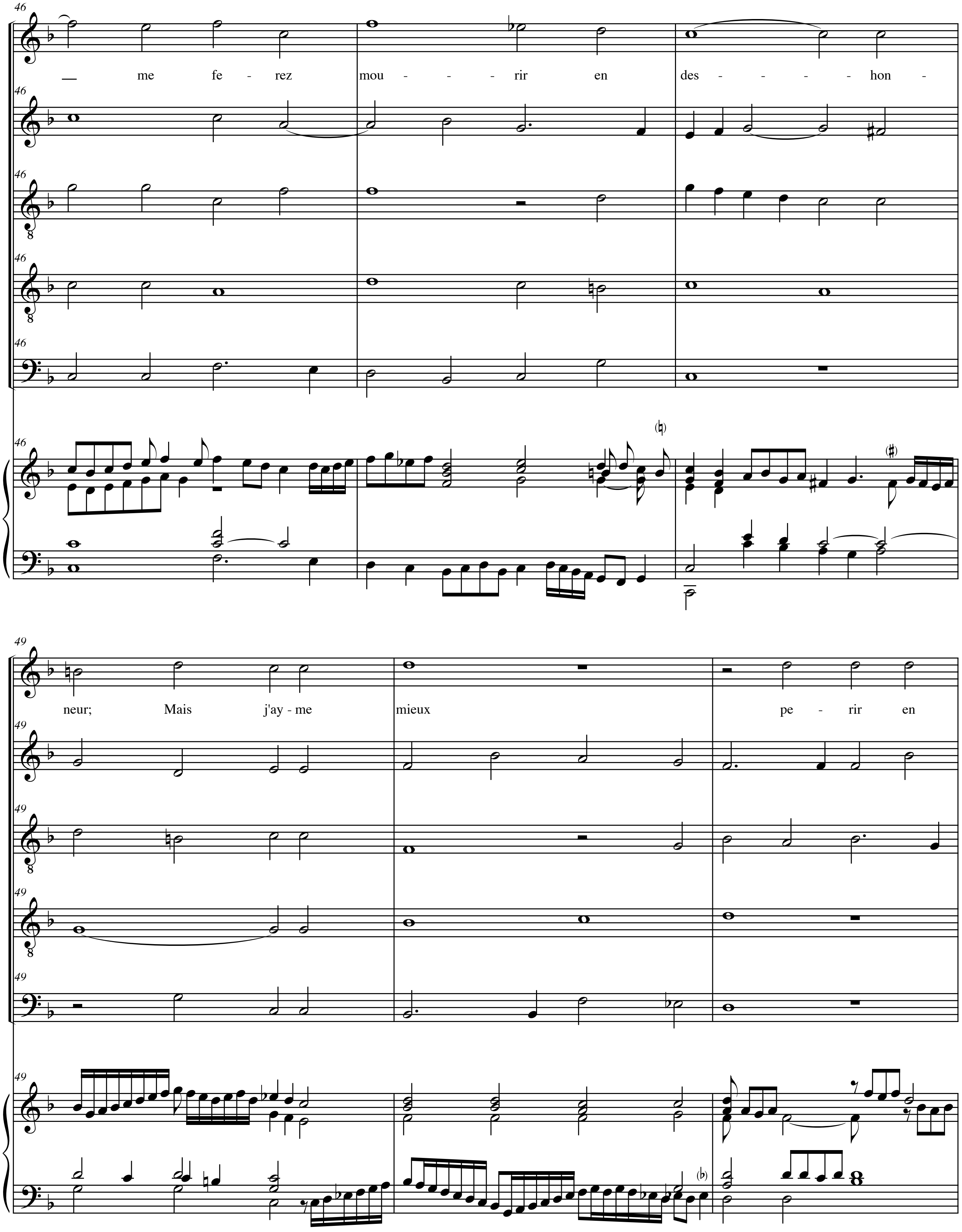

22
coeur
tris - te & dé -
25
con - for - té - - - - - - e,

