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Discantare Super Planum Cantum : new approaches to vocal polyphonic improvisation 1300-1470

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Discantare super planum cantum

New Approaches to Vocal Polyphonic Improvisation 1300-1470

Niels Berentsen

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NOTE ON TERMINOLOGY, TRANSCRIPTIONS AND CITATIONS

Because this research is concerned with vocal music, conceived of without the notion of a pitch standard, all notes and note-names represent approximate, relative pitches. Note names are given in Helmholtz pitch notation (e.g. c′ for middle c). Italicised capitals (e.g. *F*) represent pitch classes. Historical note names (e.g. 'Gsolreut' for g) or solmisation syllables may be used as part of a historical quotation or discussion. Note values are called by their British names, also in discussing mensural notation (e.g. breve for *brevis*). Intervals are given in English (e.g. fifth for *diatessaron* or *quinta*), unless part of an original language quotation. Interval progressions—for instance: third to unison—are given in the following form: 3-1. Three-voice sonorities—for instance a first inversion triad—are indicated as follows: 3/5. If needed, upper and lowercase m's are used to indicate major and minor imperfect consonances (e.g. M3-5 means: major third to fifth).

The musical examples in this dissertation fall into three main categories: transcriptions of historical compositions and treatise-examples, demonstrative examples, and transcriptions of improvisations.

The historical examples have been transcribed from images of their manuscript or printed sources (facsimile editions, digital pictures or microfilms), unless otherwise indicated. References to a recommended modern, scholarly edition are provided in a footnote. References to digital or printed facsimiles used for transcription are given in the bibliography together with the sources. All examples are given in modern clefs (F4 and G2). Ligatures are indicated with horizontal closed brackets. Broken horizontal brackets indicate coloration. Manuscript accidentals are given within the staff, using ♯ for the *diesis* or 'mi-sign' and ♭ for the 'fa-sign'. (See also Glossary, 'musica ficta'). Accidentals above the staff or between parentheses are editorial. Reconstructed music is placed between vertical square brackets. Chant and polyphony notated without a clear rhythm has been transcribed in semibreves. If notated on a single staff, filled notes represent the second voice, open semibreves the tenor. The fourteenth-century mensural examples in Chapter 3 have been transcribed at various levels of reduction, corresponding to those of the referenced editions. This is in order

to facilitate comparison and to accommodate for the many different, regional variants of fourteenth-century mensural notation. The fifteenth-century mensural examples in Chapter 4 have been transcribed retaining the original note-values, unless otherwise indicated. Improvisations (e.g. Example 2.20) have been transcribed from recordings, notating only rhythm and relative pitch. The notated pitch reflects the mode of the cantus firmus, not the performance pitch. In metric improvisations, the semibreve represents the beat. Sung accidentals are given within the staff. The names of the participants are given in square brackets above the parts. For demonstrative examples (e.g. Example 2.2) the same conventions are used.

The texts cited in this dissertation likewise fall into three categories: lyrics of musical examples, passages from historical treatises, and quotations from modern, scholarly publications.

The lyrics and titles of historical pieces are given in the original spelling of the sources (e.g. 'deo gracias' instead of 'deo gratias'). Similarly, part-names are given in their original forms (e.g. superius instead of soprano). Lyrics in transcriptions of improvised polyphony are given in the spelling of the *Graduale Triplex*. Quotations from historical theoretical texts are given in English translation in the body of the text, with the original in a footnote. Not all treatises could be studied from facsimile, titles and quotations from treatises, therefore, follow the spelling of their modern editions. In citations from modern English scholarly texts the spelling of the original is retained. Foreign language quotations are given in translation in the body of the text, with the original in a footnote. Unless otherwise indicated, the authors cited are historical musicologists.

GLOSSARY

Cantare super librum (Lat.): 'singing on the book', an expression used by Johannes Tinctoris to describe performances of non-written counterpoint. The term takes its origin from the chant book, *liber cantus*, which supplied the cantus firmus for such performances.

Cantus (Lat.): 'song', when used as a part-name it refers to the upper voice of a fourteenth- or fifteenth-century polyphonic composition.

Cantus firmus (Lat.): 'firm song', a plainchant melody. In modern usage it indicates a chant, often in long values, undergoing polyphonic treatment. See also 'cantus prius factus'.

Cantus prius factus (Lat.): a pre-existing tune, either sacred or secular, which forms the basis for a polyphonic composition or improvisation. See also 'cantus firmus'.

Clausula (Lat.): 'cadence', the progression from an imperfect sonority to a perfect one in stepwise contrary motion, often at the close of a musical phrase. In a two-voice cadence (e.g. 6-8 or 3-5), one voice makes an upward stepwise soprano clausula (*cantizans*), and the other a downward stepwise tenor clausula (*tenorizans*). Three-voice cadences can be formed by doubling the soprano clausula at the lower fourth or upper fifth, producing the so-called double leading tone cadence (3/6-5/8 or 6/10-8/12). In the later fifteenth century other standardised cadential functions appear: The bass clausula (*bassizans*) is formed by 5-1 below the tenor, and the alto clausula (*altizans*) by 4-5 or 5-3 above it. See also 'musica ficta'.

Color (Lat.): see 'isorhythm'.

Contrappunto alla mente (It.): an expression used for improvised counterpoint by Italian sixteenth-century authors such as Nicola Vicentino and Gioseffo Zarlino. Tinctoris already classified *cantare super librum* as a 'mental' activity.

Contrapunctus (Lat.): 'counterpoint', a term for polyphony dating from the mid-fourteenth century. In a strict sense it refers to note-against-note-counterpoint, 'punctus contra punctum', the placement of one note against another in polyphony.

Contratenor (Lat.): a voice 'against the tenor', enriching the tenor-cantus duet. Fourteenth-century mobile contratenores mostly occupy the same range as the tenor. A special instance is the fauxbourdon-contratenor, which runs in parallel with the cantus or superius. In the late fifteenth-century contratenors specialise, either as a 'low contratenor' (*contratenor bassus*) or a 'high contratenor' (*contratenor altus*).

Discantus (Lat.): 'singing apart', a term for polyphony used between the twelfth and the seventeenth centuries. It is employed here to denote fourteenth- and early-fifteenth century polyphony based primarily on contrary motion.

Discantus / Contrapunctus floridus (Lat.): 'florid discant or counterpoint', terms referring to rhythmically varied polyphony, in which the note-against-note counterpoint has been 'broken up' into smaller values.

Fixed do solfa: a modern system of sight-reading, practised mainly in Romance-language countries, in which solmisation syllables represent fixed, absolute pitches (e.g. 'do' is *C*). 'Solfa' is used here for modern, seven-note variants of this practice, 'solmisation' for historical techniques. See also 'hexachordal solmisation' and 'moveable do solfa'.

Guidonian hand: a pedagogic aid for training singers, credited to—but probably not invented by—Guido of Arezzo. It is mental map, in which the notes of the medieval Gamut (G-e'') are projected on the joints and finger-tips of the singer's left hand. See also 'hexachordal solmisation'.

Hexachordal solmisation: a system of sight-reading, practised between the eleventh and the eighteenth centuries, credited to Guido of Arezzo. This system made use of six syllables or *voces musicales* (ut, re, mi, fa, sol, and la) known as a hexachord. Hexachords would be placed on *C*, *G* and *F,* thereby obtaining all the pitches of the Gamut. See also 'musica recta'.

Hoquetus (Lat.): 'hocket', a musical technique, used in polyphonic compositions between the thirteenth and fifteenth centuries, in which a single melody is shared between different voices. The term seems to originate from 'hoquet', the French for hiccup, because of the abrupt silences in each of the parts which result from this technique.

Improvisation model: used here to identify a technique producing a particular polyphonic texture, such as fauxbourdon, gymel or discant in adjacent

consonances. Similar concepts exist for later music in the form of 'Satzmodelle' (Ger.) or 'schemata'.

Isorhythm: a term coined by musicologist Friedrich Ludwig indicating the periodic repetition of rhythmic and melodic sequences in compositions from the thirteenth, fourteenth and fifteenth centuries, especially in tenor parts. In modern parlance, *talea* refers to a repeated string of rhythmic values, *color* to a repeated melody.

Locus communis (Lat.): 'commonplace', from the Greek 'topoi', an element of a linguistic or musical idiom which is the common property of all its users. Historically these elements were collected in 'common place books', or stored in the memory, to facilitate extemporisation.

Mensural notation: umbrella-term for the musical notations used for writing polyphony between ca. 1200 and 1600. Its historical, theoretical designations, *cantus figuralis* and *musica mensurabilis*, set it apart from plainchant notation, in which notes were not 'measurable' and—in principle—supposed to be of equal length.

Moveable do solfa: modern system of sight-reading, practised for instance in Kodály pedagogy, in which solmisation-syllables apply to scale-degrees rather than fixed pitched (e.g. 'do' for *G* as the tonic in G-major). See also 'fixed do solfa' and 'hexachordal solmisation'.

Musica ficta (Lat.): 'fictive music', notes outside of the basic medieval Gamut. Not to be confused with editorial accidentals in modern editions of medieval music, which also include *musica recta*. These notes were in use for two principal reasons: the marking of cadences with a 'leading tone' (*causa pulchritudinis*), and the correction of tritones and diminished fifths (*causa necessitatis*). Even so, musical scribes very rarely indicated such 'accidentals', and the use of *musica ficta* was part of the singer's craft. See also 'musica recta' and Section 3.1.4.

Musica recta (Lat.): 'real music', the notes of the medieval Gamut, which could be sung on one of the three basic hexachords. These are all the diatonic pitches as well as *B-flat*. See also 'hexachordal solmisation'.

Oral tradition: a form of communication in which knowledge, artistic and cultural ideas are transmitted by word of mouth from one generation to the next.

Organum (Lat.): used here to identify either 'parallel organum', the singing in parallel perfect consonances, or *organum purum*, the florid, unmeasured organum practiced for instance by the Notre Dame School.

Progression: used here either as a 'dyadic progression', the progression of one interval to the next (e.g. 5-6), or as the succession between two multi-voice sonorities, analogous to a 'chord progression' in later music (e.g. 8/5-3/5).

Resfacta (Lat.): 'made thing', a term used by Johannes Tinctoris to indicate a notated 'piece' of polyphony. See also 'cantare super librum'.

Simple polyphony: a repertoire of largely homophonic polyphony from the fourteenth and fifteenth centuries, often—but not always—written in plainchant neumes or 'mixed' notations, using elements from both chant, and mensural notation.

Species counterpoint: a method of teaching counterpoint through a number of stages or *species* with an increasing number of notes of the counterpoint for every note of the tenor. This method was so named by Johann Joseph Fux in the eighteenth century, but had—in different varieties—already been in use since the late fifteenth century.

Superius (Lat.): 'soprano', a general fifteenth-century name for the upper part in a polyphonic composition. See also 'cantus'.

Talea (Lat.): see 'isorhythm'.

Tenor (Lat.): term indicating either the tenor-part of a polyphonic composition, or the *cantus prius factus* on top of which the polyphony is constructed. See also 'cantus firmus'.

1 INTRODUCTION

This thesis is the result of some five years of research into historical improvised polyphony, particularly of the late medieval period (ca. 1300-1500). As it was undertaken within the framework of an artistic research PhD, it is largely practical in aim, and I will describe my experiences with polyphony as a teacher and an improviser, as well as a researcher and analyst. The paradoxes inherent in such an approach may seem obvious: what can actually be known about non-written musical traditions that died out long before the advent of recording technology; and how can one gain 'practical experience' with historical phenomena, especially such transient ones as musical improvisation?

I will argue that we *can* actually learn enough about these extinct musical idioms to be able to improvise in them, be it in our own, limited ways. The written remains of late-medieval musical culture, the treatises and compositions left to us, are often surprisingly rich in information on this topic. As such, the reader will note that substantial parts of this thesis will be devoted to what one could consider purely music-historical or -analytical matters: close reading of historical treatises and analysis of compositions. In these sections, I will use the traditional methods available to music historians, and also seek to contribute to the scholarly debate. This work is, however, also practice-oriented, and illuminates aspects of historical materials that have inspired the development of my practical experiments with improvised polyphony. As a result of these scholarly inquiries, I will formulate certain strategies or techniques to extemporise two- or three-voice polyphony. Most of these—I claim—anyone with a good ear and a reasonable command of their voice can use to produce one's own 'instant polyphony'.

I hope to show in this dissertation how we may re-utilise elements of the late-medieval teaching of polyphony, not just to gain an analytical understanding of this music, but an experiential one as well. Such experiences are obviously important for musicians performing late-medieval music, because they will help them to contextualise that repertoire. For music students, improvising polyphony is an effective way to develop musicianship skills, such as playing, singing and thinking polyphonically, intonation, and even sight-reading. I would

argue that experience in improvising polyphony is beneficial even for those dealing with the late-medieval repertoire in a theoretical way, such as historical musicologists and music theorists. As will be shown in Chapter 2, medieval musicians primarily conceived of polyphony not through notation but through sound and singing. Any informed analysis of medieval music, therefore, needs to take this 'primacy of sounding' into account. Analysts also will profit from understanding historical improvisational techniques in order to distinguish the specific 'authorial' features of historical compositions from those elements that simply are the *loci communes* of a style.

In this introductory chapter I will first give a brief description of the state of research into improvised polyphony, both among scholars (music historians and theorists) and practitioners (teachers and performers of early music). Second, I will discuss what I see as the relevance of my project and elucidate what questions I aim to answer specifically. Third, I will expose my methodology, focussing on its more 'unorthodox' practical and experimental aspects. I will attempt to answer the question what status could be given to such practical experiences in the scholarly debate, and what one can actually 're-enact' by improvising in a historical style.

1.1 Improvised Polyphony in Practice and Scholarship

A comprehensive survey of current scholarship on extempore polyphony is given in Chapter 2, for which reason—at present—I will provide only a short overview of its development. Occasional references to practices of polyphonic improvisation were already made by nineteenth-century music historians, such as François-Joseph Fétis (1784-1871) and Hugo Riemann (1849-1919).[1] The first serious attempt at describing these phenomena, however, was made by the Hungarian musicologist and music educator Ernst Ferand in his monumental work *Die Improvisation in der Musik* (Zürich, 1938).[2] Ferand (1887-1972) gave a follow-up on this book with a number of publications on historical improvisation, particularly of the Renaissance and early Baroque periods, among which his ever popular anthology *Improvisation in Nine Centuries of Western Music* (Cologne, 1961). Until the 1980s, however, these topics seem to have been only sparsely explored by other scholars of early music.[3]

Over the last thirty years, the amount of scholarship on the subject has literally exploded. Scholars have taken on extempore polyphony from a variety of angles: Historical musicologists, such as Rob Wegman and Philippe Canguilhem, have studied archival references, the history of musical establishments, and the schooling of choirboys, to draw a picture of these practices within their socio-cultural environment.[4] Scholars of music theory, such as Klaus-Jürgen Sachs and Peter Schubert, have identified contrapuntal techniques—taught by historical authors to improvise—in written compositions, pointing to the continuity between improvisation and composition in the craft of historical musicians.[5] Methods from ethnomusicology have enabled scholars such as Leo Treitler to identify features, like the use of 'patterns' and a

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[1] See Ernst Ferand, *Die Improvisation in der Musik. Eine entwicklungsgeschichtliche und psychologische Untersuchung* (Zürich: Rhein-Verlag, 1938), p. 127, n. 2, 6 and 7.
[2] Ferand, rather tellingly, had a career combining several 'practical' activities—such as music education, criticism, production and performance—with scholarship. See Ramona H. Matthews, 'Ferand, Ernest T.', *Grove Music Online* [accessed 16 August 2016].
[3] A positive re-appraisal of Ferands work may be seen in Philippe Canguilhem, 'Le Projet FABRICA: Oralité et écriture dans les pratiques polyphoniques du chant ecclésiastique (xvie – xxe siècles)', *Journal of the Alamire Foundation*, 2 (2010), pp. 272–281 (p. 272); Giuseppe Fiorentino, '"Con Ayuda de Nuestro Señor": Teaching Improvised Counterpoint in Sixteenth-Century Spain', in *New Perspectives on Early Music in Spain*, ed. by Tess Knighton and Emilio Ros-Fábregas, Iberian Early Music Studies 1 (Kassel: Edition Reichenberger, 2015), pp. 356–379 (p. 356).
[4] See Sections 2.2.1 and 2.2.2.
[5] See Chapters 3 and 4.

'framework', as structuring agents, which pre-modern musical traditions have in common with non-Western ones.[6] Finally, research on medieval and Ancient mnemotechnics, by literary historian Mary Carruthers in particular, has enabled Anna Maria Busse-Berger to explain certain features of medieval musical treatises that had not previously been well understood.[7] Perspectives from both ethnomusicology and 'art of memory' scholarship, moreover, have helped to resolve the false, modern opposition between memorisation and improvisation, as purely 'reproductive' and 'spontaneous' musical acts. In fact, as scholars of oral poetry also report, 'oral composition' requires a well-stocked memory, and performers of oral musical and poetic traditions are able to produce coherent results, consistent between different performances.[8]

It seems that performers of early music have been somewhat quicker to catch onto the improvisatory aspect of medieval and Renaissance music. The crucial and pioneering role of performers in the investigation of improvised polyphony was also recognised by Philippe Canguilhem, who stated that 'musicology has mostly ignored the numerous areas of research opened [by Ferand], while for some years early music groups such as Capilla Flamenca, Le Chant sur le Livre and the ensemble Obsidienne have gone directly to the sources to attempt to revive these practices, without their experiences being prepared, taken on, or accompanied by academic research.'[9] Among the groups mentioned by Canguilhem, Le Chant sur le Livre in particular has been at the avant-garde of the revival of improvised polyphony in Europe.[10] In addition to these, polyphonic

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[6] See Section 2.1.2 and 2.1.3.

[7] See Section 2.2.2. Mary Carruthers, *The Book of Memory: A Study of Memory in Medieval Culture*, Cambridge Studies in Medieval Literature (Cambridge: Cambridge University Press, 2008).

[8] See for instance John D. Niles, *Homo Narrans: The Poetics and Anthropology of Oral Literature* (University of Pennsylvania Press, 1999), p. 94.

[9] 'En effet, depuis la parution en 1956 de l'article fondamental d'Ernst Ferand, la musicologie dans sa grande majorité a continué d'ignorer les nombreuses pistes de recherches qu'il ouvrait, tandis que depuis quelques années, des groupes de musique ancienne tels que la Capilla Flamenca, l'ensemble Le Chant sur le Livre, ou l'ensemble Obsidienne sont allés directement aux sources pour tenter de faire revivre ces pratiques sans que leurs expériences soient préparées, relayées ou accompagnées par la recherche académique.' Canguilhem, 'Le Projet FABRICA: Oralité et écriture dans les pratiques polyphoniques du chant ecclésiastique (xvie – xxe siècles)', p 272. Translation by the author.

[10] Le Chant sur le Livre does not have a website, but it can be heard performing here: <https://www.youtube.com/watch?v=d86iB7LVM98>, <https://www.youtube.com/watch?v=WZnBKEnS8UI>, and <https://www.youtube.com/watch?v=2xEV94dBjqI>. Capilla Flamenca was dissolved in 2014, with the passing of its artistic director, Dirk Snellings, see <https://en.wikipedia.org/wiki/Capilla_Flamenca>. For the ensemble Obsidienne see <http://www. obsidienne.fr/> [accessed 13 August 2016].

improvisations have been shown in performances and demonstrations by the ensembles Coclico (dir. Barnabé Janin), Currentes (dir. Jostein Gundersen), Ciaramella (Adam Gilbert e.a.), and The Scroll Ensemble (dir. James Hewitt).[11] Others, such as the Huelgas Ensemble (dir. Paul van Nevel), have shaped programmes around the phenomenon of improvised polyphony, but without actually improvising in them.[12] Festivals dedicated to improvisation in early music, including improvised polyphony, are the Festival de Musique Improvisée de Lausanne and the Leipziger Improvisationsfestival für Alte Musik.[13]

Besides performers, an important role in the modern 'revival' of historical improvisation has been played by music theory instructors at North American universities and European conservatoires, who—like Ferand—came to realise the pedagogical utility of these techniques.[14] Important contributions to our understanding of improvised counterpoint in the Renaissance, for instance, have been made by pedagogues such as Jean-Yves Haymoz (Haute École de Musique de Genève), Peter Schubert (McGill University, Montreal), Markus Jans (Schola Cantorum Basiliensis) and Ross Duffin (Case Western Reserve University, Cleveland). Most of these individuals are academics as well, and therefore eminently suited to mediate between the worlds of scholarship and pedagogical and musical practice. Unfortunately, the work of academically unaffiliated musicians, who may never publicise their experiences except through teaching and performance, is a lot harder to indentify. I will sometimes make reference to the 'unpublished' work of musicians when I know it from personal experience. It would, however, go beyond the scope of this thesis to provide a comprehensive history or ethnography of the modern revival of improvised polyphony.

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[11] See <http://coclico.oboka.org>, <http://www.currentes.com>, <http://www.naxos.com/person/ciaramella/33121.htm>, and <http://www.thescrollensemble.com> [accessed 16 August 2016].

[12] A recording of a concert of the Huelgas Ensemble dedicated to 'contrappunto alla mente' at the Utrecht Early Music Festival 2005 can be accessed at <http://archief.wereldomroep.nl/english/radioshow/franco-flemish-polyphony> [accessed 16 August 2016].

[13] See <http://www.fmil.org>, and <http://www.improfestival-leipzig.de> [accessed 16 August 2016].

[14] On Ferand's pedagogical motivations, see also Chapter 5.

1.2 Research Goals, Questions and Hypotheses

The aims of this research are first and foremost practical ones, concerned with teaching and improvising polyphony in the here and now, albeit in a historically informed way. My activities as a teacher focus mainly on repertoires before 1600, and, as such, I am primarily interested in techniques from this period. As will be shown in Chapter 5, practical approaches to polyphonic improvisation already exist for many repertoires of the pre-modern era: the organum of the Notre Dame school, fifteenth-century *cantare super librum*, and the 'contrappunto alla mente' of the sixteenth century. To develop a practice or pedagogy of improvisation in these styles, in other words, one does not have to start from scratch, but can build on already existing practices and ideas. However, this is not the case for the polyphony of the early fifteenth, and especially the fourteenth century, for which no such approach exists to date. One of the goals of my research, therefore, is to formulate strategies and techniques to extemporise polyphony in fourteenth- and early fifteenth-century styles, and to be able to teach this repertoire in an interactive, aural and improvisation-based way.

Over the course of the research process, these goals have crystallised into the following research questions:

1) *What historical information do we possess about the performance of extempore polyphony in the late-medieval period?*

2) *Which polyphonic techniques can I identify in fourteenth-century treatises and compositions that can be used to improvise against a plainchant?*

3) *What can I add to the current understanding of fifteenth-century improvisational techniques?*

4) *How can these and other findings from scholarship and experiments be effectively valorised in musical education?*

Partly in response to these questions, I have formulated the following hypotheses, in the form of short, affirmative statements, reflecting the basic assumptions and attitudes I originally brought to this research. I will return to these statements in my conclusion, to ask whether or not they have been validated by my research and experiences. When dealing with more specific music-analytical or -historical issues, I will clearly indicate which claims I am seeking to test in the chapter itself.

A) *Like a dead language (e.g. Latin), a historical musical idiom can be 'spoken again', as long as there is enough material left to work from.*

B) *In order to learn how to extemporise, it is more useful to study the 'tricks' and colloquialisms of a style than the 'official' rules given by theorists.*

C) *Such* loci communes *must exist for fourteenth- and early fifteenth-century music, as they exist for all other repertoires of the Western canon.*

D) *Practical experiments with improvisation can assist scholarship on historical polyphony to ask the 'right' questions of the sources.*

E) *To truly 'know' a musical idiom means to be able to extemporise in it: Being able to recite Schiller is not the same as speaking German.*

F) *Vocal polyphonic improvisation is useful not only for acquiring stylistic knowledge but also for improving musicianship skills.*

1.3 Methodology

Before outlining my research methodology, I will return, first, to the methodological problems facing a project on historical improvisation that combines historical, music-analytical and experimental approaches. What is the status of the experiment in such research? Can one use it to verify hypotheses based on historical evidence? Do similar approaches already exist, and what is the best way to make such practical experiences part of the discourse? Finally, what am I really 'reconstructing' when I improvise in a historical style? This is essential, because important theoretical objections have been raised by scholars to claims of 'authenticity' for current performance practices of early music in general, and the possibility of reconstructing historical practices of musical improvisation in particular.[15]

1.3.1 Experiential Knowledge and Historical Scholarship

I was surprised to find that experiential knowledge, gained by 'doing it', already plays a role in academic scholarship on historical polyphony. In publications on improvisation, musicologists Peter Schubert and Timothy McGee explicitly refer to practical experiments with specific polyphonic techniques.[16] In both cases, an important part of the argument rests on being able to demonstrate these techniques in practice.[17] The same goes for John Milsom's experiments with 'forensic analysis', which involve the making of replicas of historical compositions, to see how these could have been made, and whether this would

[15] See for instance Richard Taruskin, 'The Authenticity Movement Can Become a Positivistic Purgatory, Literalistic and Dehumanizing', *Early Music*, 12 (1984), pp. 3–12. Thoughts on the (im)possibility of reconstructing past improvisatory practices can be found in Max Haas, 'Schwierigkeiten mit dem Begriff "Improvisation" im Mittelalter', *Basler Jahrbuch für historische Musikpraxis*, 31 (2007), pp. 13–24; Andreas Haug, ''Improvisation und Mittelalterliche Musik: 1983 bis 2008', *Basler Jahrbuch für historische Musikpraxis*, 31 (2007), pp. 25–33. For an in-depth discussion of the issue of modern performance of medieval music, its historical background, and interactions with scholarship see Daniel Leech-Wilkinson, *The Modern Invention of Medieval Music: Scholarship, Ideology, Performance* (Cambridge: Cambridge University Press, 2002).
[16] See Peter Schubert, 'From Improvisation to Composition Three 16th Century Case Studies', in *Improvising Early Music*, ed. by Dirk Moelants, Collected Writings of the Orpheus Institute (Leuven: Leuven University Press, 2014), pp. 93–130; Timothy J. McGee, 'Cantare All' Improviso. Improvising on Poetry in Late-Medieval Italy', in *Improvisation in the Arts of the Middle Ages and Renaissance* (Kalamazoo: Medieval Institute Publications, Western Michigan University, 2013), pp. 31–70 (pp. 61–63 and 70, n. 20).
[17] Peter Schubert, for instance, provides transcriptions of improvisations by Catherine Motuz, Steven Vande Moortele and himself, on p. 103 and 113-114.

have been 'difficult' for historical composers.[18] It turns out that even the most methodologically rigorous scholars of early music will occasionally base argumentations on their own experiences recreating past practices. Margaret Bent, for instance, has argued that in order to supply editorial accidentals in editions of fifteenth-century music, one needs experience in singing from the original mensural notation, as she evidently has herself.[19] Historians of music are also not alone in doing so; in the introduction to the second edition of *The Book of Memory* (2008), historian of literature Mary Carruthers, for instance, describes practising a medieval mnemonic technique while commuting between work and home on the Chicago elevated train.[20]

There is little doubt, however, that prevailing methodological norms in the humanities do not encourage scholars to shape their research around practical experiences. This is at least partly the raison-d'être for a doctoral programme like docARTES, which gives musicians the opportunity to develop research in and through their own artistic practice in a way that would not be possible in a department of musicology. I feel, however, that it is important—especially in the field of early music—for artistic researchers and musicologists not to lose sight of what is happening on the other side of the interdisciplinary divide. This is particularly necessary because historical musicologists often do argue practical points—occasionally even from personal experience—and many early music performers do actually have a historical axe or two to grind. How, then, can I make my findings from practical experience part of the discourse, not only among my fellow musicians, but in a scholarly context as well?

In an essay entitled 'Performance Practice, Experimental Archaeology, and the Problem of the Respectability of Results' (2003), musicologist Randall

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[18] See John Milsom, 'Hard Composing; Hard Performing; Hard Listening', *Early Music*, 41.1 (2013), pp. 108–112.

[19] See Margaret Bent, *Counterpoint, Composition, and Musica Ficta* (New York, London: Routledge, 2002), pp. 201–202. '(...) the answers to many of these questions follow naturally from the experience of reading and singing from original notation (...) We need at least to learn (by doing it) to *simulate* that experience, so that in using modern scores we can make allowance for their inherent distortions (...)' I can testify from personal experience, in a workshop taught by Bent in 2011, that she is an outstanding sight-reader of early mensural notation.

[20] See Carruthers, pp. xiii–xiv. 'I spent several months, while commuting to work in Chicago on the elevated train, memorizing psalms with the method Hugh [of St. Victor] described (...) Many people have asked me over the years if memory arts really work. The answer to that is yes – if you know how to use them.' It appears that this experiment played an important role in shaping one of the central theses of Carruther's book, namely that the utility of such techniques lies in the 'retrieval' rather than in the 'storing' of memories.

Rosenfeld has argued for adopting methods from experimental archaeology in experiments with historical improvisation. Experimental archaeology is a sub-discipline in which archaeologists devise practical experiments to test the validity of assumptions made about past human behaviour and artefacts.[21] Classic examples of such experiments include replicating tools and vehicles and testing the efficiency of different ways of using them. The benefit of adopting this method, according to Rosenfeld, is that it 'offers a way to use critically controlled performances as evidence in the scholarly literature—evidence supplemental to that of more traditional sources, evidence which can be used when there is nothing from more traditional sources.'[22] Many musicians—myself included—may be quick to object to such an exclusively utilitarian and ancillary conception of a part of their musical practice. It may be worthwhile, however, to reflect on the methodological principles laid out by Rosenfeld, to see whether they can indeed be helpful for practice-based research on historical improvisation.

The first of these guidelines is that one must only use 'original materials' which would have been available to historical practitioners. [23] However, what exactly is the 'material' of music? Being trained as a composer, I am used to thinking of elements like chords, melodies and rhythms as 'musical materials', and one can definitely attempt to use only those 'original' to the historical style one improvises in. However, are these not the 'techniques' one uses to improvise, with one's instrument or voice as 'material'? Or, in my own case, should I regard the *cantus prius factus* as the 'basic material' of my improvisation? In both cases problems arise: if one may use only period instruments for exploring methods of historical improvisation, what about vocal music? Also, does John Milsom, for instance, invalidate his demonstration of a historical method of composition, by using *Happy Birthday* as a cantus firmus?[24] I would argue that non-period instruments and tunes can actually serve as well as 'original' ones, depending on what one seeks to demonstrate. The usefulness of this criterion, therefore, depends entirely on what one defines as 'material' in the context of the particular

[21] See for instance Mark G. Plew, 'Experimental Archaeology', in *The Oxford Compendium to Archaeology*, ed. by Brian. M. Fagan and Charlotte Beck (Oxford, New York, 1996), pp. 564–565.
[22] Randall A. Rosenfeld, 'Performance Practice, Experimental Archaeology, and the Problem of the Respectability of Results', in *Improvisation in the Arts of the Middle Ages and Renaissance*, ed. by Timothy J. McGee (Kalamazoo: Medieval Institute Publications, Western Michigan University, 2003), pp. 71–79 (p. 84).
[23] These are listed in ibid., pp. 81-82.
[24] See Milsom, p. 109.

experiment. In my own experiments, I will employ mostly 'original' chant melodies, as well as period methods of improvisation. Other aspects of these performances, like vocal technique or phrasing, are immaterial to what I want to demonstrate, and I claim no 'authenticity' in these respects.

The second principle mentioned by Rosenfeld is that the participants should not be 'inexpert, incompetent or inexperienced' with historical techniques. The only way to achieve this, in my experience, is by lengthy collaboration between researchers and their collaborators. This will not only blur the line between experiment and preparation, but also between 'experimenter' and 'experimental subject', in a way that does not seem consistent with the 'critically controlled' experimental process proposed by Rosenfeld.[25] It seems to me, therefore, that the criterion of expertise and experience should also be extended to 'experimenters', who will not be able to properly guide, prepare or assess their experiments without being a competent improvisers themselves.

Among the more useful principles cited is the idea that practitioners should be informed about and sympathetic to the aim of the experiment. It may be very difficult indeed, for instance, to obtain good results with musicians who do not see the point of improvising in a certain style, or who do not believe a positive outcome can be achieved. Helpful, also, is the idea that parameters and limits to the experiment should be well defined; I have found it useful, for instance, to state precisely what genre or style we are seeking to imitate. This has the benefit of establishing clear stylistic norms, determining which type of progressions and ornaments are 'in' and which ones are 'out', for instance. Furthermore, I am of the opinion that this is a way for me to assess the 'success' or 'failure' of such an experiment, a point to which I will return shortly.

In sum, I agree with Rosenfeld that experimental archaeology can be a useful analogy for the role of experiments with performance practice in music studies. However, there is an essential difference between the artefacts and practices with which experimental archaeology is concerned, and a complex, artistic operation such as musical performance; this methodology can thus not simply be adopted wholesale for such experiments. A vital point to consider is that not only the physique, but also the life-style, culture and mental processes of

[25] For my approach towards this process, see Section 5.2.1.

modern subjects differ significantly from those of their historical counterparts.[26] Such differences may not play a decisive role in utilitarian, object-bound operations, such as operating stone tools or baking bread, but they certainly do in those involving higher mental processes as well as socio-cultural and aesthetic attitudes.

What, then, am I really able to demonstrate in experiments with medieval improvisatory techniques? The most credible and reliable way to proceed, it seems to me, is to transcribe the results of an improvisation and compare it with historical compositions, as I will do in Chapter 3. Obviously, this means limiting the comparison to 'musical texts', considering only those parameters that survive in the notation of the historic examples: rhythm, (relative) pitch, and—secondarily—counterpoint. I do not claim, in other words, that my experiments lead to 'sound authentic' results—to borrow a term from philosopher Peter Kivy—because the sonic aspect of medieval music is lost and ultimately inaccessible to us.[27] What I can however seek to demonstrate is that extemporisations using certain techniques produce musical texts similar to repertoire examples. This type of comparison is justifiable, because, as we will see in Chapter 2, historical authors do not sharply divide between composition and improvisation, and it can be assumed the same techniques would have been used in both. My experiments are also reproducible because other practitioners can use the same techniques and compare their results with mine. Even readers who do not have the time to replicate my experiments may readily understand how a musical example was obtained with a certain technique and judge for themselves whether my inferences seem credible or not.

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[26] This is a significant consideration in connection with certain aspects of medieval musical pedagogy, such as the comprehensive memorisation of texts and tables, which are completely alien to us (see Section 2.2.2).

[27] Peter Kivy, *Authenticities: Philosophical Reflections on Musical Performance* (Ithaca, London: Cornell University Press, 1995), pp. 47–79.This may appear to be less of a problem for instrumental music, but here too there are uncertainties to consider, particularly in the areas of instrument construction and playing technique; and to my mind an even bigger problem with reconstructing medieval instrumental improvisational practices is the scarcity of sources of instrumental music dating from before the fifteenth century. On the issue of singing versus playing in improvisation see Section 5.3.2.

1.3.2 Methodological Approach

After these considerations, I will now outline the methodology used in this project. The three main components of my research are, first, the analysis of historical materials (compositions and treatise texts); second, practical experiments based on observations from these materials; and, third, the valorisation of these practices, mainly in music education. Needless to say, these approaches are connected in different, multidirectional ways. For example, I can 'put to the test' a hypothesis based on historical materials in improvisations, but results from such experiments may also change the questions I ask of these documents, and lead to the modification of my initial hypothesis. These different elements, as well as their interactions, are shown schematically in Figure 1.1.

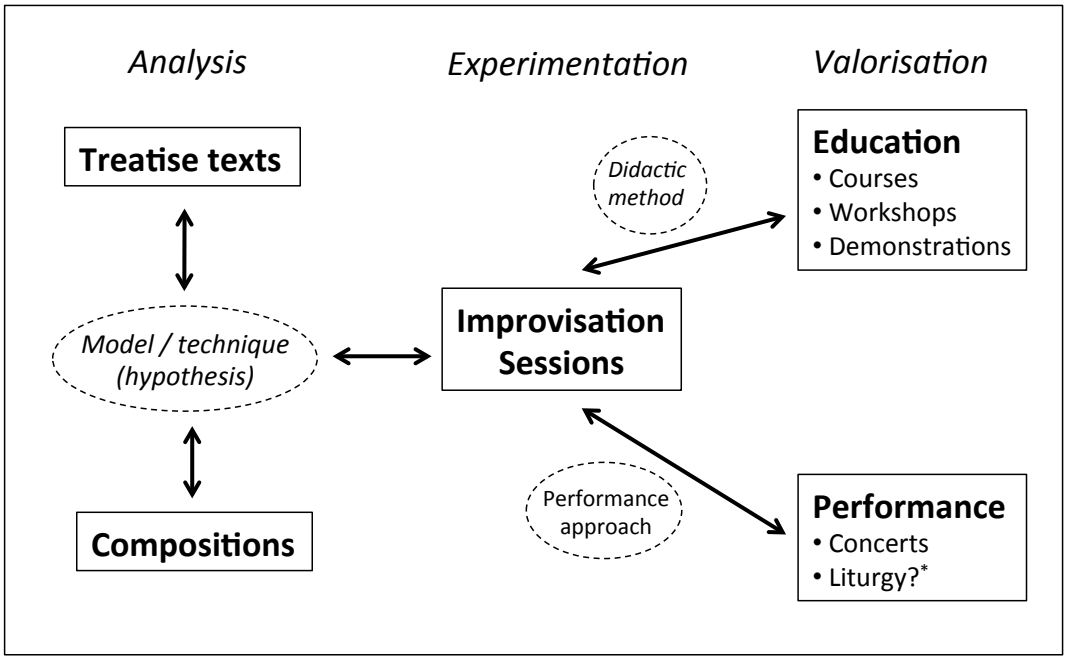

Figure 1.1 Diagram of research methodology.

The reader may observe how, through different stages of 'distillation', an approach based on observations from historical sources may be used to develop new didactic methods and performance approaches, eventually to be used in the classroom or a performance venue. Inversely, practical insights from

* On the issue of performing in the liturgy see note 497.

experimentation and teaching may be used to ask new, perhaps more relevant, questions of the historical materials under investigation. The combination of analytical, practical and pedagogical elements will vary from chapter to chapter: Chapter 2, for instance, is essentially a literature review, and here I will draw on my experiential knowledge only to compare it with the narratives music historians have proposed about improvised polyphony; in contrast, Chapter 5, which deals with the pedagogical application of polyphonic improvisation, has an entirely practical aim, and will not involve much discussion of historical or music-analytical matters. The chapters on fourteenth- and fifteenth-century polyphonic techniques, Chapters 3 and 4, will combine analytic-historical with experimental and, to a lesser degree, pedagogical approaches.

In closing, I would like to state that all my practical experiments have been conducted vocally. This is not only because I am a vocalist myself, but also because I will be dealing almost exclusively with sacred, chant-based polyphony, which in my opinion benefits most from a cappella performance. Liturgical vocal music is also the repertoire most closely related to descriptions of polyphony in late-medieval treatises, that—as we will see—are concerned chiefly with teaching to sing or compose polyphony against a chant melody. Because this thesis will not focus on the embellishment of notated or memorised melodies, I will employ the term 'improvisation' only for the extempore singing of a part in polyphony, which may be florid or simple. Finally, the fact that my experiments are based directly on observations from historical materials means that I will not address certain practices that may be familiar to modern audiences from concerts and recordings, such as the 'bourdons' routinely used by early music groups in performances of chant, but which have no clear basis in the sources from the late medieval period.[28]

[28] This kind of performance – which I personally find rather beautiful and mesmerising – can often be heard, for instance, in the recordings of the Ensemble Organum (dir. Marcel Pérès). It involves the singing of chant with a (moving) drone, presumably inspired by the 'ison' (ισοκράτημα) in Byzantine chant. As noted by Luca Ricossa, however, putting a drone under a chant is exactly the opposite of what happens in *organum purum*, where notes of the chant itself are sustained. See Luca Ricossa, Organum', in *Guide de la musique du Moyen Âge*, ed. by Françoise Ferrand (Paris: Fayard, 1999), p. 230.

2 Medieval Music, Improvisation and Orality

In his essay 'The Oral and Written Traditions of Music' historian of Italian music Nino Pirrotta called attention to the topic of 'unwritten' medieval music, comparing the corpus of extant medieval compositions to the visible tip of an iceberg:

> The visible tip certainly merits our attention, because it is all that remains of the past and because it represents the most consciously elaborated portion, but in our assessments we should always keep in mind the seven eights of the iceberg that remain submerged: the music of the unwritten tradition.[29]

Not only did Pirrotta stress the relative importance of the 'submerged' part of medieval musical tradition, he also asserted that it was not categorically unknowable:

> (...) it is sometimes possible to go beyond the generic, essentially negative notion we usually have of the submerged mass by identifying some elements in the written tradition that provide a glimpse below the surface.[30]

Research into non-written musical practices in the European tradition has increased dramatically in recent decades, covering almost the entire scope of its history, from early chant to Romantic keyboard improvisation. For the medieval period such research has, besides the subject of early chant, primarily been focussed on non-written practices of polyphony. These emerged as a polyphonic 'performance practice' of chant and were known throughout the Middle Ages and the Renaissance as *organum*, *discantus*, *cantare super librum* and 'contrappunto alla mente'. The exact nature of these practices, however, has been the issue of much debate.

In this chapter, I aim to describe the different ways in which scholars since Ernst Ferand have envisaged and defined these practices. Before giving a comprehensive overview of the literature on non-written polyphony, a few

[29] Nino Pirrotta, *Music and Culture in Italy from the Middle Ages to the Baroque: A Collection of Essays*, Studies in the History of Music Series (Cambridge: Harvard University Press, 1987), p. 72.
[30] Ibid., pp. 72-73.

publications from the fields of music theory, ethnomusicology, and chant scholarship that may provide an interesting 'bird's eye view' on the matter will be discussed. This overview is restricted to publications that deal with general questions of improvisation, orality vs. writing, and the nature of medieval musical practices, in order to establish a conceptual framework for the present research. The selected publications will be discussed, and their observations about oral polyphony compared. Finally, I will try to assess whether and where overlap exists with my own experience in practising polyphonic improvisations, as well as how this overview has inspired developing such a practice.

2.1 The Bird's Eye View: Perspectives on Improvisation and Orality

The most contested issue in the literature on non-written practices of music is the term 'improvisation' itself, casually used by some scholars, banished by some, and carefully—with much qualification—reinstituted by others. It seems pertinent therefore to look first at the implications and history of the term itself and how it is used in other scholarly contexts before determining how useful it may or not be to talk about the 'unwritten traditions' of medieval music.

2.1.1 Dahlhaus's Conception of Improvisation

Arguably the most helpful discussion of the concept of musical improvisation to date remains music theorist Carl Dahlhaus's 1979 essay 'Was heißt Improvisation?'[31] The first problem Dahlhaus notices is that 'improvisation' is routinely used as an all-purpose word for all kinds of musical phenomena that we do not wish to identify as 'composition', but that may have very little to do with one another. An etymological investigation may be helpful, but according to Dahlhaus it will not yield any definite answers. Terms like *ex improviso* ('unforeseen') or *ex tempore* ('on the spur of the moment') all indicate the 'spontaneity' of the musical action, without—or seemingly without—prior reflection.[32] To take this as the determining characteristic of improvisation, however, would be mistaken, because the notions of originality and 'novelty' associated with 'spontaneity' in the nineteenth and twentieth centuries seem rather at odds with certain aspects of 'improvised' musics, such as the use of a framework ('Gerüst') and formulas.[33]

Dahlhaus notes that the common conception of improvisation and composition as a mutually exclusive dichotomy leads to severe problems of definition: many musical phenomena are neither improvisations nor compositions in the narrow sense of the word. Dahlhaus concludes that we are dealing not with isolated fields but with a scale of musical phenomena on which,

[31] Carl Dahlhaus, 'Was heißt Improvisation?', in *Gesammelte Schriften in 10 Bänden*, ed. by Hermann Danuser and Hans-Joachin Hinrichsen (Laaber: Laaber, 2000), I, pp. 405–417.
[32] Ibid., p. 405.
[33] Ibid., p. 406.

at either end, 'absolute composition' and 'absolute improvisation' disappear into the realm of the speculative.[34]

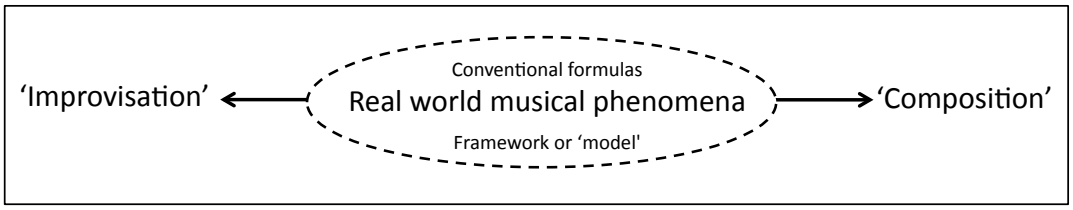

Figure 2.1 Diagram of Dahlhaus's continuum of musical activities.

Besides the theme of the 'scale' or continuum of musical phenomena between improvisation and composition (which we will encounter also in contributions of Pirrotta, Nettl and Treitler), Dahlhaus touches upon another common element in these discussions: the role of the 'framework' or 'model' in musical improvisation.[35] The decline of improvisational practice in Western art-music over the last century and a half is seen by Dahlhaus as being caused by the shift away from the 'Gerüst-Satz' relying on predictable harmonic patterns, in favour of a thematic practice of composition, much less suitable for extempore execution.[36] Another important topic reflected on by Dahlhaus is the use of formulas in improvisation, and its paradoxical relationship with the impression of spontaneity that such music-making can confer. According to Dahlhaus, the misunderstanding here lies in the prejudice, originating in the eighteenth century, that 'spontaneity' is related to novelty and subjective personal expression. [37] Thus paradoxically, it is the traditional framework ('Gerüst') and a stock of conventional formulas that enable 'spontaneous' musical creation.

Dahlhaus concludes that musical constructs that are completely or essentially worked out but not fixed in writing can neither be called

[34] Ibid., p. 410.
[35] Ibid., p. 412. For other discussions of the 'continuum' and the 'template', see below.
[36] Ibid., p. 414. This interesting idea has, as far as I know, not been reflected upon sufficiently. The demise of extempore playing in concert practice is generally viewed as the result of cultural and aesthetic shifts, rather than a change in musical style. (See for instance Lydia Goehr, *The Imaginary Museum of Musical Works: An Essay in the Philosophy of Music* (Oxford, New York: Oxford University Press, 2007), pp. 232–234.)
[37] Dahlhaus, I, p. 413.

compositions nor improvisations without significant distortion of these terms.[38] According to Dahlhaus, 'improvisation' as well as oral transmission should be considered subcategories of elementary music making ('elementares Musizieren'). In using the term, he recommends on the one hand an orientation towards its original, etymological meaning (creation 'on the spur of the moment') and on the other leaving considerable space for ethnographic and historical differentiation.[39] Without such differentiation, Dahlhaus asserts, a term like improvisation would become an empty shell:

> The life of terms consists of their reflected, but non-dogmatic use, not of the definitions that one makes of them from time to time, in the vain hope to stop the historical process that is carrying them and that will modify them. [40]

2.1.2 Nettl's Conception of Improvisation

Ethnomusicologist Bruno Nettl, in his 1974 article 'Thoughts on Improvisation: A Comparative Approach', addresses the issue from a comparative intercultural perspective. Like Dahlhaus, Nettl asks whether the idea of improvisation has integrity as a single concept, and if all the phenomena we call improvisation are indeed the same thing.[41] Nettl notes two conflicting definitions of what constitutes improvised music, the first a music produced without notation, the second a type of music-making within a literate context that can be distinguished from the performance of compositions.[42] He cites a few examples of musical traditions that cannot be clearly classified as composition or improvisation. The Plains Indians of North America, for instance, create songs in a state of trance, so it would seem that they are 'improvised', yet these pieces are 'worked out' by the singer walking back to his tribe from the isolated place where the song was originally conceived. Such songs have known composers and appear relatively

[38] Ibid., p. 415.
[39] Ibid., pp. 416-417.
[40] 'Das Leben der Begriffe besteht in deren reflektierter, aber nicht dogmatischer Anwendung, nicht in den Definitionen, die man ihnen von Zeit zu Zeit anhängt, in der vergeblichen Hoffnung, die geschichtliche Bewegung, von der sie getragen und durch die sie verändert werden, dadurch zum Stillstand zu bringen.' Ibid., p. 417. Translation by the author.
[41] Bruno Nettl, 'Thoughts on Improvisation: A Comparative Approach', *The Musical Quarterly*, 60.1 (1974), pp. 1–19 (p. 2).
[42] Ibid., p. 4.

stable when different field recordings are compared.[43] Non-western musical traditions seem to have certain words analogous to 'improvisation', but—according to Nettl—none of these traditions exhibit dichotomies similar to that of Western composition/improvisation.

Nettl notes that musicians who repeatedly improvise upon the same 'model' are quite predictable, yet they hardly ever repeat themselves exactly and will generally deny that there is a real difference between these performances, so whatever is different probably does not touch the 'essence' of the musical performance.[44] Musicians of 'modular improvisation' will also often experience playing 'something that already exists' rather than inventing the music, and pieces that are essentially fixed (in the memory) will not show very different stylistic traits from those performed extempore. Like Dahlhaus, Nettl comes to the conclusion that improvisation and composition are rather points on either end of a continuum.[45] Nettl proposes that instead of classifying musical production as either improvised or composed, we speak of music that is 'carefully thought out' and music that is 'spontaneous and model-bound'. This distinction is useful both with or without the presence of musical notation: the latter category might well be applied to works of composers who were known to work rapidly and 'spontaneously' such as Mozart, Schubert and Chopin.[46]

Having disposed of the idea of improvisation as a separate concept, Nettl reinstates it to examine certain aspects of extempore performance. His basic assumption is that the improviser has always a given to work from, which he calls the 'model'.[47] This 'model', analogous to what Dahlhaus had called the 'framework' ('Gerüst'), provides certain points of reference, like the chords of a Jazz standard or a Baroque ground bass. These points of reference are used by the improviser and listeners to control the structure of the performance, and could be used to measure the relative 'density' of a particular improvisational model.[48] Besides this, the performer needs a collection of 'building blocks', usually melodic or rhythmic motives, which appear over and over again in the

[43] Ibid., p. 5.
[44] Ibid., p. 7.
[45] Ibid., p. 6.
[46] Ibid., pp. 10-11.
[47] Ibid., p. 12.
[48] Ibid., p. 13. What Nettle defines as 'density' is the proximity in time of the fixed elements (points of reference) in an extempore performance. Thus the more 'dense' a performance the more of it is predetermined or 'fixed'.

repertoire. According to Nettl there is no fundamental difference here with composed music, which after all also uses commonplace musical elements, but in improvisation the number of building blocks seems to be fewer. Improvisation seems only to be possible if the options are limited.[49] Nettl notes that the 'model', consisting of points of reference and building blocks, is experienced differently in several types of improvised music. In some traditions, the 'model' is 'comprehensively audible', and needs to be memorised before making variations on it, such as the Persian 'radif' repertory. Nettl reserves the term 'medium audibility' for 'model's consisting of short building blocks combined with theoretical concepts, like the Arabic modal system of the 'maqamat', which encompasses scales and associated melodic patterns. The elements that make up a solo keyboard improvisation can, according to Nettl, be termed 'minimally audible models'.[50]

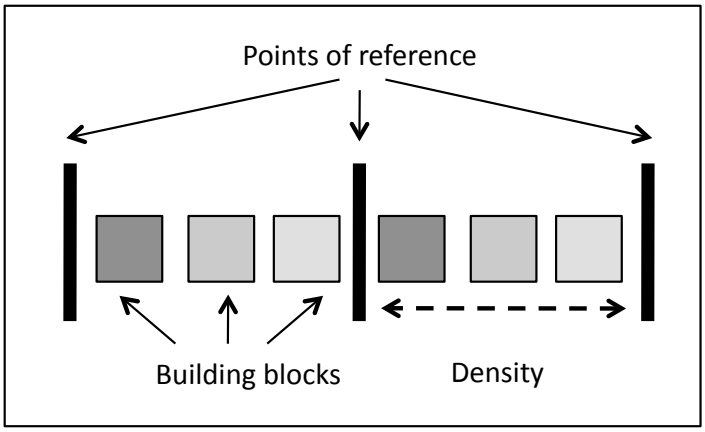

Figure 2.2 Diagram of Nettls model of improvisation.

Cultures tend to have a specific set of expectations from any musical performance, which include sticking reasonably close to the 'model', but also to not playing exactly the same each time. The latter option might be considered 'boring' but is none the less preferable to a 'highly original'

[49] Ibid., p. 15.
[50] Ibid., pp. 16-17. An element I find lacking in Nettl's discussion is the role of the audiences musical knowledge. One could argue that an experienced public can perfectly well identify 'medium' and 'minimally audible' models, recognise what 'maqam' is being used by an Arabic musician, or hear when an improvising pianist is making a modulation.

performance that ignored the 'model' altogether.[51] In an investigation of Javanese gamelan playing, R. Anderson Sutton likewise poses the question of the role of 'originality' and spontaneity in the context of an oral musical tradition. He concludes that these would more likely be taken as a sign of immaturity than of anything else: 'One would probably note greater variety and spontaneous creativity in the playing of this young musician than in the playing of the most venerated performers. Hence, we might say that the evidence of improvisation might bring negative aesthetic appraisal of one's playing as inexperienced, not yet settled and mature.'[52] Sutton describes another type of improvisation also likely to incur reproach in this tradition, which occurs when musicians are 'faking it through' by ear after a slip of memory, or when they have insufficient knowledge of the 'model'.[53] This brings Sutton to the rather remarkable conclusion that whilst Javanese musicians do improvise, gamelan music cannot be considered 'improvisatory', because it does not actively endorse improvisatory behaviour.[54]

It seems therefore that what Nettl describes as a need for variety in performance is also subject to specific cultural conditions, and that one needs to consider in each particular case what type of elaborations of the 'model' are deemed appropriate and what is not. Furthermore—and this seems particularly relevant also to the discussion of medieval music—it appears that we have to be rather careful in attributing certain European value-judgements, even positive ones such as 'spontaneity' or 'creativity', to musical practices to which these may be alien.

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[51] Ibid., pp. 18-19.
[52] R. Anderson Sutton, 'Do Javanese Gamelan Musicians Really Improvise?', in *In the Course of Performance Studies in the World of Musical Improvisation*, ed. by Bruno Nettl and Melinda Russell, Chicago (Chicago: Chicago University Press, 1998), pp. 69–91 (p. 77).
[53] Ibid., p. 86.
[54] Ibid., p. 87. This situation comes rather close to what Lydia Goehr has called 'improvisation impromptu'. (See Lydia Goehr, 'Improvising Impromptu, Or, What to Do with a Broken String', in *The Oxford Handbook of Critical Improvisation Studies,* I, 2013.)

2.1.3 Conceptions of Orality and Improvisation in Medieval Music

The similarities between the music of living oral traditions and those of the early Middle Ages have been a subject of discussion at least since musicologist Curt Sachs's article 'Primitive and Medieval Music: A Parallel' published in 1960.[55] Today Sachs' article reads as a sympathetic first attempt in calling attention to certain similarities between historical and living oral traditions, which—perhaps unavoidably—propounds views on these traditions that have long been superseded now. According to Sachs, what early Medieval music shared with 'primitive music' was its scriptless, 'non-literate' character, depending on tradition, memory improvisation and 'non-intellectualism'.[56] These qualifications are rather crude, and some seem to reflect Eurocentric prejudices rather than a close observation of either non-Western or medieval traditions. Sachs also failed to grasp the full scale of different modes of oral musical production, defining non-written music making as either 'memorised' or 'improvised'.

In an essay about early medieval polyphony musicologist Christian Meyer has concluded that the similarity of certain musical procedures in living oral traditions to medieval music—as noted by Sachs—ought not to obscure the specificity of occidental traditions, which lies precisely in the presence of musical notation.[57] When Sachs asserts that 'all history that relies on written sources alone is misleading', he ignores the fact that historical musicologists, unlike most ethnomusicologists, do not directly encounter a musical tradition, but describe music of the past based upon evidence that has itself passed through the filter of a learned, written transmission.[58] Meyer also points to the interaction of oral tradition with writing, and the substantial modification of both over time: 'oral traditions (...) have not progressed through the ages in an unchanged manner, but they have evolved in contact with written traditions and their particular subtleties—even if these have also nourished themselves from them...'[59]

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[55] Curt Sachs, 'Primitive and Medieval Music: A Parallel', *Journal of the American Musicological Society*, 13.1/3 (1960), pp. 43–49.
[56] Ibid., p. 44.
[57] Christian Meyer, 'Polyphonies médievales et tradition orale', *Cahiers d'ethnomusicologie*, 6 (1993), pp. 99–117 <https://ethnomusicologie.revues.org/1421?lang=en> [accessed 16 August 2016].
[58] Curt Sachs, p. 49; Meyer, para. 59.
[59] 'Dans son exploration des traditions orales, l'historien est aussi fondé à penser que ces dernières, avec toutes leurs subtilités, n'ont pas traversé les siècles de manière immuable, mais

A scholar of early music who has specifically applied Nettl's theory of improvisation in a particular medieval context is Leo Treitler. In the first chapter of his monograph *With Voice and Pen: Coming to Know Medieval Song and How it was Made* (2003), Treitler explains why he was initially reluctant to use the term 'improvisation':

> (...) until the publication of the original version of this chapter in 1991 I avoided the word 'improvisation' and its variants in writing about oral traditions of chant and related music in order not to give the impression that I would place those under the rubric of traditions carried on by improvident musicians. Nonetheless, as it happened, even my talk of oral traditions was translated by some readers as language about improvisation.[60]

Treitler notes that the general reluctance of scholars to employ the concept of improvisation in talking about chant is because the notion of 'looseness' in improvisation could be seen as an offence against the status and 'dignity' of chant as the foundational repertoire of Western music.[61] After getting acquainted with Nettl's conception of improvisation and its use outside the field of historical musicology, Treitler decided to admit the term into his writing about medieval music. Besides the apparently inevitability of the concept and the neutral definition of improvisation proposed by Nettl as 'creativity in the context of performance', a need to balance the use of historical and current terminology in historiography seems to have played a role in this decision.[62]

A central problem for Treitler in applying the concept of improvisation to medieval music (and chant in particular) is what he calls the 'axiom of necessary variability of improvised music'.[63] As we have already seen from Sutton's observations on the oral tradition of Javanese gamelan music, the amount and kind of variation that some traditions allow is fairly restricted. Treitler comes to similar conclusions about the early, oral history of Latin chant, when comparing different versions of the Old Roman offertory *Factus est Dominus*. The analysis

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qu'elles ont évolué au contact des traditions écrites et de leurs subtilités propres—même si celles-ci ont aussi pu se nourrir de celles-là...' Meyer, para. 59. Translation by the author.

[60] Leo Treitler, *With Voice and Pen. Coming to Know Medieval Song and How It Was Made* (Oxford, New York: Oxford University Press, 2003), p. 2.

[61] Ibid., p. 4.

[62] Ibid., p. 1.

[63] Ibid., p. 6.

can be presented in terms of rules of such precision that they control virtually every note of the chant, which might account for their relative stability between manuscripts. Treitler also suggests that a singer who had memorised the melodic elements and the rules for singing such a chant would vocalise in a virtually identical form from one performance to the other. Therefore, much like Sutton, he comes to the conclusion that 'variability is not inevitable, but depends on the density of the constraints controlling the performance',[64] so that 'improvisation as a practice or behaviour can result in orderliness and stability.'[65]

Like Nettl and Dahlhaus, Treitler concludes that, at least in the Middle Ages, improvisation vs. composition is a false dichotomy.[66] Medieval writers did not oppose the two concepts, and the systems that functioned in oral traditions continued to do so also when musical notation was introduced, a phenomenon called 'secondary orality' by literary scholar Walter Ong.[67] Therefore it is legitimate to study the written products of a musical tradition to investigate principles that governed extempore musical creation as well.[68] Another concept introduced into the discussion by Treitler is the 'aural paradigm', which stresses the continuity not only between composition and improvisation, but also between performance from memory and from notation. Early notations do not provide complete and comprehensive performance instructions, but require an act of reconstruction by the reader based on a profound knowledge of the modal system and the corresponding repertoire.[69] In a sense, extemporising a chant within the 'network of constraints' described by Treitler is not very different from 'reconstructing' it based on the clues of the neumatic notation.