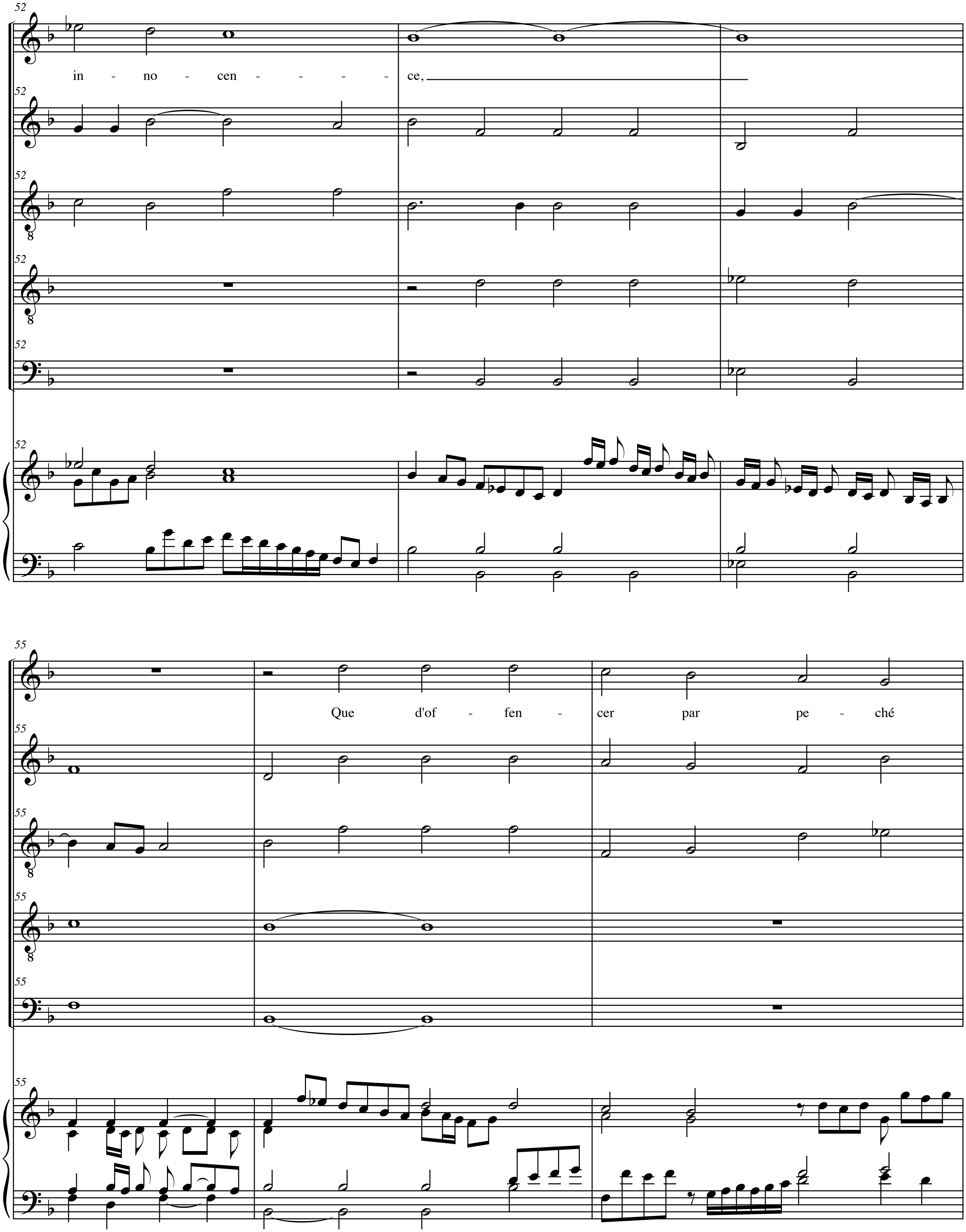

28
Voy - - - - - ant fait à sa
31
chas - te - - - - - - - - té, El - le leur dit si
(♯) (♯) (♯) (♯) (♯)