I would argue that the same is true (albeit to a different degree) of performance from mensural notation, where the performer also has an active 'reconstructive' role—for instance in applying accidentals, which requires thorough mental and aural control of counterpoint. As we will see later in discussing polyphony, 'sight-reading' and 'improvisation', usually conceived of as diametrically opposed, actually require very similar skills.

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[64] Ibid., p. 6.
[65] Ibid., p. 8.
[66] Ibid., p. 10.
[67] Walter J. Ong, *Orality and Literacy: The Technologizing of the Word* (New York: Routledge, 2002), p. 2, 10, 132 and 156.
[68] Ibid., p. 11.
[69] Ibid., p. 36.

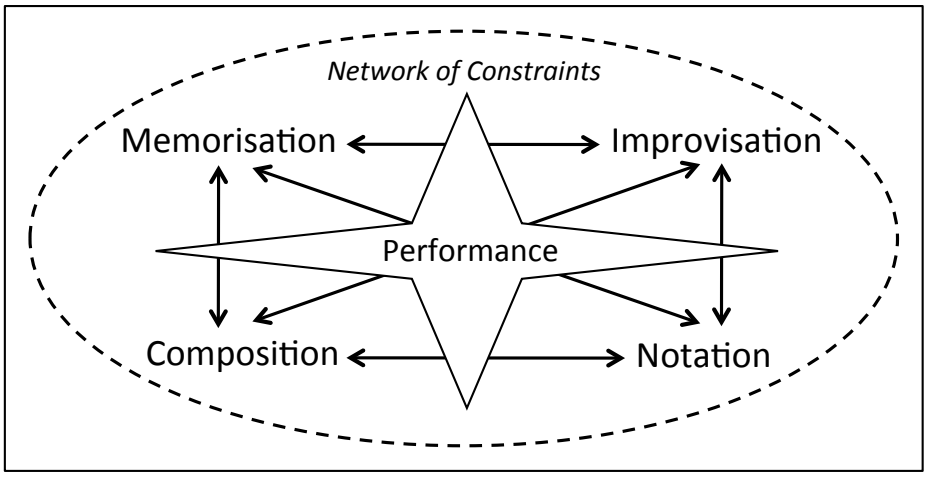

Figure 2.3 Diagram of Treitler's 'aural paradigm'.

2.1.4 Summary

What emerges from these discussions of the concept 'improvisation' is that the term need not necessarily be employed as a kind of negative mirror-image of 'composition'. Dahlhaus and Nettl both introduce the idea of a scale or continuum between musical performances that are essentially fixed (be they compositions or memorised pieces) and forms in which the performer creates the musical discourse on the spot. In a medieval context, Pirrotta has also argued that 'written and unwritten tradition are broad generalizations, or polarizations between whose extremes there is ample space for exceptions, hybrids and borderline cases.'[70]

To be able to improvise, the performer needs to have two things: a succession of 'points of reference' to control the structure of the improvisation, and a somewhat restricted collection of formulas or 'building blocks'. These two elements combined are defined as the 'model' by Nettl. Pirrotta also points to the need to reuse musical elements:

> (...) the concept of economy and the advantages it offers to an improviser who, by having a simple melodic formula ready in his memory, can concentrate more easily on improvising a text appropriate to the circumstances. Economy of means and

[70] Pirrotta, p. 54.

> memorization of melodic formulas may well have been among the secret components of the fabled "secret of the Quattrocento."[71]

However, according to Dahlhaus it can be difficult to differentiate between such a framework ('Gerüst') and the 'means of execution' in an improvisation: a motive or a harmonic sequence for instance can fulfil both functions.[72] This problem, in my view, has not been sufficiently reflected on in the discussion on polyphonic improvisation, resulting in an ambiguous use of the word 'model'. 'Improvisational model' is mostly used to identify a polyphonic technique, for instance fauxbourdon.[73] Nettl on the other hand calls the pre-existing tune (*cantus prius factus*) in polyphonic singing the 'model' which provides the basis for the improvisation.[74] This once more stresses the importance of investigating musical traditions on their own terms, and adapting any 'schematic' view to the workings of that particular tradition.

The strictness of the 'model' controls the amount of variation possible in improvisatory performances. As may be seen from Sutton's remarks, oral musical traditions do not necessarily value 'spontaneity' for its own sake, and knowledge of the 'model' may be considered the first criterion of musical competency. Leo Treitler notes that in a medieval context the 'axiom of necessary variability of improvisation' may also not be valid, and that singers schooled in the oral traditions of chant may have chanted liturgical texts very consistently from performance to performance. The question is of course what might constitute the 'sameness' of these performances. As musicians from living oral traditions often refer to variations between versions of the same piece as not touching its 'essence', one might also have to distinguish between what is 'essential' and what is not in a particular medieval tradition.[75] In order to do this one has to attempt to identify the 'framework' ('Gerüst') behind the surface of musical texts. Like other oral traditions the early practice of chant seems to have allowed for variation of 'inessential' elements, especially in scenarios where

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[71] Ibid., p. 75.
[72] Dahlhaus, I, p. 413.
[73] See for instance Peter Schubert, *Modal Counterpoint Renaissance Style. Second Edition* (Oxford, New York: Oxford University Press, 2008), p. 192.
[74] Nettl, p. 12.
[75] Ibid., p. 8.

musical material is repeated.[76] Finally, it needs to be acknowledged that, in the Middle Ages, extemporisation, composing, and singing were intimately connected in what Treitler has termed the 'aural paradigm'. These skills were highly interdependent, and as principles of 'oral composition' continue to apply in early- or semi-literate cultures, the study of the written product can also provide access to principles of extemporised music-making.

[76] See for instance the comparison of cadential melismas of the chant *Ex ade vitio* in Treitler, p. 245.

2.2 Oral Polyphony: Contrapunctus and Cantare super Librum

The existence of non-written practices of polyphony in the later Middle Ages and the Renaissance, known amongst others as *cantare super librum, sortisatio*, *discantus,* 'contrappunto alla mente' and 'fauxbourdon', has been widely recognised in historical musicology. However, the exact nature of these practices has been the subject of much debate, especially on the questions how 'spontaneous' they might have been and whether one ought to classify singing *super librum* as 'improvisation'. The question to what extent medieval polyphony was 'improvised' is perhaps impossible to answer; however, we can ask ourselves whether the idea of 'improvisation', and the conceptions of it discussed previously, may be useful in discussing these phenomena. Questions of terminology are always a bone of contention among scholars, and how the historian balances 'modern' and 'period' terminology in his or her writing may ultimately come down to a matter of decorum (what audience is being addressed) and taste. What I consider more interesting, therefore, are the questions scholars have asked about the nature of these practices, and what kind of picture they have drawn of them based on the available evidence.

Among the questions posed by scholars (along similar lines to the 'bird's eye view' discussed previously) are: how was the difference between written and non-written polyphony perceived at the time; how was oral polyphony taught; and how were *super librum* performances coordinated? In this section, I discuss in broad strokes the available historical evidence on these topics for the period roughly between 1300 and 1600, as well as the way in which music historians have interpreted this evidence. The reason for taking a somewhat larger chronological scope than the fourteenth and fifteenth centuries lies in the fact that prior to the mid-fifteenth century very few sources specifically describe extempore music-making. On the other hand the 'production-model' of church music appears to have remained unaltered in many places until the seventeenth century: young clerics received their musical training in Cathedral schools whose curricula would have changed only slightly over time.[77] The structure and functioning of ecclesiastical and princely musical establishments also remained

[77] On the musical education in Cathedral schools see Craig Wright, *Music and Ceremony at Notre Dame of Paris 500-1500*, Cambridge (Cambridge: Cambridge University Press, 1989), pp. 174–180.

basically unaltered during this period.[78] This visual symbol of this performance culture is a lectern with a large book of plainchant, the *liber cantus*, which also gave name to *cantare super librum* ('singing on the book'). Pictorial representations of singers around a choral lectern, such as the historiated initial to the psalm *Cantate Domino* shown in Table 2.1, can be found throughout the Middle Ages and Renaissance.[79] It seems therefore that, while musical styles changed significantly, the performance practices of sacred music—like their social context—remained relatively stable during three hundred years. This also justifies a partly diachronic approach of the phenomenon of polyphonic extemporisation on plainchant.

Table 2.1 Illuminated initial (ca. 1380), three singers in front of a lectern. (London, British Library, Ms. Stowe 12, fol. 195r).

[78] See Adele Poindexter and Barbara H. Haggh, 'Chapel', *Grove Music Online* [accessed 16 August 2016].
[79] For a similar, later example of the same iconography see Table 2.2. For images of this manuscript see <http://www.bl.uk/manuscripts/Viewer.aspx?ref=stowe_ms_12_fs001r> [accessed 16 August 2016].

2.2.1 Written and Non-Written Polyphony

Central to the discussion about written and non-written polyphony in the later Middle Ages is the twentieth chapter of Book II of Tinctoris's *Liber de arte contrapuncti* (1477),[80] in which he distinguishes between 'mental' or 'absolute' counterpoint, commonly called *cantare super librum* ('singing on the book'), and written counterpoint commonly named *resfacta* ('a made thing'). Earlier, similar subdivisions of polyphony may be found for instance in an anonymous thirteenth-century *Tractatus de discantu*, which defines discant as 'the art of knowing how to compose and bring forth discant on the spot' ('artem sciendi componere et proferre discantum ex improviso').[81] In his *Contrapunctus*, the fifteenth-century scholar Prosdocimo de' Beldomandi also mentions a two-fold nature of counterpoint, as 'vocal, and written: vocal that which is uttered, and written, that which is notated' ('vocalis et scriptus: vocalis qui profertur et scriptus qui scribitur').[82] Prosdocimo explains that everything his treatise contains applies equally to both categories, something that also may be assumed from the thirteenth-century anonymous' inclusion of them in a single 'art' or discipline.

This picture is slightly more complicated in Tinctoris's case, because he goes on to describe certain differences in the way voices are related in *resfacta* and *cantare super librum*. He states that, while in *resfacta* parts are mutually interdependent ('sibi mutuo obligentur'), in 'singing on the book' none of the voices is subjugated to one another ('alter alteri non subiicitur') and that it suffices that each be consonant with the tenor.[83] This statement is later nuanced by Tinctoris, saying that he considers it 'rather laudable' if singers 'prudently avoid similarity in their choice of concords', giving their singing a more 'full and

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[80] 'Contrapunctus qui scripto fit communiter res facta nominatur. At istum quem mentaliter conficimus absolute contrapunctum vocamus, et hunc qui faciunt super librum cantare vulgariter dicuntur.' Tinctoris, *Liber de arte contrapuncti*, Liber II, cap. 20. For a translation and edition, see Margaret Bent, '"Resfacta" and "Cantare Super Librum"', *Journal of the American Musicological Society*, 36.3 (1983), pp. 371–91 (pp. 372–73).

[81] Anonymous II, 'Tractatus de Discantu', *Thesaurus Musicarum Latinarum* <http://boethius.music.indiana.edu/tml/13th/ANO2TRA> [accessed 16 August 2016]. 'Ex improviso' ('from the unforeseen') may be taken as 'immediately', or 'on the spot' in this context, without implying that such a discant-voice would be 'random' or less strict than a written discant.

[82] Jan Herlinger, *Prosdocimo de' Beldomandi. Contrapunctus*, ed. by Thomas J. Mathiesen and Jon Solomon, Greek and Latin Music Theory (Lincoln, London: University of Nebraska Press, 1984), pp. 32–33.

[83] Albert Seay, *Johannes Tinctoris The Art of Counterpoint (Liber de Arte Contrapuncti)*, Musicological Studies and Documents 5 (American Institute of Musicology, 1961), pp. 107–110.

suave' effect.[84] It is not surprising that these seemingly contradictory statements about the nature of written and sung counterpoint have been interpreted very differently by music historians.

Ernst Ferand, the first modern author to write extensively on the subject of improvisation in early music, referred to the chapter in question in a number of pioneering publications. In *Die Improvisation in der Musik* (1938), he notes that, based on the passages from Prosdocimo and Tinctoris, we can assume that in the course of the fifteenth century a clearer division between written and improvised polyphony was emerging.[85] The difference between the types of counterpoint, according to Ferand, would be that 'in the former one should take the relation of all voices into account, whereas in the latter one should account only for the consonances of a single voice with the tenor' [86] Although he does admit that some type of coordination between the parts is advised by Tinctoris, Ferand mistakenly assumes that he is advising a 'similarity in the ordering of consonances', which is exactly the opposite of what Tinctoris is calling for.[87] Ferand offers the hypothesis that in sung counterpoint the kind of strictly two-voice conception of polyphony (often referred to as 'successive composition' by scholars) continued to operate alongside the emergence of an integral, 'simultaneous' approach to polyphony in composition.[88] Ferand envisioned the differentiation between *resfacta* and 'absolute counterpoint' or *cantare super librum* in terms of the emergence of the classical dichotomy between composition and improvisation, giving rise to the negative qualifications of oral counterpoint by sixteenth- and seventeenth-century music theorists.[89]

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[84] 'Non tamen vituperabile immo plurimum laudabile censeo si concinentes similitudinem assumptionis ordinationisque concordantiarum inter se prudenter evitaverint. Sic enim concentum eorum multo repletiorem suavioremque efficient.' Tinctoris, *Liber de arte contrapuncti*, Liber II, cap. 20. See Bent, '"Resfacta" and "Cantare Super Librum"', pp. 372–373.
[85] Ferand, *Die Improvisation in der Musik. Eine entwicklungsgeschichtliche und psychologische Untersuchung*, p. 146.
[86] '(...) für den ersteren das Verhältnis aller Stimmen zueinander beachtet werden müsse, während bei dem letzteren nur auf die von jeder einzelnen Stimme mit dem Tenor gebildeten Zusammenklänge Rücksicht zu nehmen sei.' Ferand, *Die Improvisation in der Musik. Eine entwicklungsgeschichtliche und psychologische Untersuchung*, p. 153. Translation by the author.
[87] Following De Coussemakers edition Ferand writes 'cantaverint' instead of 'evitaverint'. Albert Seay follows the same erroneous reading in his translation (Seay, *Johannes Tinctoris The Art of Counterpoint (Liber de Arte Contrapuncti)*, p. 107.) On this see also Bent, '"Resfacta" and "Cantare Super Librum"', pp. 371–372, n. 1 and 4. Similar advice to avoid similarity in consonances between different parts can be found in many earlier treatises, see Section 3.2.3.
[88] Ferand, *Die Improvisation in der Musik. Eine entwicklungsgeschichtliche und psychologische Untersuchung*, p. 153.
[89] Ibid., p. 154.

Margaret Bent has drawn a radically different picture of Tinctoris's conception of written and non-written counterpoint, Bent's main criticism of Ferand being that Tinctoris's terminology should be examined not in the light of theoretical writing from 1500 and later, but rather by close reading of his own works.[90] According to Bent, from Tinctoris's statement that counterpoint can be made 'mente' ('in the mind') it should not be inferred that a spontaneous process was at work. Especially in a culture much less writing-dependent compared to ours, the possibility that pieces were conserved in memory should not be excluded. Bent insists furthermore that we should consider singing and sounding together as an essential stage in the making of all counterpoint: firstly there are no indications that fifteenth-century composers used scores, or that they would have had need of this form of visual control to construct their counterpoint. Compositions could be formed in the mind and then transmitted part by part to the singers.[91] Secondly, the role of the singer was never wholly a reproductive one: even in singing from notation, accidentals had to be supplied, something which required the application of contrapuntal knowledge.[92] In sum, Bent warns us that our own incapacity at aural control and memorisation should not blind us to the possibility that worked-out pieces could be sung from memory.

Bent extracts three clues from Tinctoris's testimony in the *Liber de arte contrapuncti*: first, *resfacta* differs from *contrapunctus* in the way that parts are related; secondly, counterpoint can be written or mental; finally, written counterpoint is commonly called *resfacta.* Looking at the *Terminorum musicae diffinitorum*, Bent defines *resfacta* as the informal equivalent of *cantus compositus*, as *cantare super librum* is the informal term for counterpoint. Strikingly, she finds that writing plays no role in the definitions of *cantus compositus* or of *compositor*. As such, *resfacta* for Bent becomes something like a 'composition, usually but not necessarily written'[93], and *cantare super librum*, is the doing or singing of counterpoint as a technique. Thus, for Bent, counterpoint can be written or unwritten, and it forms the basis of *resfacta* (composition) as

[90] Bent, *Counterpoint, Composition, and Musica Ficta*, p. 301.
[91] The use of such a procedure was ascribed to Josquin des Prez by Johannes Manlius in 1562, see Rob C. Wegman, 'From Maker to Composer: Improvisation and Musical Authorship in the Low Countries, 1450-1500', *Journal of the American Musicological Society*, 49.3 (1996), pp. 409–479 (p. 456).
[92] Bent, *Counterpoint, Composition, and Musica Ficta*, p. 305.
[93] Ibid., p. 308.

well as singing on the book. Bent insists that we cannot conclude from Tinctoris that the practice of singing on the book would have been less strict in its application of contrapuntal rules than a composition, as was claimed for instance by Klaus-Jürgen Sachs.[94] In fact, in some cases Tinctoris seems to allow more licence to *resfacta* to depart from the rules than he allows in singing on the book.[95] Bent notes that devices such as proportions, syncopations, and imitations are equally recommended by Tinctoris for use in both *resfacta* and *contrapunctus*, which leads her to characterise singing on the book as a 'carefully structured procedure.'[96] For Bent, the study and practice of counterpoint is an approach to composition, singing on the book being the more laudable the closer it came to *resfacta*.[97]

At this point one must remark that Bent's clarification of Tinctoris's definitions, exclusively based on his own testimony, might have a limited use for understanding fifteenth-century musical practice in general. Tinctoris's writings carry an undeniably academic stamp, written in excellent Latin and employing quotations from the Classics. In terms of the *cantor – musicus* scale, this places him fairly squarely on the side of the *musicus*.[98] It is not to be excluded that Tinctoris's testimony provides the opinion of a university educated, Franco-flemish, humanist musician; whereas for most *resfacta* could be simply a 'written piece', Tictoris must—pedantically, agrees Bent—leave open the possibility of a *resfacta* not being written down.[99] In my opinion, this divide between Tinctoris's own ('correct') understanding of contrapuntal terminology and a *communis opinio* may also be observed in the linguistic aspect of Tinctoris's description; Tinctoris identifies *resfacta* as a name 'commonly' ('communiter') given to mental counterpoint, and *cantare super librum* as a 'vulgar' use for *contrapunctus*. In my opinion, these adverbs do not only indicate that we are

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[94] '(...) the result of all improvisation relating several parts contrapuntally to a given tenor (…) differs from carefully planned composition; the inevitable lack of strictness in improvisation is a concession, not the aim of counterpoint'. Klaus-Jürgen Sachs and Carl Dahlhaus, 'Counterpoint', *Grove Music Online* [accessed 16 August 2016].
[95] Bent refers to passages concerning the admittance of parallel perfect consonances in *resfacta*. See Bent, *Counterpoint, Composition, and Musica Ficta*, p. 318, n. 21.
[96] Ibid., p. 309.
[97] Ibid., p. 312.
[98] See Erich Reimer, 'Musicus-Cantor', in *Handwörterbuch der musikalischen Terminologie*, ed. by Hans Eggebrecht (Stuttgart: Franz Steiner Verlag, 1978) <http://www.sim.spk-berlin.de/static/hmt/HMT_SIM_Musicus-cantor.pdf> [accessed 16 August 2016].
[99] Bent, *Counterpoint, Composition, and Musica Ficta*, p. 315.

dealing with a 'general usage' or with terms originating from the vernacular, but that these are expressions from the 'common folk'.[100] Another sign that Tinctoris is distancing himself from these expressions is that 'singing on the book' is not rendered with the classical 'canere', but rather with its 'corrupted' medieval variant 'cantare', in chapter 20 of Book II.[101] Craig Wright's study of the chapter records of Cambrai Cathedral, where Tinctoris himself had been a vicar in 1460, shows that the expression 'singing on the book' must have been in general use in that great musical establishment.[102] It looks therefore as though Tinctoris is chastising his fellow musicians over the use of terminology, as he does elsewhere concerning aspects of mensural notation.[103] It seems pertinent therefore to other documentary evidence that may shed light on how musicians and non-musicians conceived of the difference between notated and non-notated polyphony.

In his 1996 article 'From Maker to Composer: Musical Authorship in the Low Countries. 1450-1500', Rob Wegman has pointed out that church records generally did not distinguish between different modes of polyphonic performance before 1500, so that 'an *Ave Maria* "in discant" or "in musike" can mean either a polyphonic rendering of the plainchant or, in a copying payment, a written setting.'[104] Whereas Tinctoris was propagating a high level of musical professionalism, Wegman claims that at the lower end of the scale knowledge of mensural music was at best rudimentary.[105] This would at least partly account for the primacy given to the 'sounding' and 'singing together' of counterpoint in fifteenth-century treatises. In fact, Wegman notes, for Tinctoris 'extemporised counterpoint' would have been a pleonasm: when counterpoint is written he always uses some kind of specification like *resfacta* or *cantus compositus*,

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[100] My thanks go to Sasha Zamler-Carhart for pointing out this aspect of Tinctoris's writing. Neither 'communiter' nor 'vulgariter' are obvious adverbs for identifying a 'general use', as would be 'fere' or 'vulgo' for instance. Strictly speaking, 'communiter' means 'together', which is not applicable in this context, so it is likely that something like the Middle French 'comunement', carrying distinct plebeian overtones, is meant. 'Vulgariter', unlike 'vulgo', which does not carry any negative connotations, is also used in medieval Latin in a similar way to the French 'vulgaire'.
[101] This is the only place Tinctoris employs 'cantare' in the *Liber de arte contrapuncti*. In other places singing on the book is rendered with 'canere'.
[102] Craig Wright, 'Performance Practices at the Cathedral of Cambrai: 1475-1550', *The Musical Quarterly*, 64.3 (1978), pp. 295–328 (p. 314). Wright's excerpts, ranging chronologically from 1485 to 1535, generally mention singers who, upon admission to the cathedral choir, had to undergo some re-schooling in *cantare super librum*.
[103] See Ronald Woodley, 'The Proportionale Musices of Iohannes Tinctoris: A Critical Edition, Translation and Study' (University of Oxford, 1962), pp. 313–314.
[104] Wegman, 'From Maker to Composer: Improvisation and Musical Authorship in the Low Countries, 1450-1500', p. 413, n. 6.
[105] Ibid., p. 429.

because counterpoint as such is presumed to be oral.[106] *Compositio* in this light becomes a mere technical term for written counterpoint: it could equally well be applied to a cantus firmus mass or to a simple counterpoint exercise.[107] There seems not to have been any difference in status between the performance of a written composition and a *super librum* performance prior to 1500.

Philippe Canguilhem also notes that a large body of notated music has been assigned to the margins of music history, because it cannot be clearly identified as either 'performance tradition' or as 'work'. He concludes that a great variety of practices combining orality and writing must have existed, ranging from singing on the book—with no visual support other than the notation of the plainchant—to carefully notated mensural music on the other.[108] Canguilhem furthermore questions the unidirectional sense in which sung and written counterpoint are usually portrayed, with *cantare super librum* as a prerequisite for, or an approach to, composition. Lusitano's *Del Arte del Contrapunto* seems to confirm the pedagogical role of 'contrapunto', but it also reveals the surprising way in which composition can be a preparation for more advanced types of improvisation, such as canons below a cantus firmus:

> When the plainchant is sung by the soprano voice, these canons are even more delicate, as is shown by the fact that only those well trained in composition can make them. It is therefore obvious that to invent them, composition is indispensable to a musicians' training, and so we will briefly explain the stages of composition.[109]

The treatise clearly does not teach composition as end in itself, but as a useful tool to progress in the art of oral counterpoint. Furthermore Lusitano offers an

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[106] Ibid., p. 432.
[107] Ibid., p. 434.
[108] Canguilhem, 'Le Projet FABRICA: Oralité et écriture dans les pratiques polyphoniques du chant ecclésiastique (xvie – xxe siècles)', pp. 274–275.
[109] 'Mas quanto mas delicades sean las fugas hechas con el canto llano en boz de tiple, ellas por si lo demonstran por que no las pueden hazer bien los que non tuvieren grande curso de la conpostura. De donde claro pareçe que pues para ellas es menester conpostura que dellas se puede aprender, por cuia causa se pondra la orden de la conpostura brevemente (…)' See Philippe Canguilhem, 'Singing Upon the Book According to Vicente Lusitano', *Early Music History*, 30 (2011), pp. 55–103 (p. 96); Philippe Canguilhem, *Chanter sur le livre à la Renaissance. Les traités de contrepoint de Vicente Lusitano* (Turnhout: Brepols, 2013), p. 238. This surprising reversal of perspective is also found with Juan Bermudo: 'the singer must exercise himself a lot in composition, so he will know by heart the movements that all the voices can make' ('el cantor se aplique mucho a la composición de canto de organo, porque sepa muy bien de memoria los golpes que cada una de las bozes puede hazer'). Canguilhem, 'Singing Upon the Book According to Vicente Lusitano', p. 96, n. 98.

interesting alternative to the two-fold division of counterpoint found for instance with Tinctoris, by distinguishing three modes of musical creation: 'contrapunto inproviso', 'contrapunto pensado' and 'conpostura'.[110] In the second category, 'thought-over counterpoint', according to Canguilhem 'singers could build counterpoint just as elaborate as the examples notated in the manuscript, by preparing them carefully, pondering over them exactly like composers over their works.'[111]

To conclude, we can state that while late medieval and Renaissance music theory sometimes distinguished between different modes of polyphonic musical production, it did not sharply divide them, nor did it privilege the written over the non-written. This is evident for instance from the ambiguous use of terms like *contrapunctus* and *discantus*, which could be employed for both written and non-written polyphony. Besides the categories of written and non-written, Vicente Lusitano distinguishes a type of 'thought-over' counterpoint, which may have occupied a place somewhere in between these. It would seem therefore that the idea of a 'continuum' or 'scale' of possibilities between fixed (memorised or notated) performances and extemporaneous music-making described by both Dahlhaus and Nettl would be a reasonably accurate model for envisioning the relation between oral and notated polyphony in the later Middle Ages and Renaissance.

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[110] 'Lo qual vale mucho ansi para de inproviso como pensado, y mucho mas para la conpostura'. See Canguilhem, 'Singing Upon the Book According to Vicente Lusitano', p. 97, n. 101; Canguilhem, *Chanter sur le livre à la Renaissance. Les traités de contrepoint de Vicente Lusitano,* p. 157.

[111] Canguilhem, 'Singing Upon the Book According to Vicente Lusitano', p. 97.

2.2.2 The Teaching of Improvised Polyphony.

One of the most fruitful ways to examine the workings of a musical tradition is to investigate its pedagogical systems; looking at the succession and priority given to elements and skills can offer clear insights into what is considered 'essential' for the performance of a certain music. For historical musical repertories, reimagining pedagogical processes is also a good way to get an idea of the capabilities of historical musicians, informing our view of performance practice in that particular epoch or style.

Rob Wegman has drawn such a picture of musicians in the southern Netherlands in the fifteenth century.[112] According to Wegman, 'discant' was taught and transmitted as a living practice, not by using Latin manuals but by internalising contrapuntal rules in singing on the book. He points to the example of Johan Soest, a singer from Cleves, who moved to Bruges specially to study with two English musicians living there, something which he surely would not have undertaken had their practical teaching not been infinitely more valuable to him then anything written in a counterpoint treatise.[113] Furthermore, Wegman points to the emergence of counterpoint treatises in the vernacular during the fifteenth century, another fact pointing to the dissemination of counterpoint outside of clerical circles,[114] such as Leonel Power's *Treatise upon the Gamme* addressed to prospective 'syngers or makers or techers.'[115] Wegman points out that discant, as a living language, also had its local dialects: the English style of singing *discantus* seems to have been particularly admired everywhere in Europe. The universally expressed admiration for the *jubilatio* of the English singers prompts Wegman to suggest that perhaps what Martin le Franc was referring to in *Le Champion des Dames* as 'contenance angloise' was actually a practice of oral counterpoint.[116]

In her 2005 book *Medieval Music and the Art of Memory*, Anna Maria Busse Berger, also asks the question how medieval polyphony was taught, and how this

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[112] Wegman, 'From Maker to Composer: Improvisation and Musical Authorship in the Low Countries, 1450-1500', p. 413.
[113] Ibid., p. 421.
[114] Ibid., p. 417.
[115] Ibid., p. 417.
[116] Wegman points out that for Le Franc the older generation of French composers, Tapissier, Carmen and Cesaris 'chanterrent' (sung), whereas the new generation, Du Fay and Binchois, having incorporated the new English influence, 'deschanterrent' (discanted?) Ibid., p. 425.

might have influenced non-written polyphony and composition.[117] Busse Berger disagrees with Wegman's view that fifteenth-century discant would have been 'an improvisational art that had little to do with written composition' and that the teaching of polyphonic singing would have been a primarily oral affair. [118] According to Busse Berger, part of a fifteenth-century choirboy's contrapuntal training would have been undertaken at least partly in writing (witness the recorded use of ruled boards with staves) and with the help of textbooks of the kind that were also used in teaching other subjects in cathedral schools.[119] Busse Berger notes that medieval education involved a great deal of memorisation: children learned to read by memorising the psalms, and the declension of Latin nouns and verbs was learned by drilling exercises called 'doing concordances.'[120] Even mathematics was not taught by the application of general principles to different cases but by solving individual problems and committing them to memory.[121] Students were not expected to be original but to build a well-stocked memory so as to retrieve relevant phrases and sentences. Therefore, textbooks always begin with the basic elements of the discipline, followed by individual combinations of these elements, repeating similar material over and over again with a multitude of individual 'rules'.[122] According to Busse Berger the vast majority of treatises about organum, discant and counterpoint are also of this type.

The so-called Vatican Organum Treatise from the first half of the thirteenth century contains 31 rules, which are groupings of 343 melismas systematically

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[117] Anna Maria Busse Berger, *Medieval Music and the Art of Memory* (Berkeley, Los Angeles: University of California Press, 2005), pp. 111–158.
[118] Ibid., p. 111. This misrepresents Wegman's position in 'From Maker to Composer', where he clearly states that 'in the best musical centres, the difference between written and unwritten counterpoint might have been negligible (as far as the sounding end result was concerned)'. Wegman, 'From Maker to Composer: Improvisation and Musical Authorship in the Low Countries, 1450-1500', p. 452.
[119] Busse Berger, p. 114.
[120] Ibid., p. 116.
[121] Ibid., pp. 116-117.
[122] Ibid., p. 118. The emergence of the rule as an 'axiom' or 'precept' appears to be a humanist, fifteenth-century development. The medieval use of 'regula' however had a very long afterlife, and similarly huge numbers of 'regole', apparently all to be committed to memory in all the different keys, can be found in Italian eighteenth-century partimento collections. See for instance the 71 (sic) rules of Francesco Durante (ed by Robert O. Gjerdingen):
< http://faculty-web.at.northwestern.edu/music/gjerdingen/partimenti/collections/Durante/regole/index.htm > [accessed 16 August 2016].

applied to motions of a tenor.[123] From this Busse Berger concludes first that singers of organum already conceived of florid polyphony in terms of an underlying 'simple counterpoint' which could be embellished in different ways. Busse Berger however thinks it significant that the first stage of this process (i.e. note-against-note progressions) are not treated separately, which—according to Busse Berger—means that the Vatican Organum Treatise's formulas were all supposed to be memorised.[124] Whilst this conclusion seems justified by the similarity of the treatise's structure to mathematics textbooks (for instance), the possibility should not be excluded that, as in later polyphony, students of organum were taught note-against-note successions first, and how to embellish these later. Other thirteenth-century treatises, such as the *Musica* of Gui de Chalis, extensively teach note-against-note progressions, and it is very well possible that this kind of instruction would have preceded what is taught in the Vatican Organum Treatise.[125] A singer who had memorised all this material would, according to Bussse Berger, have been able to effortlessly perform pieces in the style of the *Magnus liber organi*.[126]

Fourteenth- and fifteenth-century treatises teaching *discantus* or *contrapunctus*, after teaching the classification of consonant and dissonant intervals, give 'consonance tables', which list every single consonance of these kinds within the gamut.[127] According to Busse Berger such 'consonance tables' bear a striking resemblance to multiplication tables, and like these they were probably memorised. Similarly to treatises on grammar and mathematics, counterpoint treatises then teach these elements in combination as note-against-note progressions. Authors who do not take this approach, such as Prosdocimo, who states that to set down all possible progressions 'would be exceedingly difficult, and perhaps impossible, since they are in a certain way infinite', did not write for an audience of musicians, but rather for an interested lay audience.[128] Busse Berger notes that even treatises that teach sophisticated written composition include lists of such progressions. The amount of space taken up by

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[123] Busse Berger, p. 120.
[124] Ibid., p. 121.
[125] Gui de Chalis, 'Musica', *Thesaurus Musicarum Latinarum* <http://boethius.music.indiana.edu/tml/13th/GUICHA_TEXT> [16 August 2016].
[126] Busse Berger, p. 127.
[127] Ibid., pp. 131-132.
[128] Ibid., pp. 146-147, also Herlinger, pp. 66–69.

interval progressions in Tinctoris's *Liber de arte contrapuncti*, seems to indicate that its main aim was to teach these.[129] Busse Berger concludes that students of discant and counterpoint learned such consonance tables and progressions by rote, presumably from a treatise, storing them in what neuroscientist call the long-term working memory, and 'once these progressions had been memorised it was very easy to perform or compose polyphonic music.'[130]

Whereas in the teaching of simple counterpoint Busse Berger sees an important role for rote learning of endless 'rules' from musical treatises, she argues that florid counterpoint would not have been learned in the same way. The Berkeley Manuscript, for instance, gives examples of ornamental formulas called *verbula*, but states that these examples are neither complete nor definitive, and that they are meant to facilitate the invention of such formulas by the student himself.[131] Busse Berger concludes that the difference between the practitioners of florid organum in Notre-Dame style and fourteenth- and fifteenth-century musicians would have been that the first memorised entire sections of pieces and ornaments, while the second memorised consonances and progressions and 'used their creativity' to compose or sing florid counterpoint.[132]

The difference between the Busse Berger's conception of medieval musical pedagogy and that of Wegman and other writers centres on the role of the treatise. In a recent publication, Wegman has suggested that fourteenth-century counterpoint treatises were aimed at adult musicians 'who had to undergo reschooling, or those who had to teach them'.[133] According to Wegman, this would also explain the paradox that very simple rules that would have been learned by children were drawn up in Latin treatises intended for a literate clerical public. With this Wegman comes close to Daniel Leech-Wilkinson's assessment that 'the only possible audience for such a treatise in the fourteenth century consisted of those musicians in (...) places, too far distant from an expert

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[129] Busse Berger, p. 143.
[130] Ibid., p. 143.
[131] Ibid., p. 154, also Oliver B. Ellsworth, *The Berkeley Manuscript. A New Critical Text and Translation.*, ed. by Thomas J. Mathiesen and Jon Solomon, Greek and Latin Music Theory 1 (Lincoln, London: University of Nebraska Press, 1984), pp. 146–147.
[132] Busse Berger, p. 157.
[133] Rob C. Wegman, 'What Is Counterpoint?', in *Improvising Early Music*, ed. by Dirk Moelants, Collected Writings of the Orpheus Institute (Leuven: Leuven University Press, 2014), pp. 9–68 (p. 37).

to learn by word of mouth, who were not themselves skilled composers.'[134] Busse Berger, on the other hand, argues that discant and counterpoint treatises were used like textbooks to teach children the rudiments of polyphony, via the memorisation of endless lists of consonances and progressions.

The main problem with Busse Berger's hypothesis is that many of these treatises are written in sophisticated Latin, and that children seem to have been taught counterpoint from a very early age, possibly before they were even able to read. Giuseppe Fiorentino has pointed out that in fifteenth- and sixteenth-century Spain, music was taught to boys as young as eight years old, habitually from a peasant background.[135] In Burgos the *magister cantus* would teach them plainchant and the rudiments of mensural notation in a few months, before moving on to singing counterpoint 'de inproviso', enabling them to sing in the choir.[136] This clearly points to the fact that choirboys had to 'sing for their supper' in cathedrals, and that the goal of counterpoint lessons was an eminently practical one, aiming more towards 'knowing how' than 'knowing that'. I would therefore suggest that fifteenth-century treatises functioned as a kind of teacher's compendia, compiled by and for adult musicians, who might transmit the contents of the treatise to children, or use such a treatise to refresh or enlarge their own knowledge of counterpoint, but that beginners would have been taught by vocal and aural instruction.

This does not mean that we should discount the role of memorisation in discant and counterpoint education. The Burgos choirboys, for instance, seem to have been taught consonances above plainsong notes in a systematic way.[137] It may be possible that students memorised consonance tables not from the pages of a treatise but through singing together with a teacher and other students. Such drilling exercises may well have taken a similar form as shown in Example 5.2. Interval training was probably also a part of *cantus planus* teaching, as medieval treatises contain drilling exercises for singing melodic intervals.[138] Memorisation

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[134] Daniel Leech-Wilkinson, 'Machaut's "Rose, Lis" and the Problem of Early Music Analysis', *Music Analysis*, 3.1 (1984), pp. 9–28 (p. 10).
[135] Fiorentino, pp. 370–371.
[136] '(....) y continuándolo mucho y cantando con ellos de inproviso se ayudarán luego y lucirán mucho en el coro'. Fiorentino, p. 374, n. 68.
[137] '[el maestro tiene que enseñar] bien el arte por la mano dándoles a entender qué especies perfectas e imperfectas se pueden echar sobre punto de canto llano'. Ibid., p. 374, n. 68.
[138] The Berkeley Treatise for instance provides 'exercises' for all the intervals in the low hard hexachord, first reaching them stepwise and than directly, after which they are also taught in

of consonances and progressions may have provided choirboys with a solid basis for their studies, but in my opinion, this alone would not have enabled them to sing polyphony of even a fairly basic type. To be able to sing note-against-note counterpoint, one needs to learn how to string progressions together, select between the different available options, plan ahead, and make cadences. In sum, one needs to learn how to make a coherent musical 'sentence' out of the individual 'words', and this is something that cannot be learned by memorising a material but by learning how to work with it in practice.

According to Busse Berger, florid counterpoint was not learned by memorising a collection of ornamental formulas as it appears to have been for florid organum. As we have seen from Nettl's survey of oral musical traditions, however, it is fairly common for performers in such traditions to draw from a stock of internalised, more or less traditional, melodic formulas. We know from sixteenth-century diminution treatises that, at least at that time, European musicians frequently compiled collections of melodic formulas with a systematic organisation similar to that of the Vatican Organum Treatise.[139] Authors such as Bermudo and Cerone also advocate the memorisation of a repertoire of 'pasos' for the improvisation of florid counterpoint.[140] It is true that fourteenth- and fifteenth-century discant and counterpoint treatises do not include such lists of ornaments, but we know of at least one document from the fifteenth century that teaches florid formulas above a short tenor as well.[141] Fifteenth-century keyboard pedagogy also seems to have included the memorisation of florid formulas in the right hand against short, systematically organised tenor-progressions.[142] Fourteenth- and fifteenth-century singers with access to a

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different combinations. These exercises are remarkably similar to elementary sight-reading exercises from later periods. Ellsworth, pp. 88–93.

[139] See for instance Diego Ortiz' *Trattado de glosas* (Rome: Dorico, 1553), especially Book I (pp. 20-25), which systematically teaches diminutions for rising and falling melodic progression up to a fifth. Such 'glossae' could arguably be used to turn a simple counterpoint into a florid melody as well as ornamenting a part of a written composition.

[140] See Fiorentino, pp. 376–377.

[141] London, British Library, Ms. Add 70516, fol. 79. This leaf contains three three-note tenor patterns, each accompanied by four counterpoints of increasing floridity. David Fallows, 'Embellishment and Urtext in the Fifteenth-Century Song Repertoires', *Basler Jahrbuch für historische Musikpraxis*, 14 (1990), pp. 59–85 (pp. 67–68).

[142] See for instance the initial exercises of the *Fundamentum organisandi magistri conradi pauman contrapuncti* in the Buxheimer Orgelbuch (Munich, Bayerische Staatsbibliothek, Ms. 3725). See Bertha Antonia Wallner, *Das Buxheimer Orgelbuch Teil II (nr. 230-256 und kritischer Bericht für die gesamte Neuausgabe)*, Das Erbe deutscher Musik (Kassel: Bärenreiter, 1959), pp. 315–355.

music master would have learned *verbula* or *flores musicae mensurabilis* simply through oral transmission and by internalising them through singing compositions.

In general it needs pointing out that fourteenth- and fifteenth-century music, like that of any age, has a great deal of commonplace ornamental formulas, and that composers also seem to have had a personal stock of these to draw from.[143] Taking all this circumstantial evidence into consideration, it seems unlikely that there would have been a fundamental difference between the teaching of *organum purum* and fourteenth- and fifteenth-century florid polyphony, as Busse Berger has claimed. Note-against-note progressions are also a standard component of thirteenth-century treatises, and the teaching of the Vatican Organum Treatise may simply have presumed prior knowledge of these progressions.

2.2.3 The Coordination of *Super Librum* Performances

Although most of Tinctoris's illustrations of *cantare super librum* show a single voice in florid counterpoint against the plainchant tenor, it is clear from the text of the treatise that such a procedure could also be carried out by multiple singers simultaneously. Vexingly, neither Tinctoris nor any other fifteenth-century author give precise information about how several contrapuntists should coordinate their respective parts.[144] We have already touched upon Tinctoris's paradoxical statements in the *Liber de arte contrapuncti*, where, on the one hand, he says that in *cantare super librum* singers have to be consonant with the tenor alone but, on the other hand, are to avoid similar consonances between each other, which would imply a rather high level of mutual coordination. This problem is augmented by the apparently contradictory assessment of the quality of improvised counterpoint given by sixteenth- and seventeenth-century authors, ranging from severe criticism and incredulity, on the one hand, to high praise and admiration on the other.[145] Not surprisingly therefore, researchers have held rather different opinions as to how well coordinated *super librum* performances would have been.

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[143] A good case in point are the recurring melodic formulas in Machaut's *Messe de Nostre Dame*.
[144] As discussed previously Tinctoris in fact does advice against using similar concordances in different parts.
[145] On this see Wegman, 'What Is Counterpoint?', pp. 51–52.

In an article published in 1951, Ernst Ferand connected Tinctoris's statement about the relationship of voices in a *super librum* performance to a definition of *sortisatio* in Andreas Wollick's 1512 treatise *Enchiridion musices.*[146] *Sortisatio*, derived from *sortior*, to cast lots, seems to have been a denominator for a kind of sung counterpoint 'by chance'.[147] According to Wollick the difference between *sortisatio* and *compositio* is that, while in composition the relations between all the parts has to be considered, *sortisatio* is the *repente* (sudden) adding of concordant parts to a chant. Thus Ferand's interpretation was that singers in fact did not coordinate very much when singing on the book, and that it would unavoidably have been less strict in its application of contrapuntal rules than written music.[148] As we have seen, Margaret Bent has opposed this hypothesis, characterising Tinctoris's *cantare super librum* as a 'carefully structured process' that might very well have taken the shape of memorising a piece put together in rehearsal part after part.[149]

Other researchers, such as Peter Schubert and Klaus-Jürgen Sachs, have stressed the importance of 'improvisation models' ('Satzmodelle') for *cantare super librum.* The application of these models would have enabled singers to deduce simple three- and four-part settings quasi automatically from a written melody.[150] The importance of these 'recipes' for simple polyphonic settings is not to be underestimated, and writing a history of improvised counterpoint must of necessity include a discussion of three- and four-part fauxbourdon, as well as canons above plainchant and other such techniques that will be shown in Chapters 3 and 4.[151] However, it is also clear that expert singers would have been able collectively to improvise florid counterpoint without adhering to a single such model. Sixteenth-century Spanish treatises refer to such performances as 'contrapunto concertado', and it appears that as many as five parts could

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[146] Nicolaus Wollick, *Enchiridion musices* (Paris: Jehan Petit and Francois Regnault, 1512). See Ernst Ferand, '"Sodaine and Unexpected" Music in the Renaissance', *The Musical Quarterly*, 37.1 (1951), pp. 10–27 (pp. 12–13).
[147] Ferand, '"Sodaine and Unexpected" Music in the Renaissance', p. 10.
[148] Ferand, *Die Improvisation in der Musik. Eine entwicklungsgeschichtliche und psychologische Untersuchung*, p. 153.
[149] See Section 2.1.
[150] Schubert, *Modal Counterpoint Renaissance Style. Second Edition*; Klaus-Jürgen Sachs, 'Arten improvisierter Mehrstimmigkeit nach Lehrtexten des 14. bis 16. Jahrhunderts', *Basler Jahrbuch für historische Musikpraxis*, 10 (1987), pp. 101–120.
[151] Chapters 3 and 4 will be devoted to discussing such models for creating two, three, and four-voice polyphony.

collectively be improvised on a plainchant.[152]

The question remains therefore how this type of collective improvisation would have been coordinated by singers. Fifteenth-century counterpoint treatises offer precious little information on this subject, mostly limiting their advice to avoiding secondary dissonances (e.g. a simultaneous fifth and sixth above the tenor) and, more rarely, the avoidance of similar consonances between different parts.[153] Even sixteenth-century authors, who are much more informative in this respect, seem rather reluctant to give away the 'secrets of the trade' of this complex type of polyphonic improvisation.[154] Besides the economic advantages of restricting access to this kind of teaching, it may well be that the most important part of the practice of 'contrapunto concertado' was impossible to verbalise, simply because it depended almost entirely on collective experience. Extensive practice could have made singers very well aware of the habits of their colleagues, enabling them to anticipate each other's 'moves', rather like a high-level soccer team.[155]

Rob Wegman has also pointed to the importance of the social interaction between singers during music-making.[156] Pictorial evidence, he states, suggests a great deal of eye- and gestural contact between musicians. Moreover there seems to have been a special role for a kind of singer called the *tenorista*. Wegman mentions for instance the dismissal of sopranos and *contratenores* from Sienna Cathedral in 1448, because 'senza tenorista non si puo cantare.'[157] He notes that even in legal documents musicians could be referred to as *tenorista*,

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[152] Canguilhem, 'Singing Upon the Book According to Vicente Lusitano', p. 81.
[153] For a discussion of the treatment of three-voice discant and counterpoint in fourteenth- and early fifteenth-century treatises see Section 3.1.
[154] On this 'Geheimlehre' see Ferand, *Die Improvisation in der Musik. Eine entwicklungsgeschichtliche und psychologische Untersuchung*, p. 220 and 238. He cites Constanzo Porta, who would 'not give away for thousand ducats the secrets that he had learned', as well as the case of the treatise of the brothers Nanini, the use of which was supposedly to be restricted to members of the Papal chapel.
[155] Juan Bermudo testifies to the fact that he saw two men 'excellent in counterpoint', who were nonetheless unable to perform together, because they did not know each other: 'Visto avemos dos excelentes hombres en contrapunto y por no cognoscerse non concertarse en el contrapunto'. Bermudo, *El libro llamado declaración de instrumentos musicales* (Ossuna: Juan de Léon, 1555), fol. 134. See Fiorentino, p. 377.
[156]Wegman, 'From Maker to Composer: Improvisation and Musical Authorship in the Low Countries, 1450-1500', p. 442.
[157] Ibid., p. 445. See also David Fallows, 'Specific Information on the Ensembles for Composed Polyphony 1400-1474'', in *Studies in the Performance of Late Medieval Music*, ed. by Stanley Boorman (Cambridge: Cambridge University Press, 1983), pp. 109–59 (p. 116).

and that they received a significantly higher salary than other singers.[158] Writing in 1496, Johannes Herbenus of Maastricht described the difference between *concinare ad librum* and *compositus cantus* as residing in the fact that in the former, the pronouncing of the text is left to the tenor alone, which would add significantly to the *tenorista's* responsibilities.[159] Wegman proposes that the role of the *tenorista* would have been much like what today we would call a composer.[160] He has little doubt that a *tenorista* coordinating the contrapuntal choices of the other singers would have been able to conceive the entire polyphonic complex in his mind.[161] The only difference between a *tenorista* and a *compositor*, he claims, would have been the extent to which they converted their counterpoint into parts and mensural notation, the sounding results of *cantare super librum* and *resfacta* presumably being much alike in the best musical establishments, the only distinction between them being that between the written and the non-written, exactly as Tinctoris tells us.[162]

Supposedly the role of the *tenorista* would have been rather close to that of the leader of a Jazz orchestra, who, relying on the individual contributions of the members of his band, nevertheless controls the overall result. Phillippe Canguilhem has pointed to the importance given to improvised counterpoint in the selection of chapel masters in sixteenth-century Spain.[163] An oft-recurring element in these 'auditions' was the singing of a counterpoint above a plainchant, whilst pointing out two further voices on the Guidonian hand.[164] This type of 'remote controlled' counterpoint is of course not the product of collective decision making, but rather of a single individual, much like a keyboard improvisation. Although this type of exercise is known to us only from Spanish sixteenth century sources, the Guidonian hand would seem a universal and easy-to-use device for controlling one or more parts in an improvisation. Table 2.2 shows the left side of Luca della Robbia's *cantoria* (singing loft), ordered by the

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[158] Wegman, 'From Maker to Composer: Improvisation and Musical Authorship in the Low Countries, 1450-1500', p. 446.
[159] Johannes Herbenus, *De natura cantus ac miraculis voci* (1496). Ibid., p. 448.
[160] Ibid., p. 449.
[161] Ibid., p. 450.
[162] Ibid., p. 452.
[163] Canguilhem, 'Singing Upon the Book According to Vicente Lusitano', pp. 57–58.
[164] The first of the twenty tests for applicants for the post of the choirmaster at Toledo cathedral in 1604: '1. Contrapunto suelto sobre canto llano de contrabajo, y do concierto, puntando dos vozes por la mano y cantando otra.' Ibid., pp. 102–103. In this case it is clearly not the singer of the cantus firmus who is coordinating the performance.

Florence cathedral chapter in 1431, with five boys singing from a book, while in the background on the right fifth boy—who is not singing—holds up his opened left hand, possibly to indicate pitches on it.[165] The interpretation of such images must remain speculative, as it is usually impossible to tell exactly what kind of performance is taking place, but it may be that hand-signals of some type were common enough between singers that visual artists would have picked up on them and included them in their depictions of angelic or human music-making.

Table 2.2 Luca della Robbia, singing loft, detail: opened left palm. (Florence, Museo dell'Opera del Duomo).

A question that remains is whether singers did in fact need to 'rehearse' their *super librum* singing, putting it together step-by-step and finally performing from memory, as Margaret Bent has argued. As has already been mentioned, Vicente Lusitano offers a three-fold division of counterpoint in his *Del Arte del Contrapunto*, which besides 'improvised counterpoint' and 'composition' also includes 'contrapunto pensado' ('thought-over counterpoint'). In the second

[165] I am thankful to Giuseppe Fiorentino for pointing out this interesting detail to me. For more images see <http://www.wga.hu/html_m/r/robbia/luca/cantoria/index.html> [accessed 16 August 2016].

chapter of his treatise, on 'contrapunto conçertado', he gives more information as to what kind of preparation a collective *super librum* performance would require.[166] The first step, he says, is to look at the chant and determine the mode and the cadences implied by it, to distribute the different cadential roles in every case.[167] Secondly the singers have to listen carefully to one another, to 'await each other to show the grace of counterpoint, which must never be confused with disorder.'[168] To achieve this, it is important that the singers know each other and their respective vocal ranges well. They also have to be conscious of the make-up of the ensemble as a whole, this because different procedures are called for by different voice-distributions. No matter how talented the members of the ensemble, Lusitano states that it would be difficult to achieve agreement on such issues 'de inproviso', and he advises to coordinate them before the performance.[169]

It would appear from Lusitano's description that determining the cadences in advance ensures that the improvisation does not disintegrate into chaos, even if accidents happen on the way. As Nettl has argued, such 'points of reference' make it possible for performers and audience to control the structure of an improvised performance, ensuring the basic stability of the musical edifice.[170] While he advises to determine some structural moments in the improvisation in advance, Lusitano's description does not confirm Margaret Bent's hypothesis that *super librum* performances were essentially 'pre-cooked' and performed from memory. On the other hand, it should be clear from the foregoing survey that *cantare super librum* would have involved a great deal of 'control strategies'

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[166] Canguilhem, *Chanter sur le livre à la Renaissance. Les traités de contrepoint de Vicente Lusitano*, pp. 213–229.

[167] 'lo primero que deven mirar es de que modo sea el canto sobre el qual quieren cantar, y esto para la orden de prosegir y para las clausulas.' ('the first thing they must look at is the mode of the melody on which they want to sing, considering the cadences and the order to follow.') Canguilhem, 'Singing Upon the Book According to Vicente Lusitano', p. 81; *Chanter sur le livre à la Renaissance. Les traités de contrepoint de Vicente Lusitano*, p. 213.

[168] 'Y lo segundo que deven mirar es que danbas las bozes que contrapuntan se esperen, para que se paresca la gracia del contrapunto y no sea confundida con la desorden.' Canguilhem, 'Singing Upon the Book According to Vicente Lusitano', p. 81; *Chanter sur le livre à la Renaissance. Les traités de contrepoint de Vicente Lusitano*, p. 213.

[169] 'This wait and this agreement are difficult to make extempore, however talented the singers and they should know their respective vocal ranges to sing in harmony more easily.' ('El qual esperar y concertar apenas se haze bien de inproviso, por abiles que sean, y conviene que se conoscan para saber el uno los terminos del otro, por que mas façilmente se conçierten.') Canguilhem, 'Singing Upon the Book According to Vicente Lusitano', p. 81; *Chanter sur le livre à la Renaissance. Les traités de contrepoint de Vicente Lusitano*, p. 213.

[170] See Section 2.1.2.

that we may not automatically associate with collective improvisation: a hierarchic division of roles combined with verbal and gestural communication prior to and during the performance. If we combine this with what has already been established about the training of young musicians, we can perhaps begin to understand how it would have been possible collectively to produce florid counterpoint on a plainchant, without having to resort to comprehensive memorisation.

2.2.4 Summary

We can state that medieval and Renaissance musical terminology does not sharply divide between written and non-written polyphony. This is clear from the ambiguity of terms like *discantus* and *contrapunctus*, which can refer to either in different contexts. Where a distinction was made between sung and written polyphony, the decisive criterion was the absence or presence of musical notation, and no difference in status between such performances is evident from discussions of theorists until the late sixteenth century. The fluidity and interdependence of different modes of musical production is also evident from the fact that alternative categorisations existed: Vicente Lusitano divides counterpoint in 'improvised', 'composed' and 'thought-over', indicating that to conflate non-written polyphony with 'improvisation' might be an oversimplification. It is also clear that pre-modern musicians functioned within what Leo Treitler has called an 'aural paradigm', indicating the significant overlap both between composition and extemporisation, as well as performance from memory and notation.

Musical treatises teaching the basic elements of polyphony left to us from the Middle Ages and Renaissance, probably functioned as a kind of teacher's compendia, used by adult musicians, not by beginners. Primary musical education would almost certainly have been vocal and aural. Imitation of a master and learning by 'osmosis' seems to also have been the way to learn to extemporise florid polyphony. At the end of this process, the musician would possess a memory well-stocked with elementary progressions, but also with a set of florid formulas to turn these progressions into a graceful and attractive musical line. The acquisition of a collection of melodic 'building blocks', combined with the learning of a few theoretical precepts, also seems to be a

common pedagogical strategy in living oral musical traditions.[171] The aim of this kind of teaching is not to develop 'creative' or 'inventive' music-making, but to provide the student with a well stocked memory, containing *loci communes* that could be used in any conceivable situation.[172] As such one could state, following Dahlhaus, that the ability to improvise comes, paradoxically, from copious practice and the mastery of musical clichés.

[171] See Section 2.1.2.
[172] For a discussion of the use of *loci communes* in the music pedagogy of the sixteenth century see Peter Schubert, 'Musical Commonplaces in the Renaissance', in *Music Education in the Middle Ages and the Renaissance*, ed. by Rusell E. Murray Jr, Susan Forscher Weiss, and Cynthia C. Cyrus (Bloomington, Indianapolis: Indiana University Press, 2010), pp. 141–157.

2.3 Conclusions and Observations from Practice

I would like to close this chapter by summing up what I see as the major points arising out of the foregoing overview of 'improvisation' and comparing them with my own experience of trying to recreate fourteenth- and fifteenth-century sung polyphony. First and foremost, it cannot be emphasised enough that in no musical tradition (including Western classical music) a sharp line be can drawn between the 'written' and the 'non-written' in musical practices. As Dahlhaus and others have argued, even the execution of a written score by, say, a classical pianist, involves impromptu decision-making, 'interpreting' and 'translating' the written score into a sounding piece of music. 'Absolute' improvisation and composition must be assigned to the realm of the speculative, and real-life musical phenomena will always be positioned somewhere on the continuum between these hypothetical extremes.

This idea is very pertinent to the study and performance of early music, because we know that most pre-modern repertoire allowed for, or even required, a rather significant creative input on the part of the performer. Of course there is a difference between singing a part in composed polyphony from mensural notation (supplying perhaps only accidentals and text-placement) and singing *super librum* with the plainchant as the only written support. I would argue, however, that this difference is one of degree, not of kind, and that an understanding of what musicians might do when confronted with a part of composed polyphony has much to gain by understanding what they where capable of when singing on the book.

It follows from these considerations that we need to specify carefully what we mean by 'improvising' in a particular context. The amount of stylistic and contrapuntal constraints placed on improvisations will vary considerably between the different techniques described in this thesis. In some cases, the improvisation model will be so specific as to leave almost no choice to the performer, in other cases a larger—but not unlimited—set of options is available. 'Improvisation' therefore is used here simply referring to the creation of polyphony, on the spot, by singing, without extensive preparation of the individual musical events.

From several years of practical experience with improvisations in medieval and Renaissance styles, it has become clear to me that knowledge of the style and repertoire, the ability to sight-read it, and the ability to improvise, are intimately connected. No improvisation can take place *ex nihilo*: it is always based on prior musical experiences, and—exactly like sight-reading—cannot take place in a stylistic vacuum. It is my experience that some elementary improvisation techniques, such as simple discant and gymel, will after a bit of practice also give the sensation of sight-reading, because one can 'see' at first sight how a second voice can be sung against a notated melody. Several traditions of counterpoint pedagogy refer to the visual aspect of extempore polyphony as 'sighting' or *contrapunctus visus*, stressing the importance of a visual support, the staff of the plainchant, on which to visualise one's counterpoint.[173] I often encourage students to use what I call an 'imaginary laser-pointer' to visualise their counterpoint on the musical staff, and using this strategy may indeed feel like reading a part that has not (yet) been written.