(♭)

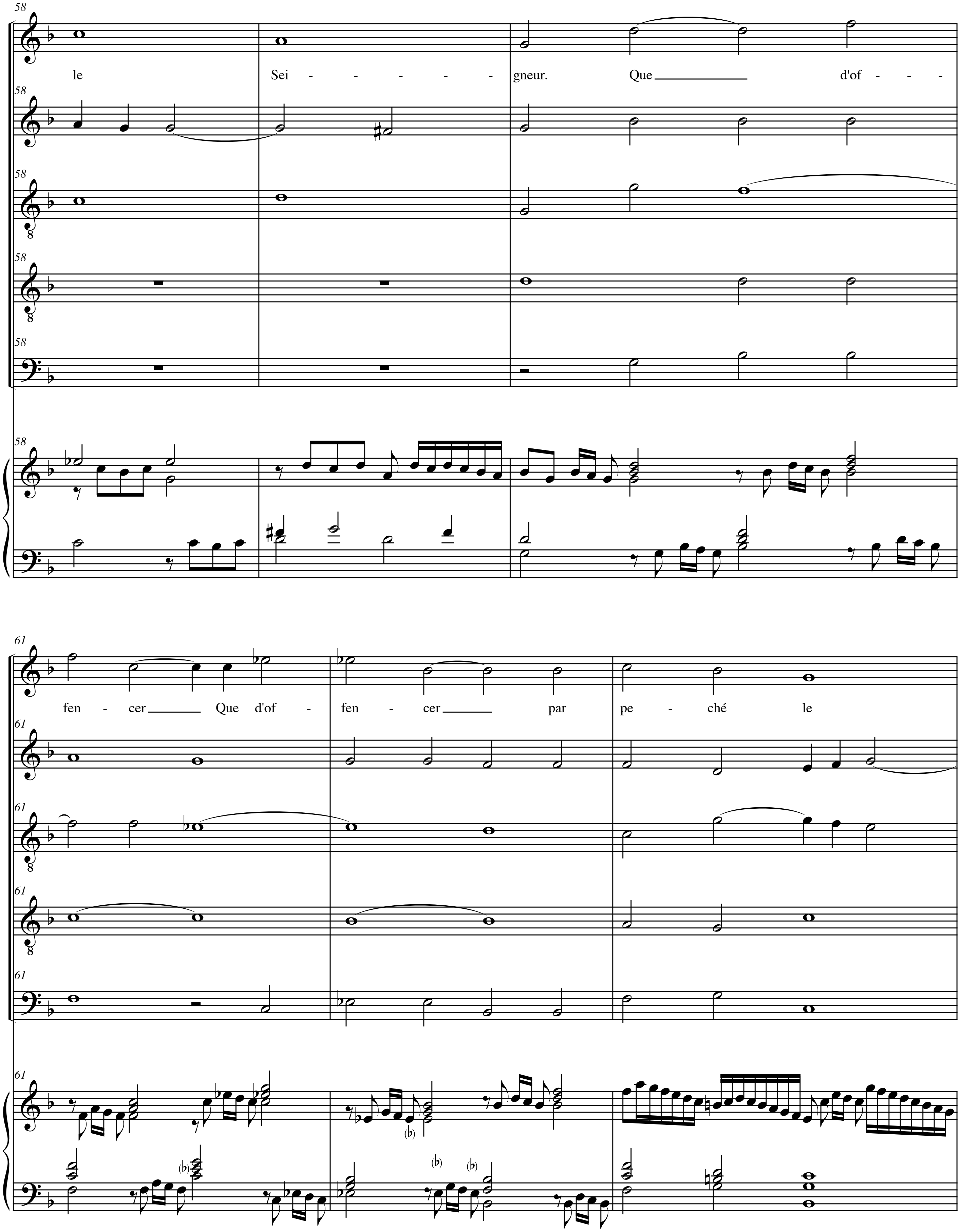

34
par des - - loy - au - té De ce cors

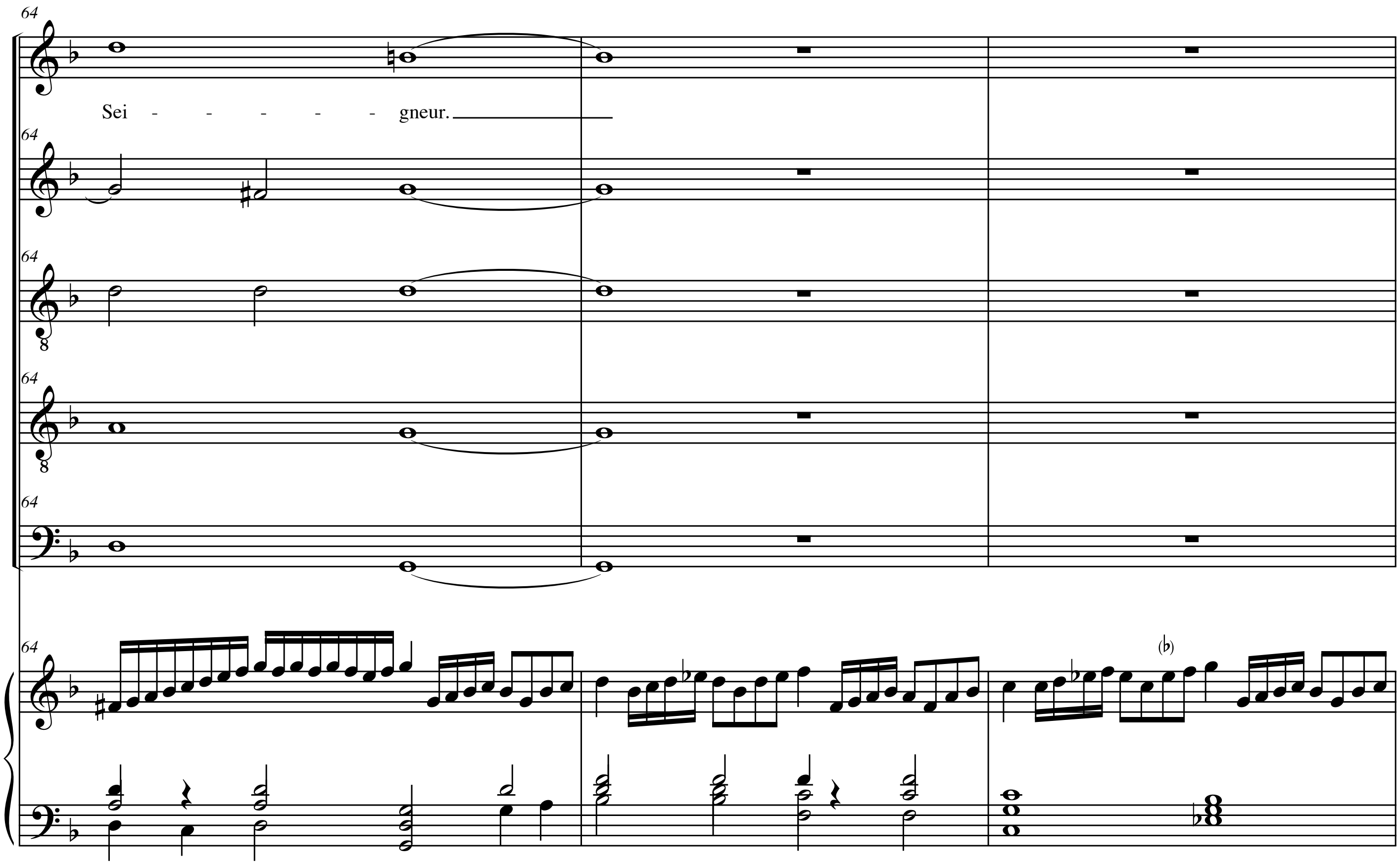