What we know of the coordination of *super librum* performances points away from the common misconception of musical improvisation as 'spontaneous' and 'free'. The internal organisation of fifteenth- and sixteenth-century musical chapels seems to have been rather hierarchic, with clearly defined roles for all its members. In the case of collective *super librum* singing, a special role seems to have been reserved for a singer called the *tenorista*, who would be in charge and possibly 'conduct' the other singers. It is likely that certain points of reference, for instance cadences, would be determined prior to the performance, and even during performance communication might have taken place with gestures or the use of the Guidonian hand. Finally, we have to consider that singers would have had an intimate knowledge of one another's voice and contrapuntal habits, building daily on this collective practice. When we consider these 'control strategies' together with the intensive training musicians would have undergone as children, it would have been perfectly possible for them to create polyphony without extensive preparation of the individual performance. This conception of *cantare super librum*, as a highly controlled type of music-making should not come as a surprise considering the functioning of

[173] See Sections 3.1 and 4.1.

living oral traditions of music, which, as has been shown, tends to place a set of rather strict expectations on the performer. It also fits with our general understanding of the social realities of late medieval Europe, as a culture where individuals were assigned well-defined roles in society, and 'transgressive' behaviour in any sense was generally frowned upon.[174]

A crucial point to consider here is that an extempore performance does not have to be 'unprepared' or 'uncoordinated', even when it is not rehearsed. Practising musicians understand that improvisation is not the completely spontaneous or unprepared process that some definitions make it out to be.[175] While I agree with Margaret Bent that the term 'improvisation' is not fifteenth-century vocabulary, I do not see why one would need to avoid it in a discussion of *cantare super librum*. Most types of musical performance we call improvised use pre-learned musical material, involve coordination between the performers both beforehand and during the performance, and require years of musical training and practice. In a more recent publication, Bent also has professed to not being opposed to the application of Nettl's 'model'-based view on oral practices to *cantare super librum*.[176]

A more informed understanding of 'improvisation', taking the cultural values particular to the later Middle Ages into account, might very well describe the act of adding 'instantaneous polyphony' to a plainchant. Phrases like *ex improviso, ex tempore, subitus* or *repente*, can simply be taken as 'on the spot' without reading values like 'randomness' or 'spontaneity' into them. The kind of active involvement of the singer in creating polyphony described by Bent is very similar to Treitler's 'aural paradigm', that is, the interconnectedness of memorising, extemporising, composing and reading music. If, with Treitler, we accept that improvisation in oral or semi-literate traditions can lead to orderly

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[174] For an introduction to the social history of medieval Europe, see Jacques Le Goff and Julia Barrow, *Medieval Civilisation 400-1500* (Oxford, New York: Basil Blackwell, 1988), pp. 255–361.
[175] Bent, '"Resfacta" and "Cantare Super Librum"', p. 374. I would argue that Wili Apel's definition cited by Bent ultimately echoes the mystification of the improvising 'virtuoso', a process that began in the nineteenth century, and probably did not even correspond to the reality of non-written music-making in that era.
[176] Bent remains reluctant to use the word 'improvisation' however, because even when distanced from older, superseded views on it, it 'has no license from Tinctoris, and (…) may still be open to misunderstanding as an unprepared process.' Bent, *Counterpoint, Composition, and Musica Ficta*, p. 50.

and balanced results, the practice of *cantare super librum* could well have included an 'improvisatory' element.

On a more philosophical note, I think that a sharp distinction between 'pre-cooked' and 'genuinely improvised' performances is ultimately untenable. As I have argued here, no successful performance of improvised counterpoint can be considered 'unprepared' or 'uncoordinated', even if it was not rehearsed as such. A first element of preparation would be the singers individual training, a second their collective experience (which may have been extensive and prolonged), and a third their coordination prior to the performance. Such 'control-strategies' differ only from actually 'pre-rehearsing' a performance in the matter of time spent at the coordination of individual musical events.[177] With increased experience this process will also go faster, such that less prior negotiation is needed every time one sings together.

[177] As such Max Haas' objections against the use of 'improvisation' in medieval music because pieces could be performed as a 'rehearsed unit' ('geprobte Einheit') do not seem valid to me. See Haas, pp. 13–14.

3 IMPROVISED POLYPHONY 1300-1400

For Renaissance music, a widely established method of 'historically informed analysis' has become the comparison of compositions to improvisational techniques or models described in treatises of the period.[178] Underlying this approach is the quite reasonable assumption that if an important part of Renaissance musicians' training and daily work consisted of improvising polyphony, this would have had a considerable influence on the way these musicians composed as well. A similar argument has been made for the study of the partimento pedagogy of eighteenth-century Neapolitan 'conservatori', in which young musicians were trained in playing unfigured basses and realising a kind of musical 'Lückentexte'.[179] Those exercises firmly established elements of musical grammar and style, linking interpretation, improvisation and composition, in much the same way that choirboys' training in counterpoint would have achieved in the Renaissance. This provides us—as modern analysts and musicians—with a unique opportunity to approach these repertoires with a 'period eye', or, when we make the effort to practise these techniques ourselves, a 'period ear'.[180] What is more, both 'contrappunto alla mente' and partimento playing have recently been successfully used in tertiary music education to improve aural understanding of historical styles, complementing more traditional methods of teaching music theory and ear-training.

The standard historiography of Western music, characterises fourteenth- and early fifteenth-century music as 'subtle' and concerned with notational and compositional intricacies. It is telling, for instance, that Johannes Wolf's designation for this period—still widely in use today—the *Ars Nova*, was derived from a complex of treatise-texts about mensural notation said to have been written by Philippe de Vitry.[181] In fact, there are no indications that the music of

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[178] See for instance Schubert, 'From Improvisation to Composition Three 16th Century Case Studies'; Julie E. Cumming, 'Renaissance Improvisation and Musicology', *Music Theory Online*, 19.2 (2013) <http://mtosmt.org/issues/mto.13.19.2/mto.13.19.2.cumming.html> [accessed 16 August 2016].

[179] See for instance Giorgio Sanguinetti, *The Art of Partimento: History, Theory, and Practice* (Oxford, New York: Oxford University Press, 2012); Robert O. Gjerdingen, *Music in the Galant Style* (Oxford, New York: Oxford University Press, 2007).

[180] For an investigation of the 'period ear', the challenges and benefits of an attempt at 'historical listening', see Shai Burstyn, 'In Quest of the Period Ear', *Early Music*, 25 (1997), pp. 692–701.

[181] See David Fallows, 'Ars Nova', *Grove Music Online* [accessed 16 August 2016].

the '*Ars Nova* period' would have been less improvisation-based than that of the preceding and succeeding periods. As we have seen in Chapter 2, fourteenth-century authors view composition and extemporisation as a single skill (*ars*), known as *discantus*. Even though scholars as Nino Pirrotta, Sarah Fuller, Shai Burstyn and Anne Stone have stressed the importance of extempore polyphony as a means of producing music during the later Middle Ages, polyphonic improvisation of the 'long fourteenth century' remains largely unexplored in practice-based and -oriented research.[182] While similar approaches exist for thirteenth-, fifteenth- and sixteenth-century music, the traditional image of the *Ars Nova* seems to have discouraged practitioners from investigation fourteenth-century music in the same light.[183]

In this chapter, I will describe a number of improvisational techniques I have experimented with, together with my fellow-singers of the ensemble Diskantores and students at the Royal Conservatoire of The Hague. I would argue these techniques can be used as a curriculum teaching late medieval polyphony, as well as informing the analysis of historical compositions, in much the same way as partimento and 'contrappunto alla mente'. For each of these techniques, I will provide a description of the theoretical sources and the way late-medieval musicians have employed them to compose both 'simple' and 'refined' polyphony. I will also provide a concise description of how my fellow-singers and myself have practised these models and how we have used them to improvise on cantus firmi.

[182] The only other research project taking on fourteenth-century counterpoint and improvisation from a practical angle I am aware of to date is the 'Wheels within wheels' project of the University of Bergen: <http://artistic-research.no/prosjektprogrammet/tildelinger/tildelinger-2015/wheels-within-wheels-new-approaches-to-interactions-between-performers-and-composers/?lang=en> [accessed 16 August 2016].
[183] See Section 5.1.

3.1 Two-Voice Polyphony

In the first part of this chapter, I will describe several techniques available to singers of polyphony between ca. 1300 and 1400, to extemporise a second voice to a plainchant melody (referred to as *cantus firmus* or *tenor*). The discussion will start from a type of polyphony that is essentially note-against-note, that is often referred to as 'simple polyphony'.[184] This type 'unbroken' singing, somewhat akin to what later authors call *contrapunctus simplex*, was held in high esteem by church authorities throughout the Middle Ages.[185] It seems that such polyphony was not only the 'staple diet' of medieval musicians, but also that it formed the basis of their training in singing polyphony. As I will argue, the habits acquired in this basic level of musical activity continued to play an important role in the production of more sophisticated polyphony as well.

3.1.1 Fifthing and Discant in Perfect Consonances

The first sources describing polyphonic singing in the medieval West point to a procedure of accompanying a plainchant, the *vox principalis*, by a second voice, the *vox organalis*, in perfect consonances called *symphoniae*.[186] It is probable that parallel organum originated as a kind of acoustic amplification, and might initially not have been thought of as multi-part singing at all.[187] In hexachordal solmisation notes an octave, fifth or fourth apart are also sung with the same syllable (*vox*), and are therefore in a sense identical. An important testimony to the survival of parallel organum, especially in fifths, into the later Middle Ages is a corpus of simple, archaic or 'popular' repertoires found all over Europe. (The fourth-organum appears to have disappeared from practical documents by this date). In the Low Countries, for instance, much of the polyphony of the Brethren

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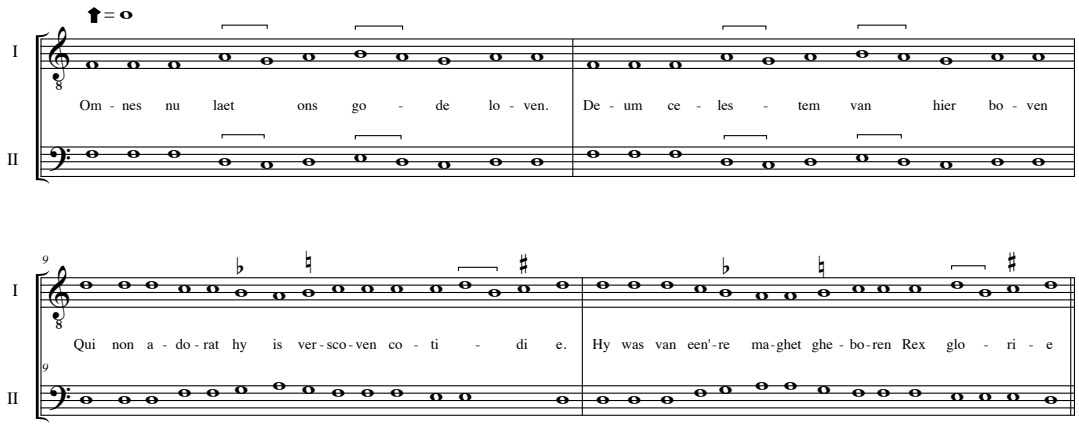
[184] On the term 'simple polyphony' and its definition see 'The Definition of Simple Polyphony Some Questions', in *Le Polifonie Primitive in Friuli e in Europa. Atti del Congresso Internazionale Cividale del Friuli, 22-24 Agosto 1980.*, ed. by Cesare Corsi and Pierluigi Petrobelli (Rome: Edizione Torre d'Orfeo, 1989), pp. 33–42.

[185] See for instance Mary Berry, 'John XII [Duèse, Jacques]', *Grove Music Online* [accessed 16 August 2016] .

[186] See Richard L. Holladay, 'The Musica Enchiriadis and Scholica Enchiriadis A Translation and Commentary' (Ohio State University, 1977), pp. 140–150 <https://etd.ohiolink.edu/ap/10?0::NO:10:P10_ACCESSION_NUM:osu1392116314> [accessed 16 August 2016].

[187] I will refer singing parallel perfect consonances as 'organum', even if the term has a rather complex history, and acquired different meanings over time. See 'organum' in Michael Bernhard, 'Organum', *Lexicon Musicum Medii Aevi* (Munich: Verlag der Bayerischen Akademie der Wissenschaften, 2006) <http://woerterbuchnetz.de/LmL/> [accessed 16 August 2016].

of the Common Life could be categorised as parallel organum. The following 'modern devout' piece, dating from the late fifteenth century, starts out as an organum in parallel fifths.[188]



Example 3.1 *Omnes nu laet ons gode loven* (Hasselt, Franciscanerklooster, 'Handschrift Tongeren', no shelfmark, fol. 123v-124).

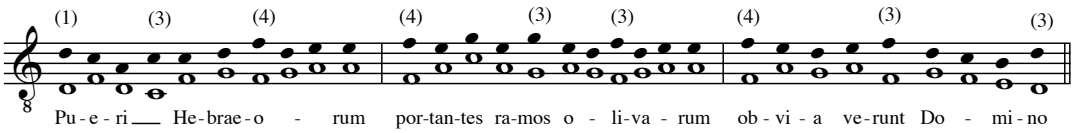
More surprising perhaps than the amount of extant organal pieces from the later Middle Ages is the fact that we possess a number of treatises that teach singers how to extemporise this kind of polyphony. Sarah Fuller has called attention to four short treatises from the late thirteenth to the early fifteenth centuries that teach a kind of 'updated' fifth organum, called 'fifthing' (*quintare*).[189] The difference with the strictly parallel organum presented in the *Enchiriadis* treatises is the fact that the student is instructed to move from the fifth to the octave, or vice versa, in contrary motion at certain points.[190] Fuller notes that, despite the disparity in date and provenance, these treatises present a remarkably uniform doctrine, which makes it likely that they were each based

[188] Eliseus Bruning, 'De Middelnederlandse Liederen van het Onlangs Ontdekte Handschrift van Tongeren (Omstreeks 1480) [1955]', *Digitale Bibliotheek voor de Nederlandse Letteren* <http://www.dbnl.org/tekst/brun007midd01_01/> [accessed 16 August 2016].
[189] Sarah Fuller, 'Discant and the Theory of Fifthing', *Acta Musicologica*, 50 (1978), pp. 241–75 (p. 51). Fuller investigates the following treatises: 1) *Libellus in Gallico* ('Quiconques veut deschanter...'),. Paris, Bibliothèque national de France, fonds latin, Ms 15139, fol. 269-270. 2) *Quicumque bene et secure discantare voluerit...*,. St. Dié, Bibliothèque muncipale, Ms. 42, fol. 56-58. 3) *Quicumque vult quintare /cantare... breviter et secure...*, Barcelona, Biblioteca central, Ms. 888, fol. 64-66 and Seville, Biblioteca Capitular y Colombina, Ms. 5-2-25, fol. 81-82. 4) *Regule in discantu ('Iste sunt regule in discantu...')*, Seville, Biblioteca Capitular y Colombina, Ms. 5-2-26, fol. 65.
[190] Ibid., p. 251.

upon a shared oral tradition that must have been relatively widespread.[191] The precepts taught by the fifthing treatises can be summarised as follows:[192]

1) If the chant rises initially, start on the octave; if it descends, start on the fifth.
2) Proceed in parallel fifths.
3) When the chant descends, the last note of the descent receives an octave.
4) When the chant ascends the first note of the ascent receives an octave.[193]
5) Octaves are inserted to create variety, but are not used in succession.[194]

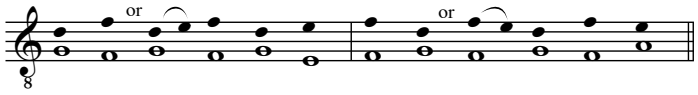
When we apply these rules to a plainchant we obtain a result that looks something like the following example. (Every time the *quintizans* sings an octave the corresponding rule is indicated).



Example 3.2 *Pueri Hebraeorum* (*Graduale Triplex*, p. 138) with fifthing.

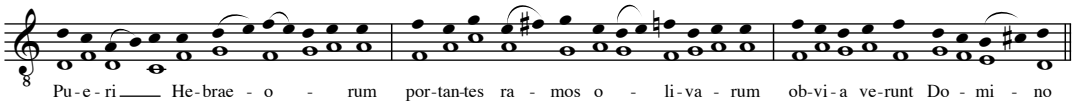
As opposed to the strictly parallel type of the *Enchiriadis* treatises, the singer is no longer required to follow the melody as if singing and unison, and should be able to sing a fifth as well as an octave above every note of the cantus firmus.[195] In order to comply with rules 3) and 4), the singer also has to read ahead and analyze the movement of the chant. In my experience, it works best to gradually introduce these rules taking singing in parallel fifths as a starting-point, and making suggestions in the course of singing. A helpful observation is that progressions from fifth to octave or octave to fifth in contrary motion require a third in one of the parts, while the other goes by step. Such progressions can be filled with a passing note when the melodic third occurs in the *quintizans.*

[191] Ibid., p. 253 and 258.
[192] Summary after Fuller. Ibid., p. 254.
[193] Ibid., p. 257.
[194] Ibid., p. 258.
[195] Ibid., p. 254.



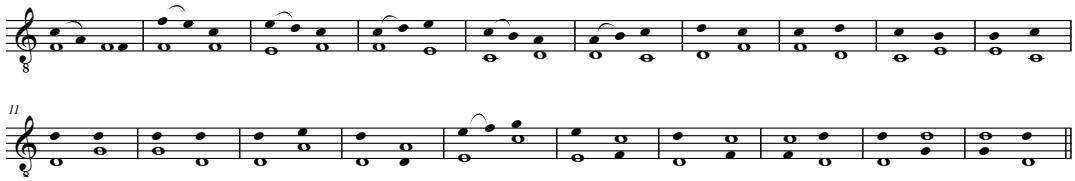
Example 3.3 Fifth-octave and octave-fifth progressions.

Fuller hypothesises that at a later stage of training the basic progressions of fifthing would be ornamented with passing notes, and that fifth-octave progressions could be changed to sixth-octave directed progressions.[196] A version of *Pueri Hebraeorum* sung in this way might have sounded like this:



Example 3.4 *Pueri Hebraeorum* (*Graduale Triplex*, p. 138) with 'enriched fifthing'.

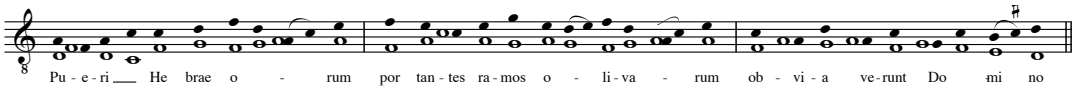
Another way that one could conceivably progress from this type of parallel organum to 'real discant' would be to introduce other progressions between perfect consonances. Such progressions are taught in thirteenth-century discant and organum treatises, which instruct the student by means of stock discant responses to melodic intervals of the cantus, referred to as 'Klangschrittlehre' in scholarship. The treatise *Discantus positio vulgaris* (ca. 1230), for instance, teaches discant responses for a repeated note and ascending and descending cantus firmus motions up to an octave.[197]



Example 3.5 Interval progressions from *Discantus positio vulgaris*.

[196] Ibid., p. 263-264.
[197] See Anonymous, 'Discantus Positio Vulgaris', *Thesaurus Musicarum Latinarum* <http://boethius.music.indiana.edu/tml/13th/DISPOS> [accessed 16 August 2016]; Sarah Fuller, 'Organum - Discantus - Contrapunctus in the Middle Ages', in *The Cambridge History of Western Music Theory*, ed. by Thomas Christensen (Cambridge: Cambridge University Press, 2002), pp. 477–502 (p. 488).

Most of the progressions in Example 3.5 are in contrary motion and they involve only unisons, octaves and fifths. The example also indicates possibilities for passing notes, similar to those in Example 3.3. All progressions are given in letter names, but the adverb 'puta' suggests such progressions can also be sung on other pitches. A version of *Pueri Hebraeorum* using the discant progressions of the *Discantus positio vulgaris* as well as parallel fifths looks like this:



Example 3.6 *Pueri Hebraeorum* (*Graduale Triplex*, p. 138), with discant.

I have found fifthing a useful tool for getting students and colleagues to start improvising. Also, parallel organum in fifths is good training to sing perfect consonances in tune. Practising contrary motion in perfect consonances can also be fruitful when combined with the type of discant in stepwise contrary motion that will be described below. The 5-8 progressions used in fifthing remain an important ingredient of fourteenth-century discant. We may also see in Section 4.1.2 how 'disguised' (or structural) parallelism in fifths and octaves can even be used as a framework for florid counterpoint.

3.1.2 The Adjacent Consonances Principle

The term *discantus* ('singing apart') first appears in twelfth-century treatises as a translation of the Greek *diaphonia* ('sounding apart'), referring to harmonic intervals or polyphony in general.[198] In the fourteenth century this 'singing apart' would have come to be understood in a quite literal sense of a mirroring, or inverting, of the motion of the plainchant by the added voice. The English treatise *Quatuor principalia musicae* formulates this principle as follows: 'After beginning with one of the consonances mentioned before, one must proceed by adjoining

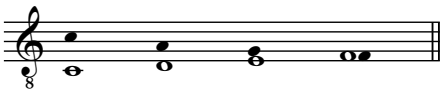
[198] See Ernest H. Sanders and Peter Lefferts, 'Discant', *Grove Music Online* [accessed 16 August 2016]. This definition is for instance found in the the third chapter of Liber VII of Jacobus Leodensis's *Speculum Musicae*: 'As for the first, discantus is so named in one sense, from "dya" which means two, and song, as it were two-fold song (...)' 'Quantum ad primum, discantus uno modo dicitur ad "dya" quod est "duo", et cantus, quasi duplex vel duo cantus (…)' Jacobus Leodensis, 'Speculum Musicae, Liber Septimus', *Thesaurus Musicarum Latinarum* <http://boethius.music.indiana.edu/tml/14th/JACSM7> [accessed 16 August 2016].

consonances, in the best way possible, so that if the cantus ascends the discantus descends and vice versa.'[199]

The idea that *cantus* and *discantus* should principally move in contrary motion is perhaps too much of a commonplace in this period to warrant more discussion. What is more interesting is that the *Quatuor principalia* seems to imply there is an easy way to achieve this, by using adjacent consonances ('proximas concordantias'). In his *Compendium de discantu*, Petrus dictus Palma Ociosa also instructs that discant must mostly proceed in adjacent consonances ('species vicinori'). He is however much more explicit than the author of the *Quatuor principalia* as to how this is done:[200]

Praeterea notandum est, quod omnes species discantus praedictae debet una alteri viciniori quam poterit aptari et etiam ordinari, verbi gratia, ut si cantus ascendat per voces sese immediate sequentes et discantus sit in diapason supra cantum praedictum, post diapason debemus facere diapente descendendo contra cantum dictum semiditonum et ultimo unisonum, ut hic:

One should note, moreover, that all the aforesaid species of discant must be adapted and arranged in such a way that each interval is as close as possible to its neighbour, for example, when the chant moves up by successive steps and the discant is in the octave above the aforesaid chant, then moving down against the said chant, we must make a fifth after the octave then a minor third, and lastly a unison, as here:

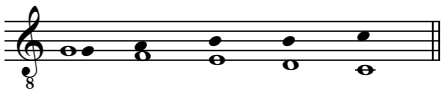


Et si cantus descendat gradatim per voces sese immediate sequentes, ut dictum est, et discantus sit in unisono, tunc debemus facere post unisonum ditonum addendo dictum diapente, post tonum cum diapente et ultimo diapason, ut patet in sequenti exemplo:

And if the chant moves down stepwise in successive steps, as already said, and the discant is in the unison, then after the unison we must make a major third, then the said fifth, then the major sixth , and lastly the octave, as is evident in the following example:

[199] 'Deinde posito principio in aliqua praedictarum concordantia, prosequendum est ad proximas concordantias quo bono modo fieri potest, ita quod si planus cantus ascendit, discantus descendet et e contrario...' See Luminata Florea Aluas, 'The Quatuor Principalia Musicae: A Critical Edition and Translation and Commentary' (Indiana University, 1996), p. 22 (transl. p. 713). Translation adapted here. See also Klaus-Jürgen Sachs, 'Zur Tradition der Klangschrittlehre: DieTexte mit der Formel "si cantus ascendit..." und ihre Verwandten', *Archiv für Musikwissenschaft*, 28 (1971), 233–270.

[200] Petrus dictus Palma ociosa, 'Compendium de Discantu Mensurabili', *Thesaurus Musicarum Latinarum* <http://boethius.music.indiana.edu/tml/14th/PETCOM>. Translation after Rob C. Wegman, 'Petrus Dictus Palma Ociosa: Compendium of Measurable Discant (1336)' <https://www.academia.edu/3512869/Petrus_dictus_Palma_ociosa_Compendium_of_Measurable_Discant_1336_> [accessed 16 August 2016].



Progressions in adjacent consonances are also taught in a large number of other theoretical treatises between the thirteenth and the late fifteenth century, which I have listed in Appendix A. The theorists call such progressions 'natural' ('X naturaliter requirit post se Y') or 'general' ('post X sequitur generaliter Y'). This seems to indicate that they were conceived of as the most common or usual progression from a given interval to the next.

Klaus-Jürgen Sachs has argued that the adjacent consonances serve as 'model progressions' ('Normverbindungen') in treatises because they exemplify the aesthetic principles of contrary motion, stepwise voice leading and alternation between perfect and imperfect consonances.[201] Looking at Petrus's example however, we find that two of his progressions, 8-5 above the ascending tenor and 5-6 above the descending tenor, do not comply with at least one of these criteria. The progressions 5-6 and 6-5, not in contrary motion, are also referred to as 'natural' in the treatises. Similarly, 5-8 and 8-5 progressions, from perfect to perfect consonance, are equally included in lists of adjacent consonances by theorists.[202] Furthermore, it is clear that the teaching of the treatises does not only concern imperfect-perfect 'directed progressions' (e.g. 3-1), because the inverse perfect-imperfect progressions (e.g. 1-3) are described by the theorists in exactly the same words.[203]

I would argue therefore that the lists of progressions in adjacent consonances should be interpreted as a whole, a string of progressions to accompany a stepwise tenor, and not only as separate 'model progressions'. As

[201] See Klaus-Jürgen Sachs, 'Die Contrapunctus-Lehre im 14. und 15. Jh.', in *Die Mittelalterliche Lehre von der Mehrstimmigkeit*, ed. by Friedrich Zaminer, Geschichte der Musiktheorie 5 (Darmstadt: Staatliches Institut für Musikforschung, 1984), pp. 161–256.
[202] The *Optima introductio in contrapunctu pro rudibus* for instance teaches that 'after the fifth follows the sixth, or otherwise the octave or another consonance' ('Post quintam sequitur sexta et aliquando octava et etiam unaqueque species.') Johannes de Garlandia (?), 'Optimo Introductio in Contrapunctum pro Rudibus', *Thesaurus Musicarum Latinarum* <http://boethius.music.indiana.edu/tml/13th/GAROPT> [accessed 16 August 2016].
[203] The *Liber musicalium* teaches that 'the said fifth has to have a third after it' ('tunc quinte debet habere post se tertiam') and Anonymous XI uses the formula 'the unison requires a third before or after it' ('unisonus requirit post se tertiam vel ante'). Philippe de Vitry (?), 'Liber Musicalium', *Thesaurus Musicarum Latinarum* <http://boethius.music.indiana.edu/tml/14th/VITLIBM>; Anonymous XI, 'Tractatus de Musica Plana et Mensurabili', *Thesaurus Musicarum Latinarum* <http://boethius.music.indiana.edu/tml/15th/ANO11TDM> [accessed 16 August 2016].

has also been argued by Shai Burstyn, these progressions can be recognised in much simple polyphony from the later Middle Ages, and they have aptly been compared to a bellows by Nino Pirrotta.[204] The common doctrine of these treatises can be synthesised in the following diagram, showing progressions between unison and third, third and fifth, and sixth and octave etc.

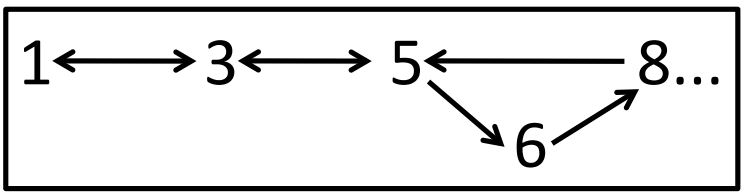
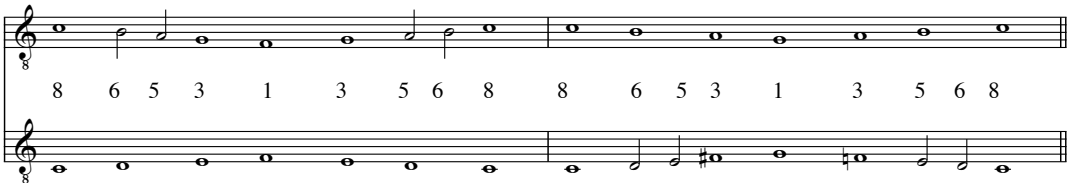


Figure 3.1 Diagram of the adjacent consonances principle.

From the fact that the fifth and sixth proceed in oblique motion, and that the sixth may be skipped when the tenor ascends, arises a peculiarity we can already observe in the examples from Petrus Palma Ociosa's treatise. A contraction starting from c-c' can conclude in unison on f as well as on g. This gives the model some flexibility, to take into account a desired cadential goal or the number of steps by which the tenor rises or falls.



Example 3.7 Successions in adjacent consonances.

[204] See Shai Burstyn, 'Contrapuntal Texture', in *Polyphonies de tradition orale histoire et traditions vivantes. Actes du colloque de Royaumont 1990*, ed. by Michel Huglo, Christian Meyer, and Marcel Pérès (Paris: Créaphis Editions, 1993), pp. 159–69; Pirrotta, pp. 72–79.

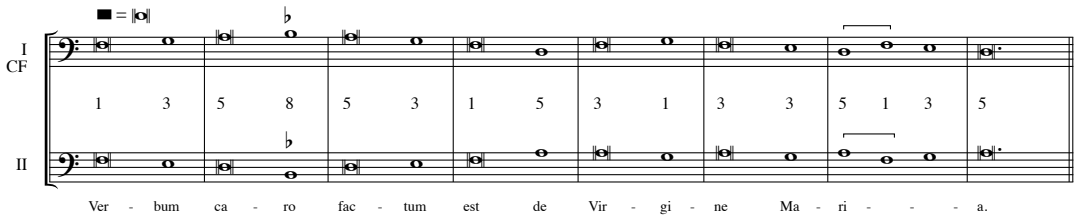
3.1.3 The Adjacent Consonances in Two-Voice Compositions

In his *Music and Culture in Italy* (1984), Pirrotta makes several references to 'bellows-like' counterpoint in adjacent consonances, which he characterises as 'an obviously mechanical procedure, compared to the more skilful and varied procedures of artistic polyphony.'[205] He connects this type of polyphony to the Italian vernacular traditions of improvised poetry and music, but also mentions a two-voice *Verbum caro* (see Example 3.8), as a 'sporadic occasion' in which such music was preserved in writing.[206] Discant in adjacent consonances appears to have been a much more widespread phenomenon, both geographically and temporally, than Pirrotta imagined. It can be found in such a large number of pieces that an all-encompassing overview would be impossible here. My aim, therefore, is to give a few typical examples, illustrating how these relate to the treatise descriptions. The clearest examples of discant of this type may be found thirteenth-, fourteenth-, and fifteenth-century simple, liturgical and devotional pieces from all over Western Europe. As I have argued above, the technique is also taught in Latin treatises, which begs the question as to the supposed 'popular' nature or origin of the technique. That the use of the adjacent consonances principle was not limited to sacred or simple polyphony will be shown by means of excerpts from two-voice secular song compositions and a piece in florid discant above a cantus firmus.

The early fifteenth-century setting of the sequence *Verbum caro factum est*, mentioned by Pirrotta, begins with a straightforward use of the adjacent consonances principle.[207] The *cantus prius factus* lies in the upper part, and is accompanied by the lower voice in contrary motion. A few details can be observed: in bb. 2-3 the composer has opted for a 5-8 progression in contrary motion as shown in the first example of the *Compendium de discantu*, and in bb. 4-5 the oblique motion of the counterpoint causes the unison-axis of the model to shift from f to g, which is moved back by the parallel thirds in b. 6, to attain a fifth above the final. This shift probably occurs for the sake of variety, as a strict

[205] Pirrotta, p. 73.
[206] Ibid., p. 73.
[207] For a facsimile see Michael Scott Cuthbert, 'Trecento Fragments and Polyphony beyond the Codex' (Harvard University, 2006), p. 384. See also no. 45 in F. Alberto Gallo, *Italian Sacred Music*, ed. by Kurt von Fischer, Polyphonic Music of the Fourteenth Century 13 (Monaco: Éditions de l'Oiseau-Lyre, 1976), p. 158.

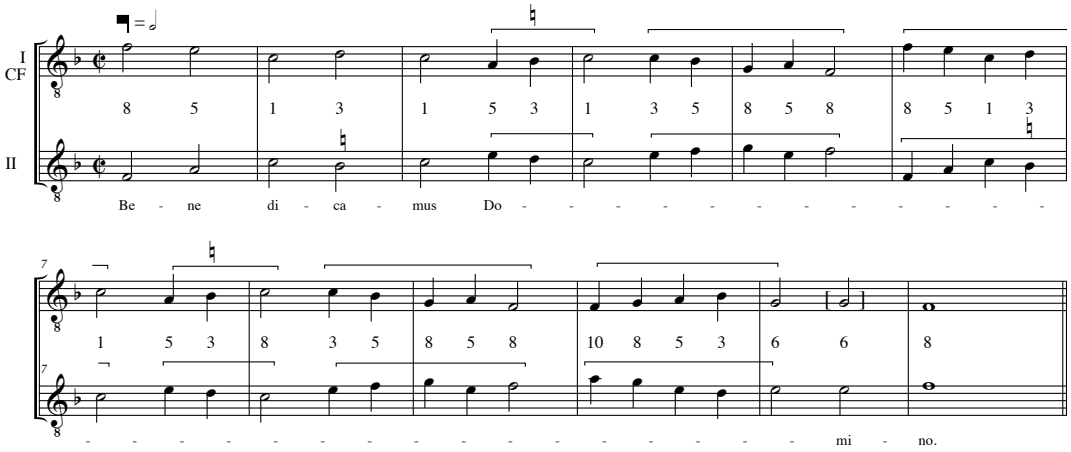
application of the rule also would have been possible, with the lower voice singing f e f g in bb. 5-6.



Example 3.8 *Verbum caro* (Florence, Biblioteca Laurenziana, Ms. Ashb. 999, fol. 95).

A slightly more elaborate use of the model is found in the *Benedicamus Domino* of the so-called Sorbonne Mass.[208] The upper voice is a transposed version of the fifth-mode *Benedicamus* of the gradual and is accompanied by a mirroring discant occupying the same range as the tenor. We can observe here that even though the treatises explain this type of discant only for stepwise tenors, it can in fact also be used on tenors with leaps: in bb. 1-4 all the melodic intervals of the chant are mirrored in the c' by the discant, except for the initial 5-8 progression. In bb. 4-5 the temporary axis on d' is shifted back to c' so an octave appears on the *F* final. In b.10 we see that, as some of the treatises indicate, the adjacent consonances can also be repeated over the octave. The stepwise ascending tenor receives a 10-8-5-3 succession of intervals.

[208] See no. 6 in Giulio Cattin, Francesco Facchin, and Maria del Carmen Gómez, *French Sacred Music*, ed. by Kurt von Fischer, Polyphonic Music of the Fourteenth Century 23a (Monaco: Éditions de l'Oiseau-Lyre, 1989), p. 27. I have not been able to consult a facsimile of the source in this case.

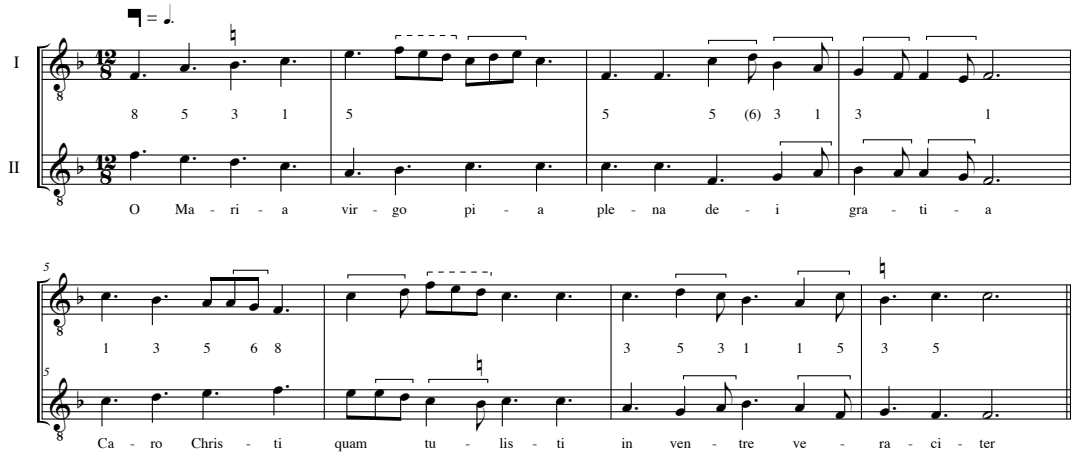


Example 3.9 *Benedicamus Domino* (Paris, Institut de Musicologie de l'Université, no shelfmark, fol. 2v).

In retrospect we may now identify the same technique in the setting of the song *Omnes nu laet ons gode loven* (Example 3.1), after its initial phrases in parallel fifths. Many fourteenth- and fifteenth-century settings in simple polyphony alternate between contrary motion of the adjacent consonances principle and parallel consonances (fifthing or organum).[209]

The wide geographic spread of the technique in question can be observed from a number of English examples from the thirteenth and fourteenth centuries, such as the two-voice sequence *O Maria virgo pia* from the Worcester fragments (Example 3.10).[210] Interestingly, in this piece we encounter two different strategies of manipulating the model to make a cadence. In both cases the unison-axis of the model is shifted to obtain the desired cadential sonority by means of parallel motion, in b. 4 with parallel thirds and in b. 7 with a parallel unison. Parallel imperfect consonances are considered something of an English specificity in this period, but they also appear in continental music, typically before a cadence.[211]

[209] See for instance *Cantus fractus italiano: un' antologia*, Musica Mensurabilis 4, ed. by Marco Gozzi (Hildesheim, Zürich, New York: Georg Olms Verlag, 2012) p. 37, 103–107 and 147–151.
[210] See appendix 1 in Ernest H. Sanders, *English Music of the Thirteenth and Early Fourteenth Centuries*, ed. by Kurt von Fischer and Ian Bent, Polyphonic Music of the Fourteenth Century 14 (Monaco: Éditions de l'Oiseau-Lyre, 1979), p. 179.
[211] This may also account for they way the license of parallel imperfect consonances is formulated in fourteenth-century treatises. The Berkeley Manuscript, for instance, states that 'there can well be two, three or four thirds, one after another step by step, (...) and the same



Example 3.10 *O Maria virgo pia* (Worcester, Cathedral Library, Ms. Add 68 XXIX, fol. 4r-4v).

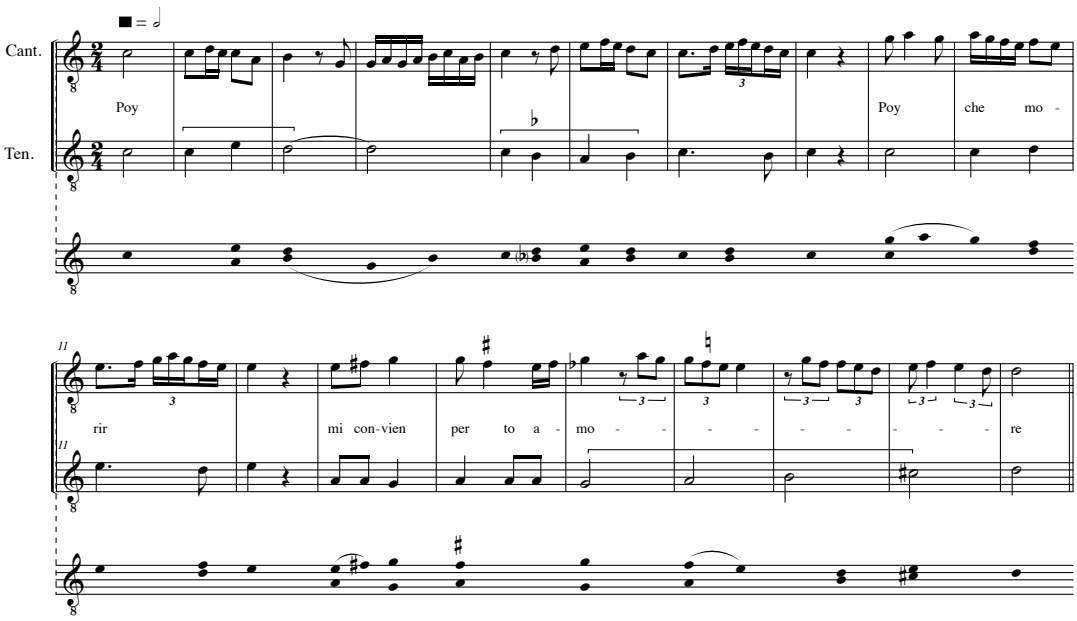
In one of his essays, Pirrotta explores the relation between an oral tradition of singing 'siciliane' and a number of trecento compositions featuring an 'unorthodox style of accompaniment' in fifths and adjacent consonances. Comparing these pieces to the ballata *Poy che morir* ascribed to Johannes Ciconia (Example 3.11).[212] he concludes: 'In spite of a keen naturalistic spirit of observation, Ciconia was too refined a polyphonist to accept at face value the rather crude and mechanical techniques of popular polyphony, except for their expressive dissonances.'[213] As we may observe from Example 3.11, whilst the ballata does not contain parallel fifths, its counterpoint can be reduced almost entirely to progressions in adjacent consonances. In bb. 1-8 the voices expand and contract to the axis on c'. The next segment, bb. 9-12, starts out in a fifth, enabling a 1-3 cadence to e' on the word 'morir'. In bb. 15-19 the voices slowly contract from the g-g' octave, using a parallel third to enable a cadence to d'. Obviously, the ballata is a much more refined composition than the examples

number of sixth, as long as the last one is followed by the *consonance it requires*, in like manner to those stated above.' Italics mine. ('Item sciendum est quod bene possunt fieri due, 3, vel 4 tercia, una post aliam gradatim (...) et totidem sexte, dum tamen ultima habeat in fine, iuxta illa que supradicta sunt, consonanciam quam requirit''). The verb *requiro*, as can be seen in Appendix A, is general usage for progressions in stepwise contrary motion, which in this case would be the cadence. See Ellsworth, pp. 114–115.

[212] See no. 41 in Margaret Bent and Anne Hallmark, The Works of Johannes Ciconia, Polyphonic Music of the Fourteenth Century 24, ed. by Kurt von Fischer and Ian Bent (Monaco: Éditions de l'Oiseau-Lyre, 1985), pp. 158-159.

[213] Pirrotta, p. 68.

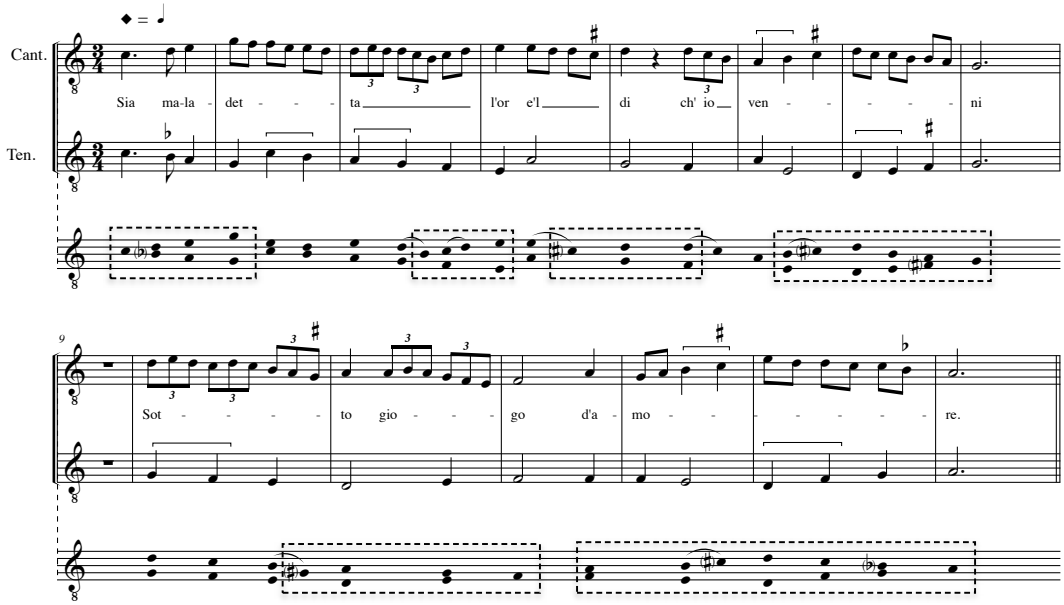
discussed earlier in this chapter, but the underlying contrapuntal procedure is virtually identical.



Example 3.11 Johannes Ciconia (?), *Poy che morir*, excerpt (Lucca, Archivio di Stato, Ms. 184, fol. 32v).

The same technique can be identified in a large number of trecento and early quattrocento pieces, typically intermixed—as Pirrotta also observed—with structural parallel fifths. A typical example is Francesco Landini's ballata *Sia maladetta l'or e'l di*, the opening of which is laid out in Example 3.12.[214] In bb. 12-15 the composer makes use of the previously mentioned 'double use' of fifth and sixth, to shift the axis of the model from the g to a. Both passages in parallel and contrary motion are enlivened with ornaments, for instance in bb. 7-8 and 13-14 where the contracting adjacent consonances are embellished with appoggiaturas. In bb. 10-11 we can observe how parallel fifths are decorated with auxiliary and passing notes.

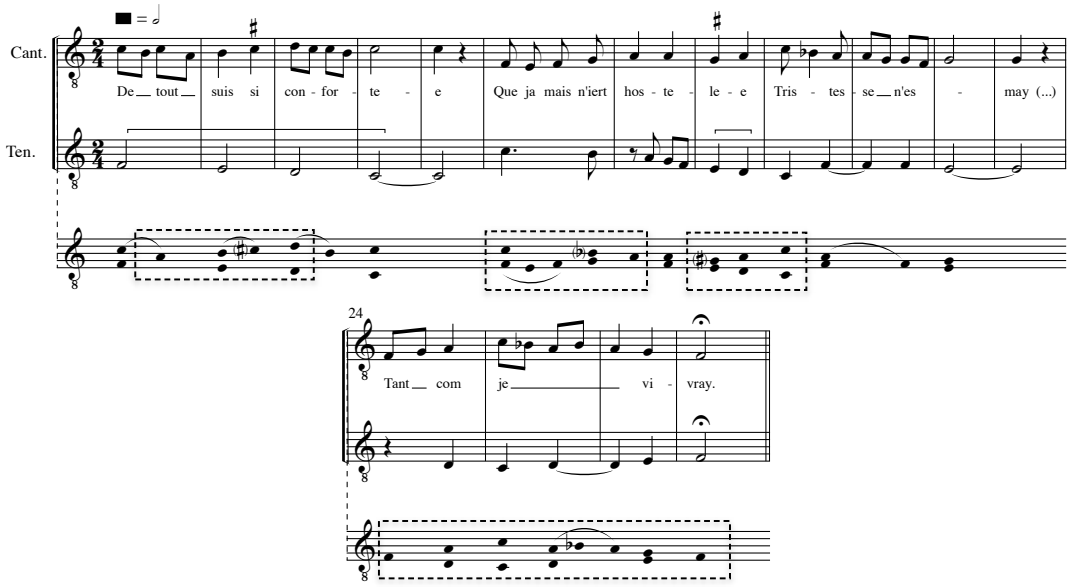
[214] See no. 13 in *Two-Part Ballate*, Francesco Landini Complete Works 2 (Monaco: Éditions de l'Oiseau-Lyre, 1982), p. 19.



Example 3.12 Francesco Landini, *Sia maladetta l'or e'l di*, excerpt (Paris, Bibliothèque national de France, fonds italien, Ms. 568, fol. 67v-68r).

The use of the adjacent consonances principle to compose, and presumably extemporise, secular two-voice polyphony seems not to have been restricted to a single geographical region. We may also find traces of it in the two-voice works of Guillaume de Machaut, for instance in the virelay *De tout sui si confortee* (Example 3.13).[215] The closing of its refrain (bb. 24-27) shows an expansion and contraction in adjacent consonances. The cantus skips the sixth on its way up, moving directly to the octave, and embellishes the 8-5 and 5-3 progressions with a passing seventh and an auxiliary note. Similar progressions can also be found in bb. 1-9, which also use structural parallelism in fifths and octaves (see bb. 1-4).

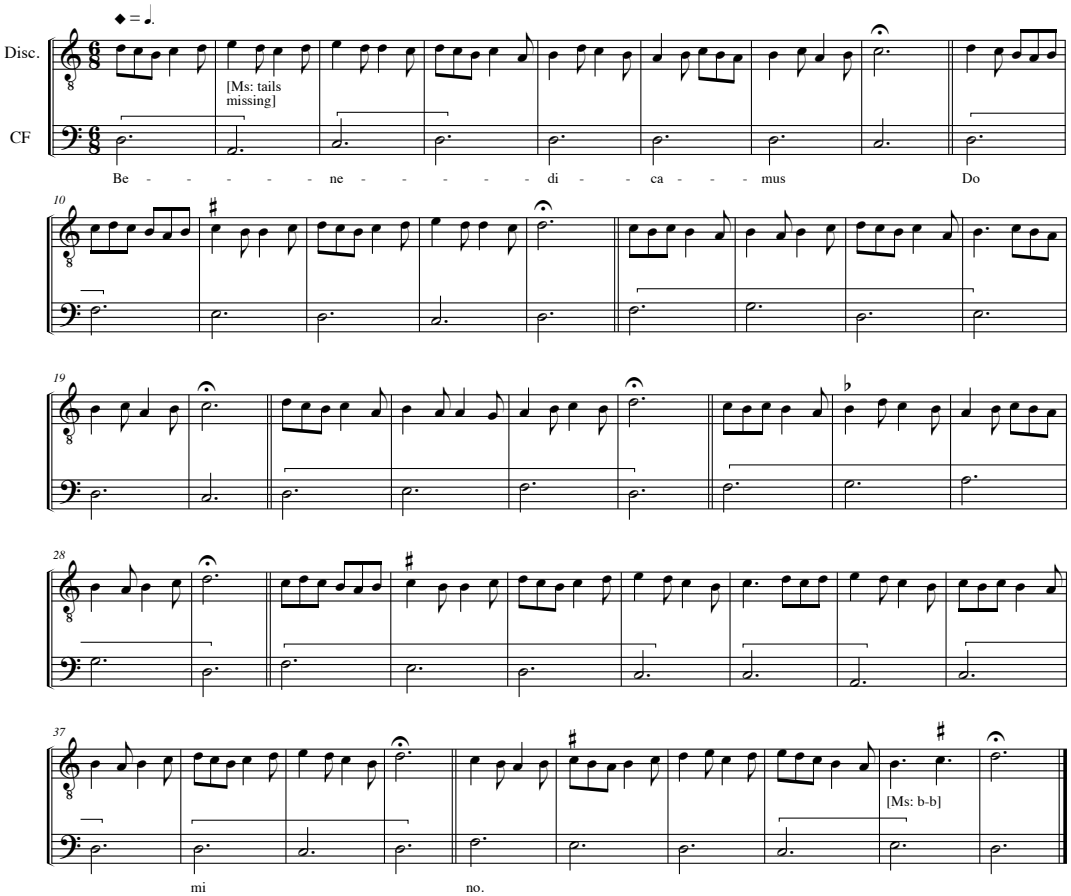
[215] See no. 32 in Leo Schrade, *Les Rondeaux, Les Virelais*, Guillaume de Machaut Oeuvres Complètes 5 (Monaco: Éditions de l'Oiseau-Lyre, 1977), p. 53.



Example 3.13 Machaut, *De tout sui si confortee*, excerpts (Paris, Bibliothèque national de France, fonds français, Ms. 1584, fol. 502v).

One of our best sources to get a glimpse of liturgical improvised polyphony is a corpus of compositions in which florid voices are composed against a plainchant-tenor in equal values.[216] Michael Scott Cuthbert has called attention to a number of Italian settings of the *Benedicamus Domino*, which use the *flos filius* motet-tenor as a cantus firmus.[217] The simplest of these is a *cantus planus binatim* written in solmisation syllables above the chant.[218] Three settings in florid discant survive of this particular *Benedicamus*, one these was identified by Agostino Ziino in an antiphonal from Messina (Example 3.14).[219]

[216] A comprehensive list of manuscripts containing polyphonic pieces with equal-note tenors is given in Jérémie Couleau, 'Contrapunctus : Les pratiques polyphoniques improvisées du plain-chant dans les sources théoriques et musicales de la Renaissance' (Univerity of Toulouse - Jean Jaurès, 2015), pp. 106–109. Couleau lists 12 such pieces dating to the fourteenth century, 4 of these I have been able to identify as florid discant (see below).
[217] See Cuthbert, pp. 365–383 and 410–418.
[218] Ravenna, Biblioteca Classense, Ms. 453 fol. 5r. See Cuthbert., pp. 411-414.
[219] See 'Nuove fonti di polifonia Italiana dell'ars Nova', *Studi Musicali*, 2 (1973), pp. 235–255. See also no. 26a in Fischer and Gallo, p. 104. Another florid discant on the same tenor can be found in Oxford, Bodleian Library, Ms. Canon. Pat. Lat. 229, fol. 33v. See also no. 26 in Fischer and Gallo, pp. 102–103. A further setting, in three voices, survives by Paolo da Firenze, also the author of a *Gaudeamus omnes* in this style. See no. 27 and 30 in Fischer and Gallo, pp. 105–106 and 110–112. Paris, Bibliothèque national de France, fonds italien, Ms. 568, fol. 138r and Florence, Biblioteca Laurenziana, Ms. Ashb. 999, fol. 19v-20r.

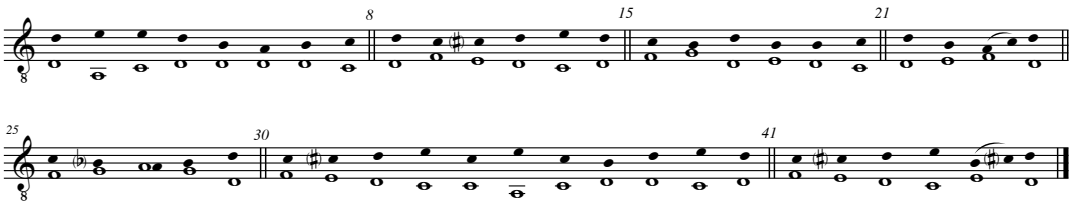


Example 3.14 *Benedicamus Domino* (Messina, Biblioteca del Seminario Arcivescovile, Ms. O.4.16, fol. 169r).

The corpus of fourteenth- and early fifteenth-century settings in florid discant above a plainchant deserves a much more thorough analysis than can be given within the space of this chapter. (A comparison with the teachings on florid discant in treatises containing examples of florid voices against tenors in equal values as well, would seem an especially fruitful line of inquiry to me). However, I would like to offer the hypothesis that the adjacent consonances principle could have played a role also in the creation of florid discant above a cantus firmus.

When we reduce Example 3.14 to its breve-to-breve counterpoint (dotted minims in the transcription), it is striking how many progressions happen in adjacent consonances. Some of the ornaments in the upper part are of a type that depart and return to the main note, as for instance in bars 1, 5, 6, and 7. Remarkable are the figurations which cause parallel octaves and fifths on a

minim level (b. 3, 13, 21 and 38). It seems that Example 3.14 was created by embellishing a simple counterpoint in adjacent consonances with purely melodically conceived diminutions.



Example 3.15 *Benedicamus Domino*, reduction.

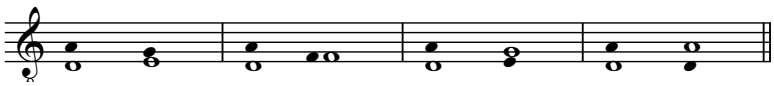
Obviously, the identification of passages in adjacent consonances in itself is insufficient for a meaningful analysis of the musical discourse of any particular piece, for which one needs to consider the tonal plan, the relation of text to music, and the numerous other contrapuntal procedures that have been employed. But that composers of complex polyphony were not above using a simple device such as the 'bellows' of the adjacent consonances principle indicates that, even for a skilled musician, composing was intimately connected to and informed by basic procedures taught to extemporise discant. Furthermore, examples of this technique are found in French, Flemish, Italian and English music, so it cannot be considered a feature of a particular national style, but should rather be regarded as a general principle of pitch-organisation common to all fourteenth-century repertoires. Finally, the fact that we find examples of the device in both 'simple' and 'refined' repertoires should remind us that contrapuntal procedures may be more obvious or visible in the former, but are also present in the latter.

3.1.4 Improvising Two-voice Simple Discant in Practice

Having established how the adjacent consonances principle can be identified in polyphonic compositions, I now proceed to discuss how one can use them to teach and practise singing discant in a fourteenth-century style.[220] Firstly, the singer has to keep in mind the following rules of thumb:

1) When the tenor ascends, the discantus descends, and vice versa.
2) Mirror the melody of the tenor in an axis-note (unison).

At this point, exercises can be done within a fifth, so that all movements of the tenor are mirrored exactly by the discant. This works not only for steps but also for other intervals, as may be seen in Example 3.16. Another way of conceptualising this is that within a fifth every note has a 'partner-note'. (Within the d-a fifth, for instance, d is always paired with a, e with g, and f receives a unison). Such preparatory exercises can be done with the Guidonian hand or a musical staff to point out one of the parts.[221] I have found that such exercises do not only very quickly teach the interval-combinations of this technique, but that they are also a good way to develop thinking in two voices.



Example 3.16 Progressions within a central fifth.

After these initial exercises, the technique can be applied to a cantus firmus or fragment thereof. Care needs to be taken that one of the 'open positions', the fifth or the unison, is placed on the modal final. In protus, within a d-a fifth, the technique gives perfect concordances on the finalis (d) and both the modal

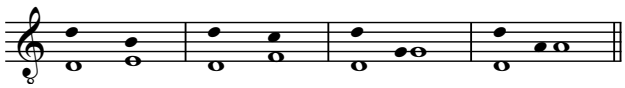
[220] For an instruction on the use of adjacent consonances in thirteenth-century discant see Margriet Tindemans, 'Improvisation & Accompaniment before 1300', in *A Performer's Guide to Medieval Music*, ed. by Ross W. Duffin (Bloomington, Indianapolis: Indiana University Press, 2000), pp. 454–469. No bibliography is provided, but it seems that Tindemans identified this technique independently of Pirrotta and Burstyn.
[221] See Andrew Hughes and Edith Gerson-Kiwi, 'Solmisation', *Grove Music Online* [accessed 16 August 2016]. On the use of the hand in extempore counterpoint see Section 2.2.3.

dominants (f and a). The same applies if one uses a f-c' fifth in tritus. At this point one also has to introduce the octave and sixth. I have found it expedient to formulate this in the following rule:

3) 5-8 and 8-5 require a third (or two steps) in one of the parts.

In this way, the student will notice, for instance, that when he or she is at the fifth above the tenor and the tenor goes down by a step, the discant needs to go up by a third. An occasional tenth above the tenor may also be used, but it is advised to keep the parts in an equal range, as can be seen in Examples 3.8-10.

These instructions suffice to accompany a stepwise cantus firmus, and—as discussed above—leaps within the central fifth are also accounted for. It may however be necessary to practise successions on cantus firmus leaps separately, because, as has been observed with the 5-8 progressions, the asymmetric nature of the heptatonic scale makes it impossible to mirror every cantus-firmus motion with the exact same melodic interval. I recommend practising a type of progression that stays as close to an exact mirror as possible, for instance by mirroring a rising fourth with a falling fifth as illustrated below.

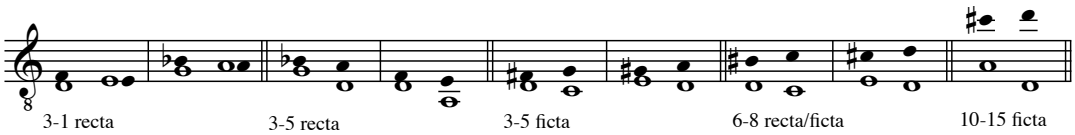


Example 3.17 Progressions outside the central fifth.

To successfully extemporise a simple discant in a fourteenth-century style, three further precepts need to be introduced:

4) Cadences: finish every poetic/musical phrase on a unison, fifth or octave.
5) Two or three parallel thirds or sixths are allowed, especially when approaching a cadence.
6) 'Rule of closest approach': make the imperfect intervals as close as possible to the following perfect interval. (E.g. M3-5 but m3-1).

Rules 4-6 essentially concern the cadential approach, or—as it has become known in the literature—'directed progression'.[222] Fourteenth-century treatises teach that imperfect-perfect progressions should be sung 'per minori distantiam' ('from the smallest distance'), because the imperfect consonance is seeking its perfection.[223] To produce this effect of tension and release, it is often necessary for one of the parts to use *musica ficta*, pitches outside the Guidonian gamut (the diatonic pitches and *B-flat*). Naturally such progressions occur mainly in contrary motion, but, as shown in Petrus's *Compendium de discantu*, 3-5 progressions in similar motion, also fall into this category and should—in principle—be inflected accordingly.[224]



Example 3.18 Directed progressions from *Compendium de discantu*, cap. I, selection.

I have found it best initially to restrict the use of *musica ficta* somewhat initially, using it only on important caesuras of the chant melody and/or text. A good start can be to practise in the Lydian mode, with a central fifth on f-c', singing either b or b-flat—both *musica recta*—according to the contrapuntal context. The tritus also has the advantage of having a half-step ('mi-fa') below the finalis, which provides a 6-8 directed progression to *F*. These progressions can subsequently be introduced into other modes as well. After a few sessions of practising with this technique, Santo Militello, one of my colleagues from the Ensemble Diskantores, succeeded in improvising the following discant to the antiphon *Ego sum resurrectio et vita*, using mainly adjacent consonances and providing the appropriate accidentals:

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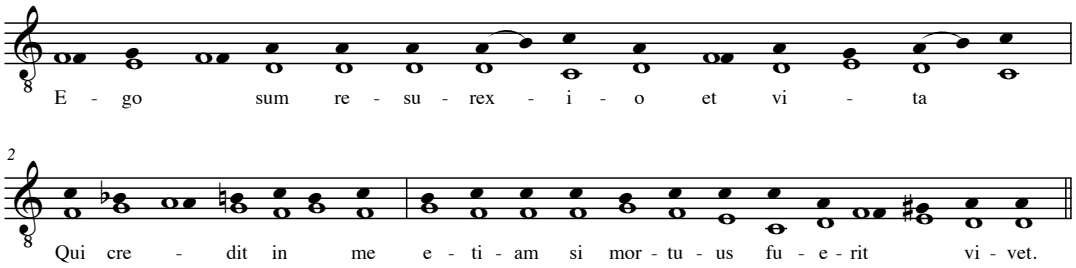
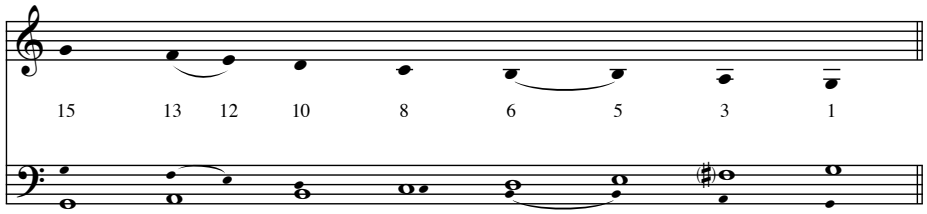
[222] See Sarah Fuller, 'Tendencies and Resolutions: The Directed Progressions in Ars Nova Music', *Journal of Music Theory*, 16 (1992), pp. 61–86.
[223] See for instance cap. VI and VII in Marchetus de Padua, 'Lucidarium, Tractatus Quintus', *Thesaurus Musicarum Latinarum* <http://boethius.music.indiana.edu/tml/14th/MARLU5_TEXT.html> [accessed 16 August 2016].
[224] See Petrus dictus Palma ociosa, 'Compendium de Discantu Mensurabili', *Thesaurus Musicarum Latinarum* <http://boethius.music.indiana.edu/tml/14th/PETCOM> [accessed 16 August 2016].



Example 3.19 *Ego sum resurrectio et vita* (Liber Usualis, p. 1770), with improvised discant.

When discanting in the treble register above a plainchant, it is useful to employ an octave transposition ('treble sight') to visualise the counterpoint on a four or five-line staff. Mark that, so far, I have discussed the use of this technique for equal voices exclusively, because the parts of such an improvisation are not 'octave neutral', such as the fifteenth-century gymel. One needs to keep in mind that visualised lower fifths will sound as fourths (dissonant) and visualised lower fourths will sound as fifths (consonant).[225] This is how a part in adjacent consonances, ranging from the double octave above to a unison with the tenor, can be visualised:



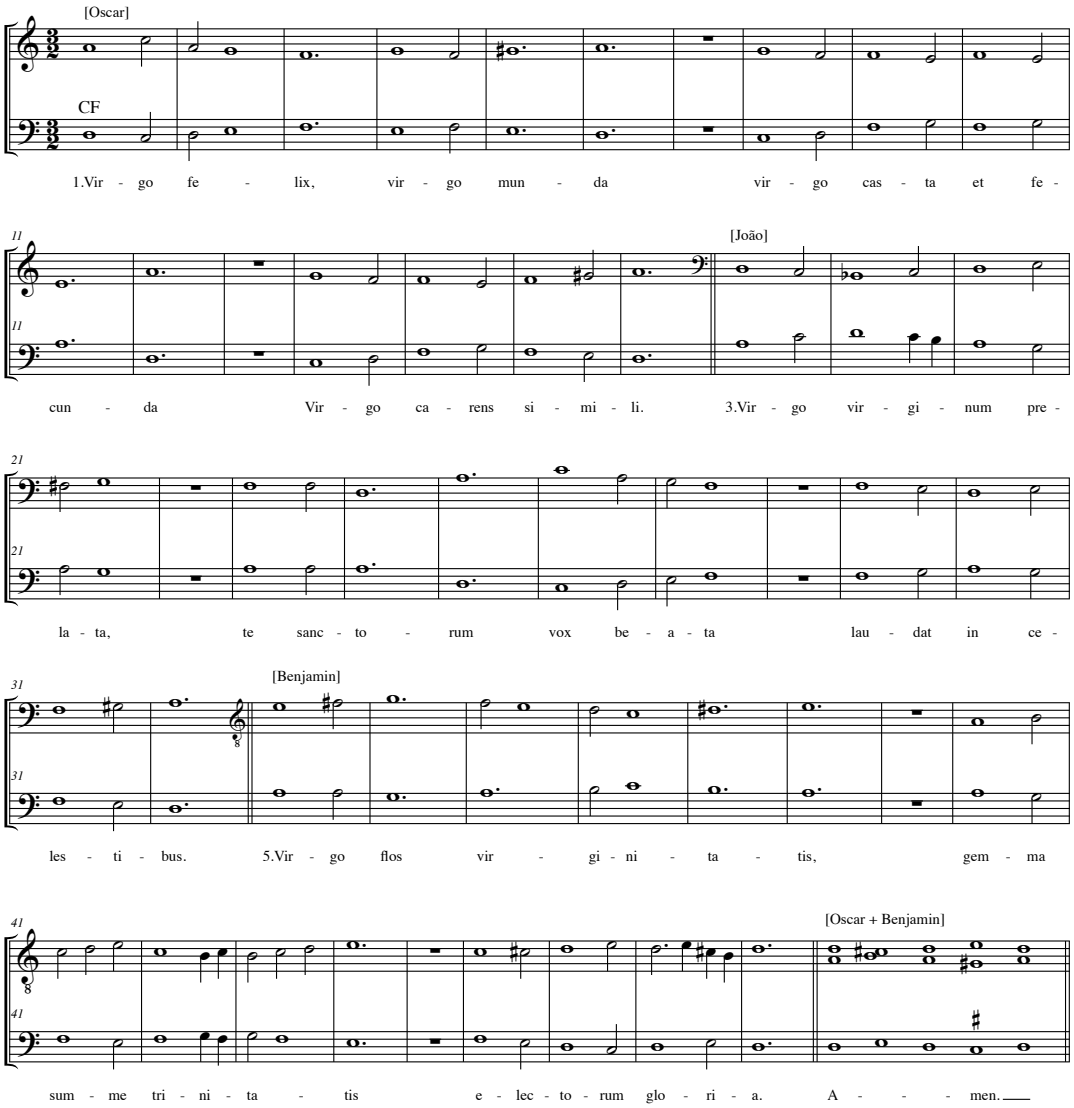
Example 3.20 Visualisation of a treble part in adjacent consonances.

[225] Fourths appear in the repertoire with a certain frequency in a way that might indicate treatment as consonance rather than a dissonance, for instance in the many 4/6 sonorities in the Machaut Mass, e.g. *Sanctus* b. 81 and *Ite missa est*, b. 11 in Leo Schrade, *La Messe de Nostre Dame, Double Hoquet, Remède de Fortune*, Guillaume de Machaut Oeuvres Complètes 3 (Monaco: Éditions de l'Oiseau-Lyre, 1977). Fourteenth-century treatises, however, do not class fourths among the concords, and as we have seen they do not form part of the system of the adjacent consonances for which reason I exclude them from exercises.

Apart from practising this technique on plainchants sung in equal values, it can be interesting to practise them on rhythmically notated chants (*cantus fractus*) as well. As will be explained in the following chapter, chants with metric texts (hymns and sequences) often receive a long-short (longa-brevis or brevis-semibrevis) trochaic rhythm in triple time in late medieval sources of chant. This first rhythmic mode-pattern can provide a nice change from a potentially monotonous performance in equal values.

Strophic chants also provide opportunity for a kind of 'jam-session' approach, which I have used with my colleagues from the Ensemble Diskantores, whereby we sing the first verse of the sequence all together in monophony, and one of the singers improvised a counterpoint when the melody is repeated in the second verse. This has the advantage that the singers, while singing the first verse, can already mentally prepare the counterpoint they will have to sing. Example 3.21 is a transcription of an improvisation sung at a concert in December 2014, on the sequence *Virgo felix, virgo munda*.[226] The first verse of the sequence was improvised on by Oscar Verhaar (countertenor), the third by João Luís Paixão (baritone) and the final verse by Benjamin Jago Larham (tenor).[227] The *Amen* was performed using a three-voice technique combining parallel fifths and discant that will be discussed later in this chapter.

[226] Paris, Bibliothèque national de France, fonds latin, Ms. 1343, fol. 15r. See also Gozzi, p. 80.
[227] A point of critique I would formulate, looking at the improvisation in transcription, is an incorrect use of accidentals in b. 19 and 36. The B-flat is a slightly unusual note, not part of the Guidonian Gamut, and is used mainly to produce correct fifths with f. The d-sharp'' is likewise unusual, and almost never used in protus.



Example 3.21 *Virgo felix, virgo munda*, with improvised discant.

3.2 Three-Voice Polyphony

Having demonstrated how simple two-voice polyphony can be sung according to the precepts of fifthing and discant both in perfect and in adjacent consonances, I now proceed to discuss three-voice polyphony. The key question here is whether the principles of two-voice singing can be used to create three-voice settings in such a way that these could be produced extempore without the aid of extensive prior reflection ('composition'). Similarly to the discussion of two-voice discant, I will take my lead from the hints the treatises offer about the construction of such polyphony, and attempt to offer a contextualisation with examples from the repertoire. Based on this analysis I will present models one can use to practise these techniques extempore.

In the fifteenth century the most elementary way of producing a three-voice polyphonic setting was by combining two gymels, voices in parallel imperfect consonances, into a fauxbourdon. Settings in parallel 3/6 sonorities ('faburden') already appear in fourteenth-century English music, but a discussion of this technique will be given in the following chapter, together with its continental, fifteenth-century offspring. Likewise three- and four-voice parallel organum, which in all likelihood survived throughout the later Middle Ages, will not be discussed. This because it had essentially become a part of the normal performance practice of plainchant, and could be executed— as we will see in the upcoming discussion—by singers without training in polyphony.

3.2.1 'An Art in Which Several Men Appear to be Discanting'

The English treatise *Quatuor principalia musicae* provides several clues about extemporised three-voice discant, the most prominent of which are contained in the chapter 41 of the *Distinctio secunda*. The treatise describes an 'art in which several men appear to be singing discant, whilst in reality only one of them does'.[228] This technique, apparently a kind of trickery by which one can create

[228] 'Ars in qua plures homines discantare apparent, cum in rei veritate unuis tantum discantabit'. Aluas, pp. 519–520 (transl. pp. 746–747). The translation has been adapted here for comprehensibility and English style, numeration has been added.

the impression of multi-part polyphony without having sufficient trained singers to fit all the parts, is described as follows:

[1] Alius modus discantandi invenitur, qui quidem modus si bene pronunciatur artificiosus auditui apparet, cum tamen valde levis est.

[2] In isto enim modo plures super cantum planum discantare apparebunt, cum tamen in rei veritate unus tantum discantabit: aliis vero planum cantum in diversis concordanciis modulantibus, hoc modo:

[3] Sint quatuor vel quinque homines cantandi habiles; primus incipiet planum cantum in tenore; secundus ponet vocem suam in quinta voce; tercius vero in octava voce; et quartus si fuerit, ponet vocem suam in duodecima voce.

[4] Hii omnis in concordanciis inceptis, continuabunt planum cantus usque in fine.

[5] Qui vero in duodecima et in octave et eciam in quinta continue cantant, frangere debent et florere notas, prout magis decet, mensura servata.

[6] Illus vero qui discantabit, vocem suam minime ponet in concordanciam perfectam, sed tantummodo in concordanciis imperfectis, videlicet in tercia, et sexta et in decima.

[7] Per istas enim concordancias discurret ascendendo et descendeno secundum quod magis sibi videbitur expedire et auditui placet.

[8] Sicque unus in discantu expertus hominis vocis habilitatem potest cum allis habentibus habilitatem canendi, magnam facere melodiam.

[9] Sufficit enim quid sint quatuor similis cantantes si vero quintus fuerit, canter continue duodecimam notam.

[1] Another way of discanting is found, which, if performed well, appears artful to the ear while actually being very easy.

[2] In this way, there are several men who appear to be discanting on the chant when in fact only one will discant, the others sing the plainsong in various consonances, in the following way:

[3] Let there be four or five men skilled in singing; let the first begin the chant in the tenor, let the second put his voice in the fifth, the third in the octave, and, if there is a fourth, let him put his voice in the twelfth.

[4] All those will follow the chant till the end with their initial consonances.

[5] Those who continuously sing a twelfth, an octave and a fifth must break and flourish the notes as much as possible, keeping the measure.

[6] Let he who will discant put his voice in as few perfect consonances as possible, but rather in imperfect ones, that is in thirds, sixths and tenths.

[7] Let him run with these concords, ascending and descending, according to what seems most expedient and which pleases the ear.

[8] In this way, one who is an expert in singing discant can make, together with others who are able to sing, a great *melodia*.

[9] It suffices if there are four singing together, if there is a fifth singer, let him continuously sing the twelfth.

This passage has aroused considerable debate in counterpoint scholarship since the appearance of Manfred Bukofzer's thesis *Geschichte des englischen Diskants und des Fauxbourdons nach den theoretischen Quellen* in 1936. Hugo Riemann, in his *Geschichte der Musiktheorie* (1898), had already given a basically correct, but rather tendentious interpretation of the chapter, as 'a rather breakneck combination of the old parallel organum (...) with a discant'.[229] Bukofzer, disagreeing with Riemann, proposed a reading of the passage as describing 'English discant' in parallel 3/6 chords above a cantus firmus. [230] Bukofzer's reading was criticised by Ernst Ferand in his *Die Improvisation in der Musik* (1938),[231] but was taken up again in 1958 by Günther Schmidt, who proposed a few rather far-fetched interpretations of his own.[232] According to Schmidt, the prescription to use imperfect consonances applies to *all* the singers, despite of the clear use of the singular in lines 6 and 7.[233] As Ernest H. Sanders has argued, such interpretations 'pervert the original meaning of the text' in an attempt to fit it to Bukofzer's theory of 'English discant', a theory, moreover, that was proved to be untenable in light of the historical treatises' teachings by Sylvia Kenney.[234] Sanders correctly stressed that in fact the technique is a 'special kind of two-

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[229] '(…) eine ziemlich halsbrecherische Kombination des alten Parallelorganums (...) mit einem Diskant.' See *Geschichte der Musiktheorie im IX.-XIX Jahrhundert* (Leipzig: Max Hesse's Verlag, 1898), p. 192. The 'flourishing and breaking of the notes' would, according to Riemann, serve to 'hide the wrong (!) parallelism with figuration' ('die falschen (!) Parallelfortschreitungen durch Figuration verdecken'). Translations by the author, exclamation mark and parentheses are Riemann's.

[230] Reprinted as Manfred Bukofzer, *Geschichte des englischen Diskants und des Fauxbourdons nach den theoretischen Quellen* (Baden-Baden: Verlag Valentin Koerner, 1973, p. 20. Bukofzer deemed it unlikely that 'a connoisseur of polyphonic writing as Tunstede' would have found a mixture of discant and parallel organum 'pleasing to the ear'. ('Es ist jedoch unwahrscheinlich, dass ein Kenner des mehrstimmigen Satzes wie Tunstede von solcher Mischung gesagt haben würde: "auditui placet"). Translation by the author, the *Quatuor principalia* was formerly attributed to a 'Frater Symon de Tunstede'.

[231] Ferand, *Die Improvisation in der Musik. Eine entwicklungsgeschichtliche und psychologische Untersuchung*, pp. 145–146. Ferand agreed with Riemann that the passage describes 'a highly curious combination of the old parallel organum and diminuted discant' ('eine höchst merkwürdige Kombination des alten Parallelorganums mit dem diminuierten Diskantus') and stated that aesthetic objections to this type of polyphony would 'not be entirely unfounded', but, less judgmentally than Riemann, considered it an interesting sidetrack in the development of harmony. Translation by the author.

[232] Günther Schmidt, 'Zur Frage des Cantus firmus im 14. und beginnenden 15. Jahrhundert', *Archiv für Musikwissenschaft*, 4 (1958), 230–250.

[233] Schmidt, presumably following Coussemakers edition, cites '*is* vero discantabit' instead of '*illus* vero qui discantabit'. Italics mine. Ibid., p. 234, n. 2.

[234] See Ernest H. Sanders, 'Cantilena and Discant in 14th-Century England', *Musica Disciplina*, 19 (1965), pp. 7–52 (p. 47, n. 2); Sylvia W. Kenney, '"English Discant" and Discant in England', *The Musical Quarterly*, 45.1 (1959), pp. 26–48.

voice discant' that 'remains within the bounds of tradition' but is made to sound more complex by the organal doublings.[235] In her 1996 dissertation on the *Quatuor principalia*, Luminata Florea Aluas also briefly discusses the chapter in question. Aluas erroneously states that in this technique an organum quadruplum or quintuplum is accompanied by 'one optional singer discanting in imperfect concords.'[236] In fact, it is the fourth singer of the organum, doubling the chant at the twelfth, who is optional, and not the singer of the discant, as may be observed from lines 3 and 9.[237]

The technique clearly entails the singing of a kind of organum at the fifth, octave and possibly twelfth, by three or four singers, to which an expert in discant adds a voice using mainly imperfect consonances. The author of the *Quatuor principalia* states that such music can 'strike the ear as artful, while actually being very easy' ('artificiosus auditui apparet, cum tamen valde levis est'). At the end of the description he assures us again that in this way an 'expert singer of discant' can produce 'magnam melodiam' (a very beautiful sound or 'harmony') with the help of four or five others capable of singing, presumably, only chant.[238] It should be noted that 'aesthetic objections' of the kind expressed by Riemann, Bukofzer and Ferand—presumably against clashes between the organum and the discant, as well as the parallel organum itself—are entirely absent from the treatise text.

The author of the *Quatuor principalia* encourages the singers of the organum to ornament their parts by 'breaking' and 'flourishing' the notes of the plainchant. As noted by Aluas, he uses the same phraseology in chapter 58 of the *Tertium principale*, for the embellishment of rhythmically sung plainchant.[239] The theorist teaches a way to sing chant, in which the notes are divided in groups of two, three and four, separated by rests, each note receiving a predetermined

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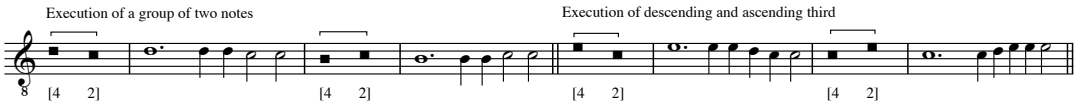
[235] Sanders, 'Cantilena and Discant in 14th-Century England', p. 47, n. 137.
[236] Aluas, p. 140.
[237] In the last sentence of the chapter (line 9) a *fifth* singer is called optional. This is easily explained by the fact that the singer of the discant is now included in the total number, however, the optional singer clearly is the one singing organum at the twelfth: '*si* vero quintus *fuerit*, canter continue duodecimam notam'. Italics mine.
[238] *Melodia* was understood in a rather different sense in the Middle Ages as the modern use of 'melody'. It is generally meant to convey the beauty of sound or singing as well as the celestial harmony. See Michael Bernhard, 'Melodia', *Lexicon Musicum Medii Aevi* <http://woerterbuchnetz.de/LmL> [accessed 16 August 2016].
[239] Aluas, p. 141.

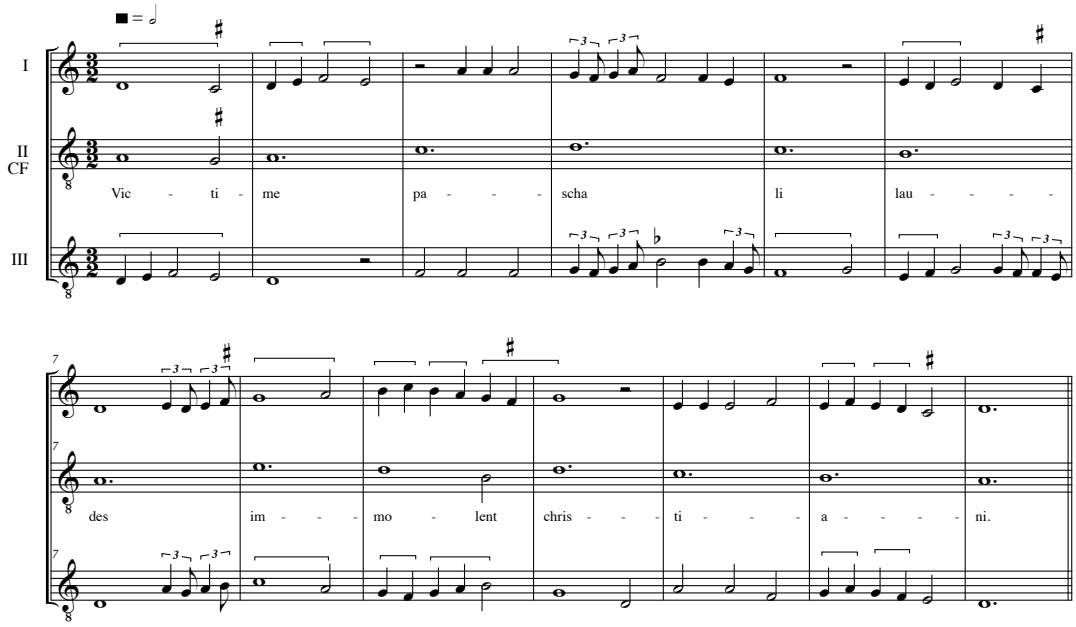
number of *tempora*.[240] The plainchant notes—conceived of as longs— receive a kind of ornamentation which consist of breaking them into repeated semibreves and breves.[241] Jumps of thirds, fourths and fifths are also to receive a kind of diminution, consisting of semibreves or a *plica*.[242] The treatise stresses that such ornaments need to be 'repeated sweetly in the throat' ('dulciter / suaviter in gutture duplicata'), suggesting some kind of subtle throat-articulation to distinguish the quick notes from one another. In Example 3.22 we can observe how groups of two notes, by step and by third, are to be treated.[243]



Example 3.22 Examples of *fractio* and *florificatio* from *Quatuor principalia* (Aluas, p. 360 and 368).

The rather curious ornamental breaking-up of longer values into repeated notes is also found in a setting of the sequence *Victime paschali laudes* from the Fountains Fragments (Example 3.23), dating around 1400, which—perhaps not incidentally—seems to rely almost entirely on structural parallel fifths and octaves in bb. 1-7.[244]

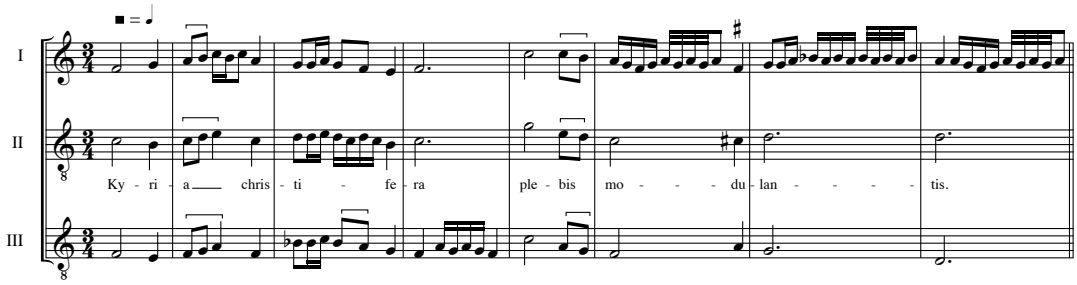
[240] Ibid., pp. 359-372 (trans. pp. 644-649).
[241] The division of a long into breves is referred to as *duplicatio*, and into semibreves as *florificatio* or *fractio* in the treatise. Ibid., p. 360 (trans. p. 645).
[242] Ibid., p. 368-371 (trans. p. 648-649).
[243] Plainchant neumes are transcribed in black square notes, with the amount of tempus assigned to them in the text indicated in brackets. The rhythm of the execution is transcribed with a minim for the value of every tempus or breve.
[244] See also no. 80 in Ernest H. Sanders, Frank Ll. Harrison and Peter M. Lefferts, *English Music for Mass and Offices (I)*, Polyphonic Music of the Fourteenth Century 16 (Monaco: Éditions de l'Oiseau-Lyre, 1985), pp. 182–185. The piece is also discussed in Sanders, 'Cantilena and Discant in 14th-Century England', pp. 37–38.



Example 3.23 *Victime paschali laudes*, excerpt (London, British Library, Add. 62130A, fol. 228r).

Both *fractio* and *florificatio* are regularly used in thirteenth- and fourteenth-century treatises to denote some type of ornamentation, both in chant and polyphony.[245] Another case to be considered is the style of ornamentation we find in the pieces of the Manuscript British Library Sloane 1210, dating from the second half of the fourteenth century. This manuscript employs a particular insular kind of notation, in which the breve can be subdivided in a different number of semibreves, the length of which can be modified by different kinds of tails and other signs.[246] These semibreves are used in fast, oscillating trill, turn and mordent-like passages, often sung in parallel thirds, fifths or sixths as can be seen in Example 3.24.[247] It is possible that the compiler of this document was drawing on a particular English tradition of *florificatio* that could also have been familiar to the author of the *Quatuor principalia.*

[245] See Michael Bernhard, 'Fractio, Fractura, Frango, Flos and Florificatio', *Lexicon Musicum Medii Aevi* <http://woerterbuchnetz.de/LmL> [accessed 16 August].
[246] On the notational techniques used in this manuscript amongst others see Frank Ll. Harrison and Roger Wibberley, *Manuscripts of Fourteenth Century English Polyphony. A Selection of Facsimiles* (London: Stainer and Bell, 1981), pp. XXVI–XXVIII.
[247] See also no. 7 in Sanders, Harrison and Lefferts, *English Music for Mass and Offices (I)*, pp. 13–14.



Example 3.24 *Kyria Christifera*, excerpt (London, British Library, Ms. Sloane 1210, fol. 139r-139v).

More puzzling are the instructions in line 6, for the expert singer who is to perform the 'real discant'. He is to 'put his voice in as few perfect consonances as possible', presumably because these are already taken up by the singers of the organum. What remains, in other words, are the imperfect consonances, third, sixth and tenth. It is perhaps surprising to see the sixth included here specifically, because it would obviously clash with a part in parallel fifths.

Another ambiguity presents itself in line 7, where the singer of the discant is instructed to 'run with these [imperfect] concords' ('per istas concordancias discurret'). The classical meaning of the verb 'discurro' is to wander, roam, or run about; which would support a reading that the singer is to produce a part in florid discant, 'running about' in fast figurations, 'ascending and descending' as he sees fit.[248] The author of the *Quatuor principalia* however uses the same verb elsewhere to describe the singing of an antiphon in parallel octaves.[249] Medieval treatises also use 'discurro' in a more general sense as 'to proceed'.[250] This usage

[248] See for instance 'discurro' in Charlton T. Lewis and Charles Short, *A Latin Dictionnary* (Oxford, 1879) <http://www.perseus.tufts.edu/hopper/resolveform?redirect=true&lang=Latin> [accessed 16 August 2016].
[249] See Aluas, p. 231 (transl. p. 558). 'Unde si duos cantores quamlibet antiphonam per hanc consonantiam [= diapason] cantent ita, quod unus per graves et alter per acutas modulando *discurrant*, nullam sencies diversitatem...' ('It follows that, if two singers sing some antiphon with this consonance [=octave] so that they *run along*, one in the *graves* and the other in the *acutae*, you will not hear any diversity...') Translation adapted here, italics mine.
[250] Ibid., p. 53 (trans. p. 754). 'He who sings the organum above the tenor must modulate in such a way that, as long as the organum purum lasts, it is proper *to carry on* with unmeasured notes until the [next] consonance'. ('Cantans vero organum super tenorem, tali modo habet modulari, ut quamdam organum purum durat *discurrere* per notas opportet sine mensura usque ad concordiam (...)' Translation adapted here, italics mine. Other music theoretical sources use

of 'discurro' would suggest a part 'running along' with the plainchant in imperfect consonances, avoiding perfect intervals as much as possible. Such a voice would essentially be a gymel, and turn the 5/8 sonorities of the organum into 3/5 or 5/10 parallel 'triads'.[251]

3.2.2 Organum and Discant in English Chant-Settings

Would it be possible to identify the 'fake discant' described in the *Quatuor principalia* in written compositions? Most English liturgical chant-based compositions from the fourteenth century are in three voices, such as Examples 3.23 and 3.24. In looking for traces of this technique we should therefore search for pieces with two lower voices in organum, most likely in parallel fifths. The upper part may be a florid counterpoint, according to the first hypothesis, or a gymel, according to the second, most likely in parallel tenths.

The abovementioned manuscript Sloane 1210 contains the end of a *Credo* ('adoratur et conglorificatur…') in a rather simple note-against note style.[252] The middle voice carries a slightly decorated version of the *Credo I*, accompanied by a kind of faburden-tenor in lower thirds and fifths and an upper voice mainly in parallel fourths. In the *Amen* (Example 3.25), the lower parts consist entirely of perfect longs, while the upper part continues in breves and semibreves.

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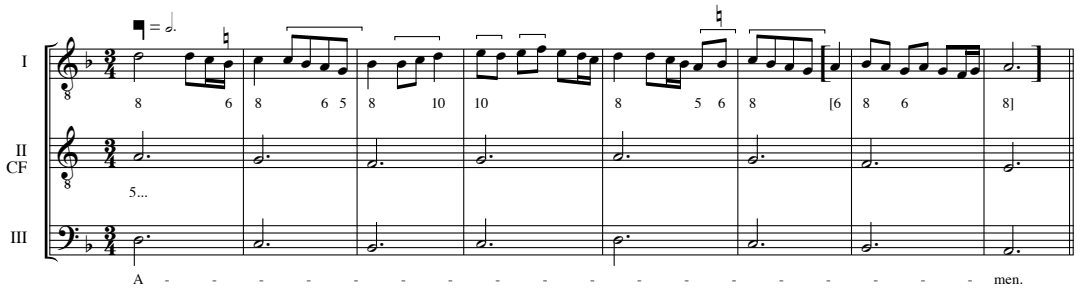
discurro in a similar way as 'to proceed' or 'carry on'. See Michael Bernhard, 'Discurro', *Lexicon Musicum Medii Aevi* <http://woerterbuchnetz.de/LmL> [accessed 16 August 2016].

[251] For a description of gymel, see Section 4.1.1. A disadvantage of this second hypothesis is that the treatise text places much emphasis on the fact that the non-organal part is to be in 'real discant' and performed by an 'expert singer', which would imply a more artful procedure.

[252] See also no. 43 in Sanders, Harrison and Lefferts, *English Music for Mass and Offices (I)*, pp. 89–90.

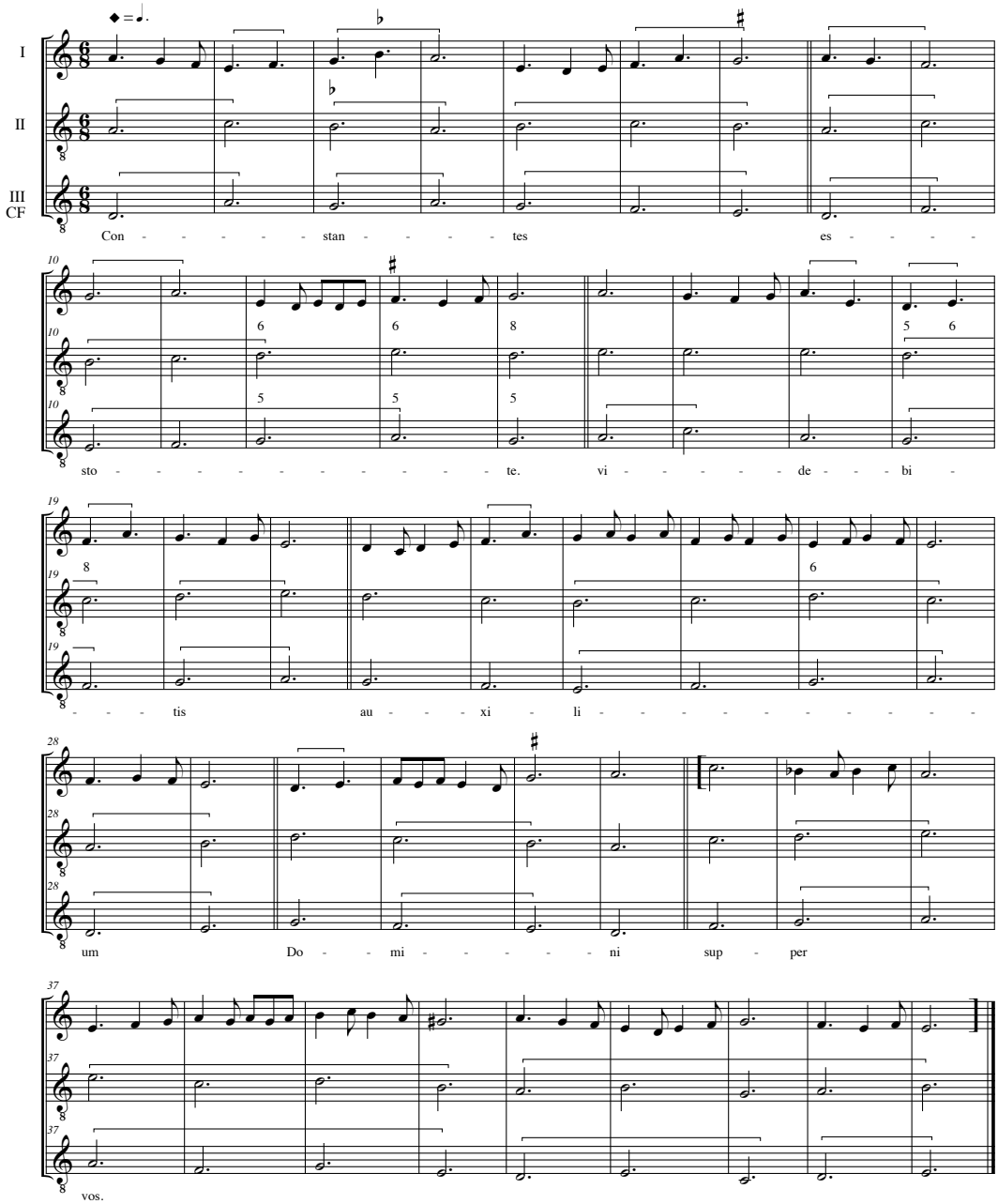


Example 3.25 *Credo*, excerpt (London, British Library, Ms. Sloane 1210, fol. 1v).

The technique used in Example 3.25 resembles the description in the *Quatuor principalia* in several ways: first, the two lower voices sing parallel organum (in this case it is the middle voice carrying the chant, not the tenor as in the description, but this makes no difference to the sounding result).[253] Second, the upper part looks rather like a florid discant, even though it relies on octaves from bar to bar with the tenor. Imperfect consonances are used mostly as passing notes, except in b. 4, where the structural note (e') is a tenth above the tenor. The manuscript was cropped in such a way that the last two bars of the upper voice are lost; they have been reconstructed here.[254]

The Fountains fragments contain pieces which exhibit structural use of parallel fifths as well, the aforementioned *Victimae paschali laudes* (Example 3.23) and two settings of *Constantes estote*, the psalm-verse for the first antiphon of the Christmas vigil *Iudea et Iherusalem*. In the first of these (Example 3.26) the cantus firmus is placed in the tenor, and both lower voices consist entirely of breves, the vast majority of which form parallel fifths.

[253] Although the chant is usually placed in the middle voice—as in faburden—in the following examples, I will continue to refer to the lowest voice as tenor. This is because —as the treatises say—the lowest part is the foundation of the counterpoint, and therefore functions, contrapuntally, as the tenor. The 'chant-part' will be referred to as cantus firmus.
[254] The editors of Polyphonic Music of the Fourteenth Century propose a long g and a in the last two bars. See Sanders, Harrison and Lefferts, *English Music for Mass and Offices (I)*, p. 90.



Example 3.26 *Constantes estote* (London, British Library, Ms. Add. 62130A, fol. 229r).

The upper voice, by contrast, is quite orthodox in terms of counterpoint. Parallel fifths and octaves occur mostly between the close of one phrase and the start of the next (see bb. 14-15 and 22-23), so that as a two-voice piece Example 3.26 would be virtually identical to other pieces in florid discant above an equal-note

cantus firmus, such as Example 3.14.[255] However, the middle part, with its many parallel fifths, gives the piece a rather special, euphonious effect in performance, which may perhaps be described, as the *Quatuor principalia* does, as 'magna melodia'. Unfortunately this piece is also lacking the end of the top part, the last 12 bars of which have been reconstructed in Example 3.26.[256]

Another striking feature of Example 3.26 are the prolonged dissonances between the upper parts: note in bb. 12-14 how the sixths of the upper part rub up against the middle part. The composer could have avoided this easily by having the middle voice sing in thirds above the tenor, as in fauxbourdon. Such dissonances occur also in non-cadential situations such as in b. 18, 26 and 30, when the discant moves from fifth to octave by means of a passing note. (They occur in other pieces in this manuscript as well, see for instance b. 6 and 12 in Example 3.23).[257] We may have a clue here as to why the sixth was included in the *Quatuor principalia*'s description of the 'art in which several men appear to be singing discant'. Contemporary listeners might not have minded the resulting clashes between fifths and sixths in such improvisations, because they belonged to the style of such polyphony. It is possible that such progressions originated in the practice of extempore singing, in which some licenses from discant-theory were acceptable and found their way into composed music.

Putting this idea into practice, my colleages of the Ensemble Diskantores and I have been able to perform improvisations such as Example 3.27, which in transcription look rather similar to Example 2.26. In fact we have been able to—

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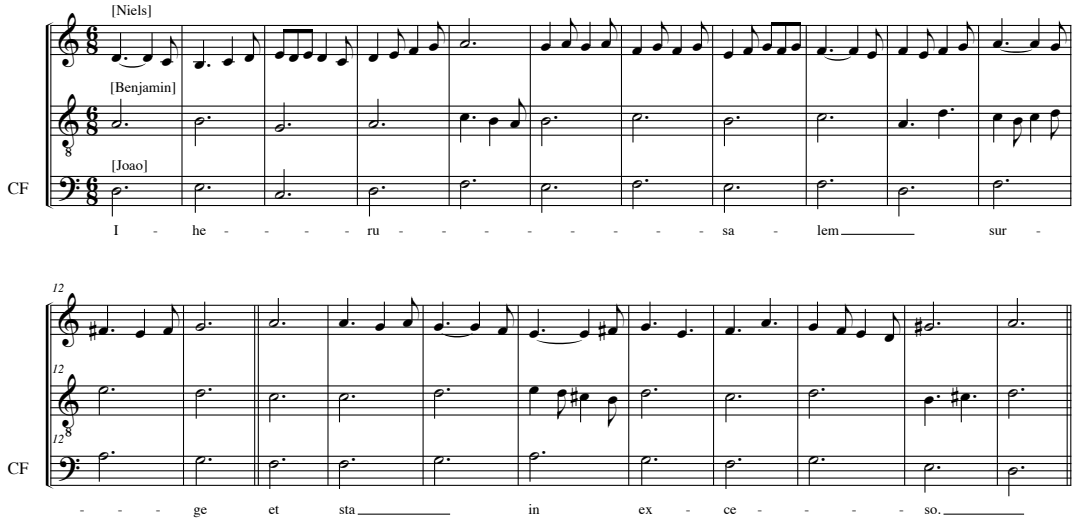
[255] Margaret Bent correctly states of such parallel perfect consonances in the *Gloria* of the Machaut Mass that 'a parallel interval with the tenor is somehow annulled by the occurrence of the cadential articulation'. See Margaret Bent, 'The "Harmony" of the Machaut Mass', in *Machaut's Music: New Interpretations*, ed. by Elizabeth Eva Leach (Boydell & Brewer, 2003), pp. 75–93 (p. 87).

[256] It is possible the scribe had run out of space, or—as Sanders has suggested—abandoned the piece and continued with a new setting of the same chant on fol. 229v. See no. 84 in Sanders, Harrison and Lefferts, *English Music for Mass and Offices (I)*, pp. 197–198. Sanders implies that the second setting represents something of an advance over the first, as it does not contain quite as many parallel fifths. See Sanders, 'Cantilena and Discant in 14th-Century England', p. 37.

[257] Sanders notes that 5/6 - 5/8 and 4/6 - 5/8 progression occur frequently in thirteenth- and fourteenth-century English music. See Sanders, 'Cantilena and Discant in 14th-Century England', pp. 34–35. Neither of these progressions conform to the teaching of discant treatises: the first violates the prohibition of parallel perfect consonances, while the second results in a fourth between the tenor and middle voice. According to Sanders these are caused by the 'strict subservience to the cantus firmus', which may be true in some cases but clearly does not apply to the 5/6 - 5/8 cadences of Example 3.24, because the middle voice, which is not a cantus firmus, could have easily been changed to create a 3/6 sonority.

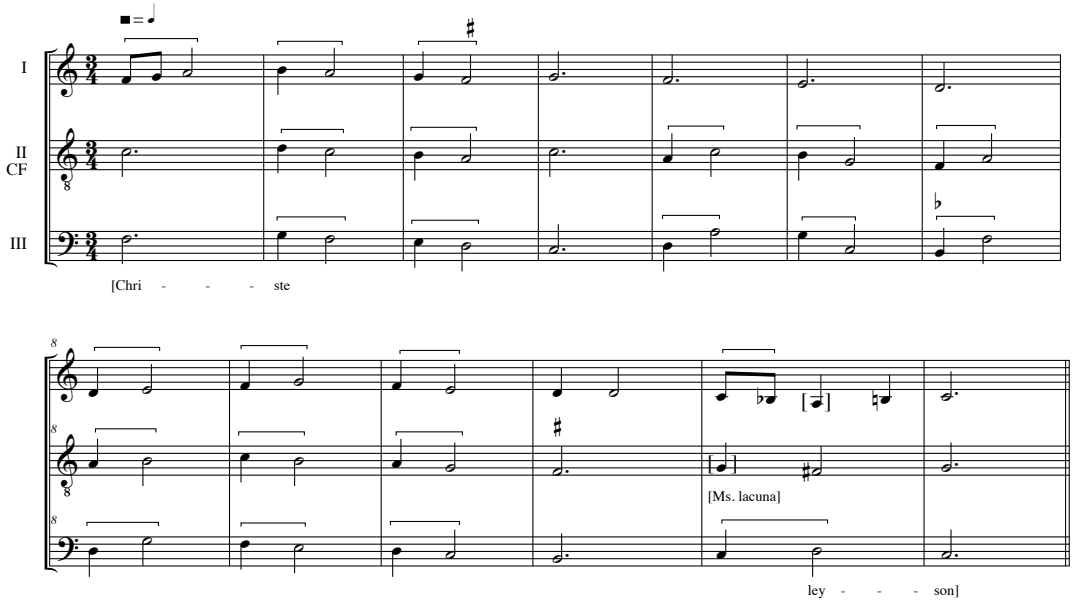
in the spirit of the *Quatuor Principalia*'s description— 'improve' on the repertoire examples, by singing a slightly more ornate middle part. As may be seen in bb. 5, 10-11 and 17, 'breaking up' the parallel fifths of this part can result in a kind of texture which may—indeed—fool the listener into thinking a 'real' three-part improvisation is going on.



Example 3.27 Improvisation on *Iherusalem surge*, excerpt, (Graduale Triplex, p. 20-21)

Examples 3.25, 3.26 and our practical experiments seem to confirm an interpretation of the chapter in the *Quatuor principalia* as describing an organum combined with a florid discant. However, the repertoire also supports the second interpretation I offered, that of a combination of parallel organum with a gymel. As Ernst Apfel and Sanders already noted, a combination of parallel fifths and tenths occurs rather frequently in the English fourteenth-century repertoire.[258] The example below is an excerpt from the first piece on a sheet of music kept in the Durham Cathedral Library.[259] The piece is textless in the source, but its middle voice can be identified as a Sarum variant of the *Kyrie lux et origo*.[260]

[258] Ernst Apfel, *Studien zur Satztechnik der Mittelalterlichen englischen Musik I* (Heidelberg: Carl Winter Universitätsverlag, 1959), p. 33; Sanders, 'Cantilena and Discant in 14th-Century England', pp. 12–15.
[259] See no. 1 in Sanders, Harrison and Lefferts, *English Music for Mass and Offices (I)*, pp. 1–3.
[260] See the commentary and transcription of the chant in ibid., p. 266 and 280.



Example 3.28 *Kyrie*, excerpt (Durham, Chapter Library, Ms. A.III.1, fol. 1r).

Sanders argues that 'parallel fifths between the two lower voices (...) were evidently not considered contrapuntally objectionable, despite the unanimity of fourteenth-century theorists (...) in forbidding such parallelism. Apparently the goal of aural pleasure achieved through a judiciously restricted variety of euphonious chords was more important than contrapuntal propriety.'[261] Whilst Sanders is definitely correct in pointing out the discrepancy between discant theory and the polyphonic texture of the English chant settings, I do not see the need to resort to a chordal, 'triadic' interpretation of such passages.[262] 'Aural pleasure' can be provided in a number of ways, one of which is singing parallel fifths (*quintare*), which – as we have seen above – is attested well into the later Middle Ages both in treatises and in written music.

Markus Jans offers a somewhat similar interpretation of the parallel 5/10 sonorities in English pieces as a combination of parallel sixths and tenths below an upper voice, so that (resultant) parallel fifths occur between the middle and

[261] Sanders, 'Cantilena and Discant in 14th-Century England', p. 13, n. 25.
[262] This technique clearly defies the interdiction of parallel perfect consonances, as well as the restrictions placed on parallel imperfect consonances, by continental as well as English discant treatises (including the *Quatuor principalia* itself). See Kenney.

lower voices.[263] In his view, parallel 3/6 sonorities (fauxbourdon), as well as parallel 6/10 and 5/10 sonorities may be explained as a superposition of gymels, either below or above a cantus firmus. Whilst the system of different combinations of gymels put forward by Jans has the virtues of simplicity and elegance, it fails to take into account the fact that in fourteenth-century counterpoint the lowest voice is always the 'Bezugsstimme' ('voice of reference'), even if it does not carry the chant. In other words, the parallel fifths in Example 3.28 are a kind of parallel organum, and need not be explained away as resulting from parallel 'chords' or superimposed gymels.

None of the examples given here is a perfect match for the 'art in which several men appear to be singing discant'. In Example 3.25 one can object to the lack of imperfect consonances and contrary motion in the upper voice. Similarly, the upper voice in Example 3.26 cannot be said to 'minimally' use perfect consonances, since it is a usual florid discant alternating between perfect and imperfect consonances. Next, the gymel-like upper voice of Example 3.28 may not have been understood as 'true discant' by the author of the *Quatuor principalia*, due to its lack of contrary motion. Finally, none of these examples show *florificatio* in the organal parts. We can conclude, however, that it was possible to combine parallel organum simultaneously with another polyphonic procedure. It appears that discant in contrary motion and gymel in imperfect parallels did not simply replace the practice of parallel organum but coexisted alongside it for some time, sometimes even within the same piece.[264] Furthermore, it is important to realise that the rules of fourteenth-century discant may not apply to the entirety of the contemporary repertoire, especially in pieces where composition appears to reach out to oral tradition.

3.2.3 The Theory of Three-Voice Discant

Having established an improvisational model involving a combination of parallel organum with a florid discant or gymel, I now proceed to a discussion of three-voice discant proper. This means that, unlike the former technique, all the voices

[263] See example 8 in 'Alle gegen Eine: Satzmodelle in note-gegen-note Sätzen des 16. und 17. Jahrhunderts', *Basler Jahrbuch für historische Musikpraxis*, 10 (1987), pp. 101–120 (p. 106).
[264] See my earlier remarks on the horizontal combination of fifthing and discant in two-voice pieces, such as Example 3.1.

are 'in counterpoint': they proceed primarily in contrary motion and are consonant with one another and with the tenor. I will first discuss the information given in fourteenth- and early fifteenth-century treatises, which is often frustratingly imprecise. Then I will consider a few examples of three-voice note-against-note settings, confronting the way they are constructed with the teaching of the treatises. Finally, I will synthesise my observations into a model by which such three-voice settings can be extemporised on a plainchant tenor.

In his influential study *Der Contrapunctus im 14. und 15. Jahrhundert*, Klaus-Jürgen Sachs points out that the teaching of discant and counterpoint treatises stands in an ambiguous relationship to music for more than two voices.[265] The core teaching ('Kernlehre') of these treatises concerns itself only with two-voice progressions. Theorists often state that the rules for two-voice counterpoint apply equally to three-voice or four-voice music, which seems to imply that they need no modification when the number of voices is increased. On the other hand, many treatises offer 'implementation rules' ('Ausführungsbestimmungen') for counterpoint in more than two voices, which, according to Sachs, are concerned with two main issues. Firstly, one is to avoid interval-combinations in which two contrapuntal voices are consonant with the tenor, but not with one another (e.g. 5/6).[266] Special attention is paid by the theorists to the scenario in which one voice sings below and another above the tenor. In this case, the lowest voice acquires the function of the tenor, as discussed above, and the upper voice should be made consonant to it.[267] Secondly, the fourth may be used between contrapuntal voices, even though it is considered dissonant by itself. In a 3/6 or 5/8 sonority the consonances 'neutralise' the fourth ('Neutralisierungseffekt').[268] The theorists typically describe the construction of three-voice polyphony as a successive process, whereby first a discantus is composed against the tenor, followed by a triplum or contratenor.[269] Some treatises also describe an *ars contratenoris*, prescribing

[265] Klaus-Jürgen Sachs, *Der Contrapunctus im 14. und 15. Jahrhundert: Untersuchungen zum Terminus zur Lehre und zu den Quellen* (Wiesbaden: Franz Steiner Verlag, 1974), p. 123.
[266] Ibid., p. 124.
[267] Ibid., p. 127.
[268] Ibid., p. 125.
[269] Ibid., p. 126.

which pitches can be added to a pre-existing dyad in order to construct a contratenor.[270]

The *Ars discantus* of pseudo-Johannes de Muris, however, hints at a more sophisticated procedure, in which three-voice sonorities are considered as a whole. In a chapter titled 'de compositione contrapunctus', the author of this treatise states that 'whoever wants to compose two counterpoints or discants above a tenor, must beware of combining two equivalent or similar consonances'.[271] This means that octave-equivalent notes, such as the upper third and tenth, should be avoided in three-voice counterpoint, because 'there is no diversity in them' ('quia ibidem nulla esset diversitas'). According to the *Ars discantus* it is 'dulce' ('sweet') to combine 5/10, 10/12 and 6/8, because these intervals are consonant also when the tenor is silent.[272] These passages show that multi-voice sonorities in fourteenth-century music did not result 'randomly' from superimposed voices, as has sometimes been claimed. As Margaret Bent has aptly remarked, 'a dyadic basis [of counterpoint] does not confine composers to hearing only two parts at a time any more than triadic harmony means that its practitioners cannot hear polychords.'[273]

Besides the 'art in which several men appear to be discanting', the *Quatuor principalia* contains a number of other references to multi-voice discant. As Ferand already noted, most of these passages refer specifically to extemporised discant, as shown by the expression 'discantare super planum cantum'.[274] Contrary to the *Ars discantus*, the author of the *Quatuor principalia* states that parallel perfect consonances can sometimes be used in three-voice music.[275] On other hand the treatise clearly discourages singers from doubling

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[270] Ibid., p. 128.
[271] 'Quicumque voluerit duos contrapunctus sive discantus componere super unum tenorem, debet se cavere ne duas equipollentes sive consimiles concordantias componat (...)' See Johannes de Muris (?), 'Ars Discantus', *Thesaurus Musicarum Latinarum* <http://boethius.music.indiana.edu/tml/14th/MURARSD.html> [accessed 16 August 2016].
[272] Sachs, *Der Contrapunctus im 14. und 15. Jahrhundert: Untersuchungen zum Terminus zur Lehre und zu den Quellen*, p. 130.
[273] Margaret Bent, 'The Grammar of Early Music: Preconditions for Analysis', in *Tonal Structure in Early Music* (New York, London: Garland Publishing, 1998), pp. 16–60.
[274] Ferand, *Die Improvisation in der Musik. Eine entwicklungsgeschichtliche und psychologische Untersuchung*, p. 143.
[275] '(...) two perfect concords ought never to be made consecutively, either when ascending or descending, unless a rest intervenes, or when three parts are sung together.' ('... nunquam due concordancie perfecte consequenter fieri debent nec ascendendo neque descendendi, nisi pausi

each other: 'When two or three are discanting above the plainsong, they must as much as possible begin and continue in different consonances'.[276] If a singer finds himself in the same note with a colleague, he is to 'designate himself immediately to another consonance' ('statim signare se debet ad aliam concordanciam'). The goal of three- or four-voice discant above a plainchant is apparently to create a sonority as rich and 'diverse' as possible.

The author of the *Quatuor principalia* also advises restricting the use of voice-crossings in extemporised discant, stating that 'it is not permitted to descend more than a third below the plainchant while another or others are singing above the chant, and this only when the fifth and the twelfth are not sung above it'.[277] Paradoxically, however, chapter 40 of the *Distinctio secunda* is devoted entirely to 'discant below the plainchant'.[278] In this chapter no restriction is placed on the intervals available to a low discant, but the theorist states that 'when you are singing below the plainchant, no one can discant above, unless he knows the place of the low notes, because all high notes must be made concordant with the lower ones for the consonance to be good.'[279]

It appears, in other words, that for this procedure to function successfully, the singer of the upper discant must be able to follow the low voice, or even predict what is going to be sung, in order to concur both with the plainchant and the lower part. The question is whether sufficiently clear rules can be provided for singing a discant below the plainchant, in order for a triplum to be added to it simultaneously. In any case, even when two discants are being sung above a

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intervenerit; aut quando tres cantus simul modulantur.') Aluas, p. 467 (transl. p. 712). Translation adapted here.

[276] 'Si unde duo vel tres discantant super planum cantum, uti debent in quantum possunt ut incipiant et continuant in diversis concordanciis.' Ibid., p. 515 (transl. p. 743). Translation adapted here.

[277]'Non licet amplius descendere quam ad terciam sub plano cantu, alio vel aliis discantantibus supra planum cantum, et hoc solo modo fiat quando quinta vel duodecima supra planum cantum non modulatur.' Ibid., p. 515 (transl. p. 743). Translation adapted here.

[278] 'Quomodo sub plano cantu discantandum est.' Ibid., p. 519 (transl. p. 746).

[279] 'Tunc dummodo discantaveritis sub plano cantu, nullus potest discantare supra, nisi fuerit expertus de gravium vocum sedibus, quia omnes superiores voces ad graviorem habent reddere concordantiam, ad hoc quod consonancia bona sit.' Aluas confusingly translates this passage thus: 'You cannot discant above it the way you discanted below the plainsong unless you are expert in the seats of the lower voices'. In my view 'nullus' should be translated as 'no one', and 'fuerit' does not refer to the second-person addressee of the text. Ferand already correctly interpreted this passage as follows: '(...) wenn der Sänger über dem Cantus firmus auch die tiefere Stimme verfolge, da alle Oberstimmen mit der tieferen Stimme richtige Konsonanzen bilden müßten'. Ferand, *Die Improvisation in der Musik. Eine entwicklungsgeschichtliche und psychologische Untersuchung*, p. 143.

plainchant, a certain amount of predictability would presumably be needed to avoid secondary dissonances.[280] We should consider therefore whether, like their fifteenth- and sixteenth-century colleagues, fourteenth-century singers were able to coordinate their discant through a collective knowledge of standardised vertical combinations.

The *Compendium de discantu* of Petrus dictus Palma Ociosa does not offer an explanation of three-voice discant, but its first chapter includes an example of counterpoint in three voices, which are labeled 'contrapunctum quasi in loco tripli', 'contrapunctum loco moteti' and 'tenor utriusque'.[281] Its tenor is the beginning of the *Kyrie fons bonitatis*, and—as their names indicate—the other parts occupy the ranges of a triplum and motetus voice.[282] This example is very important, because no other fourteenth-century treatise provides a substantial example of three-voice counterpoint. Furthermore it has interesting affinities with the teaching on two-voice discant contained in the same chapter of the treatise.

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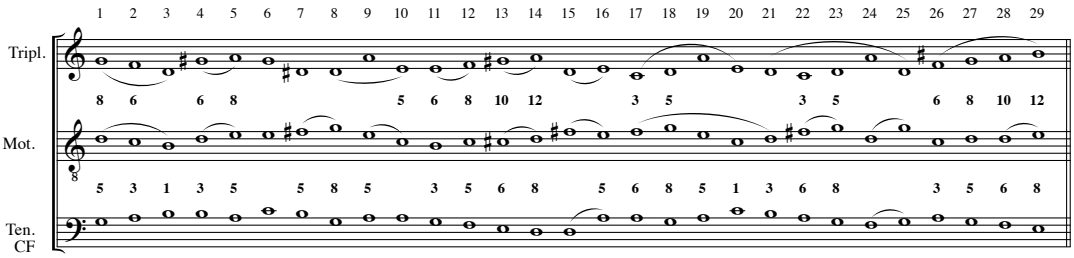
[280] Klaus-Jürgen Sachs, *Der Contrapunctus im 14. und 15. Jahrhundert: Untersuchungen zum Terminus zur Lehre und zu den Quellen*, p. 143.

[281] Example transcribed after Johannes Wolf, 'Ein Beitrag zur Diskantlehre des 14. Jahrhunderts', in *Sammelbände der InternationalenMusik-Gesellschaft*, ed. by Max Seiffert and Charles Maclean (Leipzig: Breitkopf & Härtel, 1914), pp. 504–534 (p. 513). The example appears to contain several errors, especially in the placements of sharp-signs. As I have not been able to consult a reproduction of the manuscript, I have abstained from making any corrections or proposing editorial accidentals.

[282] *Graduale Triplex* (Solesmes: Abbaye Saint-Pierre de Solesmes, 1979), p. 715. Rob Wegman has argued that the part labels of this example prove that Petrus's readers would have been unfamiliar with note-against-note counterpoint, and that it was intended as an ersatz for singing motets. I remain unconvinced by this reasoning, as a 'reductionist' conception of polyphony is already evident from the Vatican Organum Treatise, and can therefore not be considered coeval with the emergence of the term *contrapunctus*. Wegman, 'What Is Counterpoint?', pp. 22–23. See also Section 2.2.2.