37
mien vous a - vez jou - is - san - - - ce, - - - ce,

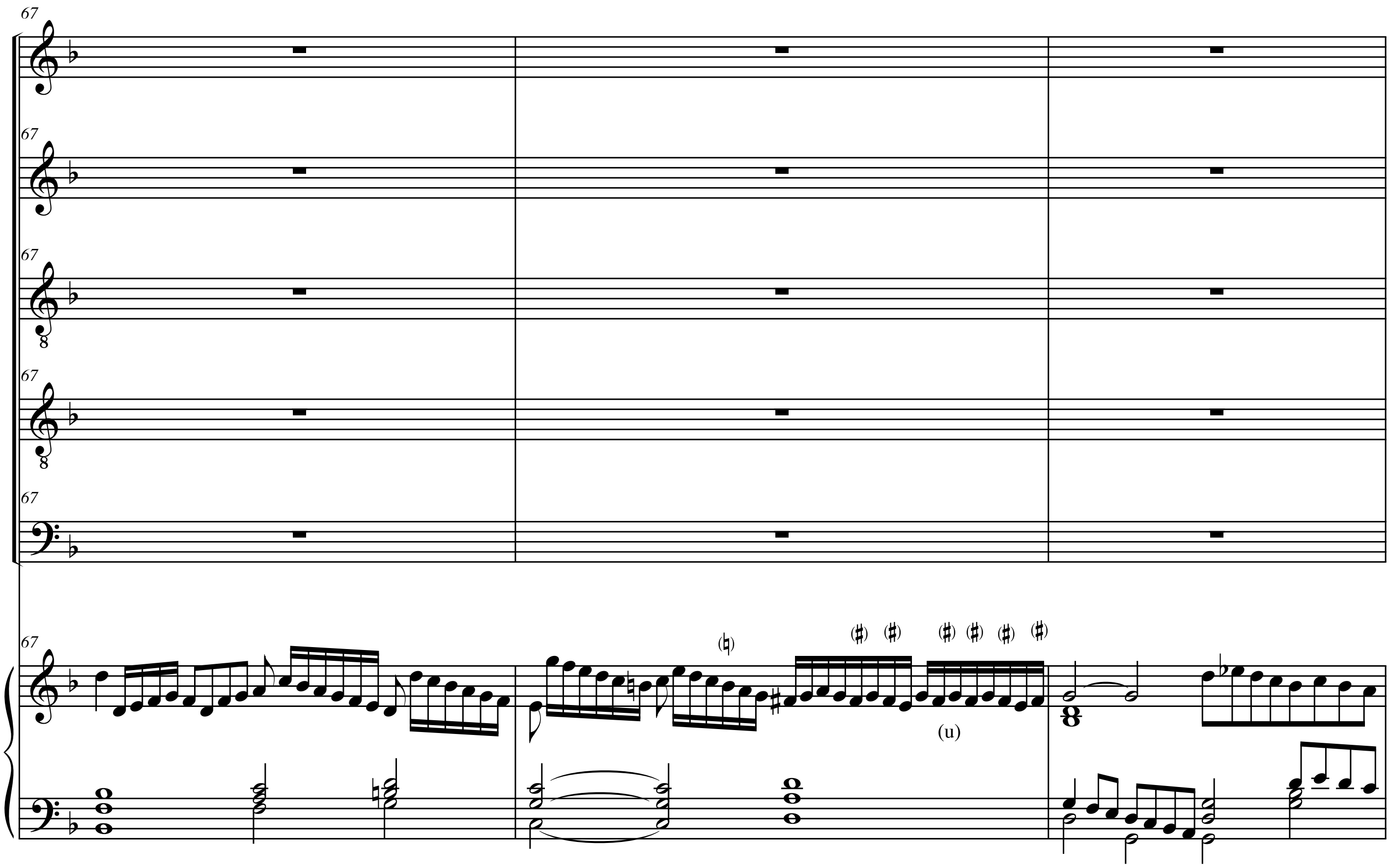

40