Example 3.29 *Compendium de discantu*, three-voice counterpoint, after Johannes Wolf.

In Example 3.29 one may readily observe the presence of long chains of adjacent consonances, especially in the middle voice, as indicated in the example. The top part of Petrus's example contains more leaps than the 'motetus' (including augmented, diminished and chromatic intervals), exactly as one would expect of a part composed against a pre-existing duo. However, sections using the adjacent consonances principle also figure in the 'triplum', and these always overlap with those of the middle voice, such as between notes 1-2, 11-14 and 26-29. The example also carefully observes the advice of the *Ars discantus* to avoid octaves between the two counterpoints.

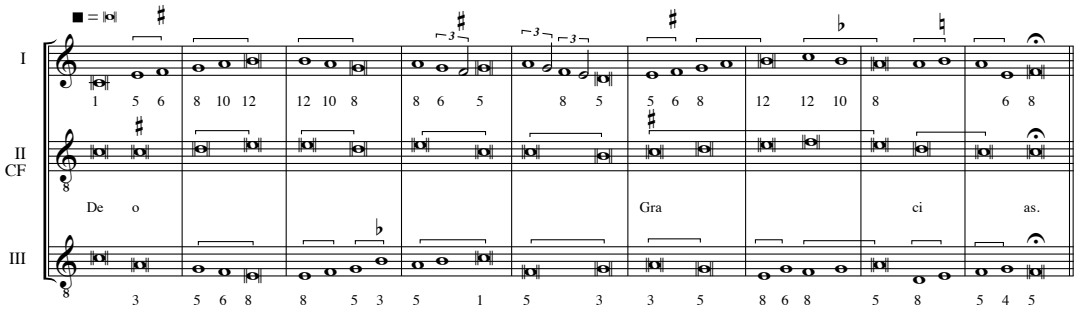
In my view, two conclusions can be drawn from this example: first, it need not be the case that when one voice is sung or composed in stepwise contrary motion against a tenor the other voice must perforce fill in 'left-over' consonances without consideration for its own melodic outline. Secondly, the superposition of two different voices in adjacent consonances with the tenor can lead to a good overall contrapuntal result, which could also be achieved by singers discanting simultaneously above a plainchant. It may even be that the kind of predictability required of a discant singing below a tenor in order for a part to be added above (as hinted at in the *Quatuor principalia*) can result from the use of the adjacent consonances principle.

3.2.4 Compositions in Simple Three-Voice Discant

In this section I will examine a few examples of fourteenth-century, three-voice homophonic compositions to see how they relate to the teaching of the treatises,

and whether any further observations can be made to formulate improvisation models. Unfortunately three-voice pieces in simple discant are much rarer than two-voice examples. Most homophonic pieces in three voices originate in the British Isles; however, the majority of these cannot unequivocally be described as discant, due to an extensive use of parallel 3/6, 6/10 and 5/10 sonorities. Still, the English sources do contain a few three-voice pieces that can be considered *contrapunctus simplex*, somewhat comparable to Example 3.30, two of which will be discussed below. The manuscript Apt Trésor 16 bis, copied in the south of France in the late fourteenth century, includes a few largely homophonic pieces I will use to confirm and contextualise my findings from the English examples.

The manuscript Cambridge University Library Kk.i.6 contains two folios with musical compositions. The first of these, fol. 246r, contains four relatively short chant-settings in a similar syllabic, homophonic style; two settings of the *Deo gracias* (Examples 3.30 and 3.31) and two votive antiphons to the Blessed Virgin (*Paradisi porta* and *Sancta Maria Virgo*).[283] All of these pieces appear to have a cantus firmus in the middle voice.[284]



Example 3.30 *Deo gracias I* (Cambridge, University Library, Ms. Kk.i.6, fol. 246r).

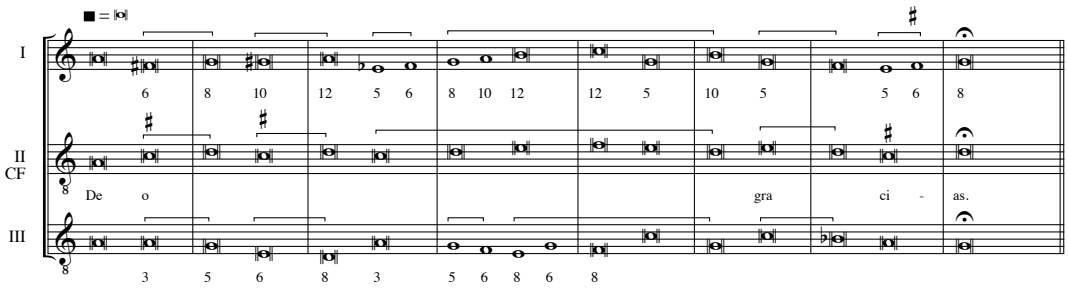
Almost the entire counterpoint of Example 3.30 can be explained in relations of adjacent consonances: The tenor is constructed in strict contrary motion with

[283] See also nos. 68 and 69 in *English Music for Mass and Offices (II) and Music for Other Ceremonies*, Polyphonic Music of the Fourteenth Century 17 (Monaco: Éditions de l'Oiseau-Lyre, 1986), p. 159. See also no. 7 in Sanders, Harrison and Lefferts, *English Music for Mass and Offices (I)*, pp. 13–14.

[284] See the commentary in Sanders, Harrison and Lefferts, *English Music for Mass and Offices (I)*, p. 275; Sanders, Harrison and Lefferts, *English Music for Mass and Offices (II) and Music for Other Ceremonies*, p. 177.

the cantus firmus, expanding and contracting from a unison to an octave below. The upper voice appears to be a counterpoint not so much to the cantus firmus, with which it runs mostly in similar motion, but with the tenor. We may observe, for instance, how in b. 3 the tenor's passing seventh is used structurally by the upper part, resulting in a 7/10 sonority, something which happens again in b. 7. In the last two bars the application of contrapuntal rules is significantly more relaxed, with parallel twelfths between the outer voices and a 4/6–5/8 final cadence.

The same kind of contrapuntal construction can be seen in the second *Deo gracias* (Example 3.31), whose outer voices move in contrary motion until b.7. In bb. 3-4, where the cantus firmus sings c' d' e', an almost identical counterpoint is generated as in bb. 1-2 and 6-7 of Example 3.30. Three consecutive parallel 3/5 sonorities occur in bb. 6-7, which cannot be explained as a counterpoint constructed above the lower voice. It might be that, in those instances, the dyadic counterpoint is formed by the outer voices against the cantus firmus.



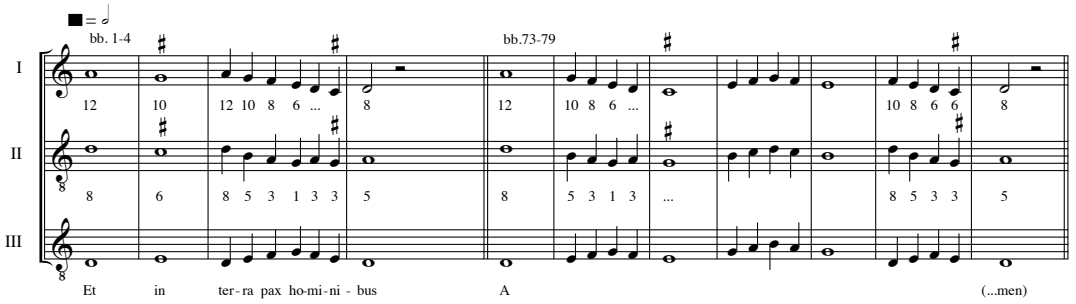
Example 3.31 *Deo gracias II* (Cambridge, University Library Ms. Kk.i.6, fol. 246r).

It is interesting to observe that the contrapuntal procedure we see in these pieces seems to resemble the scenario described in the *Quatuor principalia*'s chapter on discant below a cantus firmus.[285] Given the strict adherence to the principle of the adjacent consonances between the cantus firmus and the tenor, it seems likely that such music could not only have been written but also extemporised. It is quite possible that the singer of a top part could learn to

[285] See note 278-279 and Aluas, p. 519 (transl. p. 746).

anticipate the moves of the tenor and adapt his own part accordingly, as will be shown in the following section.

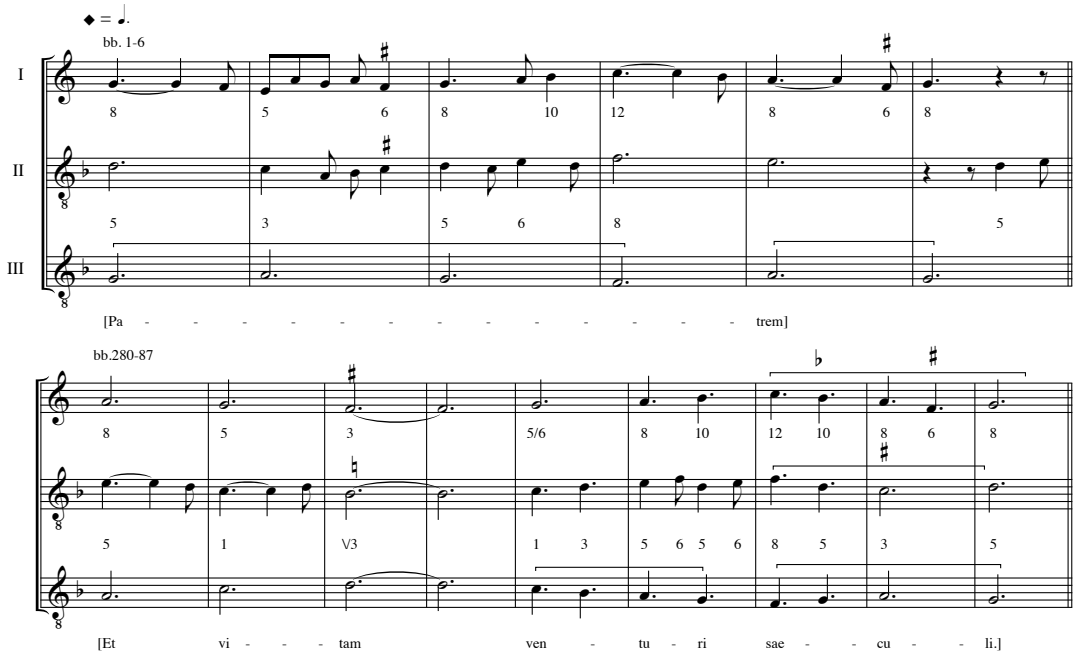
A *Gloria* setting in the Apt manuscript, attributed to Johannes Susay, shows extensive passages in parallel 3/6 and 6/10 sonorities, but contrary motion is also frequently used between the parts. Example 3.32 gives two fragments of this composition, in which the upper voices accompany the stepwise tenor in adjacent consonances. In b. 3 a parallel 3/6 sonority is used to produce the 3/6-5/8 cadence to *D*, whereas the 3/6 sonorities in bb. 75-77 do not immediately lead to a cadence but are used as a kind of proto-fauxbourdon.



Example 3.32 Johannes Susay, *Gloria*, excerpts (Apt, Cathédrale Ste Anne, Ms. Trésor 16 bis fol. 25v-26r).

A similar use of three-voice discant in adjacent consonances can also be observed in an anonymous *Credo* in the Apt manuscript (see Example 3.32).[286] The opening bars provide an interesting example of two counterpoints in adjacent consonances above a cantus firmus in equal values, embellished with turns, passing-notes and other ornaments, in a way not dissimilar from what can be observed in Example 3.14.

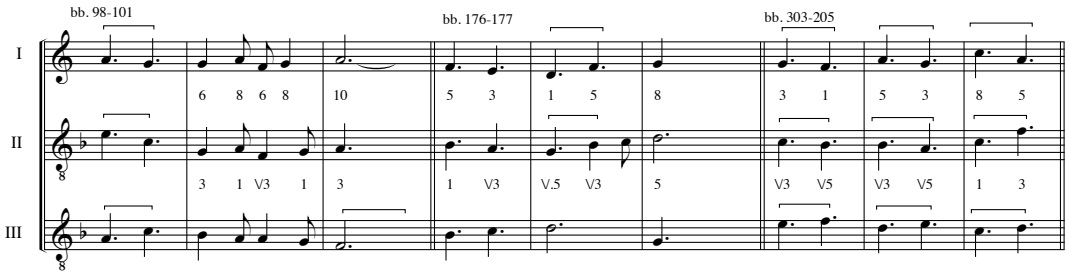
[286] See also no. 50 in Giulio Cattin and Francesco Facchin, *French Sacred Music B*, Polyphony Music of the Fourteenth Century 23b (Monaco: Éditions de l'Oiseau-Lyre, 1991), pp. 213–223.



Example 3.33 *Credo*, excerpts (Apt, Cathédrale Ste Anne, Ms. Trésor 16 bis fol. 27v-29r).

In this *Credo*, dissonances and parallels in perfect consonance between the upper parts occur with considerable frequency. Parallel fifths occur when both voices sing in adjacent consonances with the tenor, starting from a unison and a fifth, such as in bb. 176-177 of Example 3.33. A case of parallel octaves occurs in bb. 99-100, where the upper voices accompany the tenor with an almost identical motif. The second segment of Example 3.33 may fall under the license of secondary parallels, but the octaves in bb. 98-100 are irreconcilable with the pseudo-Johannes de Muris's prohibition of octave doublings. Parallel sevenths occur in bb. 304, with both voices singing correct dyadic counterpoint with the tenor. Margaret Bent has labelled such resultant dissonances 'bifocal collisions' and argued that they are not actually at odds with dyadic counterpoint as taught in the treatises.[287] As we have seen, such resultant dissonances are discouraged by theorists that discuss three-voice discant, but this seems not to have been heeded by composers consistently.[288]

[287] Bent, 'The "Harmony" of the Machaut Mass', p. 90.
[288] See above and Klaus-Jürgen Sachs, *Der Contrapunctus im 14. und 15. Jahrhundert: Untersuchungen zum Terminus zur Lehre und zu den Quellen*, p. 127.



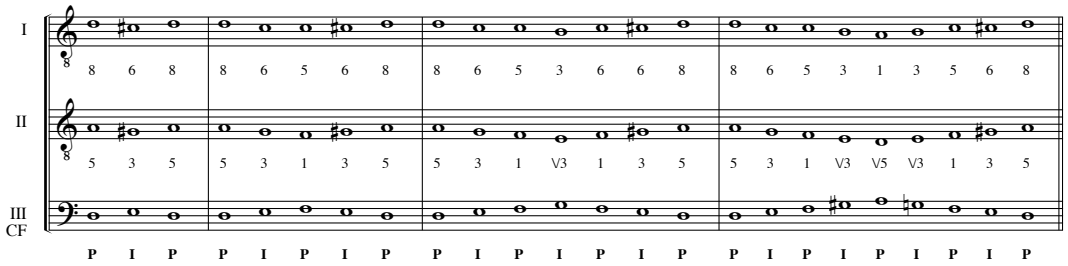
Example 3.34 *Credo*, excerpts (Apt, Cathédrale Ste Anne, Ms. Trésor 16 bis fol. 27v-29r).

From the analyses above we can draw some tentative conclusions about the relation between the instruction on three-voice polyphony in discant treatises and the extant repertoire. First, the combination of two voices in stepwise contrary motion to the tenor, that we observed in the three-voice example in Palma Ociosa's *Compendium de discantu*, also appears in contemporary compositions. Secondly, the type of discant with one voice below and one voice above the tenor described in the *Quatuor principalia* seems to be reflected in a number of three-part English pieces. The three-voice homophonic settings from the Apt manuscript show some remarkable similarities with the English pieces. Resulting dissonances between contrapuntal voices appear with a certain frequency, as well as secondary parallels in perfect consonances. Finally, as Example 3.33 shows, the adjacent consonances principle may also be used as a basis for a more elaborate, florid type of three-voice counterpoint.

3.2.5 Improvising Three-Voice Simple Discant in Practice

What elements of the foregoing discussion can be helpful for developing a practice of three-voice discant in a fourteenth-century idiom? The *Compendium de discantu* states that adjacent consonances are to be employed in passages where the tenor descends or ascends stepwise, as is also shown in the two brief examples illustrating this technique. In its three-voice example of contrapunctus, we can also identify two-voice combinations of adjacent consonances, especially when the tenor moves by step (see Example 3.29). Taking these observations into account, my colleagues of the Ensemble Diskantores and myself have begun

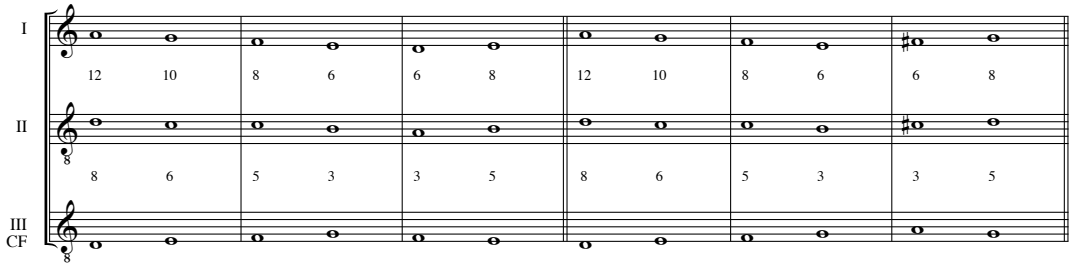
practising this technique in exercises above a stepwise ascending and descending tenor, as shown in here:



Example 3.35 Exercises in three-voice discant.

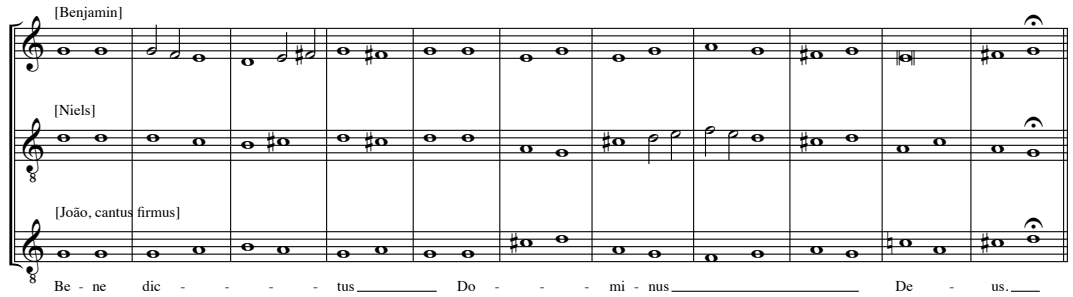
As we can see in the example, the technique provides a constant alternation between perfect and imperfect sonorities. However, the exercise has a slightly different 'harmonic trajectory' at every stage, and one should take the time to get accustomed to the different cadential relationships and the chromatic alterations that these necessitate. The exercise can also be done with the upper voice starting from the twelfth, and the middle voice from the octave. After these successions on three, four and five-note stepwise tenors have been mastered in the *D* mode, the same exercise should be done in *E*, *F* and *G* as well. What I have found very useful about this exercise is that one quickly gets used to certain interval-combinations above every step of the tenor, which—in this simple form—can be learned almost by ear.

After practising such drilling exercises, one can progress to singing short exercises on cantus firmi. As a rule, we have not used original plainchants for this, but simple, stepwise melodies written on the blackboard. At this stage one should also learn to shift the model in order to produce cadences on different degrees of the scale. As we have already observed, this is most easily done by singing one or two parallel imperfect consonances right before the cadence. Example 3.35 is an example of a three-voice discant starting in *D* and 'modulating' to *E* and *G* respectively.



Example 3.36 Cadences to different scale degrees.

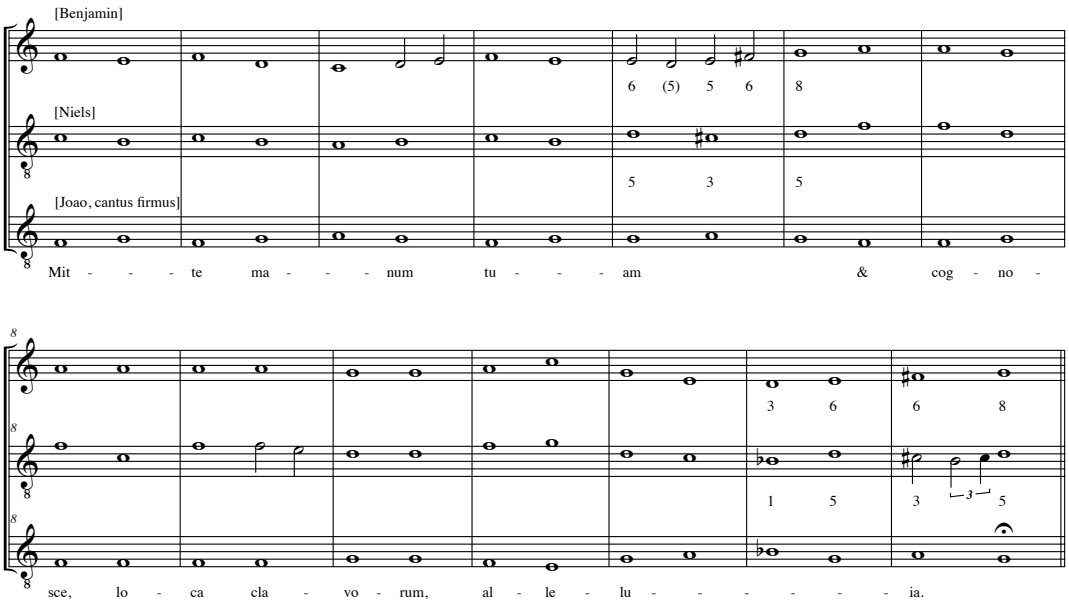
To practise singing above longer and more disjunct plainchants, we have found it useful to improvise the two voices successively against the cantus firmus. Example 3.36 is a transcription of such an exercise. João first sang the cantus firmus alone, so we could 'pre-programme' our counterpoints. Then I sang a counterpoint, occupying the same range as the tenor, and following the model as closely as possible. Note that in bb. 6 and 11, where I crossed below him, João had to use c-sharps to make a correct cadential approach. Initially I used a raised index finger to indicate sharpened notes, but eventually my colleagues learned to predict where directed progressions would occur and use accidentals accordingly. After listening to the duo, Benjamin then added a top voice to it, taking into account the places in which the lower voices had crossed.



Example 3.37 *Benedictus Dominus* (*Graduale Triplex*, p. 257) with improvised discant.

We have found that exercises in successive three-voice improvisation did not only help us to learn using the model, but also to get to know the habits of our fellow improvisers and respond accordingly. After a while we progressed to simultaneous improvisation on plainchants. Example 3.36 is a transcription of

such an exercise, with João singing the tenor and Benjamin and me improvising against it. The transition from successive to simultaneous three-voice singing was an interesting one, because certain decisions that could previously be premeditated or negotiated now had to be taken in real time.[289]



Example 3.38 *Mitte manum tuam* (*Graduale Triplex*, p. 218) with improvised discant.

We may observe several 'bifocal collisions' between the upper voices in Example 3.37, such as in b. 5 and b. 13. In both cases Benjamin chose to approach the cadence in parallel sixths, whereas I had planned a 5-3-5 progression. On repeating the exercise I changed my fifths into thirds, eliminating the clashes with the upper part. However, looking at the transcription of our improvisation, it strikes me how familiar these dissonances are to those that sometimes occur in fourteenth-century compositions, for instance in Example 3.26 or 3.33. One can learn to prevent secondary dissonances almost entirely in improvisation, but in my view this would constitute 'hypercorrection'; such dissonances are—after all—an attractive feature of fourteenth-century polyphony.

[289] One may note for instance the lack of b-flat *causa pulchritudinis* in my part in b. 2. This is probably because I expected it to be combined with an e' rather than a d' in Benjamin's part.

3.3 Conclusion

Discant and counterpoint treatises contain useful information on the basis of which one can attempt to reconstruct a practice of extemporised discant. For two-voice improvisation theorists provide several useful 'recipes', such as 'fifthing' and the adjacent consonances principle, that—when internalised—enable a singer to generate almost automatically a second voice to any given melody. Supplied with the appropriate cadential accidentals and the occasional ornament, such as in Example 3.19, this kind of improvisation can sound exactly like composed examples of simple fourteenth-century polyphony. It is clear furthermore that such procedures continued to play a role in the production more sophisticated music, such as Examples 3.11-14. An easy way to progress from simple counterpoint in adjacent consonances to florid discant may be gleaned from the *Benedicamus Domino* in Example 3.14. By adding ornaments in semibreves and minims to a counterpoint in breves or longs, one can achieve a very similar result.

The case is more complicated for multi-voice polyphony, as this subject falls outside of the 'core teaching' of fourteenth-century counterpoint treatises. We have seen that the theorists do provide advice on the subject, and even attempt to regulate issues like secondary dissonances. However, when one considers the corpus of extant compositions, it also appears that composers frequently took licenses from those precepts, and it seems likely that such 'exceptions' would also have occurred in extempore discant. The 'art in which several men appear to be discanting', described in the *Quatuor principalia*, falls—at least partly—outside of the purview of discant theory. Paradoxically however, it is through the 'learned' media of musical notation and theory that we know anything about such oral traditions at all. This may indicate that the border between artful and 'non-learned' polyphony was rather permeable and that a significant number of the techniques discussed in this chapter would have been used in both.

Concerning multi-voice polyphony, one of the principal points that fourteenth-century theorists seek to impress on the reader is the importance of the 'variety of consonance'. Doublings in unisons or octaves between discants are

undesirable precisely because they detract from this 'sonic fullness'. This doctrine has also proven useful to us in pratice. Taking inspiration from the *Quatuor principalia*'s advice on avoiding doublings, we have sometimes appointed one of us as a 'problem-solver' when practising three-voice discant. This singer then is the one to 'designate himself immediately to another consonance' in case of unison-doublings or unwanted secondary dissonances. As explained above, secondary dissonances are discouraged by the treatises, but as they do appear in compositions, it does not seem necessary to eliminate them altogether. The advice given in the same treatise concerning voice-crossings has inspired us to practise voice-crossings between the tenor and the middle part, as in Example 3.36. The key to success is to confine oneself to pre-established conventions, thereby making it possible for the upper voice to predict what is happening below.

What the treatises do not provide (or at least not in so many words) is a method or collection of *loci communes* for three-voice music, as they give for two-voice discant. I have presented a model of singing which, not unlike fauxbourdon, vertically combines voices following a two-voice model of counterpoint. Three-voice discant can be practised successively first, after which it is only a small step to learn to improvise simultaneously. In my experience, the only difference between the two is that one needs to think and adapt more quickly in the latter.

These experiences have led me to doubt whether late-medieval counterpoint would perforce have been the result of 'successive composition', adding one part after another, instead of composing them all together. Margaret Bent is correct in pointing out that certain features of fourteenth-century compositions are best explained as 'bifocal', because they result from parts that are not 'in counterpoint' with one another.[290] However, Bent does not support the idea of 'successive composition' in a strict, literal sense, and argues for a more nuanced view of it, based, not on the chronology the compositional process, but on a hierarchy between parts.[291] The question remains whether it is meaningful to distinguish between a successive and a simultaneous conception

[290] See Bent, 'The "Harmony" of the Machaut Mass', p. 90.
[291] Ibid., p. 78.

of polyphony when it is clear that medieval composers did take vertical considerations into account when composing three-or four-part settings.[292]

As I have shown in this chapter, three-voice discant can be created extempore using a system of vertically combined interval successions. Of course, this three-voice combination of the adjacent consonances principle does not constitute a system of triadic harmony, but it is very well possible it would have been recognised by fourteenth-century musicians as a *locus communis* of three-voice polyphony. This also means that we should not view the difference between composition and extemporisation in fourteenth-century polyphony as a divide between 'mere' two-voice singing (possibly amplified by organal doublings) and 'real' three-part counterpoint.

[292] This point was also argued in Julie E. Cumming, 'From Two-Part Framework to Movable Module', in *Medieval Music in Practice: Studies in Honor of Richard Crocker*, ed. by Judith A. Peraino (Middleton: American Institute of Musicology, 2013), pp. 177–215 (p. 206); Leech-Wilkinson, 'Machaut's "Rose, Lis" and the Problem of Early Music Analysis', p. 11.

4 IMPROVISED COUNTERPOINT 1400-1470*

The primarily oral and aural understanding of counterpoint in the fifteenth century has become widely recognised by scholars and practitioners of early music in recent decades. Practice-oriented scholarship has already been carried out on fifteenth-century improvised polyphony chiefly by pedagogues and researchers such as Jean-Yves Haymoz (Haute École de Musique de Genève), Peter Schubert (McGill University, Montreal), and Markus Jans (Schola Cantorum Basiliensis). The treatise *De preceptis artis musicae*, written by one Guillelmus Monachus around 1470, has played an essential role in this recent pedagogical revival of 'cantare super librum'.[293] Introductory texts on fifteenth-century improvised counterpoint, such as the articles by Klaus-Jürgen Sachs, Markus Jans, and Ross Duffin in the *Basler Jahrbuch für historische Musikpraxis,* and Barnabé Janin's improvisation manual *Chanter sur le livre*, rely heavily on *De preceptis* for their information.[294] This chapter will take *De preceptis* as a point of departure, so that several types of fifteenth-century polyphonic improvisation, such as canons, that are not mentioned in *De preceptis* will not be discussed.[295] I have found that the models of two-, three, and four-voice counterpoint discussed in this chapter form an excellent practical introduction to singing on the book.

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* An earlier version of this chapter was published as Niels Berentsen, 'From Treatise to Classroom: Teaching Fifteenth-Century Improvised Counterpoint', *Journal of the Alamire Foundation*, 6.2 (2014), pp. 221–242.

[293] The treatise survives in a single manuscript: Venice, Biblioteca Nazionale Marciana, Lat. 336 (Contarini), coll. 1581. Andrew Hughes dates the treatise around 1470; see Andrew Hughes, 'Guillelmus Monachus', *Grove Music Online* [accessed 16 August 2016]. For a modern version, see Eulmee Park, 'De Preceptis Artis Musicae of Guillelmus Monachus: A New Edition, Translation and Commentary' (Ohio State University, 1993) <https://etd.ohiolink.edu/rws_etd/document/get/osu1220457317/inline> [accessed 16 August 2016].
Park's dissertation, the most recent and accessible edition of the treatise, will be used for references, including indicating the pages of the corresponding translation.

[294] Klaus-Jürgen Sachs, 'Arten improvisierter Mehrstimmigkeit nach Lehrtexten des 14. bis 16. Jahrhunderts'; Jans, 'Alle gegen Eine: Satzmodelle in note-gegen-note Sätzen des 16. und 17. Jahrhunderts'; Ross W. Duffin, 'Contrapunctus Simplex et Diminutus: Polyphonic Improvisation for Voices in the Fifteenth Century', *Basler Jahrbuch für historische Musikpraxis*, 31 (2007), pp. 69–90; Barnabé Janin, *Chanter sur le livre. Manuel pratique d'improvisation polyphonique de la Renaissance* (Langres: Éditions Dominique Guéniot, 2012).

[295] For a more comprehensive overview see for instance Peter Schubert, 'Counterpoint Pedagogy in the Renaissance', in *The Cambridge History of Western Music Theory*, ed. by Thomas Christensen (Cambridge: Cambridge University Press, 2002), pp. 503–533; 'Musical Commonplaces in the Renaissance'.

What is the best way to use the information in *De preceptis* to teach counterpoint in our modern classrooms? This is the main question I address in this chapter. Existing modern scholarship on *De preceptis* extensively treats its three- and four-voice models,[296] but little attention has been given to the useful insights the treatise can provide into two-voice counterpoint. In my discussion of Guillelmus's parallel three-voice techniques, I will point to some hitherto unobserved relationships with composed polyphony and offer some suggestions as to how these can inform us about improvisation. The three- and four-voice techniques involving a contratenor bassus that *De preceptis* gives in its sixth chapter will be examined with special attention to the relation between the two. Due to the rather unsystematic nature of the treatise, I will not discuss the contrapuntal models in the order in which they appear in the source.[297] The original place of these techniques in the text and examples of *De preceptis*, is given in Appendix B. For the purposes of this chapter, I have opted for the order that appears most logical to me as a modern reader and pedagogue: a progression from simple to complex two-voice counterpoint, with the three-and four-voice models as a final step. A comparison of the different contrapuntal models of *De preceptis* with several late fourteenth- and fifteenth-century compositions will provide further insights into singing on the book. On the basis of these observations I will propose a model for teaching improvised counterpoint.

The most important obstacle to a proper assessment of Guillelmus's contrapuntal techniques is the somewhat surprising fact that no completely satisfactory edition or translation has been published of this important text. Albert Seay's 1965 edition of the treatise is limited to a diplomatic transcription and does not offer score-transcriptions of the examples. Seay also does not consider how the examples should be placed in the text, a matter which is

[296] See for instance 'Alle gegen Eine: Satzmodelle in note-gegen-note Sätzen des 16. und 17. Jahrhunderts', pp. 104–105; Duffin, pp. 80–81.
[297] Andrew Hughes has proposed that *De preceptis* might be a compilation, taking passages of earlier, now unknown, texts, because of the unsystematic, haphazard structure of the treatise. Counterpoint, for instance, is discussed in chapters IV and VI of the treatise, and briefly returned to in chapter VIII. The different types of counterpoint are not discussed in any apparent order and a lot of information from chapter IV is repeated in chapter VI. See Hughes, 'Guillelmus Monachus', in *Grove Music Online* [accessed 16 August 2016].

particularly important because of the haphazard composition of the source.[298] Eulmee Park's edition of 1993 is more useful in this respect, but has some problems of its own; firstly, it is regrettable that Park's transcriptions of the examples fail to indicate that the 'cantus firmus' part is not to be sung together with the other voices. In fact, this part appears to serve the purpose of illustrating how a florid superius can be derived from a chant in long notes. The musical examples in the single source of *De preceptis* contain some remarkable errors, for which a correction should be offered in a critical edition.[299] Finally, some passages in Park's translation seem to be at odds with the teaching of the treatise: for instance references to the visualisation technique of 'sighting' are confused with doubling in parallel octaves.[300] Although a comprehensive revision of Park's work lies outside of the scope of this chapter, I will draw attention to a few of these problems in my discussion of Guillelmus's contrapuntal models.

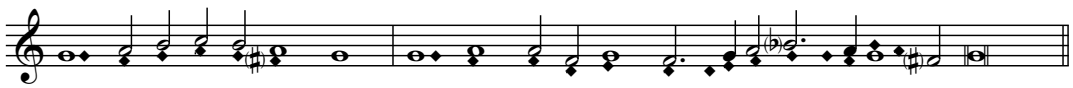
[298] Albert Seay, *Guillelmus Monachus De preceptis artis musicae*, Corpus Scriptorum de Musica 11 (American Institute of Musicology, 1965). On the problems of this edition see also Park, pp. 5–6.
[299] See for instance the musical example on fol. 34r-34v (Park, pp. 72-73, Ex. 61 [transcr. pp. 192-193]), where the scribe seems to have notated the contratenor a third too high, from b. 10 of the transcription. See Example 4.18 below.
[300] See my remarks below on Park's translations of 'reiterando ad octavam bassam' in cap. IV § 6 of *De preceptis*, and the chapter heading 'Regula ad componendum cum tribus vocibus non mutatis' (cap. IV § 7).

4.1 Two-Voice Counterpoint

In the first part of this chapter I will present an itinerary for acquiring the skill of extemporising two-voice counterpoint based on *De preceptis artis musicae,* and a comparison of its teaching with other theoretical sources and compositions. Starting from singing in parallel intervals, more free types of extemporisation can be learned through alternating between parallel intervals and the use of simple contrary motion. In this way, two-voice counterpoint can be taught using elementary techniques or 'recipes' which invite students to improvise, rather than giving them a strict set of rules and prohibitions.

4.1.1 The Gymel

In his treatise, Guillelmus first refers to singing two-voice counterpoint in chapter IV, entitled 'Ad habendum veram et perfectam cognitionem modi Anglicorum' ('To have a true and correct understanding of the ways [to sing counterpoint] of the English').[301] After discussing three-voice fauxbourdon, Guillelmus introduces another way of singing in two voices, called 'gymel'.[302] The consonances used in this technique are the lower and higher third and the unison, which can be 'repeated at the lower octave' ('reiterando ad octavam bassam') as the octave, sixth, and tenth.[303] The example Guillelmus gives for this technique shows the improvised voice in black dots, as opposed to the white mensural notation of the *cantus prius factus* (see Example 4.1).[304]



Example 4.1 Gymel (*De preceptis*, fol. 20r).

[301] Park, pp. 43-44 (transl. pp. 159-61).
[302] The name for this technique was clearly derived from the word *gemellus,* the Latin for 'twin'. This is corroborated by a sixteenth-century English-French vocabulary giving the translation 'iumeau' for 'Gymmell song'. See Ernest H. Sanders, 'Gymel', *Grove Music Online* [accessed 16 August 2016].
[303] Guillelmus corrects his omission of the tenth as an interval for gymel in ch. VI § 43 (Park, p. 64 [transcr. p. 180]).
[304] See also Park, p. 44, Ex. 46 (transcr. p. 160).

Park confusingly translates 'reiterando ad octavam bassam' as 'doubling at the lower octave', implying that gymel could be performed in three or four voices singing in parallel octaves.[305] My interpretation would be that, instead of digressing into three-voice music, Guillelmus is referring to a kind of visualisation technique related to the English 'sighting' procedure. This system entailed the imaginary transposition of the plainchant an octave up in the 'treble sight', a twelfth up the 'quadruple sight' and a fifth down in the case of the 'countir sight'.[306] In this way contrapuntal intervals could be visualised conveniently within the range of a four- or five-line staff. Of these imaginary transpositions Guillelmus only retains the 'treble sight': a visualised third below 'in sight' will produce a sixth above the cantus firmus, whereas visualised upper thirds will produce tenths above.[307] In several of his examples, Guillelmus shows a way to visualise counterpoint when the superius is paraphrasing a chant at the higher octave ('at treble sight'). The lower voice visualises upper or lower thirds with the written chant, which could be called a 'phantom tenor', producing sixths or tenths below the superius.[308]

In addition to generating gymel, this visualisation technique is very useful for singing the kinds of three-voice fauxbourdon which will be examined later in this chapter. I have found Guillelmus's version of the 'sights' to be very easy to use in the classroom. Asking a student to sing her counterpoint or the chant 'in her own octave' suffices to let her use the 'treble sight'. Practice of parallel organum in fourths, fifths, and octaves will quickly introduce students to the idea of reading a chant on different pitches as well. In my pedagogical practice, I have found that this visualisation technique works best on cantus firmus melodies in original clefs, as these tend to fit neatly within the musical staff without using ledger lines, making it easy to visualise thirds above and below every chant note.

After considering these issues, the description and example of gymel in *De preceptis* paint quite a straightforward picture:

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[305] *De preceptis* ch. IV § 6. See Park, p. 44 (trans. p. 160). This idea is also advanced by Markus Jans, who ascribes to Guillelmus several three-voice techniques involving parallel octaves, presumably based on this passage. Jans, 'Alle gegen Eine: Satzmodelle in note-gegen-note Sätzen des 16. und 17. Jahrhunderts', p. 106, Example 7–8.
[306] Fuller, 'Organum - Discantus - Contrapunctus in the Middle Ages'; Brian Trowell, 'Sight, Sighting', *Grove Music Online* [accessed 16 August 2016].
[307] See also Fuller, 'Organum - Discantus - Contrapunctus in the Middle Ages', p. 498.
[308] See Examples 4.4 and 4.14.

1. The improvised gymel begins in unison with the cantus firmus.
2. Then it follows it in thirds below or above.
3. At the cadences the gymel returns to the unison.[309]
4. These intervals can be 'reiterated at the lower octave' as sixths, tenths, and octaves when the cantus firmus is paraphrased in the upper voice, or above the cantus firmus if it is sung in the written octave.

Guillelmus discussion of parallel singing in imperfect consonances as 'modi Anglicorum' seems to suggest that this type of music was considered an 'English speciality', and that it might have been introduced to continental Europe from England. The phrase 'contenance angloise' drawn from the poem *Le Champion des Dames* (ca. 1440) by Martin Le Franc, is traditionally used to describe this transmission.[310] English music was held in high esteem during the fifteenth century, Tinctoris for instance called it the 'fons et origo' of the music of his day.[311] It remains unclear what qualities Tinctoris and Le Franc exactly appreciated in English music, but it appears that—already in the thirteenth and fourteenth centuries—the extensive use of imperfect consonances was considered a specific trait of English music by continental musicians.

The Paris-educated theorist Anonymous IV, writing in late thirteenth-century England, reports that there are certain *organistae* from the 'Westcuntre' who count the major and minor thirds as 'the best consonances, because they are much in use with them.'[312] Anonymous IV calls the sixth 'vile and tedious

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[309] If the cantus firmus presents an upward soprano clausula, the gymel must sing a few (sighted) thirds above and make a downward tenor-clausula, as the last three notes of Example 4.1 illustrate. Another option is to arrive at the final note of the chant and add a cadence with a tenor-clausula in the gymel and a soprano clausula in the cantus firmus.

[310] The poet describes the excellence of Du Fay and Binchois, having 'taken the English countenance and followed Dunstaple' ('ont pris la contenance angloise et ensuy de Dompstable'), but is rather unspecific about what this influence would have consisted of. See David Fallows, 'Contenance Angloise', in *Guide de la musique du Moyen Âge*, ed. by Françoise Ferrand (Paris: Fayard, 1999), p. 642.

[311] In the preface to his *Proportionale Musices* Tinctoris writes: 'ut ita dicam, novae artis fons et origo, apud Anglicos quorum caput Dunstaple exstitit, fuisse perhibetur (...)' ('and the source and well-spring, so to speak, of this new art is held to have been among the English, with Dunstable standing pre-eminent at their head.') See Woodley, p. 313. Translation after Woodley.

[312] 'Tamen apud organistas optimos et prout in quibusdam terris sicut in Anglia in patria, quae dicitur Westcuntre, optimae concordantiae dicuntur, quoniam apud tales magis, sunt in usu.' See cap. V in Anonymous IV, 'Musica', *Thesaurus Musicarum Latinarum*

dissonance', and he complains of singers who sing many such intervals in succession: 'There are some who multiply dissonances before a perfect concordance, for instance an octave, and rejoice and laugh about this, and it appears a great and wonderful thing to them. This can be done as follows: d'f'c'd'c'b'c' in the upper voice and ddefedc in the lower.'[313] Johannes Boen, a Dutch theorist who had studied in Oxford, also mentions the particular love of the English for imperfect consonances in his *De musica* (ca. 1355): 'Laymen there, and clerics, and old men, youths and just about everybody loved thirds and sixths so fondly that I've seen them invoke these alone as though in reverent prayer, in preference to octaves and fifths.'[314] Boen seems to have been very surprised to hear music of such a different nature in a nearby country.

As has been argued by Sylvia Kenney, English fourteenth- and fifteenth-century theorists do not give more licence for singing imperfect intervals in parallel than their continental counterparts.[315] It would appear therefore that, like many of the techniques discussed in Chapter 3, this type of proto-gymel is at odds with the official discant teaching. The surviving English repertory does provide a few examples of this kind of polyphony, such as the two-voice *Virgo salvavit hominem*, dating from the end of the fourteenth century (see Example 4.2).[316]

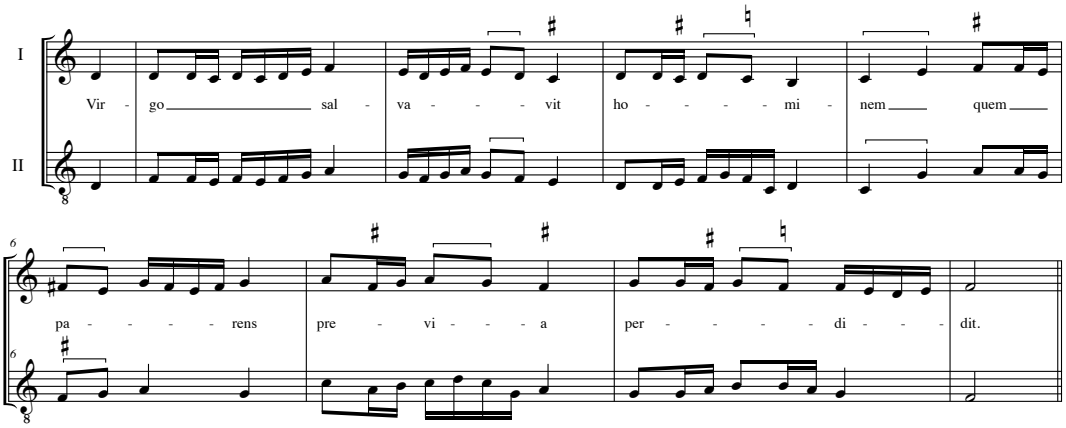
<http://boethius.music.indiana.edu/tml/13th/ANO4MUS> [accessed 16 August 2016]. Translation by the author.

[313] 'Iterato sunt quidam, qui multiplicant multiplices discordantias ante unam perfectam concordantiam sicut ante diapason, et nimis inde gaudent et rident, et videtur esse mirabile magnum inter ipsos, quod hoc potest fieri sicut dfcdcbc in superiori, in inferiori sic: DDEFEDC.' Ibid. Translation by the author.

[314] '... audito, quod layci ibidem et clerici, senes, iuvenes et indifferenter omnis tertiis et sextis tantam atribuebant affectionem quodque, duplis et quintis postpositis.' See Johannes Boen, 'Musica', *Thesaurus Musicarum Latinarum* <http://boethius.music.indiana.edu/tml/14th/BOENMUSI_MVBM8-24> [accessed 16 August 2016]. Translation after Rob C. Wegman, 'The State of the Art', in *Renaissance? Perceptions of Continuity and Discontinuity in Europe 1300-c1550*, ed. by Alexander Lee, Pit Pérporté, and Harry Schnitker (Leiden: Brill, 2010), pp. 129–160 (p. 155).

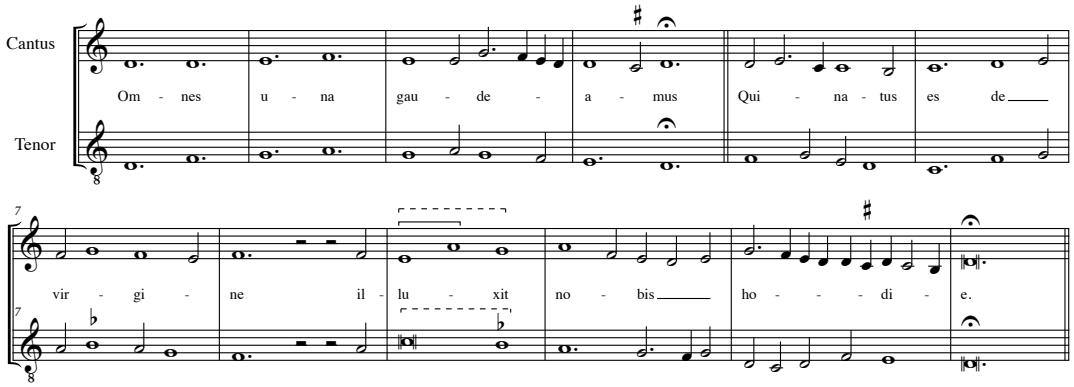
[315] Kenney, '"English Discant" and Discant in England'.

[316] Manuscript breves are transcribed as crotchets, and semibreves as quavers or semiquavers. See also no. 30 in Sanders, Harrison and Lefferts, *English Music for Mass and Offices (II) and Music for Other Ceremonies*, pp. 61–63.



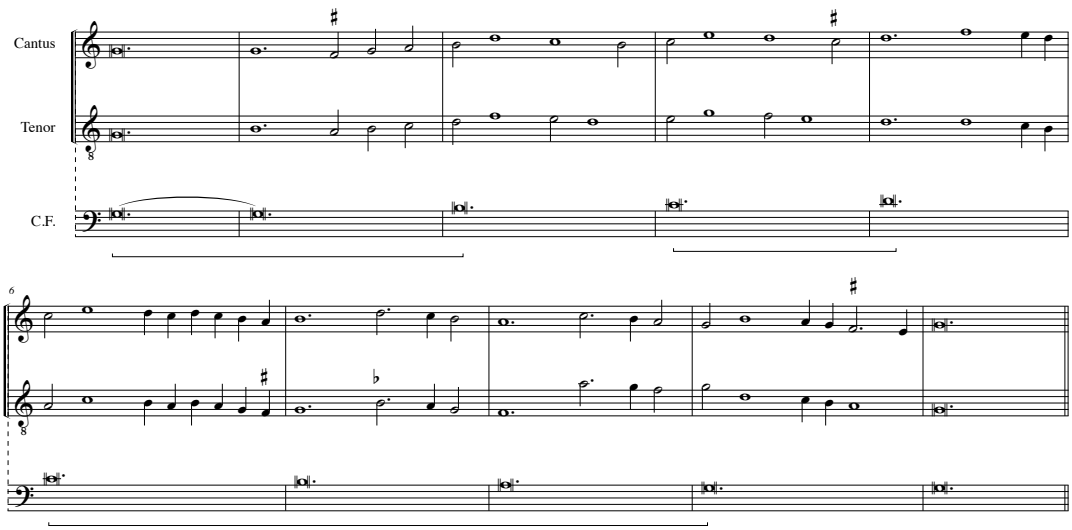
Example 4.2 *Virgo salvavit hominem*, excerpt (London, British Library, Ms. Sloane 1210, fol. 139v-140r).

An example of the use of the same technique in the fifteenth century is the carol *Omnes una gaudeamus* (see Example 4.3). The texture is enlivened by the use of suspensions and other ornaments, but—except for the final phrase—the counterpoint is of exactly the type we have seen in Example 4.1. Similar suspensions could be created in Guillelmus's example; the 'improvised' gymel could for instance delay the penultima of the soprano clausula in b. 1 and advance the penultima of the tenor clausula in b. 2 (compare b. 5 and 7 of Example 4.3).



Example 4.3 *Omnes una gaudeamus* (London, British Library, Ms. Egerton 3307, fol. 68v).

Guillelmus continues his discussion of the 'contrapunctus Anglicorum' in chapter VI. Some of the 'exempla notata' at the end of this chapter can shed further light on the practice of gymel. The first of these examples is a straightforward gymel at the lower sixth, in which the superius is derived from the cantus firmus.[317] The two following examples also show two-voice gymels, but now alternating between sixths, tenths, and thirds (see Example 4.4).[318]



Example 4.4 'Mixed gymel' (*De preceptis*, fol. 30r-30v).

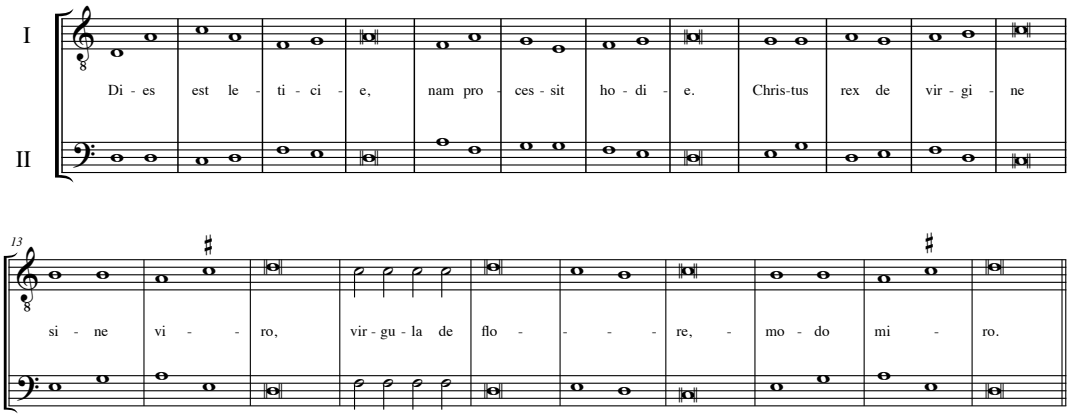
[317] Park, p. 66, Ex. 56-1 (transcr. p. 182). See my remarks above on this 'phantom tenor'.
[318] Ibid., p. 67, Ex. 56-2 (transcr. p. 184).

This horizontal combination of different gymels – analogous to the vertical combination of them in fauxbourdon – I have dubbed 'mixed gymel', and this is actually the technique we encounter most often in Guillelmus's examples, as well as in fifteenth-century compositions. Presumably there would have been little point for the simple gymel illustrated by Guillelmus in chapter IV to be written down, since every choirboy could produce it *ex tempore*. The pedagogical benefit of mixed gymel is that it offers students a somewhat restricted choice, preparing them for more advanced types of two-voice counterpoint.

4.1.2 Simple Counterpoint

The next step is to learn to improvise a counterpoint in contrary as well as parallel and oblique motion. This is not much harder than singing a gymel if the right kind of instruction is provided. As we have seen already in Chapter 3, Guillelmus is the last theorist to cite the principle of counterpoint by adjacent consonances in chapter VI of *De preceptis*. This technique can provide a good introduction to singing contrary motion in fifteenth-century counterpoint. After doing exercises alternating consonances above a sustained tenor note (oblique motion), adjacent consonances (contrary motion), and gymel (parallel motion), students will be able to quickly extemporise a simple counterpoint on plainchant. As examples, 'archaic' note-against-note settings may be used, which can be found in sources up to the end of the fifteenth century (see Example 4.5).[319]

[319] Puncta transcribed as semibreves, and double puncta as breves. See no. 19 in *Brussels, Koninklijke Bibliotheek, MS II 270. Collection of Middle Dutch and Latin Sacred Songs (ca. 1500)*, ed. by Bruno Bouckaert and others, Monumenta Flandriae Musica 7 (Leuven, Neerpelt: Alamire Foundation, 2005), p. 114.



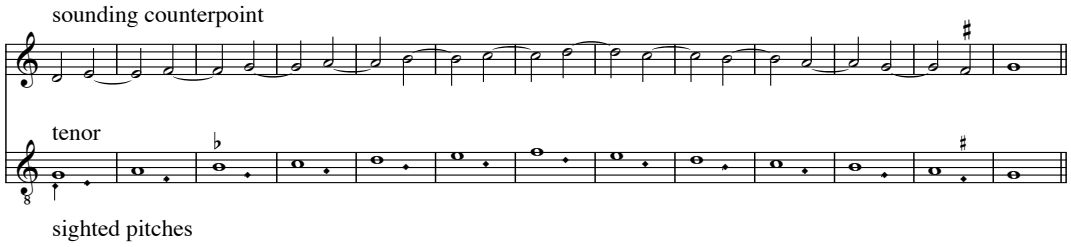
Example 4.5 *Dies est leticie*, excerpt (Brussels, Koninklijke Bibliotheek, Ms. II 270, fol. 137v).

After some initial practice it may be convenient to provide students with a number of 'rules of counterpoint'.[320] It is important—in my opinion—that, as when learning the grammar of a language, such rules be connected to music with which one is already familiar. Most elements of contrapunctus theory can simply be provided as 'rules of thumb' in doing exercises.

4.1.3 Syncopation and Species-Counterpoint

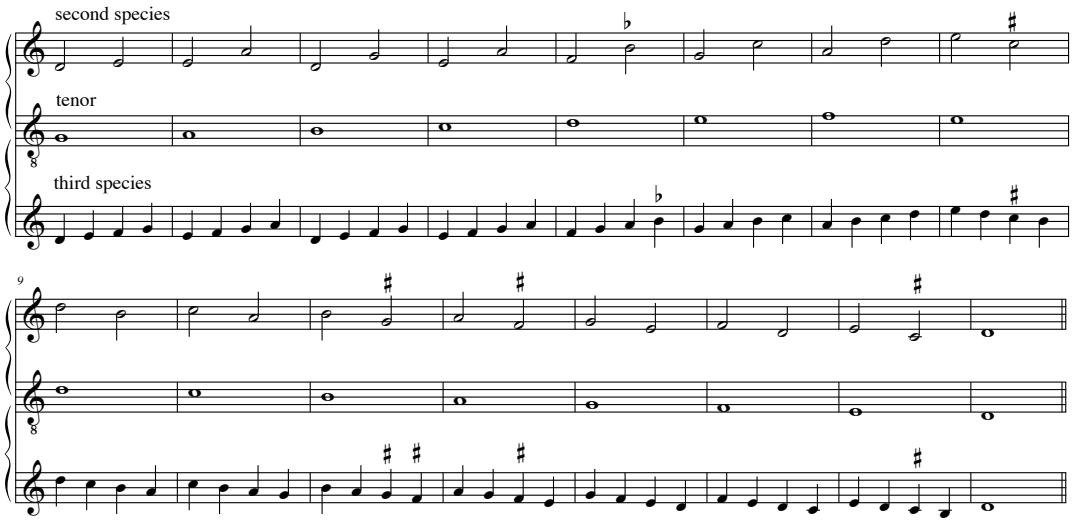
In chapter VIII ('Regula circa cognitionem syncoparum') Guillelmus provides two more important pieces of information for the pedagogy of singing on the book.[321] The first is, as the title of the chapter suggests, the rule of syncopation: when the cantus firmus ascends stepwise we can make syncopations with a sixth changing into a fifth on the next note of the tenor, and when it descends, with a sixth changing into a seventh. He explains, as is also shown in the example, that the fifths and sixths—in ascent—can be visualised as fourths and thirds below, the sixths and sevenths—in descent—as seconds and thirds below (see Example 4.6).[322]

[320] For Guillelmus's rules of counterpoint see Park, pp. 54-57 (trans. pp. 170-173). On the use of such *regulae* or *praecepta* see Sections 2.2.2 and 6.1.2.
[321] Park, pp. 95-96 (trans. p. 218).
[322] Ibid., p. 95, Ex. 66-1 (transcr. p. 218).



Example 4.6 Syncopations (*De preceptis*, fol. 42v).

The other example given in this chapter is not accompanied by a description, but has a similar stepwise tenor, and two counterpoints (see Example 4.7).[323] The first one, given together with the tenor in score, is composed entirely in semiminims, four notes against one ('third species'); the second, presented as a separate part, uses only minims ('second species').



Example 4.7 Two and four notes against one (*De preceptis*, fol. 42v).

The 'third species' part fills the melodic fourths and thirds of the 'second species' mechanically with four semiminims. Octaves are used on every downbeat when the tenor descends, even if this produces 'bad counterpoint' from beat to beat.[324]

[323] Ibid., p. 96, Ex. 66-1 (transcr. p. 218).
[324] This is generally prohibited in counterpoint manuals in the tradition of Fux's *Gradus ad Parnassum*. Fux forbids such successions because 'the intervening note on the upbeat is regarded as hardly existing, since owing to its short duration and the small distance between the tones it

In this respect the example is consistent with the preceding one on syncopation, and also with Antonius de Leno *Regulae de contrapunto*, copied in the same manuscript as *De preceptis* but written at least fifty years earlier.[325] It remains unclear to me whether de Leno's treatise influenced *De preceptis*, and why they were eventually bound into the same manuscript. The two treatises seem to belong to different traditions of counterpoint pedagogy, de Leno's to the Italian, hexachord-based system of the 'gradi', and Guillelmus's to the English tradition of visualisation (the 'sights') and singing in parallel imperfect consonances.[326]

The fact that one of the core pedagogical concepts of species counterpoint is prefigured by de Leno as well as Guillelmus seems largely to have been ignored in counterpoint scholarship. [327] To my knowledge, de Leno's is the first treatise to teach counterpoint in an increasing amount of notes against every note of the cantus firmus, a standard feature of sixteenth-century counterpoint pedagogy[328] which would eventually be termed the first-, second-, and third-species counterpoint by Johann Joseph Fux in his *Gradus ad Parnassum* (1725). Let us therefore take a closer look at the teaching of de Leno's *Regulae*.

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cannot compensate to such an extent that the ear will not notice the two succeeding fifths or octaves'. See Alfred Mann and John Edmunds, *The Study of Counterpoint from Johann Joseph Fux's Gradus Ad Parnassum* (New York, London: Norton, 1965), pp. 42–43.

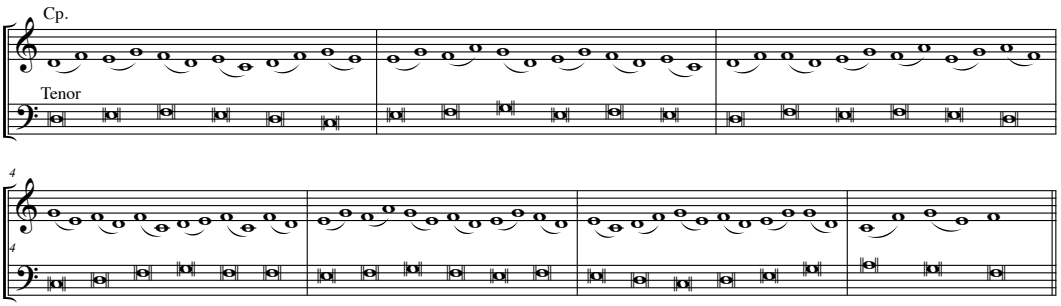
[325] See F. Alberto Gallo and Andreas Bücker, 'Antonius de Leno', *Grove Music Online* [accessed 16 August 2016]. Don Harrán has argued that de Leno's and Monachus's treatises were bound into a single codex in the late 1400s or early 1500s, whereas the text of the *Regulae de contrapunto* was probably conceived in the first decades of the fifteenth century. See Don Harrán, 'Intorno a un codice Veneziano Quattrocentesco', *Studi Musicali*, 8 (1979), pp. 41–60 (pp. 43–44). Carla Vivarelli has argued, based on internal references in the treatise's text, that the *Regulae* originally formed part of a *summa musicae* encompassing plainchant, counterpoint and instrumental music. See Carla Vivarelli, 'Antonius de Leno: Teorico della tradizione o teorico d'avanguardia?', in *Musica e liturgie nel Medioevo Bresciano (secoli XI-XV). Atti dell'incontro nazionale di studio (Brescia, 3-4 aprile 2008)*, ed. by Maria Teresa Rosa Barezzani and Rodobaldo Tibaldi (Brescia: Fondazione Civiltá Brescia), pp. 519–540 (p. 520).

[326] See Fuller, 'Organum - Discantus - Contrapunctus in the Middle Ages', p. 496.

[327] The *Grove Online* states that 'the division of counterpoint into species goes back at least to Lanfranco's *Scintille di musica* of 1532'. Peter Schubert cites Vicente Lusitano's *Introdutione facilissima* (1553) as the first treatise to employ this type of teaching. See Schubert, 'Counterpoint Pedagogy in the Renaissance', p. 509, n. 21. Philippe Canguilhem hypothesises that the absence of species in Italian sixteenth-century texts may point to it being a Spanish invention. See Canguilhem, *Chanter sur le livre à la Renaissance. Les traités de contrepoint de Vicente Lusitano*, p. 9.

[328] On the 'proto-species' counterpoint of the sixteenth century see Schubert, 'Counterpoint Pedagogy in the Renaissance', pp. 509–510. The anonymous fourteenth-century treatise *De diminutione contrapuncti* also shows examples of what looks like second- and third-species counterpoint. These examples are however conceived of as 'diminutions', which also include other—irregular—rhythmic patterns. See Sarah Fuller, 'Contrapunctus, Dissonance Regulation, and French Polyphony of the Fourteenth Century', in *Medieval Music in Practice: Studies in Honor of Richard Crocker*, ed. by Judith A. Peraino (Middleton: American Institute of Musicology, 2013), pp. 113–152 (pp. 128–129).

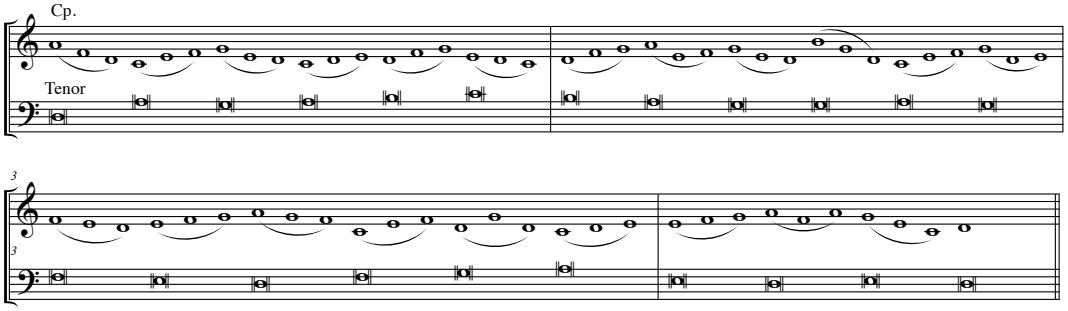
De Leno first presents twenty-two examples of note-against-note counterpoint ('contraponto di nota per nota'). The counterpoint of the first twelve examples makes use only of the hard hexachord (fol. 43v-55r), after which also the natural hexachord is introduced (fol. 56).[329] In the following chapter on 'contraponto de due notte per una', de Leno clearly encourages the use of octaves and fifths on successive downbeats of the tenor. In Example 4.8 the counterpoint follows the cantus firmus in octaves above, breaking them up on the upbeat. [330] This typically happens with octave-tenth in ascent and octave-sixth in descent.



Example 4.8 Two notes against one. (*Regulae*, fol. 58r).

De Leno's next chapter is devoted to three notes against one ('contraponto di iii note per una'). Here de Leno introduces the possibility to sing dissonances: 'If you wish to sing three notes, always make the first and last of them consonant, or all three if possible. In case you can not make the middle note consonant, it does not matter, as long as the others will be'.[331] In de Leno's examples dissonant middle notes tend to move stepwise to a consonance on the third beat. They are not always reached by step (see Example 4.9).[332]

[329] See Albert Seay, *Antonio de Leno Regulae de Contrapunto* (Colorady Springs: Colorady College Music Press, 1977), pp. 6–8 and 11–13. For this reason Examples 4.8 and 4.9 have been reproduced without editorial accidentals. (In the early fifteenth century the singing of *ficta* sharps would probably have entailed singing the syllables of a fictive hexachord).
[330] Ibid., p. 16.
[331] 'Volendole far de iii, fa sempre che de esse iii la prima e la ultime nota di contraponto siano bone, e anchi tute iii se poy. Caso che non potesse far bona quella de mezo, non monta niente, pur che le altre siano bone.' Ibid., p. 19.
[332] Ibid., p. 19.



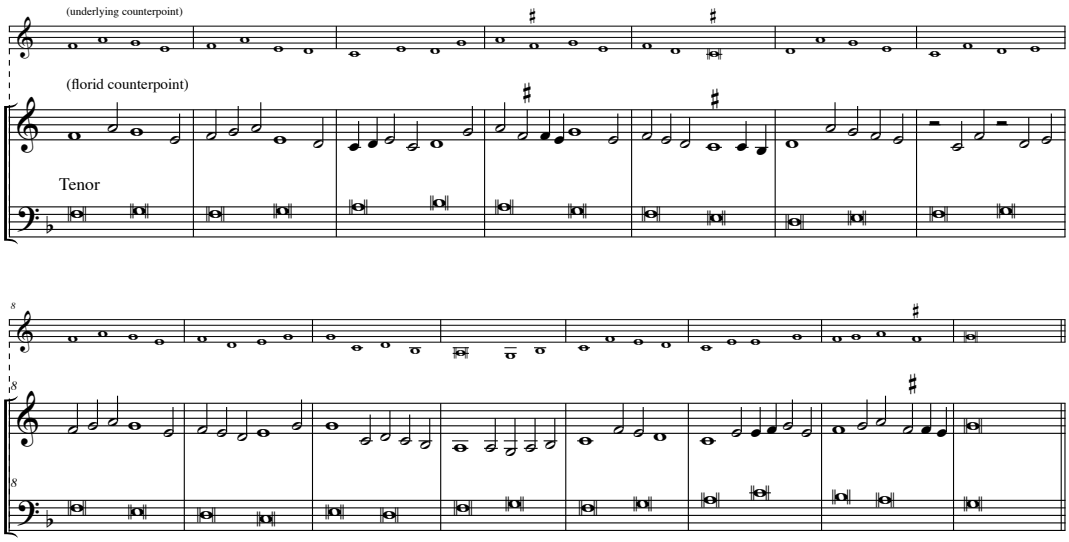
Example 4.9 Three notes against one. (*Regulae*, fol. 59r).

It is clear that species counterpoint did play an important role in the training of young singers. However, the earliest examples of it show a very different approach from the Fuxian species counterpoint with which we tend to be familiar today. They do not seem concerned with establishing normative rules for voice-leading and dissonance treatment but rather with training students to 'rattle off' consonances above every conceivable progression of the tenor. This would give them a secure knowledge of the different options available to them in singing above a plainchant.

I have drawn the following conclusions from Guillelmus's and de Leno's examples for my own pedagogical practice: octaves or fifths on a few successive downbeats are an integral part of the system and may be encouraged; when singing two or three against one, every tenor note can receive an octave or fifth so long as another consonance follows on the second or third beat. It follows that independent motion between the voices is not obligatory. Finally, the counterpoint does not necessarily have to present a well-balanced or varied melody, resembling written composition.[333] This is because these counterpoints would be 'finished' at a later stage by embellishing them with standardised melodic formulae, as is illustrated in the later chapters of de Leno's *Regulae*.[334]

[333] This point was made for sixteenth-century counterpoint by Peter Schubert against Carl Dahlhaus' claim that the species approach is 'hardly reconcilable with the historical reality of Palestrina's style'. He notes that Cerone's note-against-note counterpoint 'often contains voice-leading errors that will be corrected when the line is diminished', See Schubert, 'Counterpoint Pedagogy in the Renaissance', p. 510.
[334] See the examples of 'fiortise' in Seay, *Antonio de Leno Regulae de Contrapunto*, pp. 27–39.

The ‘fiortise’, as de Leno calls these ornamental formulae, are used to provide the necessary surface polish to the underlying framework (see Example 4.10).[335]



Example 4.10 Florid counterpoint. (*Regulae*, fol. 65r).

4.1.4 Towards Free Two-Voice Counterpoint

I propose the following itinerary for teaching and learning to extemporise fifteenth-century two-voice counterpoint:

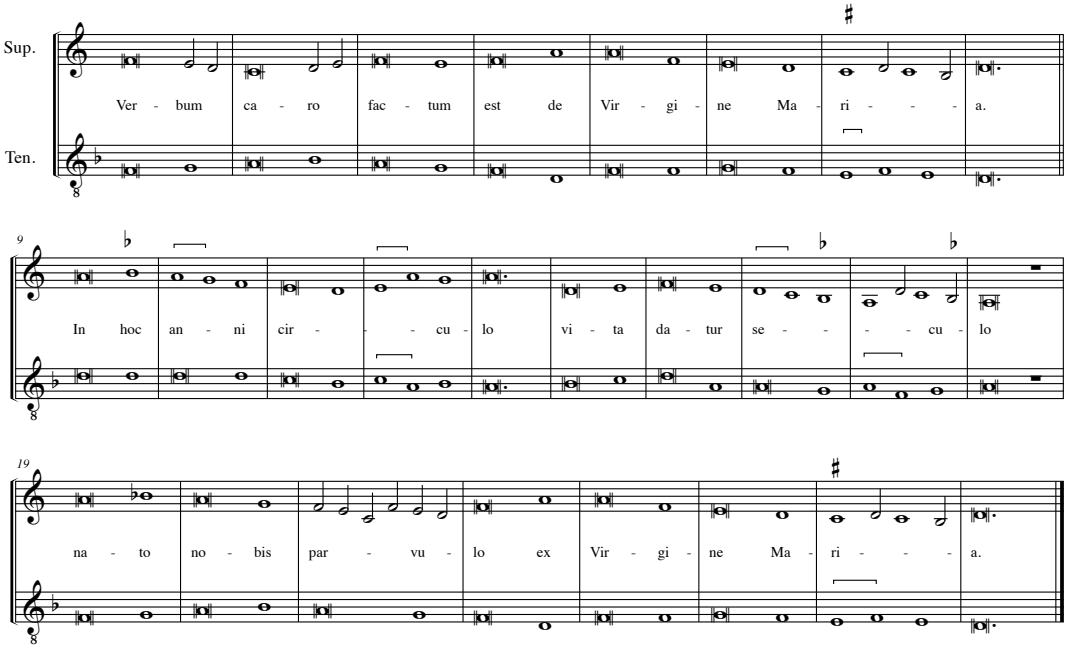
1. The student learns to sing a simple gymel in thirds, above and below the cantus firmus.
2. With the help of the treble sight, the sixth and tenth above and below are introduced.
3. ‘Mixed gymel’: the student learns to alternate between these different types.
4. After some introductory exercises in contrary and oblique motion, the student learns to extemporise a short piece in discantus style, in which

[335] In her analysis of Petrus dictus Palma Ociosa’s examples, Sarah Fuller also notes that diminutions can be used to ‘cover up’ underlying parallel perfect consonances. See Fuller, ‘Organum - Discantus - Contrapunctus in the Middle Ages’, pp. 494–495. An early voice against this practice of disguising underlying perfect parallels is the Berkeley Treatise. See Ellsworth, pp. 130–131.

the use of parallel imperfect consonances is restricted to one or two at a time (see also Section 3.1.3).

5. When the gymel and discantus techniques are combined, a florid upper voice can be extemporised on top of a metric tenor (including syncopation, ornamentation, etc.).

For this final stage, two-voice fifteenth-century pieces in homophonic style, such as English carols, Italian laude, or French chansons, can be used as models. In the piece quoted in Example 4.11, a setting of the New Year song *Verbum caro factum est*, the voices move from an octave to a third, using the principle of the adjacent consonances in the first bar. This is then followed by two bars of gymel in thirds and sixths, leading to a cadence on *F*. After some oblique motion in bb. 4-6, we have two bars in sixth gymel leading to a cadence on *D*. The tenor remains stationary in bb. 9-10, causing the upper voice to use oblique motion, followed by a gymel in thirds in bb. 11-12. When the initial cantus firmus melody comes back in b. 19, the composer has opted for a passage in tenths and sixths with an additional ornament on the word 'parvulo'. It is not difficult to imagine how such a setting could have been obtained by extemporising an upper voice upon a tenor. In fact, it is a good exercise to first extemporise counterpoint on a tenor before singing it with its original upper voice, in order to compare the two.



Example 4.11 *Verbum caro factum est* (Oxford, Bodleian Library, Ms. Canon. Misc. 213, fol. 16v).

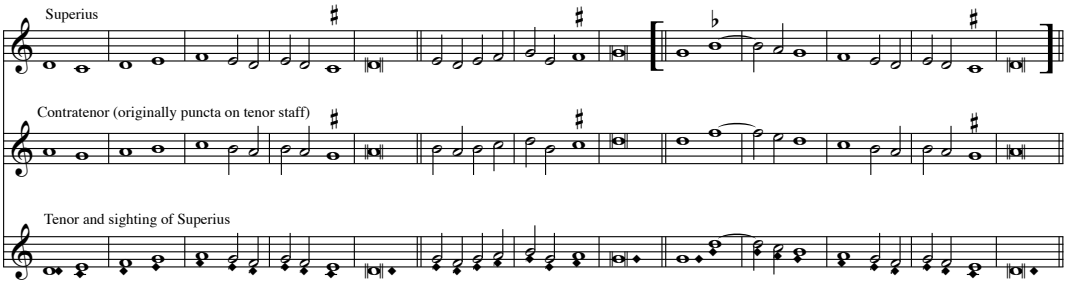
4.2 Three- and Four- Voice Counterpoint

Similarly to two-voice counterpoint, where different gymels can be combined successively to create a more diverse setting, two simultaneous gymels can be used to create simple kinds of three-voice polyphony. *De preceptis* contains descriptions of different ways to sing fauxbourdon, a first with the chant in the tenor and a second with the chant paraphrased in the superius. The other option, placing the chant in the middle voice, described as 'faburden' in English treatises, is not mentioned by Guillelmus. Such faburden extemporisation leads to exactly the same result as the procedure described here as the second variety of fauxbourdon: in both these versions, superius as well as contratenor paraphrase the chant, a fourth apart.[336] Besides a parallel contratenor, a gymel can also be supplemented with a third part moving in a fixed interval-pattern below the tenor, called 'contratenor bassus' ('low contratenor'), precursor to the sixteenth-century bassus voice. In its sixth chapter, *De preceptis* also illustrates a four-voice version of fauxbourdon which is commonly known as 'falso bordone'.

4.2.1 Fauxbourdon I

We encounter Guillelmus's first description of fauxbourdon in chapter IV of *De preceptis*. This fauxbourdon is sung in three voices: superius, tenor, and contratenor.[337] The superius is derived from the cantus firmus, exactly like gymel at the upper sixth. It reads lower thirds in 'treble sight', with a sighted unison—sounding an octave—as the initial and final notes. The contratenor starts and ends with a fifth above the cantus firmus, singing thirds in between. Essentially, we are dealing with a combination of sixth-gymel in the superius and third-gymel in the contratenor. This procedure is illustrated by an example that shows the contratenor and the visualised pitches of the superius in dots, along with the sounding pitches of the superius on a separate staff (see Example 4.12).[338]

[336] On this topic see Schmidt, pp. 230–250.
[337] Park, pp. 43-44 (trans. p. 159). The original—slightly unusual—name for the upper part in *De preceptis* is 'suprano'.
[338] See also Park, p. 43, Ex. 45 (transcr. p. 159).



Example 4.12 Fauxbourdon I (*De preceptis*, fol. 18v).

The treatise provides only one example of this type of counterpoint (given above), and I do not know of any fourteenth- or fifteenth-century composition in which this model is used.[339] Perhaps this technique, like simple gymel, was practised *ex tempore* but not considered refined enough for use in composition.

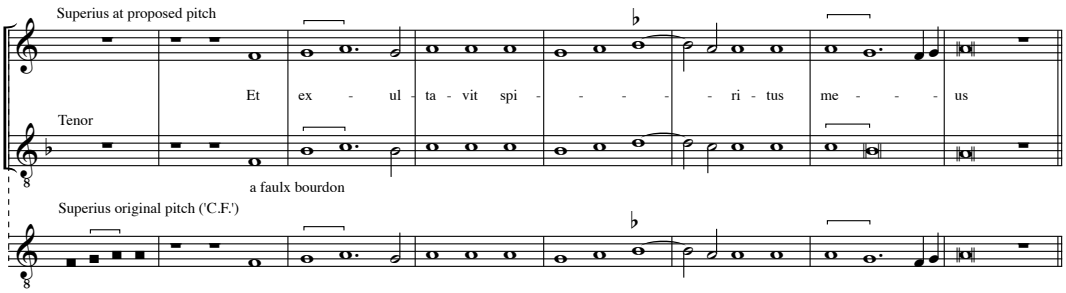
The value of this technique for teaching improvised counterpoint today lies in the fact that it can provide a smooth passage from simple two-voice singing into three-voice singing, and later to four-voice fauxbourdon with the tenor singing the cantus firmus. At any rate, the lack of composed examples makes it hard to go beyond the strict note-against-note style illustrated by the example. This is the reason I tend in my teaching to focus more on the second kind of fauxbourdon described by Guillelmus.

4.2.2 Fauxbourdon II

The second type of fauxbourdon, described by Guillelmus in chapter VI, is similar to what we see in compositions by, for instance, Du Fay and Binchois (see Example 4.14). The cantus firmus is read an octave up in the superius. The tenor follows the cantus firmus in thirds above, with unisons at the beginning and at the cadences (sixths and octaves with the superius). The contratenor 'does as the superius' ('vere dicitur sicut supranus'), singing the cantus firmus a fifth up, which results in thirds and fifths above the tenor (fourths below the superius).[340]

[339] Similarities, however, exist with the example of fauxbourdon given by Tinctoris, which uses the sequence *Lauda sion* as its tenor. See Seay, *Johannes Tinctoris The Art of Counterpoint (Liber de Arte Contrapuncti)*, p. 29.
[340] *De preceptis* ch. VI § 40. See Park, p. 63 (trans. p. 179).

As we can see, this improvisation technique relies wholly upon visualising intervals on a 'ghost tenor', a chant which is not sung at its actual pitch. This practice may explain a remarkable phenomenon we find in one of the fauxbourdon Magnificats in the manuscript Trent, Museo Provinciale d'Arte, Ms. 1374 (olim 87), where the scribe appears to have notated the superius *below* the tenor, on the pitch where a plainchant would typically be written (see Example 4.13).[341]

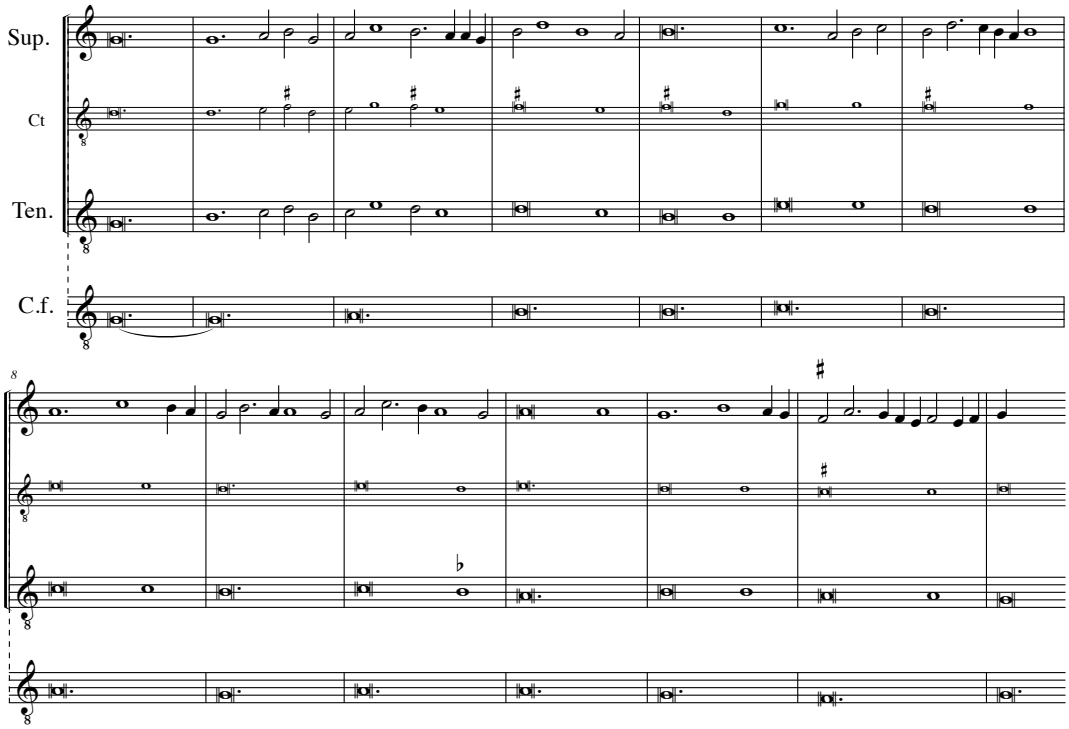


Example 4.13 *Magnificat primi toni*, excerpt (Trento, Museo Provinciale d'Arte, Ms. 1374 [olim 87], fol. 110v).

Leaving aside the basically identical contrapuntal procedure, there are a number of differences between compositions using fauxbourdon and Guillelmus's illustration of this technique (see Example 4.14).[342] The cantus firmus in Guillelmus's example moves in breves and longas, whereas composed settings seem to prefer a faster succession of chant pitches. As a consequence Guillelmus's cantus firmus is broken up into fast figurations by the superius, using standardised melodic formulae reminiscent of the 'fiortise' discussed earlier. Most fauxbourdon compositions use a relatively homorhythmic texture, where the upper voice is only slightly more ornate than the tenor. The improvised contratenor can use the same rhythm as the tenor: this kind of rhythmic treatment of the lower voices can be seen in Example 4.24, and has also been used in Example 4.14, below. The contratenorist may also attempt to follow

[341] A similarly notated fauxbourdon was identified by Craig Wright in the second strophe of the sequence *Cultor Dei memento* in Cambrai, Bibliothèque municipale, Ms. 29, fol. 159. Wright, 'Performance Practices at the Cathedral of Cambrai: 1475-1550', pp. 315–318.
[342] See Park, p. 63, Ex. 54 (transcr. pp. 178-79).

the figurations of the upper voice, as happens in fauxbourdon compositions; however, doing this by ear requires a lot of collective practice in my experience.



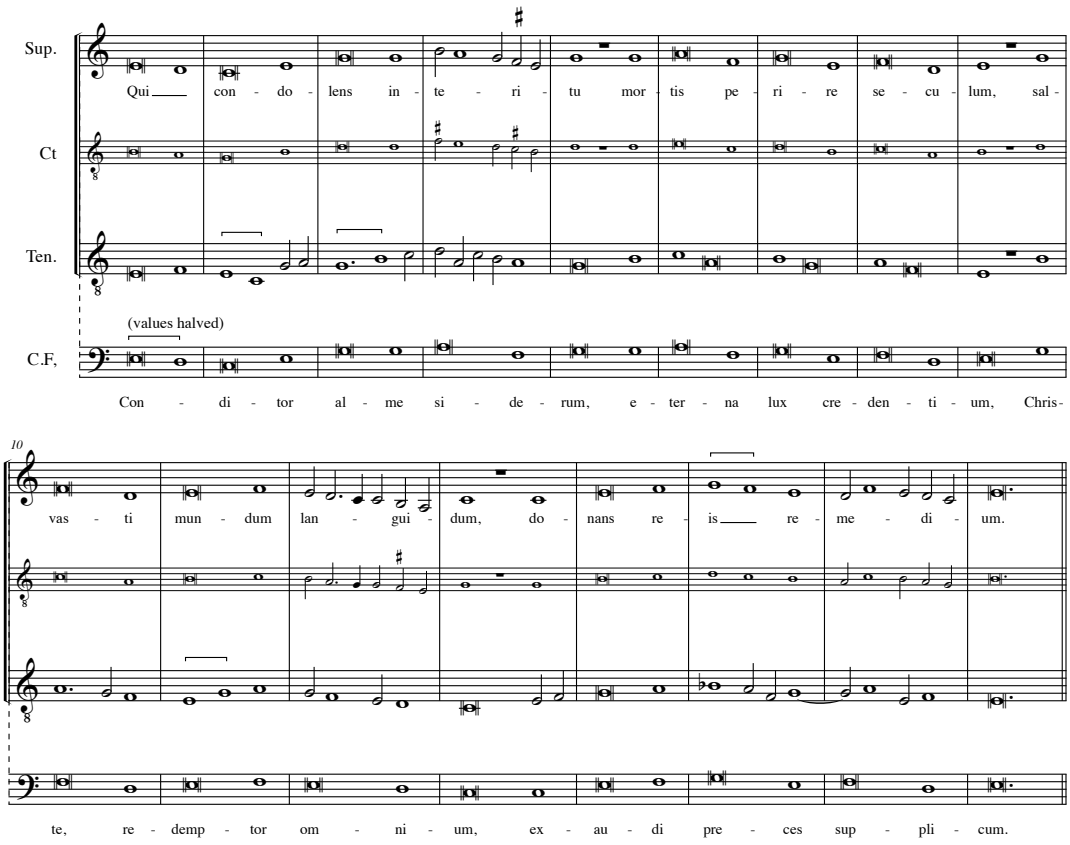
Example 4.14 Fauxbourdon II, excerpt (*De preceptis*, fol. 28r-28v).

Improvising a fauxbourdon using Guillelmus's procedure requires a superius-singer with extensive experience of florid counterpoint. Guillelmus's own ornamental formulae could be learned from the treatise and applied to this kind of improvisation. However, since this takes a long time to learn, I will propose an alternative, combining Guillelmus's method of visualisation with the more homorhythmic texture of fauxbourdon hymns by Du Fay.

4.2.3 Improvising a Fauxbourdon Hymn

Looking at Du Fay's *Conditor alme siderum*, we observe that the top part consists almost entirely of alternating breves and semibreves, coinciding with the iambic meter of the text. Directly above Du Fay's setting, in its source, the chant is

notated with the same rhythmical pattern in black longas and breves (see Example 4.15).[343]



Example 4.15 Guillaume Du Fay, *Conditor alme siderum* (Modena, Biblioteca Estense, Ms. Alfa X.1.11, fol. 4r; plainchant values halved).

In the same source we find this pattern again in the plainchant of *Vexilla regis* on fol. 9v, as well as in Du Fay's setting of *Ad cenam agni* on fol. 11r. In *Ad cenam agni* Du Fay has used the same rhythmic principle, but this time significantly more decoration has been added to the top-part (see Example 4.16).[344]

[343] See no. 11 in Heinrich Besseler, *Guillaume Dufay Opera Omnia Tomus V: Compositiones Liturgicae Minores*, Corpus Mensurabilis Musicae I (Rome: American Institute of Musicology, 1966).
[344] Ibid., no. 17.

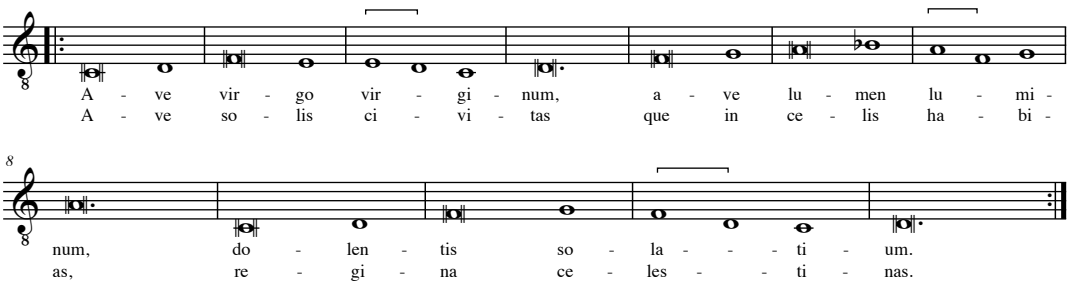
Sup.
Cu - ius cor - pus sanc - ti - si - mum in a - ra crus - cis
Ct
Ten.
(Underlying rhythmical chant)
C.F,
Ad ce - nam ag - ni pro - vi - di, et stol - lis al - bis
8
tor - - - ri - - - - - - - dum; cru - o - re ei - us ro - se -
can - di - di, post tran - si - tum ma - ris Ru -
15
o gus - tan - - - do vi - - - vi - mus De - o.
bri Chris - to ca - na - - - mus prin - - - ci - pi.

Example 4.16 Guillaume Du Fay, *Ad cenam agni* (Modena, Biblioteca Estense, Ms. Alfa X.1.11, fol. 11r).

The longa-brevis (or brevis-semibrevis) pattern can technically be applied to any chant in seven- or eight-syllable Latin poetry, such as hymns, sequences, and devotional songs, be they trochaic or iambic.[345] In the case of an iambic metre,

[345] Tinctoris explains a slightly similar procedure for rhythmicising plainchants in Liber II, cap. XX of his *Liber de arte contrapuncti*. He applies a short rhythmic cell to the melody of an Alleluia, on top of which a florid counterpoint is sung. See Seay, *Johannes Tinctoris The Art of Counterpoint (Liber de Arte Contrapuncti)*, pp. 108–109. On the interaction between the performance practice of chant and composed polyphony see Richard Sherr, 'The Performance of Chant in the

such as *Ad cenam agni*, one has the choice of either singing the first syllable as a perfect breve, or to treat it like an upbeat, as in Du Fay's fauxbourdon. In the case of a trochaic chant, such as the following trope of the sequence *Veni sancte spiritus*, the procedure is entirely straightforward, as one can start directly on the beat (see Example 4.17).



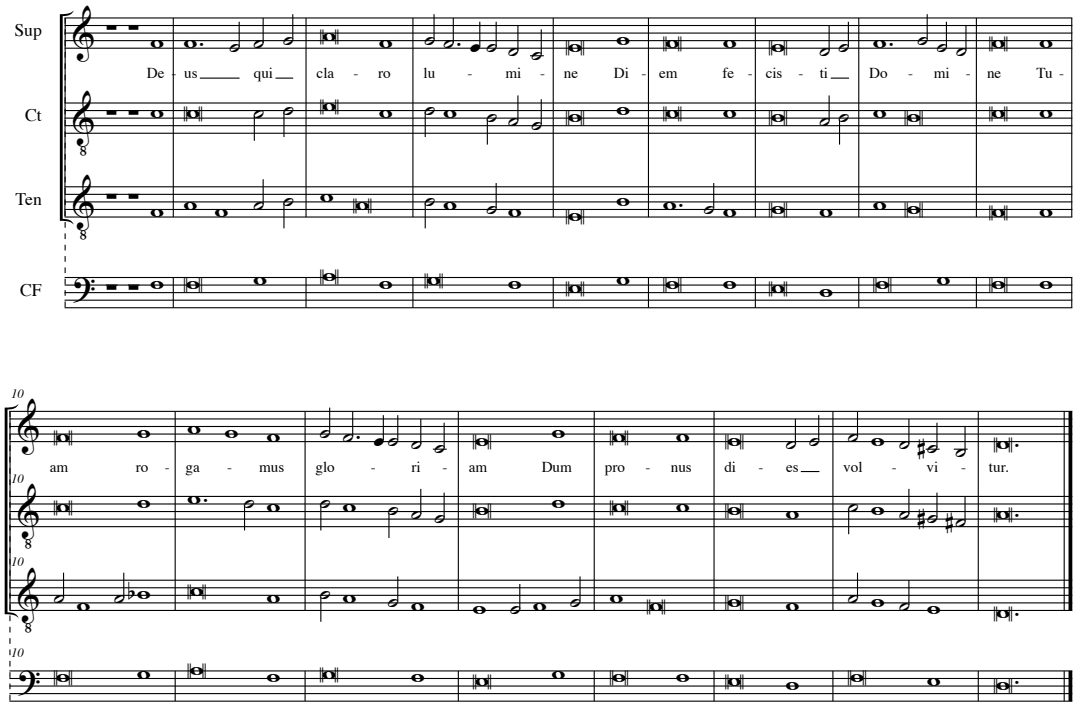
Example 4.17 *Ave virgo virginum*, excerpt (Provins, Bibliothèque Municipale, Ms. 011, fol. 205v-206r).

The numerous traces of this procedure found in sources both of chant and polyphony seem to indicate that it was quite a common way to perform metric chants and devotional songs.[346] More relevantly, the procedure may help us to reconsider the relation of the Du Fay hymns to improvisation: if such chants possessed a rhythm known to singers—even if it was not notated—no prior communication would have been necessary to attain an improvisation in the flowing triple meter that is so typical of Du Fay's rendition of them. I have found in practice that singing fauxbourdon with this kind of lightly undulating rhythm leads to a more refined result, closer to the written settings, than singing in 'square' equal notes. Such a rhythm also helps tremendously for singing together, because the tactus is immediately clear to all the singers. For the superius, it facilitates the use of ornaments, which can be easily adapted from Du Fay's hymns. Example 4.18 I have transcribed an exercise which my students, after studying the technique and repertoire examples, have been able to put together.

Renaissance and Its Interactions with Polyphony', in *Plainsong in the Age of Polyphony*, ed. by Thomas Kelly (Cambridge: Cambridge University Press, 1992), pp. 178–208.

[346] Many chants and pieces of simple polyphony can be found in Gozzi. We have already encountered it in Examples 3.8, 3.21 and 4.11 as well.

Another effective way to put this idea into practice during the counterpoint lesson is to let the students 'improvise towards' a composition: let students first sing a simple fauxbourdon on a hymn using this rhythm, then gradually introduce syncopations and other ornaments, in such a way that the result will become close, or equivalent, to a written setting based on the same chant.

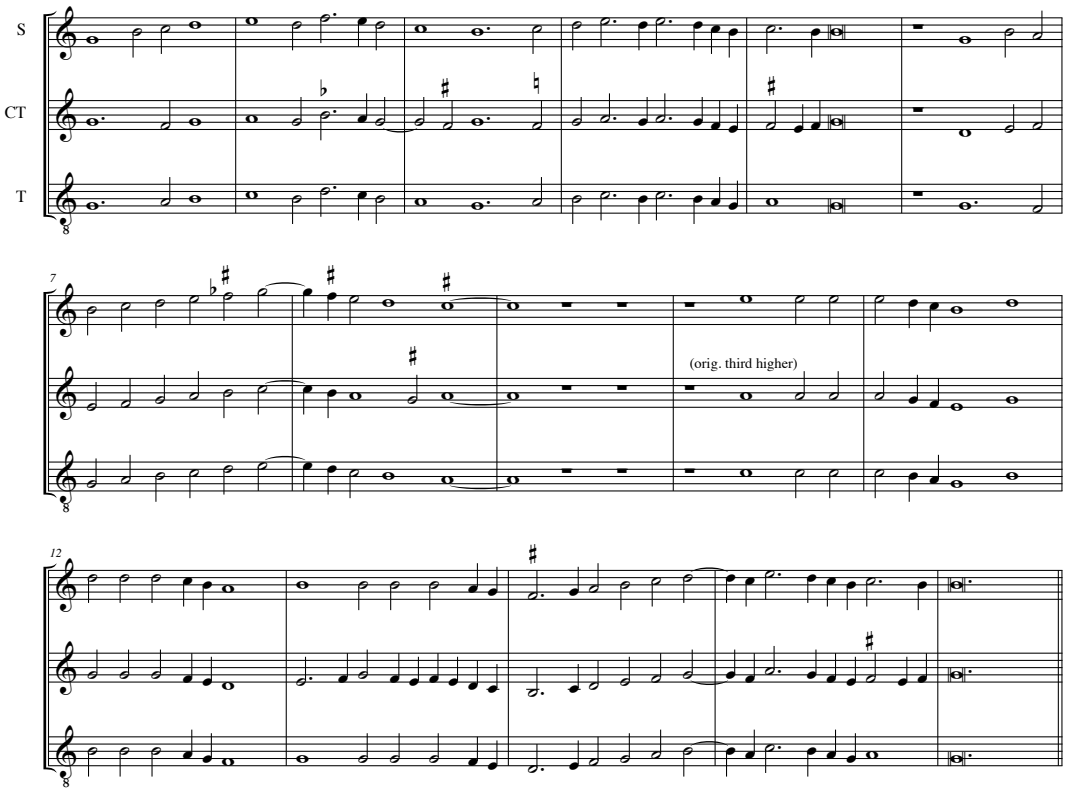


Example 4.18 Improvised fauxbourdon on *Deus qui claro lumine* (*Liber Hymnarius* p. 233)

4.2.4 Three-Voice Models with Parallel Tenths

Besides the two types of fauxbourdon, Guillelmus informs us of another parallel type of counterpoint in three voices in chapter VI. This is a rather curious technique in which the upper voices simultaneously sing sixths and tenths above the tenor, creating parallel fifths between them. Guillelmus provides a few rules

of thumb and an example for producing this kind of polyphony, which he calls 'easy and useful' ('levis et utilis'; see Example 4.19).[347]

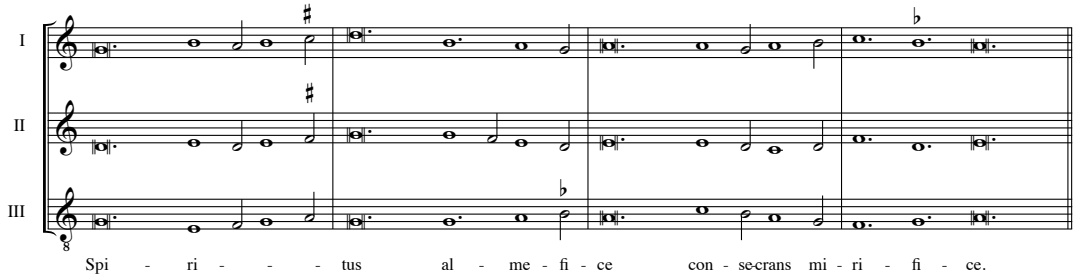


Example 4.19 Sixth-tenth model. (*De preceptis*, 34r-34v).

However strange the parallel fifths in this example may seem to us, they are not actually at odds with the core teaching of fifteenth-century contrapuntal theory: counterpoint was theoretically still considered a dyadic process, in which every voice was related to the tenor only and in this sense combined sixths and tenths are as 'correct' as combined thirds and sixths above a tenor such as in

[347] See also Park, Ex. 61, pp. 72-73 (transcr. pp. 192-93). Transcribing the example illustrating this technique poses a number of problems. First, the contratenor part is probably written a third too low from b. 10 onwards. I have corrected the parallel octaves with the tenor to sixths. Note that in Park's transcription the syncopation in the contratenor part in bb. 2-3 is overlooked, as well as the 'G-fa' sign in the superius, indicating an F-sharp in b. 8 (apparently the scribe did not have a preference for *musica recta* in correcting diminished fifths). Second, the example does not seem to fit the *tempus perfectum prolatio minor* indicated in the contratenor part (see, for instance, the long, oddly placed rest in bb. 8-9). No easy solution can be found for this problem. A transcription in tempus imperfectum would show similar problems, and the final note would arrive on a weak beat.

fauxbourdon.[348] As Markus Jans has argued, the technique in Example 4.19 can be seen as a kind of 'upside down fauxbourdon', in which contratenor and superius have exchanged places.[349] We have seen that certain authors, for instance Tinctoris, do discourage secondary parallel fifths and octaves as an 'implementation rule', but it is possible that such criteria were less strictly applied in extemporised music than in composition.[350] Nevertheless, it should be noted that this type of counterpoint would have been quite old-fashioned by the 1470s. Parallel fifths can be seen in many early fifteenth-century compositions in cadences, but we have to go back to the fourteenth century to find pieces using them as regularly as Guillelmus's example. Some late fourteenth-century English pieces show traces of this technique, such as the first bars of the *Gloria* trope *Spiritus almefice* shown in Example 4.20.[351]

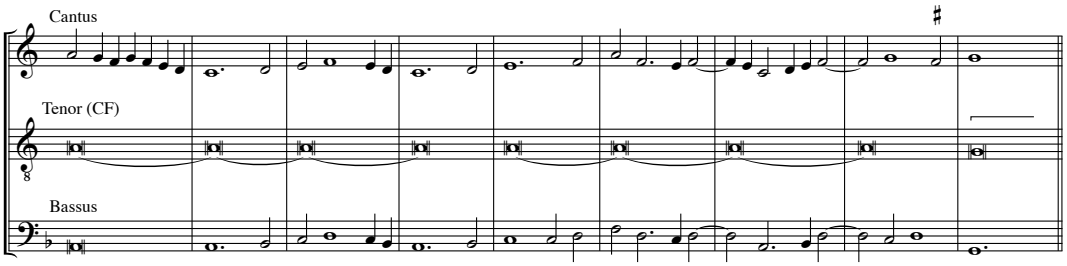


Example 4.20 *Spiritus almefice*, excerpt (Brussels, Koninklijke Bibliotheek, Ms. II 266, fol. 1r).

The last of Guillelmus's 'modus componendi', described in the end of chapter VI, is also a three-voice technique based on parallel tenths. [352] This time the gymel, sung by bassus and superius, is draped around a cantus firmus in long notes.

[348] This had evidently changed by the mid- sixteenth century, as may be witnessed from Zarlino's *Instituzione Harmoniche* (Venice, 1558). In chapter 61 of the third book, Zarlino exchanges the upper voices of a fauxbourdon to demonstrate 'how little logic there is to such a usage' (meaning fauxbourdon). See examples 138 and 139 in Guy A. Marco and Claude V. Palisca, *Gioseffo Zarlino. The Art of Counterpoint. Part Three of Le Istitutioni harmoniche, 1558* (New York: Norton, 1968), p. 195.
[349] Jans, 'Alle gegen Eine: Satzmodelle in note-gegen-note Sätzen des 16. und 17. Jahrhunderts', p. 106, Ex. 8.
[350] See Section 3.3.1 and 2.2.1.
[351] See also no. 31 in Sanders, Harrison and Lefferts, *English Music for Mass and Offices (I)*, pp. 54–57.
[352] Park, pp. 73-74 (transl. pp. 194-196).

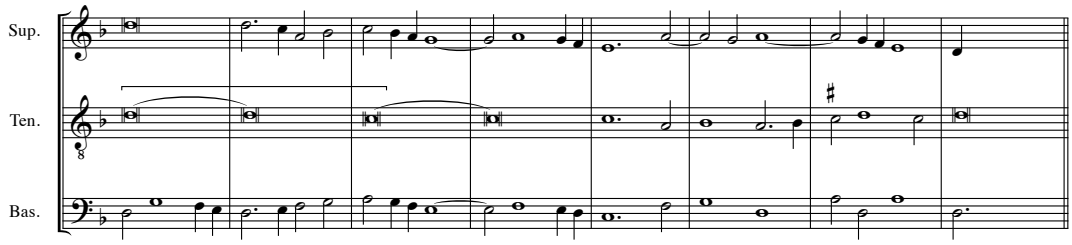
Guillelmus instructs that the contratenor bassus can make use of the lower octave, fifth, sixth and third. He must use a fifth as the penultimate, and octave or third as the antepenultimate consonance before the octave; the superius is to use the sixth as the penultimate consonance. The example shows the superius starting out from an octave above the tenor, reaching the tenth above the bassus by means of a flourish in seminiminae (see Example 4.21).



Example 4.21 Tenth-gymel with cantus firmus, excerpt (*De preceptis*, fol. 35).

In his *Practica musice* (Milan, 1496), Franchinus Gaffurius also mentions this 'very famous progression of notes in counterpoint' ('celeberrimus quidam in contrapuncto processus notularum'), in which superius and bassus sing in tenths, while the tenor harmonises with each of these parts.[353] According to Gaffurius, this procedure was used by Johannes Tinctoris, Josquin des Prez, Gaspar van Weerbeke, Alexander Agricola, Loyset Compère, Antoine Brumel, Heinrich Isaac and other 'delightful composers' ('iocundissimi compositores'). Guillelmus's example uses a tenor exclusively in long notes, behaving much like what one would expect of a cantus firmus in *super librum* performance, while the example provided by Gaffurius shows a rhythmically more active tenor that abandons its cantus firmus function before the cadence (see Example 4.22, b. 6-8). This elegant adaptation of the technique is perhaps to be associated more with composition than with *super librum* singing.

[353] Gaffurius, *Practica musice* (Milan, 1496), Liber III, cap. 12 (fol. 57r). For a translation see Irwin Young, *The Practica Musicae of Franchinus Gaffurius* (Milwaukee, London: The University of Winsconsin Press, 1969), pp. 154–155.

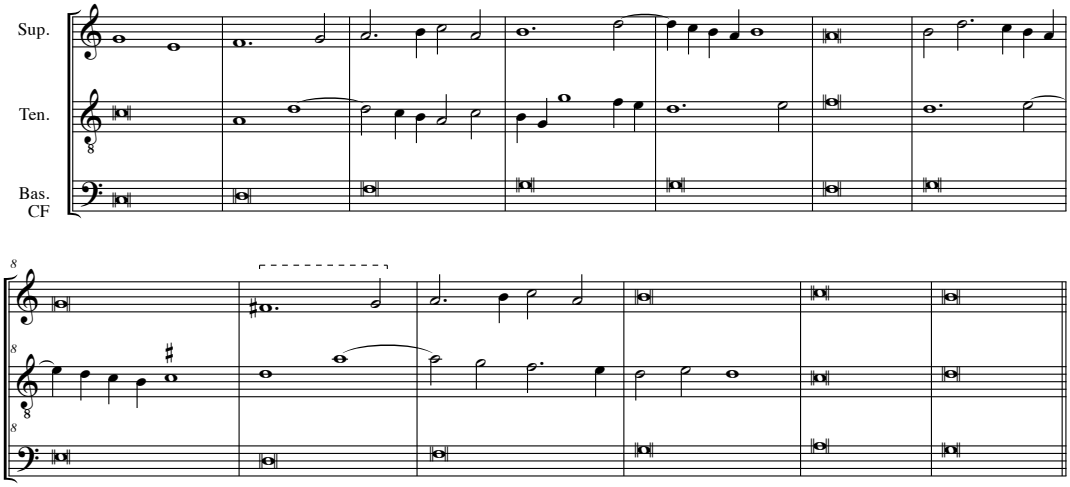


Example 4.22 Tenth-gymel with tenor, excerpt (*Practica musice*, fol. 57v).

The difficulty of having to 'shadow' a melody at the tenth, as it is being invented in real time, can probably be alleviated by copious collective practice and a shared collection of melodic commonplaces. In fact, this type of parallel singing is not more complicated than what Guillelmus illustrates elsewhere in the treatise for gymel and fauxbourdon (e.g. Examples 4.4 and 4.14), which would presumably be read from an 'unbroken' plainchant as well. Nevertheless, to the modern student of improvised counterpoint this may seem like a kind of wizardry, and he may want to look for a somewhat easier way to use this technique in improvisation.

Vicente Lusitano's *Introdutione facilissima et novissima* (1553) provides a good, relatively easy, alternative for singing counterpoint of a similar type. In the chapter on 'concerted counterpoint above the bass' ('del contrapunto in concerto sopra 'l basso') he gives the following instructions: 'One can sing easily in concert when the superius will always sing tenths from one note to the next, and the third part as it pleases him, except for parallel thirds or sixths (...)'[354] The example shows a florid superius, relying on structural tenth parallels with the bassus but using twelfths and double octaves as well (see Example 4.23). A way for superius and bassus to sing counterpoint around a cantus firmus in the tenor, exactly as in the Gaffurius and Guillelmus examples, is also explained; however, it is clear that this is considered the more difficult procedure.

[354] 'In concerto si può facilmente cantare quando 'l soprano fará sempre decime, voglio dire al mover d'una nota a l'altra, e la terza parte come li piacerá, ecceto due terze, o seste, in diverse linee, o spattii...' Vicente Lusitano, *Introduttione facilissima* (Rome: Antonio Blado, 1553), fol. 1. See Canguilhem, *Chanter sur le livre à la Renaissance. Les traités de contrepoint de Vicente Lusitano*, p. 356. Translation by the author.



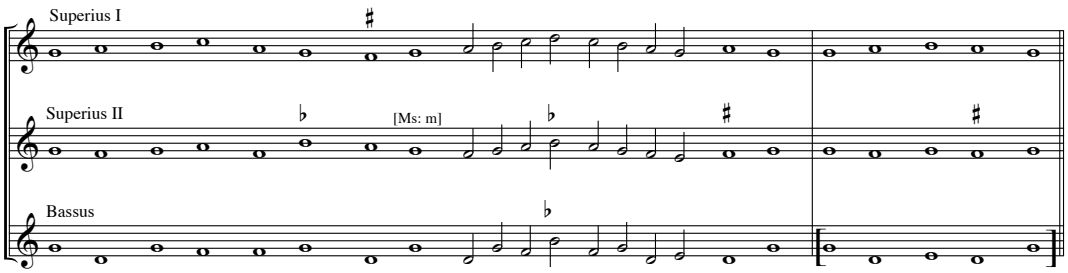
Example 4.23 Concerted counterpoint above the bass (*Introdutione*, fol. 14v).

This simple way of accompanying a bass by one voice in parallel tenths and another avoiding parallels was to have a long afterlife in seventeenth- and eighteenth-century music. Partimento and basso continuo treatises often instruct to accompany a stepwise bass in parallel tenths combined with, fifth-sixth syncopations in ascent and seventh-sixth in descent.[355] By adding a superius in parallel tenths to Guillelmus's example of syncopations we can obtain exactly such a result (see Example 4.7). One can easily imagine how the parallel sixth-tenth and the parallel fifth-tenth models used in fourteenth and early fifteenth-century polyphony evolved into this technique: parallel fifths between the lower voices would have gradually disappeared in the fifteenth century, due to more universal application of contrapunctus theory.[356] By the end of the fifteenth century, singers may have wished to suppress the secondary parallel fifths of the sixth-tenth model as well, either by avoiding parallels altogether in the middle voice, or by syncopating it and thereby 'disguising' the parallelism.

[355] See Sanguinetti, pp. 136–137 and 141–142. ('Ascending 5-6' and 'descending 7-6').
[356] On the parallel fifth-tenth model in English fourteenth-century music see Section 3.2.2.

4.2.5 Three-Voice Models with Contratenor Bassus

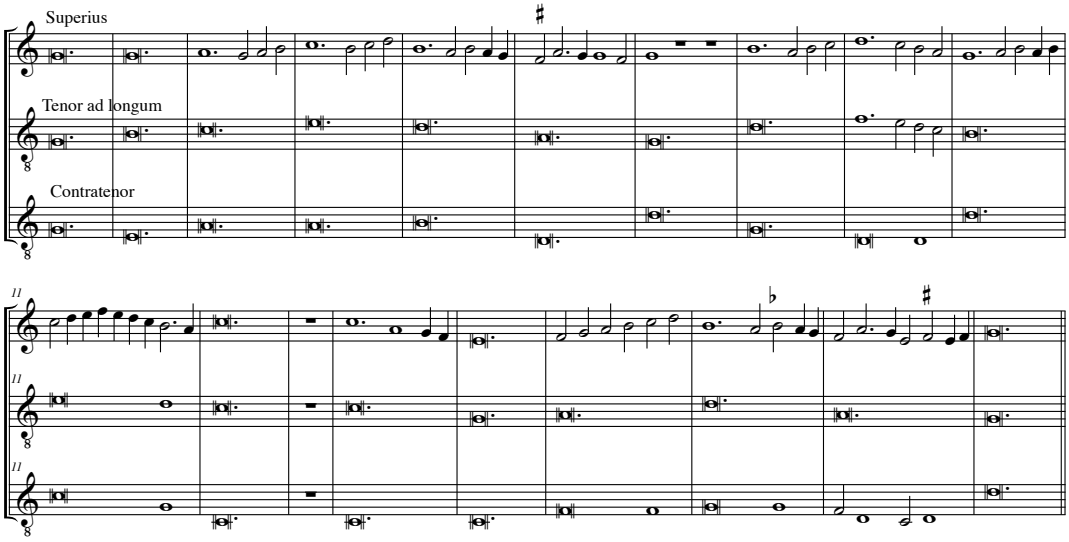
The first mention of a non-parallel contratenor is made in chapter IV of *De preceptis*. Directly after his initial exposition on fauxbourdon and gymel, Guillelmus explains a 'rule to compose with three unchanged [boys] voices ' ('regula ad componendum cum tribus vocibus non mutatis').[357] The theorist explains how to make a *secundus supranus*, starting in the unison with the *cantus prius factus* and following in thirds below. When the given melody presents an upward soprano clausula, the second part is to sing an upper third to approach the cadence (compare Example 4.1). The contratenor also begins in unison, but then alternates in fifths and thirds below. As Guillelmus instructs, its penultimate interval is to be a fifth, producing a bass clausula at the cadence.



Example 4.24 Composition for unchanged voices (*De preceptis*, fol. 20v).

In chapter VI, Guillelmus also explains that a contratenor bassus can be sung in fifths and thirds below the tenor, if the superius sings sixths above it.[358] This technique, a kind of inversion of the one shown in chapter IV, is illustrated by an example on fol. 31r, which shows an ornate superius above a tenor and contratenor in long notes (see Example 4.24). The contratenor in this example uses so-called octave leap cadences in bb. 6-7 and 18-19, creating three-voice final sonorities instead of doubling the tenor.

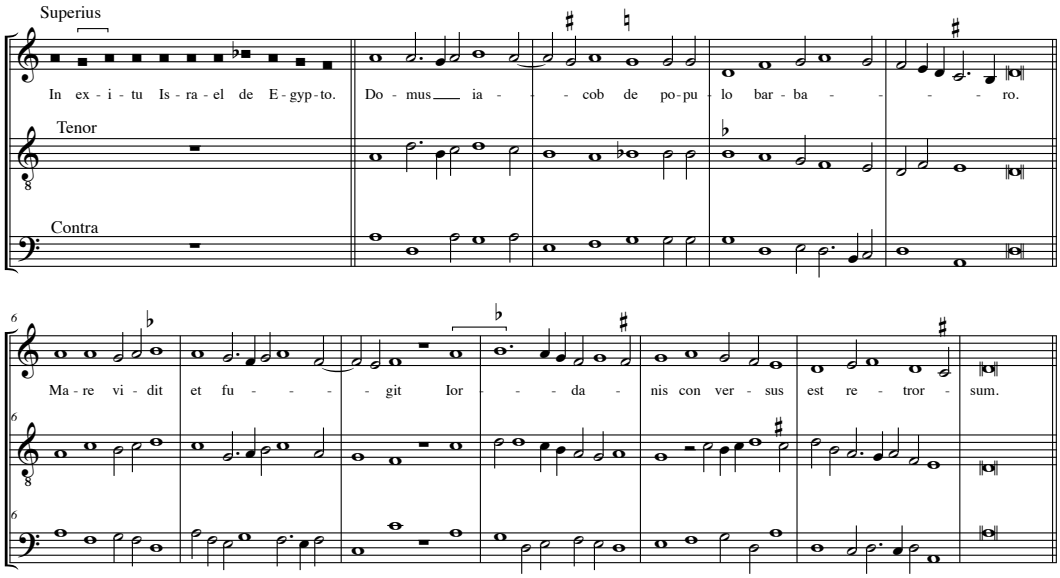
[357] Park, pp. 44-45 (transl. pp. 160-161). Park confusingly translates the heading as 'rule for composing with three *independent* voices'. Italics mine. This translation makes sense neither with the text nor the example on fol. 20v, Example 4.24, which shows a homophonic, largely parallel technique. A hexachordal interpretation of 'mutatio vocis' is irreconcilable with the example as well (none of the voices stays within one hexachord). It follows that Guillelmus is referring to polyphony for 'unchanged' boys voices.
[358] Ibid., pp. 64-65 (transl. pp. 180-181).



Example 4.25 Sixth-gymel with contratenor bassus. (*De preceptis*, fol. 31v).

The other three-voice examples in chapter VI of *De preceptis* illustrate the construction of a contratenor against duos in 'mixed gymel'.[359] These contratenors, even though they function mostly as a bassus, retain some characteristics of the early fifteenth-century 'mobile countertenor'. In one of these examples, a gymel in thirds and sixths is accompanied first with a bassus, and later with a fauxbourdon-contratenor in parallel thirds.[360] A somewhat freer version of this type of texture can be observed in an *In exitu Israel* setting from the Modena choirbooks (see Example 4.25).[361] In this homophonic psalm setting for two antiphonal choirs, we see a structural duo between superius and tenor, primarily in sixths, but making use of parallel thirds and contrary motion as well. These voices are accompanied by a 'contra' which uses thirds and fifths below the tenor when the superius is in sixths above it.

[359] Ibid., examples 55 (p. 181) and 57 (p. 186).
[360] See the example on fol. 31r, transcribed in Park, Ex. 57, p. 186.
[361] A reproduction of the source can be accessed through



Example 4.26 *In exitu Israel*, excerpts (Modena, Biblioteca Estense, Ms. Alfa M.1.11 (fol. 4v-5r) .

4.2.6 From Three- to Four-Voice Fauxbourdon.

In chapter VI of *De preceptis*, Guillelmus explains that, besides the three-voice versions discussed before, fauxbourdon can also be sung in four voices. He informs us that a gymel in sixths between tenor and superius can be combined with a contratenor bassus in thirds and fifths below the tenor, as well as contratenor altus, which is to use a third and fourth above as its final consonances.[362] This technique of harmonisation is usually referred to as 'falso bordone' as opposed to 'fauxbourdon', which is used to refer the three-voice techniques discussed earlier in this chapter.[363] Guillelmus uses 'faulxbourdon' for both the three- and four-voice varieties. Even though it became very popular in Italy, the 'falso bordone' was not considered a particular Italian phenomenon during the Renaissance.[364] Guillelmus's dual use of 'faulxbourdon' also seems to

[362] Park, pp. 64-65 (transl. p. 180).
[363] This usage goes back to Michael C. Bradshaw, *The Falsobordone: A Study in Renaissance and Baroque Music*, Musicological Studies and Documents 34 (Rome, Neuhausen, Stuttgart: American Institute of Musicology, 1978).
[364] On this issue see Canguilhem, 'Le Projet FABRICA: Oralité et écriture dans les pratiques polyphoniques du chant ecclésiastique (xvie – xxe siècles)', pp. 278–279. It seems that also the English 'faburden', like 'fauxbourdon', could refer to different versions of the technique. See John Aplin, '"The Fourth Kind of Faburden": The Identity of an English Four-Part Style', *Music and Letters*, 61.3-4 (1980), pp. 245–265.

imply that there was no need to make a sharp distinction between the techniques.