C'est fait de moy C'est fait de moy
43
si je fay re - sis - tant - - - - - ce, Vous

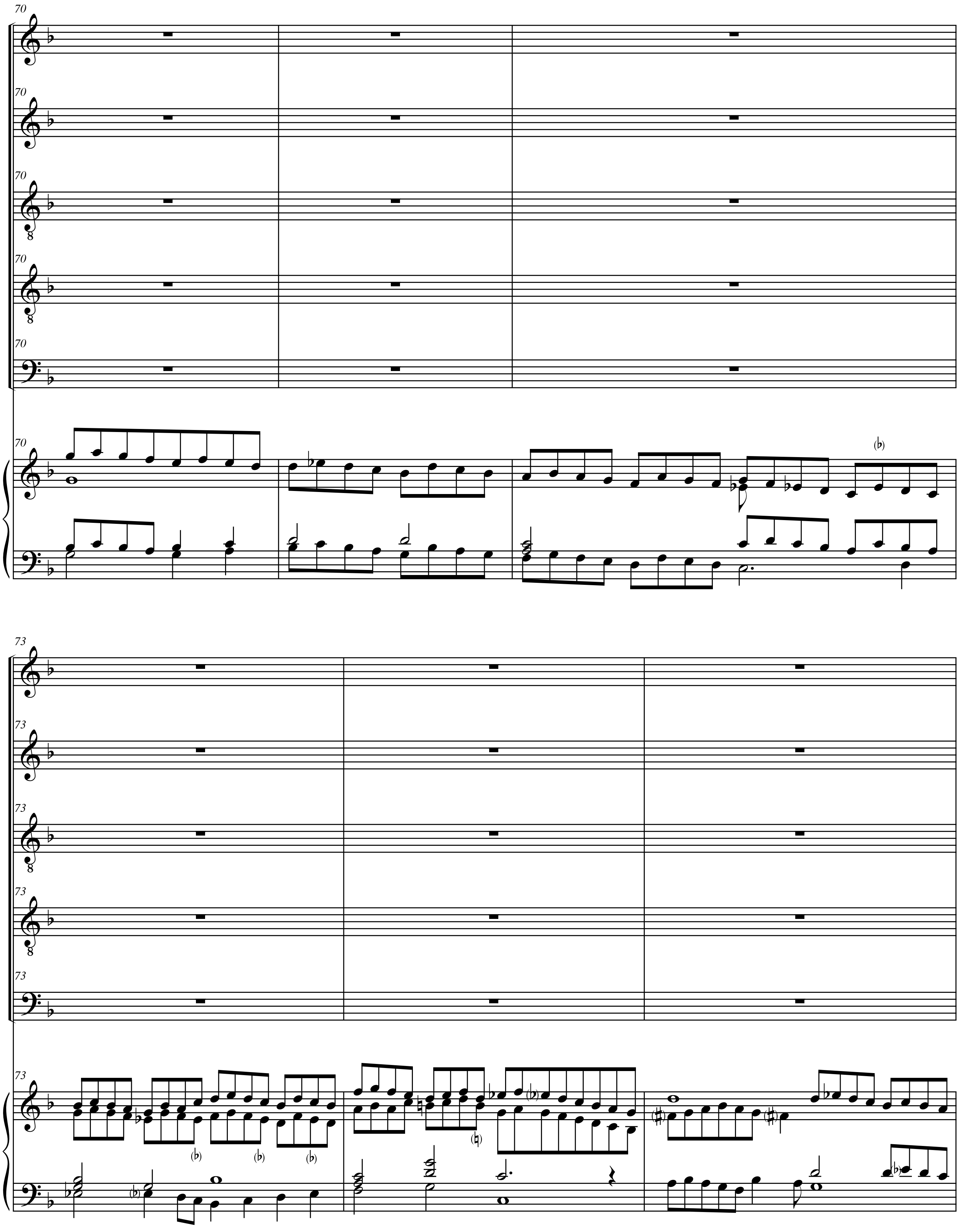

46
— me fe - rez mou - - - - rir en des - - - - - hon -
(♮)
(♯)
49
neur; Mais j'ay - me mieux pe - rir en
(♭)