The flexibility of the concept of fauxbourdon may also be observed in a number of 'hybrid' fauxbourdon compositions, in which an fourth voice is added to the three-voice texture. One such example is a *Magnificat tertii toni* by Johannes Martini, which has three parts, but also bears the rubric 'faulx bordon'.[365] The notated contratenor is apparently not an alternative contratenor ('sine faulxbourdon'), but composed to harmonise with tenor, superius, and the contratenor in fourths below it. In the four-part sections of the piece, the bassus mostly alternates octaves and tenths below the tenor, avoiding parallels with the upper parts, but making a fifth-octave bass clausula at the cadences. (I have opted to adapt the cadences of the fauxbourdon-contratenor to an alto clausula to avoid a clash with the bassus). The only real contrapuntal flaw in the piece seems to be the semiminim parallel octave between tenor and bassus in b. 10.

[365] Due to the removal of a capital on fol. 41, the superius lacks the beginning of the intonation and the second verse. The concordance on fol. 91-95 of the Ms. Capella Sistina 15 shows that we are dealing with a *Magnificat tertii toni*. This manuscript casts the piece in tempus imperfectum, and also provides music for the even verses. Remarkable also is that the inscription 'a faulx bourdon' is repeated twice on fol. 91. On this piece, see Christianus Joannes Maas, 'Geschiedenis van het Meerstemmig Magnificat tot Omstreeks 1525' (Amsterdam University, 1967), pp. 73–74; Winfried Kirsch, *Die Quellen der mehrstimmigen Magnificat - und Te Deum Vertonung bis zur Mitte des 16. Jahrhunderts* (Tutzing: Hans Schneider, 1966), p. 356, item 907.

Superius
[Mag - ni] - fi - cat A - ni - ma me - - - a Do - mi - num Ms: Lacuna u - mi -
CT a faulxbourdon
Tenor
A - ni - ma me - - - a [Do - mi - num] Qui - a res - pe - - - - xit hu - mi -
Contra
A - ni - ma me - a [Do - mi - num] Qui a res - pe - - - xit hu - mi -

li - ta-[tem] an - cil - le su - e. Ec - ce e - nim ex hoc be - a - tam me di - cent om-nes ge - ne - ra - ti - o - nes.
li - ta - tem an - ci - lae su - e [Ec - ce e - ni - ex hoc be - a - tam me di - cent om-nes ge - ne ra ti - o - nes.]
li-ta tem [an - ci - lae su - e E - ce e - nim ex hoc be - a - tam me di-cent om - nes ge - ne ra - ti - o - nes.]

Et mi - se - ri - cor - di - a e - ius in pro - ge - ni - es ti - men - ti bus e - - - um.
Et mi - se - ri - cor - di - a e - ius [a pro - ge - ni e in pro - ge ni - es ti - men - ti bus e - - - um.
[a] pro - ge - ni e in pro ge - ni - es ti - men - ti - bus e - um.]

Example 4.27 Johannes Martini, *Magnificat tertii toni*, excerpt (Modena, Biblioteca Estense, Alfa M. 1.11, fol. 41v-42r).

Even though the technique seems to be unique to Martini's setting, one wonders if it would indeed have been a 'remarkable and exceptional experiment' as Chris Maas has suggested.[366] The fact that the piece was copied into the Ms. Capella Sistina 15 shows that it must still have been considered fit for performance in the early sixteenth century. The contents of this manuscript also showcase the tendency of Renaissance musicians to 'update' older three-part compositions to

[366] Maas, p. 74.

the new four-voice standard by adding 'si placet' voices.[367] It seems probable that such additional parts were sung *super resfactam* as well as composed.[368] Martini's way of constructing a bassus in alternating tenths and octaves could have provided musicians with a simple and effective method to turn any three-voice fauxbourdon into a four-part version, with only minimal alterations to the fauxbourdon-contratenor.

Another interesting fauxbourdon 'hybrid' can be found in Josquin des Prez' *Missa Mater Patris*, based on Antoine Brumel's motet of the same name.[369] This mass is something of a *cause célèbre* in Josquin scholarship, as some scholars have doubted Petrucci's attribution of the mass to Josquin because of its 'bizarre' counterpoint.[370] David Fallows, who calls the mass 'probably the strangest work of its generation', describes it as 'an alternation between duos written in an absurd manner with homophonic passages in triads, often in parallel motion, giving the impression of a parody of bad composition'.[371] Willem Elders has interpreted these homophonic passages as written in 'the old-fashioned fauxbourdon style, with an extra voice a third above' (see Example 4.28).[372]

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[367] See for instance the four-voice arrangement of Du Fay's fauxbourdon hymns on fol. 2v-46 and 50v-70. An inventory of the source can be accessed through <http://www.diamm.ac.uk/jsp/Descriptions?op=SOURCE&sourceKey=966> [accessed 16 August 2016].

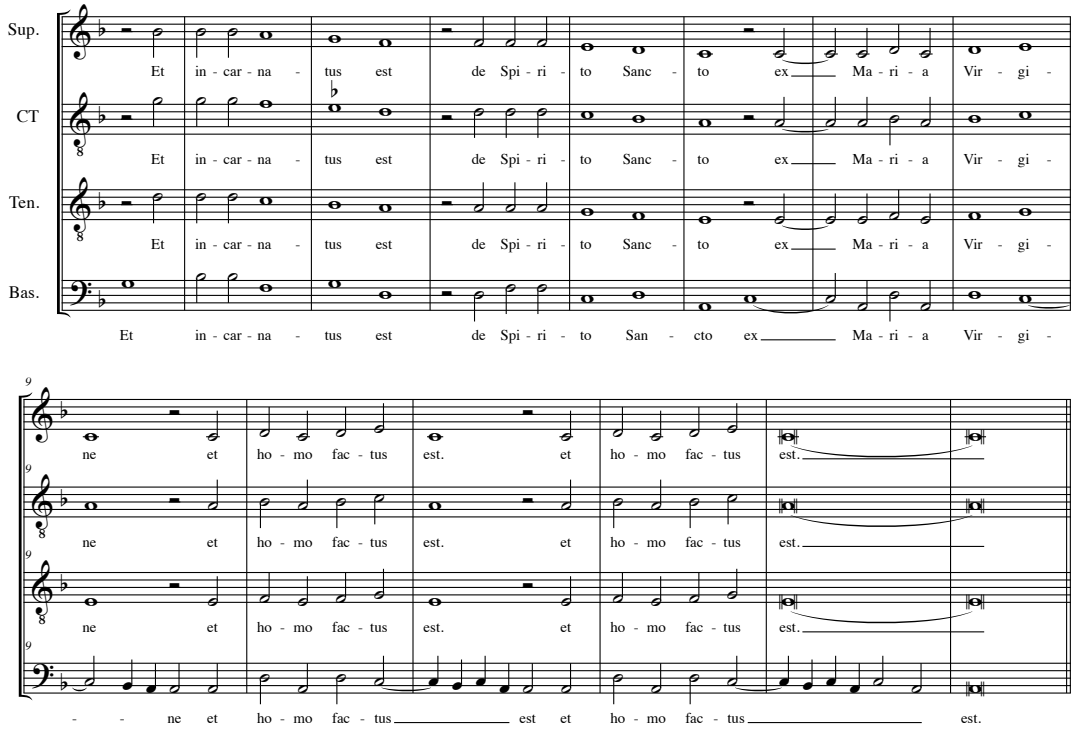
[368] On the extempore adding of voices to a pre-existing composition see for instance Gioseffo Zarlino, *Le instituzione harmoniche* (Venice: Zarlino, 1558), Liber III, cap. 64. For a translation see Marco and Palisca, pp. 221–225.

[369] Petrucci, *Missarum Josquin Liber Tertius* (Fossombrone, 1514). For a transcription see *Masses Based on Polyphonic Songs*, New Josquin Edition 10 (Utrecht: Koninklijke Vereniging voor Nederlands Muziekgeschiedenis, 1999). Willem Elders (ed.), *New Josquin Edition* vol. 10 (Utrecht, 1999). The passages in question occur in the *Kyrie* (NJE 10, bb. 18-22, 43-47, 56-60 and 74-83), the *Credo* (NJE 10, bb. 19-24, 29-36, 46-55, 63-75, 87-115, 127-135, 142-145, 159-160) and the *Sanctus* (NJE 10, bb. 99-101, 105-109, 114-118, 123-127).

[370] Opposition to attribution to Josquin was voiced among others by Helmuth Osthoff, *Josquin Desprez* (Tutzing: Hans Schneider, 1962), pp. 151–155. For an overview of the discussion around the authenticity of the *Mater Patris* mass, see Jennifer Bloxam, 'Masses Based on Polyphonic Songs and Canonic Masses', in *The Josquin Compendium*, ed. by Richard Sherr (Oxford, New York: Oxford University Press, 2000), pp. 151–210 (pp. 186–188).

[371] David Fallows, 'Josquin Des Prez', in *Guide de la musique de la Renaissance*, ed. by Françoise Ferrand (Paris: Fayard, 2011), pp. 344–364 (p. 356). Translation by the author. For Fallows, the very strangeness of the mass argues in favour of Petrucci's attribution. Had he had any doubts as to the mass's authenticity, it is unlikely that Petrucci would have placed such a piece at the beginning of his third volume of Josquin's masses.

[372] Willem Elders, *Josquin Des Prez and His Musical Legacy: An Introductory Guide* (Leuven: Leuven University Press, 2013), p. 177.



Example 4.28 Josquin des Prez, *Credo* from *Missa Mater Patris*, excerpt (NJE bb. 63-75).

Contrary to what one might expect, this procedure does not lead to parallel octaves between the superius and bassus, because the bassus – playing the role of the fauxbourdon-tenor – alternates thirds and fifths below the tenor.[373] Both Tinctoris and Gaffurius mention that in fauxbourdon fifths as well as thirds may be placed below the fourth in the upper voices,[374] and skilfully composed fauxbourdons like Examples 4.16 and 4.17 regularly alternate between 6/3 and 5/8 sonorities. One the other hand, avoiding parallel 6/3 sonorities altogether is rather untypical of fauxbourdon, and one can ask the question if the bass voice does not behave more like an actual contratenor bassus in Example 4.28. As Guillelmus explains (and as we have observed in Examples 4.24 and 4.25), such a

[373] Contrary to David Fallow's claim (see note above), I have been able to identify only one forbidden parallel in the homophonic sections of the *Missa Mater Patris*. See NJE 10, *Credo* b. 10 (p. 15), where superius and bassus sing a seminim in parallel octaves.
[374] Franchinus Gaffurius, *Practica musice*, Liber III, cap. V ('De consentanea suavitate quartae'). See Young, p. 140. Tinctoris, *Liber de arte contrapuncti*, Liber I, cap. V ('De diatessaron id est quarta'). Seay, *Johannes Tinctoris The Art of Counterpoint (Liber de Arte Contrapuncti)*, p. 29.

voice also uses mainly thirds and fifths. Jennifer M. Bloxam has also pointed out the similarity of the four-voice passages in the *Kyrie*, *Credo* and *Sanctus* to Guillelmus's examples of fauxbourdon.[375] A similar passage, featuring a sequence in parallel 4/6 sonorities in the upper voices and a bass 'covering' the fourths may be indentified in the third Agnus of Jacob Obrecht's *Missa Malheur Me Bat.*[376] More than anything Example 4.28 shows the fluid border between the techniques known as 'fauxbourdon' and 'falso bordone'. It would be a small step, for instance, to adapt the altus part to alternating thirds and fourths below the superius, thus obtaining the classic four-part fauxbourdon texture that will be described below.

We may conclude that the four-voice adaptations of fauxbourdon discussed above are found in only a few composition, but that they demonstrate viable methods for creating simple four-voice settings.[377] As such, these techniques might not have been the result of a compositional experiment but traditional techniques, usually reserved for extemporisation and—like some of the techniques described in *De preceptis*—leaving only a tiny imprint on the written record.[378]

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[375] See Bloxam, p. 190. Bloxam suggests that the chordal sections of the *Gloria*, in contrast to the sections discussed above, are constructed in 'a more varied, composed style', using a freer type of voice leading. In fact, many of these passages show a permutation of the four-voice fauxbourdon, in which the basic duet is sung in parallel thirds between the altus and tenor or superius and altus (see below). The writing of the duos shows a similar predilection for the use of simple, commonplace elements like 'stretto fuga' and gymel. It seems to me that a large part of the aesthetic 'objections' to the *Missa Mater Patris* originate from its rather straightforward use of improvisational techniques, which must have been very familiar to Renaissance musicians, but may strike the modern analyst as odd and unsophisticated.

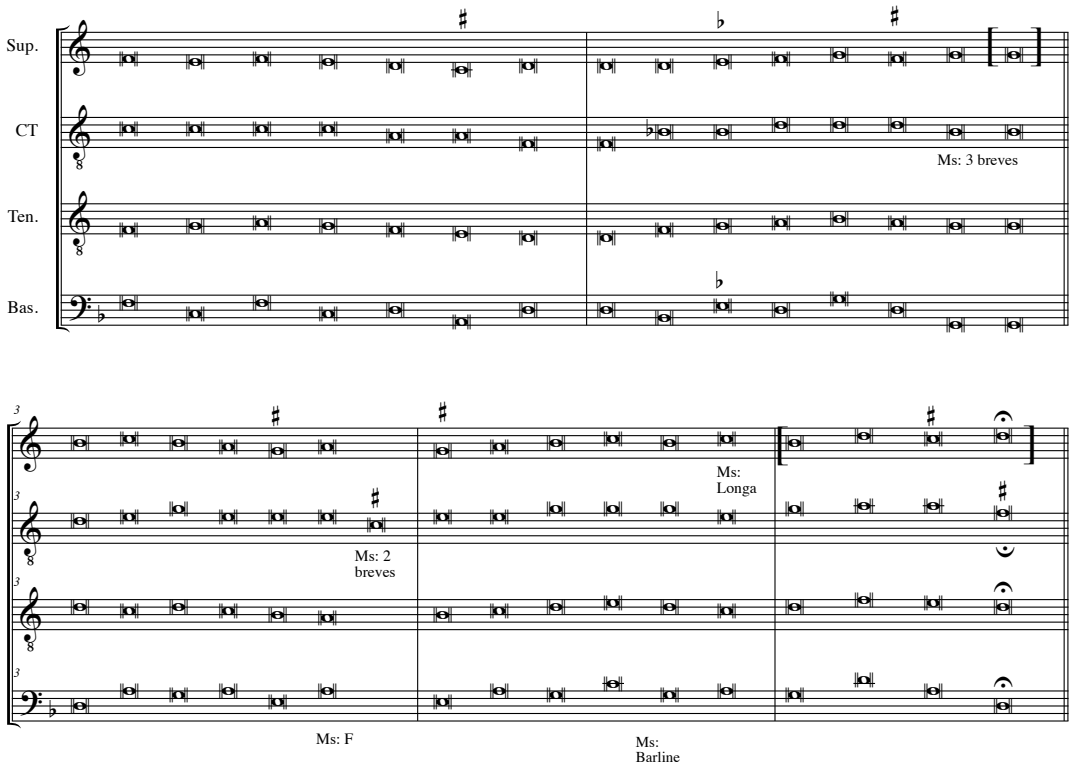
[376] Barton Hudson, *Missa Malheur Me Bat, Missa Maria Zart*, New Obrecht Edition 7 (Utrecht: Koninklijke Vereniging voor Nederlands Muziekgeschiedenis, 1987). See p. 37, bb. 182-195.

[377] At a late stage of work on this dissertation, I have come to realise that the technique shown in Example 4.28 is identical to that of an 'exemplum aliud quatuor vocum faulbourdon' on fol. 53 of Adrianus Petit Coclico's *Compendium musices descriptivum* (Nuremberg: Johannes Montani and Ulrich Neuber, 1552). This example, in turn, has been compared to a technique called the 'ferd kynd of faburdoun' described on fol. 104v-111r of the sixteenth-century Scottish anonymous treatise British Museum, Add. Ms. 1911. See Judson Maynard, 'An Anonymous Scottish Treatise on Music from the Sixteenth Century' (Indiana University, 1961), pp. 309–331. Like Josquin's and Coclico's technique, this 'ferd kynd of faburdoun' involves continuous parallel fourths between the tenor – notated in plainchant neumes – and the altus. To illustrate this model, the Scottish Anonymous provides an entire setting of the Mass ordinary, which shows a much more florid texture than the continental examples quoted above. See also Aplin, pp. 248–250. I intend to pursue my investigations of these 'fauxbourdon hybrids' in a future, separate publication.

[378] A good example is the persistence of the parallel 6/10 model in improvisation untill the 1470s, whereas the last compositions using it date around 1400 (see Example 4.18).

4.2.7 Four-Voice Fauxbourdon

Guillelmus returns to four-part fauxbourdon as a 'modus componendi' at the end of chapter VI.[379] The same intervallic rules for the bassus are explained, and the example shows that the altus, after starting out at a fifth above the tenor, can continuously alternate in fourths and thirds, coinciding with the lower fifths and thirds of the bassus (see Example 4.29).[380]

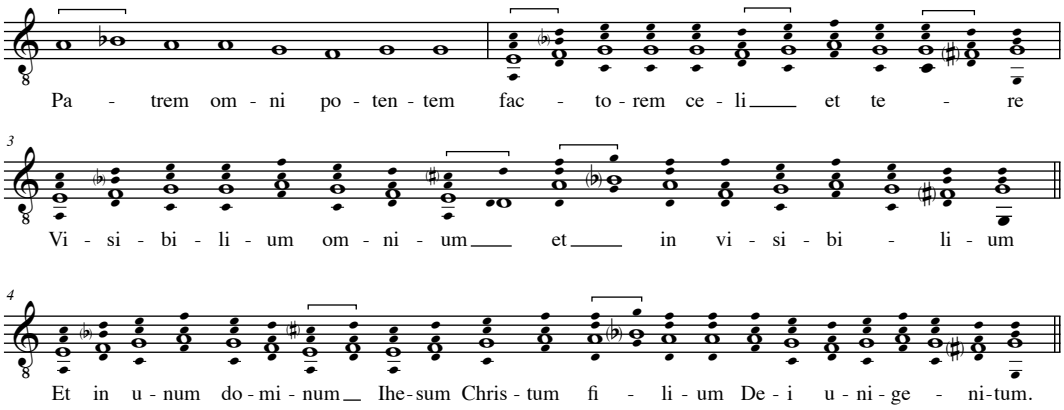


Example 4.29 Four-voice fauxbourdon. (*De preceptis*, fol. 32).

An abundance of examples of this technique exists in fifteenth- and sixteenth-century sources, in fully elaborated compositions in mensural notation, and in

[379] Park, pp. 69-71 (transl. pp. 188-191).
[380] See also Park, Ex. 59, (p. 70 [transcr. 189]). The example on fol. 32 present a number of problems: the altus ('contra') in b. 2 contains nine breves in the manuscript, against only seven in the superius. The bassus and altus in b. 3 sound F against e on the sixth breve, I have opted to emend the bassus to A. The scribe seems to have misplaced the line between the bars 3 and 4 in the bassus part. The superius—though it finishes with a long—seems to be lacking the whole of b. 5. I believe these emendations make for a more convincing reading than Park's.

the form 'aides-mémoire' in the margins of liturgical books.[381] Like the simple polyphony discussed in Chapter 3, fauxbourdons were also commonly notated in plainchant neumes. Presumably such notations were used to emphasise the 'plain', unadorned character of the music, as well as making it accessible to singers unacquainted with the intricacies of mensural notation.[382] An interesting example of this practice is to be found in a fifteenth-century gradual from Ghent, in which the *Credo V* is realised as a four-part fauxbourdon (see Example 4.30).[383] The superius, altus and bassus are written in small notes against the larger plainchant neumes, in a manner somewhat reminiscent of Guillelmus's puncta illustrating the visualisation of a counterpoint (see Examples 4.1 and 4.6).



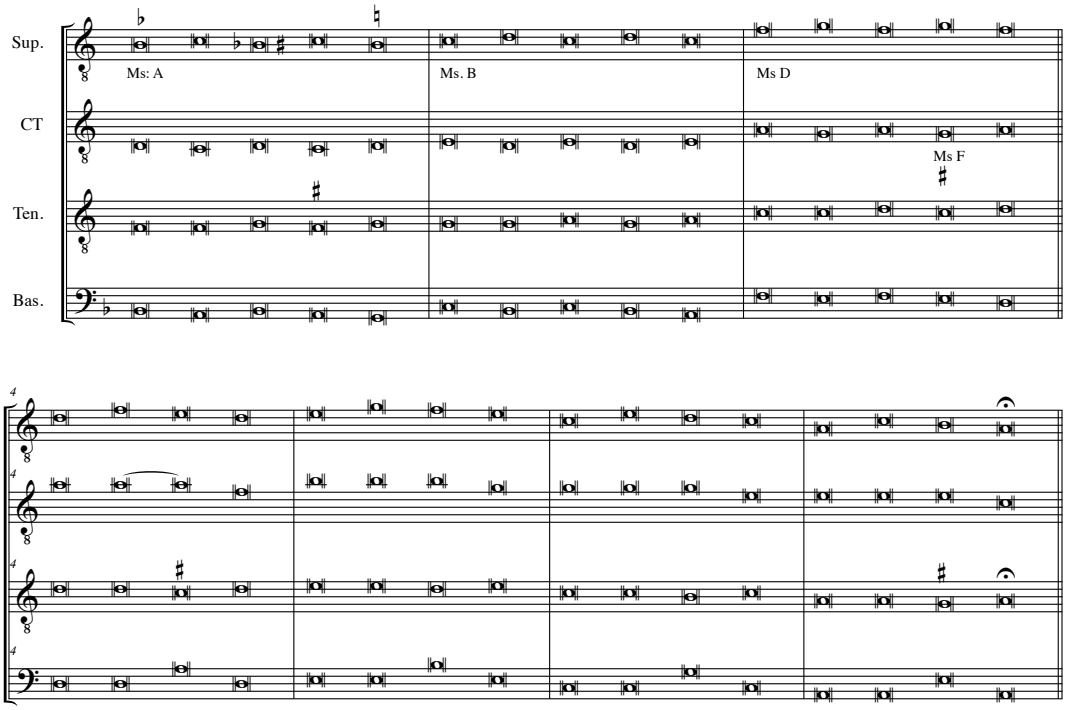
Example 4.30 *Credo V* in fauxbourdon, excerpt (Ghent, Universiteitsbibliotheek Ms. 14, fol. 272r).

A few exceptions to Guillelmus's rules are to be observed in this fauxbourdon. At the beginning of bars 2, 3 and 4 the altus sings parallel fourths above the tenor, as in Example 4.28. The other voices abandon their regular intervallic relations with the tenor when it presents a soprano clausula at the end of bars 2, 3 and 4

[381] See Canguilhem, 'Le Projet FABRICA: Oralité et écriture dans les pratiques polyphoniques du chant ecclésiastique (xvie – xxe siècles)', pp. 274–275; Wright, 'Performance Practices at the Cathedral of Cambrai: 1475-1550', pp. 318–321.
[382] Examples of fauxbourdons in this type of notation may be found from the fifteenth to the nineteenth centuries For an inventory of the fauxbourdon in France, published by the FABRICA project <http://blogs.univ-tlse2.fr/fabrica/files/2012/11/Faux-bourdons-franc%CC%A7ais-Sources-blog.pdf> [accessed 16 August 2016].
[383] Ghent, Universiteitsbibliotheek Ms. 14, fol. 271v-274r. A similarly notated three-voice fauxbourdon can be found on fol. 153v-154. I am grateful to Hendrik Vanden Abeele for pointing these pieces out to me.

to produce a cadence to G.[384] Interestingly, Guillelmus also gives 'exceptiones' to his model, making a cadence when the tenor presents a soprano clausula ('si cantus firmus teneat modum suprani'). The first option is for the bassus to make the tenor clausula with the contratenor singing a third and fifth above the bassus (fourths below the tenor) and the superius singing parallel tenths above the bassus (fifth and third above the tenor). The superius of the example illustrating this type of cadence presents significant problems, but I believe it can be reconstructed based on a comparison with the treatise's text (see Example 4.30).[385] The second option is to make a third to unison progression between tenor and superius, a third to octave bassizans clausula in the bassus and a sixth to third progression in the altus. (This type of cadence is somewhat similar to the one in bar 2 and 4 of Example 4.30.) [386]

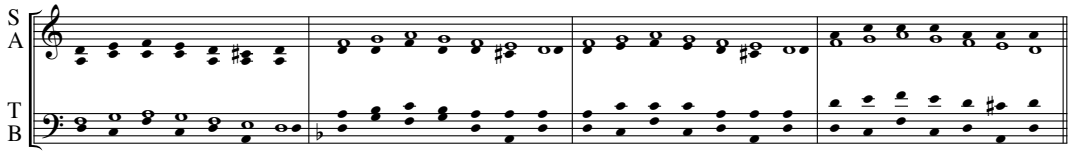
[384] The B *penultima* of the contratenor in b. 3 could be changed to A, matching the other cadences.
[385] See also Park, Ex. 60 (p. 71 [transcr. p. 19]). As Park's examples also show, the example on fol. 33 contains parallel octaves between superius and bassus at the end of every bar in the Ms. Since the treatise advocates making parallel tenths between superius and bassus, I assume that the clef of the 'cantus' would have been C2, not a C3. This would also account for the flat and sharp before and after the third brevis in b.1, which would now apply to B, not G. This leaves the problem of the initial note of every segment, which—when transposed—is no longer consonant. These notes may have been octaves above the bass (B-flat in the first bar) before the corruption of the example. B. 5, with its diminished penultimate sonority, is also problematic. This type of cadence may be used to *D, C* and *A*, as the example shows, or to *F* and *G*.
[386] It may seem that Guillelmus is laying down the rudiments of a theory of cadential functions, but his suggestions—like much of the rest of the treatise—are actually very practical in nature. Guillelmus simply provides standard closes for the most frequent terminations of a *cantus prius factus*, which can serve as well for singing on the book in fauxbourdon as simple compositions in four voices. A more complete treatment of the exchange of cadential functions, presumably for use in compositions, can be found with Gaffurius in Liber III, cap. XXI of his *Practica musice*. See Young, pp. 149–153. On this topic see also Cumming, 'From Two-Part Framework to Movable Module', pp. 149–153.



Example 4.31 Alternative cadences. (*De preceptis*, fol. 33v).

When a melody behaves more like a top part altogether, singers could presumably elect to use it as a superius with a tenor in sixths below, obtaining the same sonorities by singing a bassus in octaves and tenths and an altus in thirds and fourths below the written melody. The bassus of such a fauxbourdon can be visualised in unisons and thirds with the cantus firmus. Markus Jans has convincingly argued that the four-voice fauxbourdon can also be 'inverted' in a number of other ways,[387] as shown here in Example 4.32. The gymel-duo can for instance be sung by superius and altus in thirds, with the tenor taking over the alto function, alternating in thirds and fourths below the altus. It is also possible to place the gymel between the inner voices and having the superius taking over the alto-function, singing thirds and fourths above the altus.

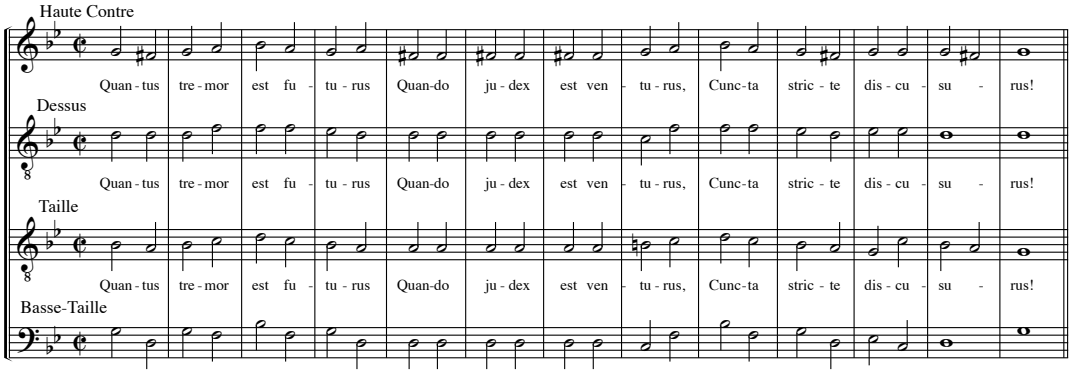
[387] Jans, 'Alle gegen Eine: Satzmodelle in note-gegen-note Sätzen des 16. und 17. Jahrhunderts', p. 102. See example 1 where he identifies different distributions of contrapuntal functions in homophonic passage from Victoria's *Missa quarti toni*.



Example 4.32 'Inversions' of the four-voice fauxbourdon.

The crucial role of the four-voice fauxbourdon in the development of Western music has been stressed by a number of scholars.[388] The model gave rise to dance basses like the folia, romanesca, passamezzo antico and moderno in the sixteenth century, which would in turn form the kernel of nascent basso continuo practice in the early seventeenth. As a designation for liturgical pieces in simple (often four-voice) counterpoint the fauxbourdon also had a long afterlife, especially in France, where collections of 'faux-bourdons' continued to be printed up to the end of the nineteenth century.[389] A few of the chant harmonisations in Père M. Bonhoure's *Méthode théorique et pratique de plain-chant* (Toulouse, 1840) still use the old fauxbourdon technique.[390] A good example is the sequence of Bonhoure's *Messe des morts a quatre voix*, which—apart from a few rather striking dissonances—strongly resembles Guillelmus's examples of four-voice fauxbourdon (see Example 4.33).[391]

[388] See for instance Carl Dahlhaus and Robert O. Gjerdingen, *Studies on the Origin of Harmonic Tonality* (Princeton University Press, 2014); Markus Jans, 'Modale "Harmonik" Beobachtungen und Fragen zur Logik der Klangverbindungen im 16. und Frühen 17. Jahrhunderts', *Basler Jahrbuch für historische Musikpraxis*, 16 (1992), pp. 167–188; Johannes Menke, '"Ex Centro" improvisation - Sketches for a Theory of Sound Progressions in the Early Baroque', in *Improvising Early Music*, Collected Writings of the Orpheus Institute, ed. by Dirk Moelants (Leuven: Leuven University Press, 2014), pp. 69–92.
[389] See note 382.
[390] Bonhoure, M. (père), *Méthode théorique et pratique du plain-chant* (Toulouse: Imprimerie Augustin Manavit, 1840).
[391] Bonhoure, pp. 200–201. The 'faux-bourdons' are written in plainchant notation, which, however, is clearly intended to be sung rhythmically. The time-signature '2' indicates 2/2 ('alla breve'). This way of singing in 'notes égales et carrées' is also explained on p. 86. The *Kyrie* of the *Messe des morts*, performed by the Ensemble Gilles Binchois, can be heard on <http://blogs.univ-tlse2.fr/fabrica/anthologie-du-faux-bourdon-francais-2/kyrie-1840/> [accessed 16 August 2016].



Example 4.33 M. Bonhoure, *Messe des morts*, excerpt (*Méthode*, pp. 200-201).

4.3 Conclusion

De preceptis artis musicae informs us that the learning of counterpoint can start from singing parallel imperfect consonances, called gymel. As has already been pointed out by Klaus-Jürgen Sachs and others, these gymels can be combined into different types of simple three-voice counterpoint known as fauxbourdon. Guillelmus's technique of combining gymels in a horizontal way, alternating between them to create a more diverse two-voice counterpoint, has hitherto been overlooked. Another important element the treatise can shed light on is the technique of 'sighting'. By imagining a fifth or an octave as a unison with the cantus firmus, it becomes easy to visualise counterpoint on the musical staff. With the use of these elements, students can quickly learn to extemporise a simple counterpoint on a given melody. A gymel in thirds or sixths can also be combined with a contratenor bassus alternating in thirds and fifths with the tenor. Finally, such a texture can be amplified into a four-voice fauxbourdon with an altus filling out the 'left-over' notes in every sonority.

Comparing Guillelmus's teaching with the extant composed repertoire of the same period and earlier leads to the following observations. Firstly, strictly parallel settings in two voices are rare; this points to the importance of contrary motion, presumably in improvisation as well as in composition. Therefore, I propose to add to Guillelmus's technique of 'mixed gymel' the principle of adjacent consonances described in Chapter 3. Secondly, Guillelmus's way of organising the rhythm of a fauxbourdon does not conform to what we find in most fauxbourdon compositions. I have proposed an alternative based on the hymns of Du Fay, where the poetic metre dictates the rhythm of the setting. Guillelmus's 'inversion' of fauxbourdon, using parallel 6/10 rather than 6/3 sonorities, can also be used if the voice-distribution requires it. Apart from the 'classic' four-voice fauxbourdon described in Guillelmus's treatise, I have identified two 'hybrid' models, which amplify the three-voice fauxbourdon into a four-voice texture.

A musician familiar with these techniques through improvisation will also be able to recognise them when singing fifteenth-century compositions. (This type of analysis can be done from a score, but it is more interesting to do it by

ear, while singing from parts). The first step is to identify which parts are singing in parallel, and form the basic duet of a particular passage. After this, accompanying voices, such as a contratenor bassus, can also be identified. The famous and well-loved chanson *Mille regretz,* for instance, is composed almost exclusively of techniques that have been discussed in this chapter (see Example 4.34).[392] The piece starts out with Gaffurius's 'famous progression' in parallel tenths (bb. 1-5), and after several varieties of gymel with bassus (bb. 6-15), it also uses three- and four voice fauxbourdon (bb. 16-19). Rather than a 'chef d'oeuvre' the piece turns out to be an elegant collage of simple contrapuntal techniques, easily diagnosed by the trained ear. The conscious listener may delight in the way the composer cleverly morphs the different contrapuntal models and manages to create and frustrate expectations, notably in b. 11, but the 'ingredients' of the chanson are entirely commonplace.

One may argue that in studying simple polyphonic procedures, we can see something of the 'histoire de longue durée' of European music. [393] Musical techniques—much like buildings—were not abandoned after they had gone out of fashion, but adapted to contemporary needs and tastes. As we have seen, the singing of two-part polyphony in imperfect consonances originated in the late thirteenth century, probably in England. This practice, which became known as gymel, was then amplified into the parallel three-voice versions discussed in Chapters 3 and 4. These models were adapted to suit the new aesthetic of Renaissance music, either by obscuring parallelism in perfect concordances, or by amplifying them—again—into four-part textures. The four-voice fauxbourdon itself also had an impressive lifespan, from the fifteenth to the very end of the nineteenth century in notated music, and arguably even beyond in the oral traditions of rural southern Europe.[394] As such I would argue that the study of

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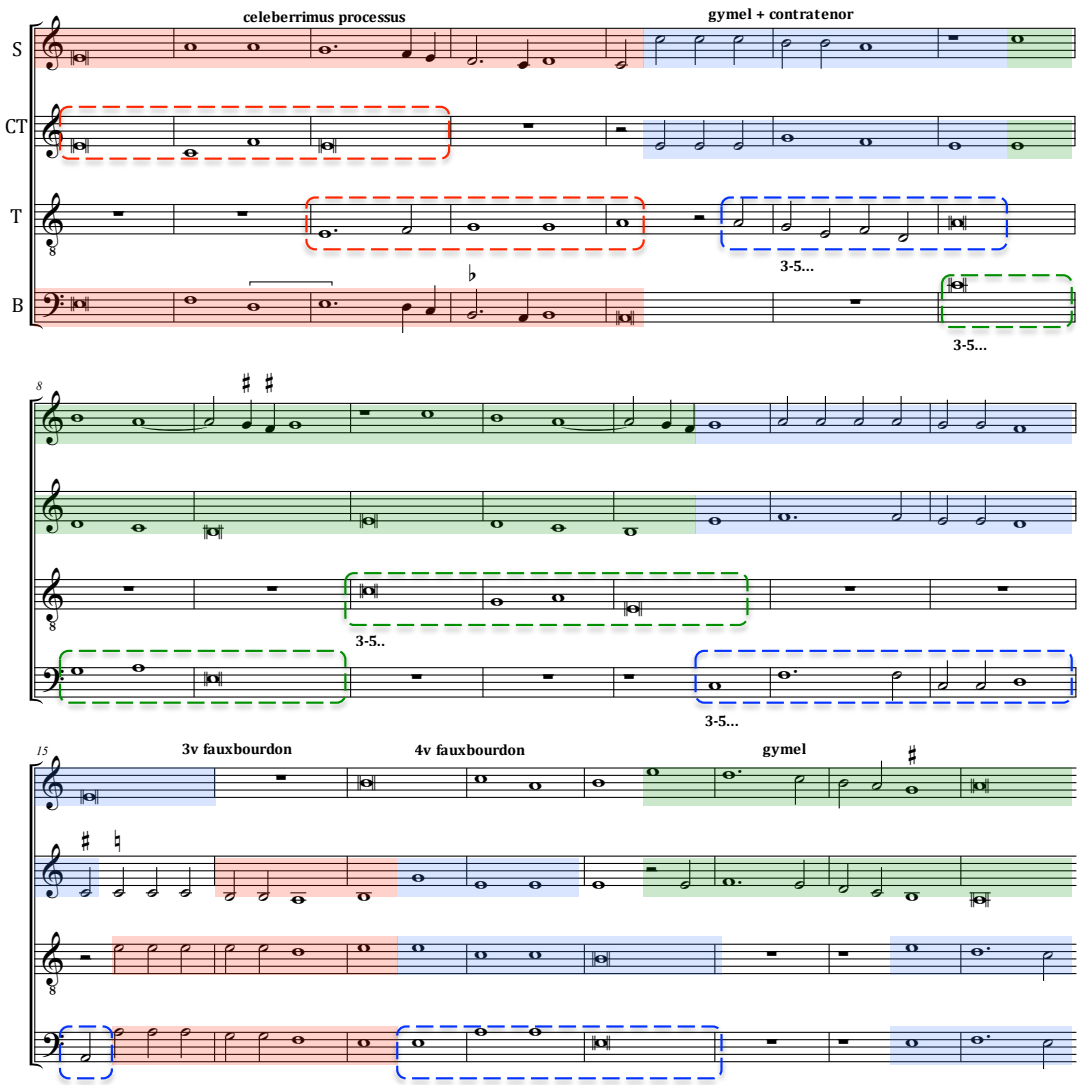
[392] Tylman Susato, *L'onziesme livre contenant vingt & neuf chansons amoureuses a quatre parties* (Antwerp: Susato, 1549). See no. 25 in David Fallows, *Secular Works for Four Voices*, New Josquin Edition 28 (Utrecht: Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis, 1999).
[393] The concept of a 'long term history' was developed by historians of the French 'Annales school', and Fernand Braudel in particular. It concentrates on the gradual social and economic developments in a society. On the concept and its use see Immanuel Wallerstein, 'Braudel on the Longue Durée: Problems of Conceptual Translation', *Review (Fernand Braudel Center)*, 32.2 (2009), p. 155–170.
[394] The project FABRICA (Faux-BouRdon Improvisation et Contrepoint mentAL) was therefore also specifically conducted as an interdisciplinary research by both historical an ethno-

elementary musical forms and procedures is eminently suited to viewing European music less as a succession of 'great composers', musical 'inventions', and clear-cut periods, than a gradual process, in which musical styles evolve from one into another.



Example 4.34 Josquin des Prez (?), *Mille regretz*, excerpt.

musicologists. For a mission statement of this project, which ran between 2009 and 2012, see <http://blogs.univ-tlse2.fr/fabrica/a-propos/> [accessed 16 August 2016].

5 Reflecting on Pedagogy

When Ernst Ferand published his *Die Improvisation in der Musik*—the first systematic modern discussion of historical improvisation—in 1938, his motivation seems to have been largely a pedagogical one. Ferand pointed to the need for a more practical and integrated form of teaching theoretical or secondary subjects in higher musical education, to mend the 'omnipresent misbalance between knowledge and ability, as well as theory and musical practice'.[395] According to Ferand such a 'practical theory education' ('praktischer Theorieunterricht') could be based on historical improvisation techniques, which, he argued, had the potential to establish a middle ground between 'abstract' musical thinking, as required in harmony and counterpoint, and 'purely motoric, thoughtless and ultimately unmusical' execution.[396]

Reading Ferand's introduction, it strikes me how many of its concerns are still valid today, some eighty years later. Much of the contents of a conservatoire 'music theory' curriculum (sight-reading, ear training, counterpoint and harmony) consists of practical skills, which historically belonged to the category of *musica practica*. However, Ferand seems to have been the first modern author fully to realise the potential of historical improvisation to move away from the deadlock of a musical education based solely on the execution and analysis of musical texts. As we have seen, this agenda is now gaining terrain, and historical improvisation has already been used successfully in some conservatoires to develop aural skills and stylistic understanding. This development is likely to gain more momentum with the greater accessibility of historical pedagogical materials, both online and in print, as well as newly devised manuals, instruction books, and even Youtube videos on the subject.[397]

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[395] '(…) allerorten bestehendes Mißverhältnis zwischen Wissen und Können, zwischen Theorie und Praxis der Musik'. Ferand, *Die Improvisation in der Musik. Eine entwicklungsgeschichtliche und psychologische Untersuchung*, p. vii. Translation by the author.

[396] 'rein motorisches, gedankenloses, und letzten Endes unmusikalisches Instrumentalspiel'. Ibid, p. viii, Translation by the author.

[397] Peter Schubert's videos on improvisation can be accessed through <https://www.youtube.com/user/peterschubertmusic> and <https://www.youtube.com/channel/UCTwjL_TQXfJS3KnynTlRpDg> [accessed 16 August 2016].

In this chapter I will reflect on the pedagogical application of historical polyphonic improvisation. First, I will provide an overview of the pedagogical materials on improvised polyphony available to date, reviewing these not primarily for their historical accuracy or scholarly basis, but for their usefulness to learn and teach improvisation. Second, I will discuss some of my own experiences in learning and teaching improvised polyphony. A short account will be given of the way I acquired fluency in these techniques, as well as how I subsequently taught them to friends and colleagues of the ensemble Diskantores, my students at the Royal Conservatoire of The Hague, and to participants of occasional workshops. I will conclude with a few thematic reflections on practical aspects of teaching improvisation, hoping to contribute to the continued discussion with my colleagues in the field, that has often been so helpful to me.

5.1 Available Pedagogical Materials

Musicians desirous to learn historical improvisation have a number of roads open to them: one is the hard way—which I have generally undertaken myself— of reading through primary sources and secondary literature before embarking on practical experiments. Another is to seek personal instruction, or—if no teacher is available—to find a manual or instruction book to learn by oneself. My starting point in investigating pedagogical publications is to see what approaches they offer, and whether I have found these useful in learning and teaching improvisation. With some regret I have decided to discuss only materials published in print, primarly due to time constraints. I am aware this entails leaving some interesting approaches unconsidered, as many teachers and musicians do not document or publish their methods, relying on time-honoured practices of oral transmission and Xerox copies instead.[398] A comprehensive history or ethnography of the modern, pedagogical revival of improvised polyphony would be a useful and worthwhile endeavour, but it goes beyond the scope of this chapter; so many talented and dedicated early musicians are teaching and experimenting with improvisation that it would be near impossible to track them all down.

It should be noted that many of the articles and books on improvised polyphony written by modern musicians are much more than pedagogical instructions: some document years of original research as well as experiments with historical improvisation techniques. Authors of practice-oriented publications on improvised polyphony often also engage in a dialogue with 'purely musicological' writing on the subject. [399] Hoping to have given due credit to these authors earlier, I will now confine myself to a discussion of the pedagogical utility of their publications, discussing them in chronological order.

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[398] Teachers who are highly esteemed among their peers, but have not published their approach are for instance Jean-Yves Haymoz (Haute École de Musique de Genève), Adam Gilbert (Thornton School of Music, University of Southern California).

[399] See for instance Ross Duffin's argumentation against Margaret Bent's ideas on *cantare super librum*, in Duffin, p. 69, n. 2.

5.1.1 Timothy McGee, 'Improvisation' (1985)

Timothy McGee includes a chapter on improvisation in his *Medieval and Renaissance Music: A Performers Guide* (1985), a clearly popularising book aimed at performers with little previous knowledge of these repertoires.[400] Like the book itself, the chapter provides a very broad overview, giving repertoire examples and practical advice on how to practice improvisation. For learning to improvise counterpoint McGee advises a trajectory along the lines of traditional first species counterpoint, providing seven 'rules of two-part counterpoint', but also emphasising the importance of internalising contrapuntal solutions to three- or four-note tenor patterns, before applying them to a whole cantus firmus.[401] The goal of these preparatory exercises, according to McGee, is to learn a 'neutral basic technique which can be expanded later and adapted to a variety of styles.'[402]

Some of the information given by McGee is outdated, such as his statement that 'imitative vocal polyphony (...) in the sixteenth century requires an extensive knowledge of counterpoint'.[403] It is now common knowledge that canons ('stretto fuga') can be improvised according to simple melodic rules.[404] A more serious problem, in my view, is that the chapter covers a rather large period of history, and fails to make a clear distinction between different style periods. One wonders if it is really possible to create a single, 'neutral' kind of counterpoint that could be modified into the variety of styles shown in McGee's examples: an English fifteenth-century carol, a keyboard setting of the *Kyrie cunctipotens* from the Codex Faenza, and a song by Guillaume de Machaut. One can conclude that McGee's chapter suffers from covering too many styles and generalising procedures of counterpoint, as if historical style were only a matter of surface decoration.

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[400] Timothy J. McGee, *Medieval and Renaissance Music: A Performer's Guide* (Toronto: University of Toronto Press, 1988), pp. 186–200.
[401] Ibid., pp. 190-196.
[402] Ibid., p. 194.
[403] Ibid., p. 187.
[404] See for instance Janin, pp. 15–24; Schubert, *Modal Counterpoint Renaissance Style. Second Edition*, pp. 156–157.

5.1.2 Margriet Tindemans, 'Improvisation & Accompaniment' (2000)

A Performer's Guide to Medieval Music (2000), edited by Ross Duffin, contains two chapters on improvisation in the 'instrumental usage' section of the book. The first of these is a chapter by the teacher, multi-instrumentalist, and longstanding member of the ensemble Sequentia, Margriet Tindemans (1951-2014).[405] A second chapter, by Rolf Mattes, devoted to improvisation and accompaniment after 1300, will not be addressed here because it focuses primarily on ornamentation and does not give practical advice on polyphonic improvisation. Tindemans begins her contribution by giving some general points of advice, such as to keep one's improvisations simple, to be deliberate and plan ahead, and to not try to be 'overly creative'.[406]

For improvising polyphony, Tindemans advises the reader to start with discant in unisons, fourths, fifths and octaves, using contrary and parallel motion.[407] The example given for this technique somewhat resembles Example 3.6, except in the use of fourths. Tindemans also advocates practicing discant in adjacent consonances centred on a fifth and mirroring each note in an axis. An interesting aspect of Tindemans's teaching is that, except on melodies in equal notes, she also advocates improvising on tenors in rhythmic modes, which creates examples resembling two-voice thirteenth-century motets. A similar technique for improvising Notre Dame-style discant clausulae has also been described by Kenneth Zuckerman (Schola Cantorum Basiliensis).[408]

In sum, Tindemans' chapter provides an excellent introduction to polyphonic improvisation in a thirteenth-century style. It may be used by singers as well, as her examples of polyphony are all based on vocal models. The general guidelines given for practising improvisation are very useful and can apply, in my view, to improvisation in any historical style. My only objection to the chapter's contents lies in its approach to hocket, which is taught by dividing a chant-melody between two different instruments. In fact, it is never the tenor

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[405] Tindemans. For an overview of Tindemans career, see Benjamin Bagby's tribute to her on the website of Sequentia <http://www.sequentia.org/news/tindemans.html> [accessed 16 August 2016].
[406] Ibid., pp. 454-455.
[407] Ibid., p. 462.
[408] Kenneth Zuckerman, 'Improvisation in der Mittelalterlichen Musik- Eine Suche nach Lernmodellen', *Basler Jahrbuch Für Historische Musikpraxis*, 7 (1983), pp. 65–83 (pp. 80–83). On my ideas for extending this idea to the fourteenth-century repertoire see Section 6.2.

that is 'hocketed' in thirteenth-century compositions, but rather the one or two added, organal parts.[409]

5.1.3 Ross Duffin, 'Contrapunctus Simplex et Diminutus' (2007)

The thirty-first edition of the *Basler Jahrbuch* contains a contribution on the subject of fifteenth-century improvised counterpoint by Ross Duffin. He speaks from thirty years of experience teaching improvised counterpoint, and has many insights to offer, some of which are highly practical in nature. Duffin starts out by explaining different types of note-against-note counterpoint in two and three voices, such as discant, different versions of fauxbourdon, and falsobordone, before treating florid types of improvisation. He argues that to progress from simple to florid improvisation it is important to get 'away from the concept of one "main' contrapuntal note moving to another', but rather to 'think of a "grid" of consonant possibilities against each note of the tenor'.[410] Cadence possibilities (tenor clausulae) should 'loom large in the improvisors' minds as places where their function and counterpoint is clearly defined'.[411] For Duffin 'the cadences are what sectionalize florid improvised pieces and give direction and function to the voices.'[412] He also makes the interesting, counterintuitive observation that it can be easier to improvise in four- and five-voice styles than in two- and three-voice ones, 'because the range of each part is more confined and contrapuntal expectations more limited'.[413]

The strength of Duffin's article lies in its inspiring tips and 'tricks of the trade' for florid improvisation. His experiences seem very much in line with Bruno Nettl's description of oral music-making as a progression from one 'point of reference' to the next, shown schematically in Figure 2.2. It is interesting that he does not take the individual note-against-note progressions as reference-points, as some other authors advice, but rather emphasises the role of the cadence to structure an improvisation. Duffin's examples of simple counterpoint

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[409] Tindemans, pp. 465–466. See Ernest H. Sanders, 'Hocket', *Grove Music Online* [accessed 16 August 2016]. The passage quoted by Sanders from the St. Emmeram anonymous also makes it clear that hockets are made 'over a tenor'.
[410] Duffin, p. 81.
[411] Ibid., p. 82.
[412] Ibid., p. 82.
[413] Ibid., p. 88.

are a little monolithic for my taste, however—especially when one compares them with repertoire examples. In general, the article does not offer advice on how to proceed from simple to florid improvisation, such as for instance a species approach, or the gradual introduction of ornaments and suspension dissonances explained in Chapter 4 of this thesis.

5.1.4 Peter Schubert, *Modal Counterpoint, Renaissance Style* (2007)

The second edition of Peter Schubert's textbook on Renaissance counterpoint contains a number of instructions for improvised exercises.[414] In the introductory note to the instructor, Schubert emphasises the didactic value of improvisation and the importance of training both the 'inner' and 'outer' ear, by singing exercises or playing them at the piano.[415] He advises, for instance, to let students propose a counterpoint to a cantus firmus fragment, have the other students sing back the solution, and evaluate it by ear. More general advice on improvisation follows in the 'introduction to improvisation' at the end of the third chapter of the book.[416] Schubert explains that 'improvising is just very fast composition', and that it is acceptable to prepare exercises mentally before singing. I will return to several other points of practical advice given by Schubert in the thematic reflections at the end of this chapter.

Schubert's book represents a notable advance over earlier counterpoint methods. While the book takes written counterpoint as a starting point, it offers many interesting tips for improvisation, and it has undoubtedly introduced improvisation to many teachers and students of counterpoint. One of Schubert's more interesting contributions is the idea of improvising with the repetition of a motif, referred to as 'contrappunto fugato' in Italian and 'pasos' in Spanish treatises: the improviser 'checks off' as many places in the cantus firmus where the motive can be placed, and improvises freely in between these.[417] The systematic progression in species towards florid counterpoint has certain

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[414] Schubert, *Modal Counterpoint Renaissance Style. Second Edition*. See pp. 40-43 (introduction and first species), p. 55 (second species), p. 75 (third species), p. 56 (fourth species), p. 101 (mixed values), p. 115 (motivic counterpoint), pp. 156-157 (canon at the fifth), pp. 190-191 (fauxbourdon) and p. 194 (parallel tenth model).
[415] Ibid., pp. xvi-xvii. For my own take using the piano, to which some teachers of early music object for reasons of temperament, see Section 5.3.2.
[416] Ibid., pp. 40-43.
[417] Ibid., p. 115.

advantages, for instance for learning to control dissonance. It is possible, however, that certain users may feel rather constricted in their attempts at improvising by a textbook that provides improvisation exercises after written ones, and gives many 'hard' and 'soft' rules for every type.

The structure of the book also causes certain simple techniques to be explained after much more difficult ones: fauxbourdon and 'stretto fuga' at the fifth, for instance, appear only after the student has presumably already mastered singing and/or writing florid counterpoint. Finally, it is not clear to me why Schubert discourages improvising in the 'parallel sixth model' (a gymel accompanied by a bassus in thirds and fifths), saying that it would be difficult to glean its 'many possible bass lines from long examination of repertoire and/or by trial and error'.[418] This type of bassus is actually very easy to improvise, as has been shown in Chapter 4. An attentive reader would of course observe that the placement of improvisation exercises in *Modal Counterpoint* is such as to make them inform the writing of exercises. This is quite reasonable for a general-use counterpoint textbook, but it comes at a price for the book's usefulness to instructors wishing to teach primarily through improvisation.

5.1.5 Alban Thomas, *Contrepoint à 2 Voix* (2011)

A series of instruction books on improvised polyphony in French is being prepared by Alban Thomas (Conservatoire Gautier d'Épinal), two volumes of which have been published so far. Both books are written in dialogue form, like Renaissance treatises, which allows Thomas to 'converse' with the reader, giving hands-on advice, and making historical digressions.[419] The second volume, dedicated to *organum duplum*, will not be considered here, as it falls largely outside of the focus of this thesis.[420] In the first volume Thomas covers two-voice counterpoint in a late fifteenth- and sixteenth-century idiom.[421] Thomas stresses that his method presents a personal approach, which is neither definitive nor

[418] Ibid., p. 192.
[419] The dialogue form of the book also has its disadvantages; it makes it difficult for the reader to glance at first sight what is being taught, having to read a substantial amount of text explaining every new element.
[420] Alban Thomas, *Organum Duplum aux 12ème et 13ème siècles*, Jouer et Chanter sur le Livre 2 (Derbamont: Association 'Musique à la Renaissance', 2014).
[421] Alban Thomas, *Contrepoint à 2 voix*, Jouer et Chanter sur le Livre 1 (Derbamont: Association 'Musique à la Renaissance', 2011).

complete, and which is intended to teach basic improvisation skills without focussing on a specific style.[422]

Similarly to the approach laid out in Chapter 4, Thomas starts his instruction from singing gymel, which is later enriched by with other intervals, and by combining one gymel with another.[423] Special attention is paid to the melodic shape of the cantus firmus, identifying its curves and proposing appropriate contrapuntal responses to them. Thomas promotes a gradual introduction of ornamental formulas rather than a comprehensive training in species counterpoint.[424] He does treat 'two notes per *tactus*' (second species) counterpoint, but explicitly identifies it as a somewhat 'unmusical' training exercise.[425] His examples of such exercises resemble those of Antonius de Leno (see Example 4.8). Towards the end of the book Thomas mentions the possibility of singing on a tenor in ternary rhythm, as well as on mensurally notated chansons.[426]

Besides some minor issues, the biggest disadvantage of Thomas's method is its approach to visualising counterpoint.[427] Instead of Guillelmus Monachus's way of visualising gymels as thirds below or above the cantus firmus (see Examples 4.1 and 4.12), Thomas proposes to read them as if they were unisons.[428] This is of course easy when one sings a part entirely in parallel thirds and sixths, but it becomes problematic when other intervals are introduced; in a gymel in upper thirds, unisons have to be visualised as lower thirds, fifths as upper thirds, and sixths—very confusingly—as fourths.[429] When changing between gymels, Thomas also advises to change visualisation, in what he terms a 'monnayage visuel'.[430] In my view, this method is not a simplification, much less

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[422] Ibid., p. 11 and 109.
[423] Ibid., pp. 41-45.
[424] Ibid., pp. 33-40 and 73-76.
[425] Ibid., pp. 77-79.
[426] Ibid., pp. 93-95 and 103-108.
[427] Thomas for instance introduces the 9-8 suspension, which is very rare in two-voice counterpoint, and perhaps is better not mentioned at all. (Ibid., p. 81). His diagram with ornamental formulas in semiminims on p. 74 could be a useful tool, but it is seems insufficiently tried-out; many of these formulas produce unwanted dissonances and parallels. I would myself refrain from writing semiminims tied to semibreves in duple time (tempus imperfectum), as such a value cannot be written in mensural notation. (Ibid., p. 37).
[428] Thomas duly mentions that this method of visualisation is not based literally on historical sources. Ibid., p. 23.
[429] Ibid., p. 23 and 41.
[430] Ibid., pp. 45-47.

an improvement of historical ways to visualise counterpoint. Finally, the book is not consistent in the kind of readership it addresses. Note-names are given in their ancient form as 'Ffaut' (f) or 'Csolfaut' (c'), but cantus firmi and examples are all given treble clef, to be transposed if necessary.[431] One would think that musicians familiar with hexachordal solmisation would be able to also read c- and F-clefs, or would at least like to see examples in the original tessitura of Renaissance music. In sum, while the book is interesting as a document of Thomas's personal practice improvising and teaching, and some valuable insights can be gained from it, it is very problematic in certain respects.

5.1.6 Barnabé Janin, *Chanter sur le Livre* (2012)

The most extensive pedagogical publication on the subject of improvised counterpoint to date is the manual *Chanter sur le livre* (2012) by Barnabé Janin.[432] This book, rather like a historical treatise, documents not just the experience of its author, but collective practices developed by the ensembles Le Chant sur le Livre and Obsidienne as well.[433] The manual is attractively laid out, with much use of colour in the text as well as the musical examples. Like Tindemans and Schubert, Janin opens with some general points of advice, including 'improvising with friends or future friends', seeking out favourable acoustics and not interrupting or commenting on the improvisation before it is finished.[434] The contrapuntal models are divided into two-, three-, four- and five-voice techniques, arranged from simple to complex. About a third of the book is taken up with 'melodies to improvise on': chants and vernacular songs, secular and devotional, as well as parts taken from polyphonic compositions, such as the songs of Gilles Binchois and the Cancionero de Palacio.