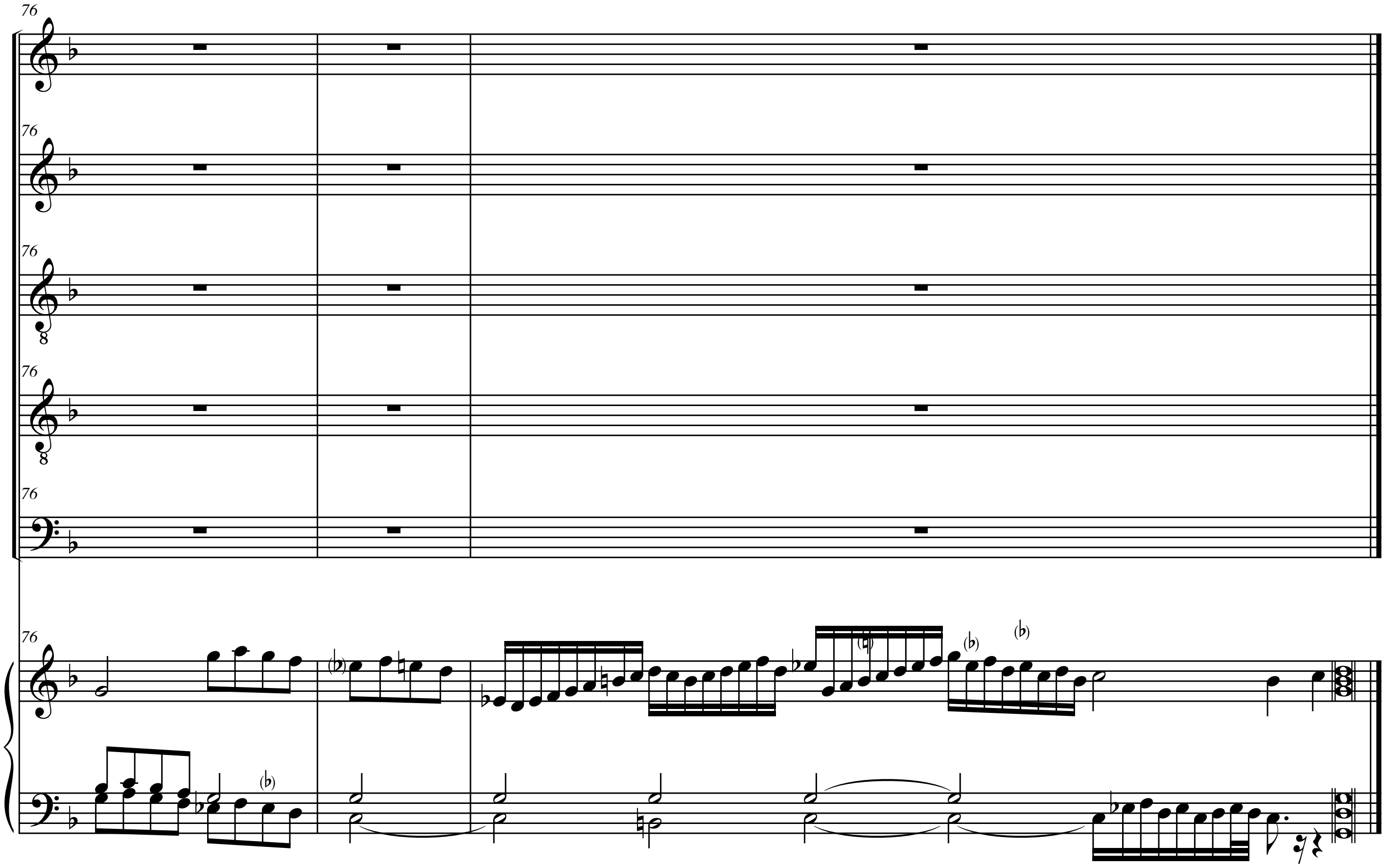

52
in - no - cen - - - - - ce,
55
Que d'of - fen - cer par pe - ché


58
le Sei - - - - - gneur. Que d'of - - -
61
fen - cer Que d'of - fen - cer par pe - ché le
(♭)


64
Sei - - - - - - gneur.
(♭)


67
(♮)
(♯) (♯)
(♯) (♯) (♯) (♯)
(u)


70
73


76
76
76
76
76
76
(♭)
(♮)
(♭)
(♭)
(♭)