Because of the sheer size of the book and the numerous styles of improvisation it touches on, I will confine myself to commenting on its presentation of two fifteenth-century techniques. After a first chapter on improvised canons—technically not 'on the book', because improvised without

[431] Ibid., pp. 13-14.
[432] Janin, *Chanter sur le livre. Manuel pratique d'improvisation polyphonique de la Renaissance*.
[433] Janin includes his own experiences improvising with these groups as 'sources' for the contents of the manual (p. 9). The book also contains an introduction by Jean-Yves Haymoz, leader of Le Chant sur le Livre (pp. 6-7).
[434] Ibid., p. 12

cantus firmus—Janin treats the gymel.[435] He first teaches a part in thirds below the cantus firmus, explaining how they can be turned into sixths above. After introducing several possibilities for passing notes and syncopations, Janin invites the student to improvise on the tenor of an English carol.[436] It is regrettable that the examples in this chapter are based only on late fifteenth- and sixteenth-century tenors, and that—with the exception of the 'Landini cadence'—no early fifteenth-century elements are introduced, making it rather difficult for the student to approach the style of that particular genre.[437]

For three-voice fauxbourdon Janin mentions all the different options of cantus firmus placement, referring somewhat confusingly to Guillelmus's 'modus Anglicorum' as fauxbourdon 'à la française' and to the classical version of the technique with the chant in the superius as 'à l'anglaise'.[438] Janin advises using the latter for singing hymns, taking Du Fay's compositions as an example, as was done also by Peter Schubert and myself.[439] Both Janin and Schubert advocate the addition of cadences when the chant does not finish with a soprano clausula, supplying it after the original close of the phrase. This is a good way to proceed for beginners, although it must be said that for hymns without upward closes, adding a bar to every phrase can rather disturb the rhythmic flow of an improvisation.[440] Two alternatives are shown in Example 5.1: a 'plagal' fourth-leap close in the tenor and a more elegant option, which may be used by more experience improvisers. In this latter option, which can be observed in Du Fay's

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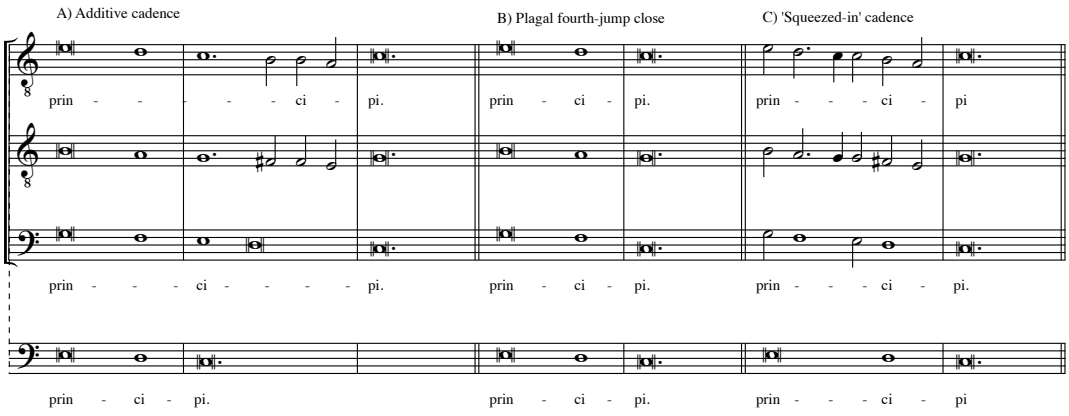
[435] Ibid., pp. 26-34
[436] Ibid., p. 31.
[437] In fact the majority of English carols mix gymel with contrary motion and include some surprising elements such as dissonant appoggiaturas and sustained fourths: see for instance Example 4.3.
[438] The naming of fauxbourdon techniques has a very confusing history. As we have seen in Chapter 4, what Guillelmus Monachus calls the 'way of the English' ('modus Anglicorum') is a technique with cantus firmus in the tenor (see Example 4.12). This use was perpetuated by writers like Bukofzer and Besseler, who referred to it as 'English discant'. English treatises, however, invariably instruct to place the chant in the middle voice in faburden. As I have argued in Chapter 4, Guillelmus's 'English' technique is virtually absent from compositions, and French composers like Du Fay and Binchois only use the technique with the chant in the upper voice.
[439] Schubert, *Modal Counterpoint Renaissance Style. Second Edition*, pp. 190–192; Berentsen, 'From Treatise to Classroom: Teaching Fifteenth-Century Improvised Counterpoint', pp. 234–237. The latter was adapted here as Section 4.2.2.
[440] A good example of such a chant is the *Te lucis* for Christmas-tide, see *Liber Hymnarius*, ed. by Abbaye Saint-Pierre de Solesmes (Solesmes, Paris, Tournai: Desclée, 1983), p. 16.

hymns, a cadence is 'squeezed in', whilst the regular rhythm of the hymn is kept intact.[441]



Example 5.1 Different ways of making a close in fauxbourdon.

Janin's manual presents Renaissance-style improvised counterpoint in the form of easily understood 'recipes', somewhat like a cookbook, using visually attractive diagrams and examples,[442] and last but not least he provides a 'starter kit' of melodies to improvise on. The value of such a book for musicians and music students can hardly be overestimated, and it is to be hoped that an English translation will soon become available, making it accessible to an even wider audience. The concerns I have voiced above are connected to a single issue: although the book aims to teach fifteenth- as well as sixteenth-century improvisation, it focuses mainly on the later, 'classical' type of counterpoint. On occasion it tends to modernise techniques and genres of the earlier fifteenth century, such as the English carol or the three-voice Burgundian chanson.[443] The book contains no contrapuntal techniques used before the generation of Du Fay,

[441] This procedure may for instance be observed in bb. 9-10, 14-15 and 18-19 of Example 4.16.
[442] For instance, Janin's presentation of 'stretto fuga' at the fifth, in the form of a simple diagram, works better than Schubert's description of it. See Janin, p. 20; Schubert, *Modal Counterpoint Renaissance Style. Second Edition*, pp. 156–157.
[443] See my remarks on the English carol above. To improvise a 'chanson bourguignonne' Janin advises the use of a principal duo in gymel, to which a 'mobile contratenor' is added using bassus and fauxbourdon contratenor formulae. See Janin, pp. 88–89. This type of contratenor is shown by Guilelmus Monachus (See Park, p. 68 [transcr. 186]), but is only very rarely found in the songs of Binchois for instance. These show a very complex type of voice leading, with contrary motion between all the parts. See *Die Chansons von Gilles Binchois*, Musikalische Denkmäler 2 (Mainz: B. Schott's Söhne, 1957). The notable exception is *Je ne fais toujours* (no. 19, p. 17), in which the upper voices run in sixths in the first two phrases, with a contratenor in thirds and fifths below.

and the earliest treatises cited in its bibliography date from the 1470s.[444] These comments serve to remind us that, as Janin states himself, his book is the 'effort of a musician of the twenty-first century to help other musicians of the twenty-first century',[445] and however well-informed and extensive such efforts may be, they should never be taken as definitive or complete.

5.1.7 Summary

The publications discussed above can all teach us something about learning or teaching improvised polyphony. For a course in Renaissance counterpoint one has the choice between the books of Schubert and Janin, the first focusing primarily on writing, the second almost exclusively on improvisation. Duffin's article, which is of course not a handbook, can be useful to gain ideas for more complex types of singing *super librum* suitable for advanced students. For the earlier fifteenth and fourteenth centuries, no such practical publications exist to date, a lacuna which Chapters 3 and 4 of this thesis may help to fill. By contrast, several approaches to teaching *Ars Antiqua*-style improvisation exist, two of which, by Tindemans and Thomas, are also accessible in print.[446] While I hope that this survey will stimulate the reader to discover and experiment with the methods laid out in these publications, I would also like to stress the importance of a continued dialogue with the historical materials themselves. These may perhaps not be as easily accessible and understood as modern articles and textbooks, but, as has been demonstrated in the foregoing chapters, they are veritable treasure-troves that still hold many important insights for us as modern musicians.

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[444] '(…) la tentative d'un musician du 21ème siècle pour aider d'autres musiciens du 21ème siècle (…)', Janin, p. 190.
[445] Ibid., p. 11.
[446] Le Chant sur le Livre have also performed beautiful improvised organa in the style of the Notre-Dame school. One of its members, Raphaël Picazos, gives courses about this as well. See <http://www.cmm-paris.fr/en/stages-et-formations/improvisation-organum-13e-siecle-2015-2016> [accessed 16 August 2016].

5.2 Pedagogical Experiences

In this section I will reflect on my own experiences of learning, experimenting with, and teaching improvised polyphony. This is not to blow my own horn as a teacher or improviser, but because, in terms of the current research, I have—in a sense—become my own 'experimental subject'. It would be deceptive to claim impassive objectivity and complete accuracy in such an autobiographical endeavour. One may remember fondly, for instance, a lesson or session in which everything 'fell into place', giving the participants a kind of 'Eureka' experience, but quickly forget ones that consisted of (seemingly) fruitless hard work. When writing up a pedagogical method one also wants to present a successful approach, fit to be recommended to other practitioners, focusing on what 'worked' rather than what did not. Nevertheless, I will attempt to give a truthful account of the development of my teaching, drawing on documentation where available,[447] and provide the reader with both positive and negative results. The latter can often be as instructive as the former.

My teaching experience dates back to September 2011, when—after completing my Masters degree in composition—I was invited to take over the counterpoint class of my former teacher Cornelis de Bondt at the Royal Conservatoire of The Hague. Since this time my teaching activities at the Conservatoire have gradually expanded, and now include a two-year counterpoint course for composition students, a three-year vocal and aural skills course for early music students, and an elective subject on the performance of Franco-Flemish polyphony. These different courses have required a variety of ways of incorporating polyphonic improvisation. I have also had the pleasure of teaching workshops to groups of musicians, teachers and music students, both in the Netherlands and abroad. My account will thus be divided in three parts, focussing, first, on my own learning experiences, second, on my experiences teaching courses in tertiary-level musical education and, third, on shorter, occasional workshops.

[447] Such documentation includes, but is not limited to emails, calendar books, teaching notes and occasional recordings of improvisation sessions with the ensemble Diskantores.

5.2.1 (Auto)didactic Experiences and Experiments

Along with many music students, my first encounter with Renaissance polyphony came through counterpoint lessons, taught in species, and entirely in writing. Although I doubtlessly learned many skills in these lessons that still serve me well today, they did not inspire the love I would later develop for Renaissance music, through performing it from original notation. My interest in the music of the Middle Ages was first aroused by a series of lectures given by a fellow-student, Sasha Zamler-Carhart, as part of a music aesthetics course in 2007. In the following years, Zamler-Carhart taught a number of medieval music-related subjects at the Royal Conservatoire in The Hague, which I attended with great pleasure and interest. At this time I also developed an interest in singing and early music performance, taking voice lessons and participating in various projects and master-classes of the early music department of the Conservatoire.[448]

Being a composer, I was interested not only in the performance aspects of early music, but in its compositional and notational components as well. I therefore joined a course called 'Atelier de Contrepoint du XVe siècle', taught by Gérard Geay (em. Conservatoire National Supérieur de Musique et de Danse, Lyon) at the Fondation Royaumont in 2010. This course was an eye-opener for me in many respects, including the importance of improvisation for understanding historical polyphony. I still remember vividly improvising fauxbourdons with my fellow students in the beautiful, reverberant rooms of that thirteenth-century abbey.[449] Inspired by what I had learned in Royaumont, I decided to carry on singing fifteenth-century style improvised polyphony together with two friends and colleagues of the Ascoli Ensemble, Alejandra Wayar Soux (mezzo-soprano) and Oscar Verhaar (countertenor).

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[448] Formative experiences in this area also included master classes given by early music specialists such as Eric Mentzel (Sequentia), Marcel Pérès (Ensemble Organum), Evelyn Tubb (The Consort of Musicke), Corina Marti (La Morra) and Jill Feldman (Mala Punica). A rather special experience during my time as a student at the Royal Conservatoire was a project about *Ars Nova* polyphony in 2009. This project also lead to the foundation of The Ascoli Ensemble, directed by Zamler-Carhart, which remains active to this day.

[449] The Fondation Royaumont continues to offer excellent courses in a number of areas to young artists, but unfortunately no longer offers one in fifteenth-century counterpoint. See <http://www.royaumont.com/fr/les-residences> [accessed 16 August 2016].

After obtaining my Masters degree in 2011, I decided to further pursue my investigations into improvised polyphony in the form of a doctoral research.[450] The practical part of this research has been carried out with a changing group of collaborators, whose latest incarnation is the Ensemble Diskantores.[451] Of course one needs to learn something before being able to teach it to others, and because I had to instruct my fellow singers, I tried to be as well prepared as possible. I did this by trying out techniques on a keyboard instrument, or by singing against a played or pre-recorded cantus firmus. On occasion I also prepared myself by writing short compositions of a type I deemed improvisable, based on historical examples. These autodidactic experiences have been an important component of my learning process, especially for the 'newly discovered' techniques described in Chapter 3. Unfortunately, it is much easier to 'step into' an existing oral tradition, learning from a musician familiar with a type of improvisation, than to establish such a tradition oneself. The feedback from my fellow singers has been vital to me in those cases; not being encumbered with an overload of treatise texts and musical examples, they have grasped the essence of certain techniques much more quickly than I did.

5.2.2 Courses at a Tertiary Level

My teaching activity at the Royal Conservatoire started with a counterpoint course for first- and second-year bachelor students of composition in 2011. The first year of this course was rather memorable, not because the results were exceptional but because of the enthusiasm of the students, many of whom joined from later years of the programme as well as from the early music, vocal, and jazz departments. Another sympathetic aspect of the course was the participation of Cornelis de Bondt, who attended the lessons and gave me some invaluable hands-on advice about teaching. We finished the course with a presentation in a small chapel, in which the students performed chant, simple polyphonic compositions and improvised fauxbourdons. I still find that my

[450] My master research presentation, titled 'Strategies for Polyphonic Improvisation and the Reconstruction of Polyphonic Fragments', was awarded the Royal Conservatoire's prize for best research presentation in the 2010-2011 academic term.
[451] For an overview of the work of the Diskantores on fourteenth-century discant see the improvisation sections of Chapter 3.

students from the composition department make up for what they lack in vocal, and sometimes aural skills with a genuine interest in how music 'works' and an eagerness to discover new repertoires.[452]

The course has changed considerably over the years, and I tend to take a more rigorous approach now, singing and writing species counterpoint as well as improvising organum and fauxbourdons. Two of the aspects I have dropped are the reading of mensural notation and hexachordal solmisation, which are too time-consuming and too little relevant for 'non-specialists'. What I retain from my original approach is a focus on the 'evolution of musical language', starting from chant and early organum, moving until the early fifteenth century in the first year, and devoting the second year to Renaissance counterpoint. Written exercises take the form of 'cleaned-up' versions of improvisations or 'forgeries', based as closely as possible on historical examples. In the last part of the second year I hand out 'Lückentexte' of sixteenth-century bicinia, in which I erase part of the music, for the student to 'reconstruct' and later compare to the original.[453] I have found this a very fruitful way to let students interact with historical materials, and learn the craft of writing florid, imitative counterpoint directly from the Renaissance masters themselves.

Together with my colleague Isaac Alonso de Molina, I was invited in 2014 to develop a new solfège and aural skills course for the bachelor students of the Conservatoire's early music department. This three-year programme, called Musica Practica, teaches sight-reading, ear-training, and improvisation through a variety of historically informed approaches. For the first year of the course we decided on a 'classical' sixteenth-century approach, teaching *cantus planus* (plainchant), *cantus figuralis* (mensural polyphony) and *contrapunctus.* Alonso de Molina produced a useful guide on sixteenth-century style hexachordal solmisation, including pictures of the Guidonian hand, a step-by-step explanation

[452] An aspect that invariably catches their attention, for instance, is the contrapuntal function of non-tempered intervals, such as the 'consonant' major seconds (9:8) used in parallel in Guidonian organum, and the 'dissonant' Pythagorean major third, or ditone (81:64) used in fourteenth-century music.
[453] I was inspired to this approach by Olivier Trachier's edition of 'Lückentexte' of Lassus's bicinia. See Olivier Trachier, *Lassus Cantiones Duûm Vocum: Textes Pédagogiques* (Paris: Éditions Durand, 1999).

of the different mutations, and many exercises.[454] My contribution to our materials consisted of a collection of simple mensural melodies to sight-read and improvise on, as well as a short beginner's guide to Renaissance counterpoint and improvisation, including canons, four-part fauxbourdons, as well as first- and second-species counterpoint.[455]

The course was something of a mixed success in the first year, and we decided on a more rigorous approach, focussing on interval training, solmisation and singing plainchant. This led to a considerable improvement in the students performance, enabling them to grasp better the rudiments of both counterpoint and mensural notation. Furthermore, we decided to split the course into a first semester on Renaissance and a second on Baroque music, to harmonise better with the rest of the students' curriculum. Materials we used included the instruction on seven-note, 'moveable do' solfa from Michel Pignolet de Monteclair's *Principes de musique* (1736) and the first part of the collection *Les Solfèges d'Italie* (1778). This part of the course was probably as instructive for me as for the students, for I had to prepare myself to teach a repertoire I had only been superficially acquainted with before, going directly to the sources.[456] On the other hand, the musicianship skills I taught were very similar to those of my lessons on music before 1600: reading from C-clefs, developing relative pitch, intonation, basic vocal technique and ensemble singing. The third year of the course, to be implemented in the 2016-2017 academic term, will be devoted primarily to medieval music, and I hope to be able to put to practical use the techniques and examples discussed in Chapter 3.

Finally, I have been instrumental in creating the elective subject Franco-Flemish Polyphony from Original Sources, which is organised as a collaboration between the Royal Conservatoire and the Alamire Foundation (Katholieke Universiteit Leuven) and taught by Stratton Bull (Alamire Foundation, Cappella

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[454] Isaac Alonso de Molina, *Basic Solmisation* (Unpublished, 2014).
[455] Niels Berentsen, *Renaissance Counterpoint and Improvisation* (Unpublished, 2015).
[456] Of particular interest to me were Monteclair's instruction to sing 'agréments' on the same solmisation syllable as the main note, which obliges the singer to differentiate between 'essential' and ornamental notes (see Monteclair, *Principes de Musique*, p. 6). For the singing of the accompanied *solfèges*, I had to brush up on my continuo-playing and transposition skills, as these exercises are usually written for sopranos, and much too high for most of my students.

Pratensis), Isaac Alonso de Molina, and myself.[457] The primary focus of the course is the performance of late fifteenth- and early sixteenth-century a capella polyphony from original notation. Besides instruction in reading mensural notation and ensemble coaching, we have, on occasion, introduced improvisation exercises as well. I have found that such exercises can help performers to listen better to other parts while singing their own. The compositions we studied often contained contrapuntal techniques that students could learn to recognise by ear (as I have argued for Example 4.34 as well). Some aspects of my counterpoint teaching could even be used as warming-up exercises, such as for instance the 'consonance drill' exercise shown in Example 2, which is very useful for training to sing intervals in just intonation, or by singing a canon after one of the teachers.

Table 5.1 Rehearsal of the Franco-Flemish Polyphony course, 25/5/2016 (photo by Maria Bayley).

[457] <http://alamirefoundation.org/en/activities/petrus-alamire-and-his-musical-universe> [accessed 16 August 2016].

5.2.3 Workshops

My first experience teaching improvised counterpoint in the form of a workshop was a remarkable one. I was invited, through the intervention of Gérard Geay, to speak and lead a workshop at the Russian Gnessin's Academy of Music (Moscow) in October 2012, within the framework of a conference called 'Musical Education in the Context of Culture'. On the first day of the conference, I delivered a short lecture, in French, with Prof. Zoya Ivanovna Glyadechkina, who invited me to the Gnessin's Academy, providing a Russian translation.[458] After attending some of the other lectures, of which I understood very little, I was introduced to the choral conducting students who had been selected for my workshop about fauxbourdon. A few of the students, who came from all over the Russian Federation, understood English, and with their help I managed to demonstrate the rudiments of singing fauxbourdon. My choice of cantus firmus proved slightly unfortunate, as the students—accustomed to 'fixed do' solfa— mistook Phrygian for e-minor. Apart from this, I was very impressed, not only with the level of aural control and the quality of singing, which— perhaps surprisingly—was very 'straight', but also by the enthusiasm of the students for a repertoire that was entirely new to them. Prof. Glyadechkina's fear that they would not be able to sing without a written-out score proved quite unfounded, and in the end she was very happy with the result.[459]

Further workshops to music students were given in 2013, at the Israel Conservatory of Music (Tel-Aviv) and at the Conservatory of Amsterdam in 2014. I also have happy memories of the workshops on improvisation I taught at the Kodály Institute of the Liszt Ferenc Academy of Music (Kecskemét, Hungary) in 2015. The students of the Institute come from all over the world, most of them specifically to learn the 'Kodály method' and train as music educators. In a sense, this made them ideal recipients of this kind of teaching, and they were very

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[458] The French text of the lecture can be accessed through <https://www.academia.edu/3698301/Enseigner_le_Fauxbourdon> [accessed 16 August 2016]. The Russian translation was published as Н. Берентсен, 'Обучение Фобурдону', in *Музыкальное Образование В Контексте Культуры: Вопросы Теории, Истории И Методологии* (Moscow: Российская академия музыки имени Гнесиных, 2013), pp. 56–61.

[459] I was saddened to learn that Prof. Glyadechkina, a tireless researcher and devoted instructor, passed away in 2014. Some of her writings on French Baroque music and a short biography, in French and Russian, are available in З Глядешкина / Zoïa Gliadechkina, *Теоретические Проблемы Музыки Французского Барокко / Problèmes Théoriques de la Musique Baroque Française.* (Moscow: ЛитРес, 2013).

enthusiastic about trying out the techniques I presented. The teachers of the Institute also enjoyed participating in these workshops, immediately integrating elements of their own pedagogy, such as the Curwen hand signs, into the exercises. As at the Gnessin's Academy, I very much enjoyed sitting in on the lessons at the Kodály Institute, which gave me valuable ideas to enrich my own pedagogical practice.

A bit closer to home, I have been involved in the project 'Connect II – Inner voicing distant touch' organised by Musica, a Flemish organisation dedicated to musical education. The project aims to introduce music teachers to different approaches to polyphony, including improvisation, creating new teaching methods for primary musical education.[460] So far, I have taught two workshops as part of 'Connect II', a first at the House of Polyphony (Leuven) in 2014 and a second at the Stedelijke Academie Borgerhout (Antwerpen) in 2016. I focussed on simple techniques in these workshops (discant in adjacent consonances, gymel and three- and four-voice fauxbourdon) and the participants felt sufficiently secure to further experiment with these without my assistance. What I enjoyed especially in these encounters were discussions with the participants about the pedagogical utility of improvisation and the importance of singing in early musical development.

5.2.4 Summary

The courses described here have been concerned not with teaching 'knowing that' but rather 'knowing how'. I have found it essential, therefore, to acquire a certain level of fluency in improvisation myself before being able to teach even the basics to others. I have also encountered a great variety of pedagogical situations: in some cases I would teach a group of students weekly over two or three years, in others I only had an afternoon to introduce them to my ideas. Improvised polyphony can be successfully used both in workshops and long-term courses, but these do require a very different kind of approach. Whereas in the former one may wish to focus on a few easily understood techniques, in the latter one can venture into more skilled and difficult procedures as well.

[460] For more information on this project (in Dutch), see <http://www.musica.be/nl/connect-ii-inner-voicing-distant-touch> [accessed 16 August 2016]. A publication in English and Dutch, documenting the approach of Connect II, will be published at a later date.

Furthermore, I found that I need different ways of teaching future early music and 'other' students. The 'specialists' can be introduced to improvised polyphony embedded in its original 'biotope' of chant, hexachordal solmisation and mensural notation. Improvising polyphony can also be beneficial and interesting for 'non-specialists', but for those one has to remove certain obstacles.

5.3 Thematic Reflections

This section will be devoted to five specific, practical issues concerning the teaching of polyphonic improvisation; the structuring of a curriculum for improvisation; the issue of singing versus using instruments; the role of visualisation and the cantus firmus; the use of solmisation, vocalisation and text; and finally, the approach to historical style in the classroom. The aim here is not to attempt a definitive answer to these issues, which would be presumptuous as well as impossible. Rather, I will show how I have dealt with them in different contexts, and compare my own approach with those of the publications discussed before. These are topics intimately connected with the personal artistry of the teacher, and, as we will see, different authors advocate different approaches to them.

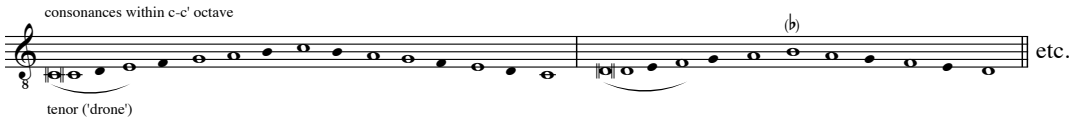
5.3.1 Structuring a Curriculum

The first considerations in designing a course-curriculum should be the type of student the course is directed at, what one needs to achieve, and how much time one has available. For improvised polyphony it is particularly important to estimate the level of the students' aural and vocal skills and how much time there is for concentrated practice in small groups. It is also important to consider the relation between improvisation and the other elements in a course. In a performance course on Renaissance or medieval music, improvisation can be used to contextualise the repertoire, but should not detract from the lesson's main aim. For such a course, I recommend short, focussed exercises, featuring a technique that can be immediately recognised in a piece being studied. In a counterpoint course, one has to consider whether the ultimate goal is for the student to gain fluency in improvising or whether improvisations are intended to inform the writing of exercises. In the latter case, one should obviously devote more time to writing, and more to singing in the former.

One of the questions I have asked myself, particularly for teaching Renaissance counterpoint, is whether to use species counterpoint or to teach according to 'recipes' such as gymel, fauxbourdon and canons, which are easy enough to learn and give immediate satisfaction. My early training in species

counterpoint left me with a slight distaste for this method, especially because in its traditional form it is so much concerned with what one is not allowed to do rather than what one might or could do. A closer look at the early, pre-Fuxian history of species counterpoint has convinced me, however, that it can also be used to train quick thinking and navigating the 'network' of contrapuntal possibilities.

I begin such exercises not with note-against-note progressions, but with a 'consonance drill' exercise, inspired by the consonance tables discussed in Section 2.2.2. This exercise involves singing and memorising consonances within a defined range—an octave or a hexachord—above a held tenor-note ('drone'). As shown in Example 5.2, the student(s) doing the exercise can sing a scale, holding notes consonant with the tenor slightly longer, and treating the dissonances as passing notes. (The latter can be eliminated at a later stage to practice oblique motion). Once students can 'rattle off' this exercise quickly and automatically, I progress to the first species exercises recommended by Peter Schubert.[461] In this way, it is also clear to students that these are training-exercises aimed at creating florid counterpoint, and do not constitute an end in themselves.



Example 5.2 'Consonance drill' exercise.

My improvisation teaching, however, remains very much connected to improvisation models, because with these one can provide clear, positive instructions as well as examples to imitate. For Renaissance counterpoint, I combine the techniques discussed in Chapter 4 and 'stretto fuga', with exercises in first and second species. If students show enough proficiency in these, we proceed to more sophisticated types of improvisation, as discussed by Duffin and

[461] See Schubert, *Modal Counterpoint Renaissance Style. Second Edition*, pp. 28–29 and 45–47.

Janin, such as florid counterpoint or canons above a cantus firmus.[462] The balance between 'recipes' and 'training exercises' needs to be assessed in every particular context, but it is my experience that for short workshops, or when working with students with limited aural and vocal skills, it is better to focus on simple, clearly defined techniques, which may motivate them to continue improvising instead of frustrating them.

5.3.2 Singing and Playing

As we have seen, pedagogical publications propose different ways of practising polyphonic improvisation, either vocally, instrumentally, or both. Tindemans and McGee clearly write for instrumentalists, while Schubert and Janin present vocal approaches. Schubert stresses the importance of singing, primarily for its benefits to ear training, and advises students to practice their counterpoint exercises playing one part on an instrument while singing the other.[463] Another option for practicing alone, mentioned by McGee, is the playing (or presumably singing) of exercises above pre-recorded cantus firmi.[464] Janin's manual focuses entirely on communal singing.[465] He does invite the reader to adapt the vocal models presented in the book to instrumental improvisation, but clearly has either ensemble-playing or improvisation on a polyphonic instrument in mind.[466]

I tend to agree with Schubert and Janin that a vocal approach is the best starting point for improvisation, even if one is teaching instrumentalists. Vocal performance ensures that the melodies and intervals produces are 'heard' in the mind before they are executed. (Reliance to the 'inner ear' is the reason why sight-reading is traditionally taught by singing as well.) On the other hand, I do agree with Schubert that the linking of musical imagination to the 'physical referent' of an instrument, if perhaps not the instrument itself, can be very

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[462] See Duffin, p. 82–89. For instruction on canons above and below a cantus firmus see Janin, pp. 62–66. In fact, as Duffin also argues, such techniques may also feel like 'tricks' to an experienced improviser, and nothing separates them from the simpler improvisation models in principle.
[463] Schubert, *Modal Counterpoint Renaissance Style. Second Edition*, pp. xii and xvii.
[464] McGee, *Medieval and Renaissance Music: A Performer's Guide*, p. 194.
[465] Janin, p. 6.
[466] Ibid., p. 11.

helpful for students.[467] (I still catch myself 'playing the piano' to imagine a complex polyphonic result, for instance). Apart from such personal 'crutches', I have found it helpful to let students use the Guidonian hand. Schubert is correct in stating that 'there is no "place" in the throat where a *D* is', but I am certain the Guidonian hand would have given historical singers a sense of 'place' for every note very similar to an instrument. Some of my students have become so adept at using the Guidonian hand in singing solmisation exercises and chant that they continue using it for sight-reading 'solfeggi' and improvising counterpoint.

An obvious disadvantage of a purely vocal approach to improvising polyphony is that one always needs someone to sing with. In our individualised society this is sometimes difficult to organise, and playing a cantus firmus on an instrument or an audio device can offer reasonable alternatives to practise at home. The use of recorded cantus firmi, however, has severe disadvantages: it is very difficult to 'sing together' with a recording of long, held notes without the presence of a clear pulse, and it can be difficult to start anywhere else but at the beginning of the recording.[468] Singing while playing the cantus firmus on an instrument works much better in these respects. [469] One disadvantage, however, is that one will often have to transpose cantus firmi, and some students will find it difficult to play in one key and imagine counterpoint in another. Another issue is of practising with an instrument is of course that of temperament, especially in the case of the piano. Practicing with an instrument in equal temperament is preferable to not practicing at all, but one needs to be aware of the difference between pure and tempered intervals, and refrain from 'checking' the notes of the counterpoint on the instrument.

Ultimately, playing and singing cannot be a substitute for collective vocal practice: there is no way to simulate the subtle mutual adjustments of intonation, interpersonal communication, and the pleasure of improvising together. While I encourage students practice with an instrument at home, in class I always insist

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[467] Schubert, *Modal Counterpoint Renaissance Style. Second Edition*, p. 41.
[468] One can of course use a metronome or click-track in the recording, but I have found this very distracting and unmusical myself, and would not recommend it.
[469] Best, in my experience, are instruments that can produce a sustained pitch and which do not hinder the singing, such as an (electronic or digital) organ, a piano, or a string instrument played seated, such as a cello or a viola da gamba. Plucked string instruments like the lute or guitar, eminently suited to accompany oneself, may require playing repeated notes —for instance twice every *tactus*—due to their limited sustain.

on vocal practice. This work can not be separated from teaching (basic) vocal technique and ensemble singing as well. One of my pedagogical maxims is that a confidently sung wrong note is preferable to a badly executed 'right' one, because one may not even be able to say of the latter whether it is correct or not. This is why I tend start my lessons with some kind of vocal warm-up, singing scales the 'consonance drill' exercise, as well as practicing the *cantus prius factus* before improvising against it. I also stress that the cantus firmus should not degenerate into a 'cantus infirmus', and that it is the responsibility of the singer(s) of the tenor to give the improviser a solid point of reference, both in pitch and in rhythm. As such, breathing properly, singing stably, healthily and in reasonably tune, all are an integral part of my approach.

5.3.3 Visualisation and the Cantus Firmus

Most types of medieval and Renaissance improvised polyphony are based on written cantus firmi, which provide an important visual 'support' for improvisation, from where the expression *cantare super librum*. As has been explained in the preceding chapters, an added part can actually be 'read into' the staff of the cantus firmus.[470] This raises the question whether these methods can be useful to modern students of improvised polyphony and whether we perforce need to use cantus firmi in their original notation. Could they work also on melodies notated in our usual 'modern' clefs? One may also ask if these historical ways of visualising cannot simply be substituted by skills we already possess as modern musicians.

As I have explained in Chapters 3 and 4, visualisation forms an important element of the way I practice and teach improvised polyphony. I have not used the complete system of the English 'sights', but only the 'treble sight'. In contrast to mental transpositions in fifths and fourths, an octave transposition allows one to visualise the correct intervals, as long as one takes into account the inversion of fifths and fourths.[471] This method works especially well for players of melodic instruments and singers who are not used to imagine widely spaced intervals, either in a score or on their instrument. For keyboard players the mental map of

[470] This process is referred to in the historical treatises as 'sighting' or *contrapunctus visus*. See Section 4.1.1.
[471] See Example 3.20.

the keyboard often suffices, but I also encourage them to 'abbreviate' to intervals within the staff, especially when non-standard clefs are being used.

This brings me to the issue of the notation of the *cantus prius factus* itself.[472] As with all the issues presented in this chapter, the choice of notation for cantus firmi should be based on the students' prior reading skills and the overall curriculum of the course. If one includes an introduction to mensural notation or the practice of chant, it is worthwhile to use melodies in original notation, either from facsimile or in diplomatic transcription. As I have argued in Section 4.1.1. such melodies have the advantage of fitting neatly within the staff, which makes visualisation ('sighting') easy. If one wants to teach improvisation in a 'general' solfège or ear training class, it may be wise to use melodies in treble and bass clefs in spite of this, because the unfamiliar c-clefs may cancel out this advantage. I generally abstain from using the *Graduale Triplex*, because the Laon and St. Gall neumes, which are not useful for my purposes, clog up the staff and make visualisation difficult. As an alternative, I use either home-made transcriptions in whatever format I find useful, or eighteenth- and nineteenth-century chant editions.[473] Producing my own transcriptions with notation software enables me to convert melodies into different formats, using different clefs or levels of reduction suitable for different types of courses.

As mentioned previously, I find it most productive to let singers improvise on plainchants they already know. Because there is less risk of failure, they are able to make more variations, explore different routes, make cadences in different places, etc. Having singers sing counterpoint to one verse of a strophic song or chant each creates a very helpful process of mutual imitation and emulation. The group Le Chant sur le Livre has shown that with experience one can learn to sing counterpoint even on unknown cantus firmi. However, I think it is rather unlikely that Renaissance or medieval musicians would ever have sung counterpoint to hitherto unknown chants, because of their daily and

[472] The pedagogical publications discussed in this chapter take different approaches in this regard: McGee and Thomas exclusively use the usual, 'modern' clefs (G2 and F4), whereas Janin and Schubert occasionally use C-clefs as well. From these publications, *Chanter sur le Livre* is the only one to present plainchants notated in square notation. See Janin, pp. 128-140.
[473] Such editions, many of which can be found online, tend to use only one or two shapes for notes, and ligatures can be read from left to right, which is quite useful when visualising a counterpoint. Students sometimes find the *Graduale Triplex*'s notation confusing, also in this respect, forgetting which note of a *podatus* to sing first, for instance.

life-long practice of chant. Using an unknown or newly composed cantus firmus may show an 'unbelieving' audience that the music is in fact created on the spot, but I do not think it is useful in a pedagogical setting.

5.3.4 Lyrics, Solmisation and Vocalisation

An issue I have struggled with slightly is whether to have students improvise vocalising, using solmisation, or singing on text. My ultimate goal is always to have students sing with the words, because whether one is using a secular song or a plainchant as *cantus prius factus*, understanding the syntactic structure of the text are indispensible for creating a second voice. When improvising on hymns, for instance, it is vital that students understand the prosody and form of the poetry, in order to perform the rhythm correctly and to produce cadences in the right places. Once students have figured out the first verse of a song or strophic chant, it becomes much easier to perform the other verses, which is quite rewarding. It is often profitable to provide a translation or summary of the lyrics sung, and to briefly explain their cultural-historical background, be it courtly or religious.[474] This tends to help students to store the tunes in memory, and to situate the repertoire under discussion historically and literarily as well as musically.[475]

Even though singing on text is my final aim, I have found that most students will require solmised or vocalised training exercises and 'trial-runs' before being able to sing with lyrics. Some students prefer vocalising on a vowel to singing on solfa, relying on the type of physical reflexes discussed previously, or simply because it is not their 'native' way to sight-read. This may be allowed, provided that the singing is solid and secure. However, for students who have not acquired enough fluency in sight-reading, or have trouble pitching melodic and harmonic intervals, solmisation should—in my opinion—remain part of the practice. On the other hand, I have also found that vocalisation can be a good way to get students to sing in tune and produce a homogenous sound as an

[474] One may even pay attention to this aspect in the selection of cantus firmi. For instance, I use a lot of communions, not only because they are short, but because they often contain biblical quotations, such as the sayings of Christ, that some students are already familiar with.
[475] For the fifteenth century, one may sing for instance songs related to the Hundred Years' War, such as *L'homme armé*, the Agincourt Carol (*Deo gracias Anglia*) or *Le roy engloys* from the Bayeux Manuscript.

ensemble.[476] (This is especially helpful in three- and four-voice textures). Typically, after singing a piece or an improvisation on solmisation syllables, I have it sung again, all on the same vowel, before introducing the text.

This brings me to the issue of solmisation syllables, and which kind of solmisation—historical or modern—is most suitable for learning to improvise polyphonically. After all, it is clear that our medieval and Renaissance counterparts thought, created and experienced polyphony through the *voces musicales*, even long after their training in sight-reading would have been completed.[477] The version of hexachordal solmisation most practiced today is a slightly simplified, sixteenth-century system, found in treatises such as Adam Gumpelzhaimer's *Compendium musicae* (1591) and promoted in Anne Smith's *The Performance of 16th-Century Music* (2011).[478] I have found this system easy to use and pedagogically beneficial for teaching how to sight-read Renaissance music, but—strictly speaking—it is anachronistic to any music written before ca. 1520. One can of course try to be as 'historically informed' as possible and use a type of solmisation coeval to the music one is studying. This has certain benefits, but for improvisation, which, even more than sight-reading, relies on quick reflexes, it may not be the right approach. I have found in practice that, unless a student is well versed in hexachordal solmisation already, it does not actually help to use it while improvising.[479]

What are the advantages and disadvantages the more current solfa systems in use today for singing modal music? As noted by Peter Schubert, a version of 'moveable do' in which the *finalis* of every mode is called 'do', would

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[476] Especially so-called close vowels, such as [i], [u] and [y], are very suitable for this purpose, because they are sonorous and overtone-rich, and produce an advantageous position of the tongue for singing.

[477] Several types of improvised polyphony were intrinsically linked to hexachordal solmisation: the Vatican Organum Treatise specifies its tenor movements in solmisation syllables. Syllables are also used in teaching, especially in the tradition of the Italian *regola del grado*. In Renaissance counterpoint, the improvisation of a canon at the fourth or fifth, sung with the same *voces*, or the transposition and permutation of repeated motives, such as the famous 'la sol fa re mi' theme.

[478] Anne Smith, *The Performance of 16th-Century Music: Learning from the Theorists* (Oxford, New York: Oxford University Press, 2011), pp. 20–54. In this system mutations are sung only with 're' and 'la', while earlier authors, such as Franchinus Gaffurius, give mutations with all the other *voces* as well. Also unlike the late sixteenth-century theorists, Gaffurius teaches mutations between the *hexachordum durum* and *molle*. See Young, pp. 25–36.

[479] It is noteworthy that, with the exception of Thomas, none of the authors of the pedagogical publications discussed in this chapter promote the use of hexachordal solmisation for improvisation.

be utterly nonsensical.[480] I would also argue against the method, sometimes used in 'moveable do' solfège, of singing the modes as inflected versions of major and minor, with all *finales* being called either 'do' or 'la'.[481] This is not only historically deceptive, but it fails to make use of the normal diatonic half-steps, and turns certain modal degrees into 'accidentals'. However, unlike Schubert, I am of the opinion that that 'fixed do' solfa also has disadvantages: students using it, for instance, tend to lose the automatism of singing a half-step between 'mi' and 'fa'. 'Fixed-do' solfa also reinforces a defined pitch standard, and its users may not develop sufficient relative hearing to be able to transpose cantus firmi or adapt to the usual pitch-shifts of a capella singing.

If one uses solfa to teach improvisation, one should use a system that is clear and easy to use for all the participants. If it is necessary to use seven-note solfa, I would advocate an approach that—like medieval and Renaissance solmisations—stresses intervallic relations rather than absolute or fixed pitches. (This is as helpful for learning to pitch melodic intervals correctly as it is for singing them in polyphony). Such a system would come down to a kind of 'fixed but moveable do', in which syllables do not represent an absolute pitch, but in which one does use a different syllable for every modal final (e.g. 're' for Dorian and 'mi' for Phrygian).[482] In this way, one can even use some of the historical 'solmisation tricks'. As shown in Example 5.3, one can sing the contratenor and a superius of a fauxbourdon, or the *dux* and *comes* of a canon at the fifth or fourth, on the same solfa, and even imagine them on the same pitch. Finally, the Guidonian hand, even though it has historically always been combined with hexachordal solmisation, can in fact just as easily be used while vocalising, singing on text, or using seven-note solfa.[483]

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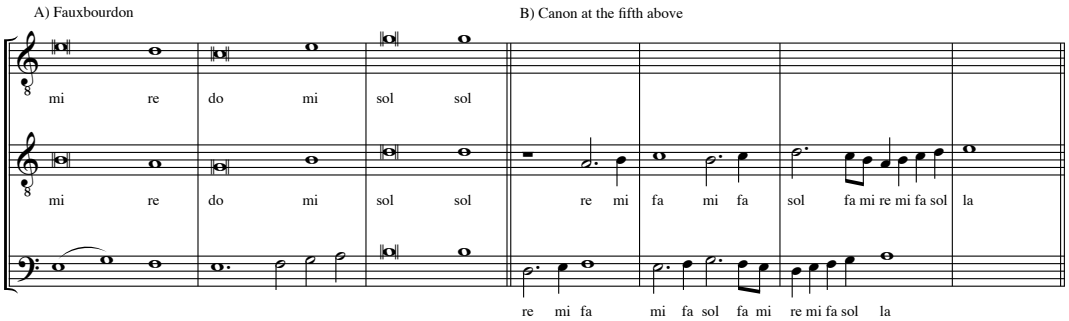
[480] Schubert, *Modal Counterpoint Renaissance Style. Second Edition*, p. 42. This approach would expand the idea of 'do-based minor', using – for instance – 'sol' for every fifth degree. I fail to see the usefulness of this kind of solfa even for tonal music.

[481] See for instance Mícheál Houlahan and Philip Tacka, Kodály Today: A Cognitive Approach to Elementary Music Education (Oxford, New York: Oxford University Press, 2015), pp. 69–71.

[482] For singing B-flat and *musica ficta*, one may either use the 'normal' note-names, as in 'fixed do', or use the Kodály method's modification of the syllables (e.g. 'fi' for *F*-sharp and 'ta' for *B*-flat). The latter has the advantage of producing the 'feel' of 'mi' and 'fa' on other scale degrees, which is similar to what some historical treatises describe, and in which one clearly has to identify what accidentals one is using. See for instance Houlahan and Tacka, p. 286.

[483] As opposed to the Curwen hand signs, the Guidonian hand is octave-specific, which is important for improvising counterpoint, as 're-la' (d-a), for instance, is consonant, but 'la-re' (A-d) dissonant.



Example 5.3 The use of seven-note solfa in fauxbourdon and canons.

5.3.5 Improvisation and Musical Style

The final topic of these reflections is the notion of musical style, and what role stylistic considerations should play in teaching improvised polyphony. The pedagogical publications discussed earlier take a variety of approaches on this issue: both McGee and Thomas start from the notion of a 'neutral' basic counterpoint, which can be adapted to different styles once one has mastered it.[484] Somewhat similarly, Schubert advises the student to concentrate on not breaking the rules first, and 'to worry about being stylish' only once one gets fast and proficient.[485] A different approach is taken by Janin, who, for instance, introduces ornaments already in the most simple techniques illustrated in his manual.[486] This brings me to the following questions: how 'stylish' can or should one be at every stage of the learning process? In other words, should 'good music' be the aim of every exercise, or only of the final stage of learning? And what, in this connection, is the most profitable way to work with repertoire examples in the classroom?

Such questions are intrinsically bound-up with the structuring and final goal of the learning process. As I have argued before, learning to improvise florid polyphony will usually require doing 'training-exercises' in species counterpoint. Such exercises are not meant primarily to produce beautiful contrapuntal

[484] McGee, *Medieval and Renaissance Music: A Performer's Guide*, p. 194; Thomas, *Contrepoint à 2 voix*, p. 11.
[485] Schubert, *Modal Counterpoint Renaissance Style. Second Edition*, p. 41.
[486] Janin, pp. 15-16.

melodies, but rather to gain fluency and exercise quick thinking.[487] I would argue, however, that even here one can focus on the beauty of well-intoned intervals, and on occasion point out more 'graceful' alternatives for a counterpoint. Such suggestions do not always have to be formulated as clear-cut rules, as talented students are also able to learn the aesthetic of a certain style by assimilation.

It is my conviction that beautiful and 'tasteful' music can be produced at every level, and at every stage of the learning process. Very simple techniques can be used to create beautiful improvisations, simply by adding a small ornament, a suspension or a carefully planned flourish. In a fifteenth-century style, the types of gymel and fauxbourdon described in Chapter 4 are eminently suited for this. As I have argued there, students can come very close to improvising music of a kind that was actually written down by composers like Du Fay. For fourteenth-century music, one could emulate most of the examples in Chapter 3 in improvisations as well. This means one can continually be in touch with the historical materials, and create something artful, albeit on a modest scale.

The choice of examples to be sung and studied in class is always an important part of my preparations, as I believe it is essential for students to get to know repertoire examples first-hand. One way to introduce examples is of course to sing them through and discuss them, pointing out interesting contrapuntal features that can later be used in improvisation exercises. Another way, which can be very stimulating for students, is to let them 'improvise towards' a historical composition. I do this by giving the students a chant or tenor used in one of the examples, and let them use the same contrapuntal technique (gymel, fauxbourdon or discant in adjacent consonances). After we have 'finished' our performance by introducing a few ornaments, strategically planned suspensions and cadential formulas, I show them the historical example. Not only will they have gained a profound understanding of how that particular piece works and the choices the composer has made, they will have learned to listen in a more 'interactive' way to similar music.

[487] See Section 3.1.3

5.3.6 Summary

When structuring a course curriculum one needs carefully to balance improvisation with the other elements. Improvisation should, at least in the initial stages, be taught vocally, in order to stimulate and develop the inner ear. Instruments can be used to play a cantus firmus, when practicing at home, or at a later stage to 'transpose' the vocal techniques into instrumental practice. The visual plays an essential role in this kind of improvisation, and visualising a counterpoint on the staff ('sighting') is helpful for most musicians. As the music under discussion is primarily vocal and text-based, singing on lyrics should always be the ultimate goal. It may however be necessary to use solmisation or vocalisation for preparatory exercises, especially when working with beginners. Finally, I would argue that, in every lesson, students should see, hear and sing a real historical composition. The direct encounter with the past is always a stimulating one, and this may also encourage an interest in the repertoire beyond the confines of the classroom.

5.4 Conclusion

'Lifelong learning' has become something of a tired cliché in educational circles, but so far it has certainly held true for my experiences teaching improvised polyphony. I have found teaching a very fruitful way to distil my scholarly ideas, formulating them as precisely and concisely as possible. The continuous input, questions, and suggestions of students have also stimulated me to keep an open mind in my look at the sources and to question my practical application of them. Even if after some five years the initial novelty of teaching this material has worn off, I still delight in trying different ways of presenting it, as well as finding and analysing different historical examples to bring to class.

As may be clear from the reflections above, a lot depends on the entry level with which students come to a course of improvised polyphony. More than knowledge of repertoire or music theory, their success will depend on their prior training in sight-reading and aural skills. These are abilities best acquired young, as I can attest from personal experience. Unfortunately, much of the primary musical training in my own country, the Netherlands, tends to focus too much and too early on instrumental playing, resulting at times in an alarming deficiency in aural and vocal skills in conservatoire applicants. Strong performance is usually shown by students who are accustomed to singing in choirs, be it professionally or recreationally. In an international environment like my own conservatoire, one cannot count on students having acquired the same skill-set, or at least not in the same way. Students from Britain and North America, for instance, can be good sight-readers while never having used solfa, while others, principally from 'fixed do' countries, may not be able to do without. I have also noticed a marked difference in how self-reliant and disciplined students from diverse educational backgrounds are, especially when it comes to practicing at home.

Taking this into account, I have presented here not so much a method for teaching improvised polyphony, but rather a framework with variable parameters, adaptable to a range of didactic situations. On one side of the spectrum I would place my own learning experience, which was essentially autodidactic and based on historical materials, including all the 'obstacles' these

present to a modern musician: Greek and Latin musical terminology, cantus firmi in C-clefs, and examples in mensural notation. At the other extreme, I am now able to teach some of the same material in workshops, removing most of these difficulties by presenting a technique in the form of simple diagram and providing cantus firmi and repertoire examples in modern notation. I do not claim this as a better or more efficient way to learn, because going directly to the sources has taught me a great deal, but it is only reasonable to assume that most musicians simply do not have the time or patience to undertake such a process. A key question in every pedagogical situation, therefore, is how far one should go in 'translating' historical materials and techniques, and which 'obstacles' one should leave for students to overcome by themselves. Removing too many may prevent students from taking an active and prolonged interested in the materials presented, while removing too few can also quickly lead to a loss of motivation and interest as well.

This brings me back to the issue of 'research and development', the preparation of the lesson and course materials. Even though a relative wealth of pedagogical publications on improvised polyphony has become available in the last decade(s), it is important that educators continue developing their own materials in dialogue with the sources as well as other musicological and practical approaches. At the very least, one has to try out a method of improvisation found in one of these publications, and identify a few repertoire examples before bringing it to class. A more prolonged study of compositions and treatise descriptions can bring other, more original ideas, many of which will actually help to solve problems encountered in the classroom.

In many cases it is not possible to 'inflict' historical teaching methods directly on modern students, who after all have a very different mental make-up and life than their historical counterparts. On the other hand these methods have produced skills that most of us—myself included —can only dream of; in other words, 'they' must have been doing something right. I would say therefore, that, even though pragmatism is essential for teaching, we should not be too quick to dismiss historical methods as arcane and irrelevant. Over the course of this research I have changed my mind significantly about the utility of certain aspects

of historical pedagogy, such as species counterpoint and consonance tables, for instance.

Obviously, in the end it is the teacher who teaches, and not the method, whether historical or newly devised. This means that whatever one teaches has to 'pass through' oneself and be internalised at least to a degree. While it is rewarding to be surprised sometimes by what one's students come up with while improvising, one should master the techniques enough to be able to 'think with' an improvisation as it is going on, and make suggestions immediately afterwards. In the beginning this will require preparing every improvisation exercise one gives to students, finding different solutions to every problem, and observing which options are taken by them. Over time, one's experience and attentive listening come to suffice, and preparation can be drastically reduced. In this way, techniques of improvised polyphony can be used to enrich any course in 'practical music theory', to borrow Ferand's term, and to inform other activities such as composition, analysis as performance as well.

6 CONCLUSION

A research project like mine, born out of a strong personal interest, and intimately connected with my own artistic and pedagogical practice, obviously does not terminate when the last words of a dissertation have been written; it is by definition open-ended, as I will continue deepening my understanding of improvised polyphony. Especially on the subject of fourteenth-century music, I hope to be able to pursue in much more depth the lines set out here. One can think, for instance, of a more profound exploration of *discantus floridus*, improvising in different (regional) styles and genres, as well as applying the techniques developed here to experiments with historical composition. The analytical and practical experiences described in this dissertation can, in my opinion, form a good starting point for these continuous inquiries. The matters discussed here, in other words, warrant drawing some general conclusions, even if it is likely that some of them will still be revised in the future.

In this final chapter, I will return to my initial research questions and hypotheses. After this, I will discuss prospects for further research, as well as possibilities to valorise the results presented here. In closing, I will offer a short 'postlude' from the perspective of the singer, providing some additional comments on my own development as an early music performer and educator, as a result of this research. From these, the reader may observe what improvising polyphony can do for an 'early musician' of the twenty-first century.

6.1 Results and Observation

In this section, I will firstly provide summary answers to my four research questions, based on the findings presented in Chapters 2-5. Secondly, I will revisit my six hypotheses, and ask whether these have been confirmed, or whether, on the contrary, I have had to modify my a priori assumptions during the course of the research project.

6.1.1 Research Questions Revisited

1) *What historical information do we possess about the performance of extempore polyphony in the late medieval period?*

As discussed in Chapter 2, archival records and musical treatises have allowed music scholars to draw a relatively detailed picture of late-medieval and Renaissance polyphonic improvisation, concerning its liturgical use, its pedagogy, and the way in which musicians coordinated and conceived of such performances. This data indicates that, contrary to the modern idea of musical improvisation as 'free' and 'spontaneous', extempore polyphony was controlled and regulated by several mechanisms: the hierarchic, well-defined structure of the ensemble, the prior negotiation of 'points of reference' such as cadences, and the rigorous training singers had received as children. The musicians who were the bearers of these traditions are obviously long gone but the material traces they left behind, in the form of scores and treatises can be of considerable help to us in re-imaging these lost practices.

2) *Which polyphonic techniques can I identify in fourteenth-century treatises and compositions that can be used to improvise against a plainchant?*

As shown in Chapter 3, a relative wealth of polyphonic techniques, such as *quintare*, discant in adjacent consonances, and the 'fake discant' described in fourteenth-century treatises, can also be identified in the composed repertoire. Furthermore, these techniques can be re-utilised by modern singers to create

fourteenth-century style improvisations. My hypothesis C, which predicted that such techniques must exist as they do for all repertoires of the Western canon, has therefore essentially been confirmed.

3) *What can I add to the current understanding of fifteenth-century improvisational techniques?*

Though a close reading of Guillelmus Monachus's *De preceptis artis musicae*, I have been able to shed new light on its teaching, especially of two- and three-voice counterpoint. Finally, I could also point to some hitherto unobserved correspondences between compositions, such as the hymns of Guillaume Du Fay and the *Missa Mater Patris* ascribed to Josquin des Prez, and improvisation models described in contemporary treatises. As in Chapter 3, I have described how the models in Chapter 4 can be used to create simple improvisations in an early Renaissance style.

4) *How can these and other findings from scholarship and experiments be effectively valorised in musical education?*

In Chapter 5, I have presented a wide range of didactic uses of improvisation, ranging from 'historically informed' warming-up exercises, to workshops, ear training lessons, and courses of Renaissance counterpoint. What is most effective pedagogically will depend on the prior knowledge of the students and the time available for teaching them. Teachers, for this reason, need to consider how much of the 'original context' of these historical practices can be presented, and which elements (notation, clefs, solmisation and so on) should be 'translated' into modern equivalents. Polyphonic improvisation can lead to a significant improvement of a student's understanding of historical styles. Moreover, if practised diligently this practice significantly improves musicianship skills useful in any repertoire, such as intonation, relative pitch, aural recognition of intervals, and 'tonal memory' (remembering pitches over time).

6.1.2 Research Hypotheses Revisited

A) *Like a dead language (e.g. Latin), a historical musical idiom can be 'spoken again', as long as there is enough material left to work from.*

The simile between music and language is a popular metaphor among musicologists and musicians alike. It seems appropriate to think of certain features of music as 'pronunciation', 'vocabulary', 'syntax' and 'style', mirroring those of verbal languages. What can be revived of a historical musical idiom, like an extinct language, are those elements which have come down to us through texts. Those elements can be studied, and, as I have demonstrated, even re-used to 'speak' such music again. The one element of medieval music that is irretrievably lost to us, is its 'pronunciation': musical execution. In this sense, improvising medieval-style polyphony is actually more like speaking Ancient Egyptian than Latin: while a lot is known about the vocabulary, syntax and grammar of the language of Ancient Egypt, its phonology remains the subject of debate, and the pronunciation used by modern Egyptologists is largely speculative and artificial.[488]

B) *In order to learn how to extemporise, it is more useful to study the 'tricks' and colloquialisms of a style than the 'official' rules given by theorists.*

Revisiting this statement, I feel that it rests on a somewhat false opposition between the 'theory' and 'practice' of polyphony in the Middle Ages. Many of the polyphonic 'tricks' described in Chapters 3 and 4 are based as much on what the theorists have to tell us as what is shown in compositions. It is true, however, that one needs to read these treatises in a particular way, in a sense less as 'music theory' than as practical documents. Significantly, the *regulae generales* or *praecepta* given in fifteenth-century treatises do not appear as principles or

[488] Karl-Theodor Zauzich and Ann Macy Roth, *Discovering Egyptian Hieroglyphs: A Practical Guide* (London: Thames and Hudson, 1992), p. 7. 'The pronunciation that results from these conventions is, naturally, totally artificial. It is probably so far from the true pronunciation that an ancient Egyptian who heard a modern Egyptologist speaking "Egyptian" would find it impossible to understand, despite the fact that the two could communicate effortlessly in writing.'

axioms at the start of the text, but as a kind of afterthought or summary at the very end. Fourteenth-century authors, moreover, struggle with the question how exactly the 'rules of counterpoint' control florid and multi-part polyphony. It would appear that medieval musicians could—rather sophistically—interpret these rules one way or the other, to 'defend' a particular musical result.[489] The best way to deal with them, in other words, seems to be as guidelines (with exceptions) that are only useful once one already knows some musical techniques and repertoire.

C) *Such* loci communes *must exist for fourteenth- and early fifteenth-century music, as they exist for all other repertoires of the Western canon.*

See previous section, research question 2.

D) *Practical experiments with improvisation can assist scholarship on historical polyphony to ask the 'right' questions of the sources.*

I have experienced the back-and-forth between musical analysis and practical experiments as one of the most productive aspects of my research methodology. I initially observed the principle of adjacent consonances (discussed in Chapter 3) when analysing pieces of simple polyphony, after which I found it very useful for improvising discant against plainchant melodies. Having formulated my own concept of it, I was then able to identify it also in the historical treatises, shedding light on a topos of fourteenth-century discant instruction which had not previously been sufficiently understood.

[489] Example 3.14, for example, could be considered strictly to obey the rules, as its counterpoint in breves is entirely orthodox (see Example 3.15). Inversely, one could argue that it constantly violates these rules because of the parallels and dissonances created in between these structural notes. The opposite could be posited of the exercises by Antonius de Leno (Examples 4.8-10) that contain perfect parallels in note-against-note counterpoint, which are 'saved' by the intervening notes.

E) *To truly 'know' a musical idiom means to be able to extemporise in it: Being able to recite Schiller is not the same as speaking German.*

Like hypothesis A, this statement is predicated on the idea that music functions like a language and that a user's competence can best be assessed through their ability to extemporise. Historically, this was certainly the case; as we have seen in Chapter 2, extemporising, performing, and composing polyphony were intimately connected skills in the Middle Ages and Renaissance. I also believe that today musicians can still benefit considerably from learning to improvise in these styles. However, I have come to perceive the acquisition of improvisatory skills less and less as being in opposition to 'interpreting' written music. After all, the main reason to study, perform, or improvise medieval and Renaissance music is an interest in compositions from these periods. In other words, while I believe that knowledge of contemporary improvisation techniques is needed to properly understand historical repertoires, a working knowledge of this repertoire – best gained through performance – is also a prerequisite for improvising in that particular musical idiom.

F) *Vocal polyphonic improvisation is useful not only for acquiring stylistic knowledge but also for improving musicianship skills.*

See previous section, research question 4.

6.2 Further Possibilities for Research and Valorisation

The techniques described in Chapter 3 are the most novel contribution of my research and, as such, I expect them to provide the most opportunities for future research. The first aspect I will further pursue is the improvisation of fourteenth-century florid discant, creating a repertory of different techniques and strategies, as well a collection of ornamental formulas (*flores musicae mensurabilis*). Hockets could be used to enliven melismatic passages, and I have already begun to explore the use of tenors with a (modal) rhythmic pattern. Used together with the three-voice, homophonic technique described in Section 3.2.5, this produces results similar to the 'Franconian' parts of the Tournai Mass (*Kyrie*, *Sanctus* and *Agnus Dei*).[490] Sung in a slower tempo, such tenors could be used to extemporise simple two- or three-voice isorhythmic motets or liturgical pieces.[491] Finally, an aspect which has not been treated here is the phenomenon of the fourteenth- and early-fifteenth-century contratenor, which, judging from the manuscript record, was at times an 'inessential' voice, added by musicians to a pre-existing composition, not necessarily their own.[492] It seems probable that such contratenors would have been extemporised as well as written down.

To see how far one could ultimately go in this direction, I would like to invite the reader to join me in a thought experiment: would it be possible to improvise a complex four-part isorhythmic piece, like the *Kyrie* of Machaut's *Messe de Nostre Dame*? Example 6.1 shows a hypothetical improvisation based on *taleae* I-III (bars 1-11) of this piece.[493] Machaut's tenor is the *Kyrie IV* of the Gradual, sung in the pattern of the so-called third rhythmic mode. A contratenor could be improvised according to the principle of the adjacent consonances, which Machaut's contratenor also uses occasionally, providing a stereotypical

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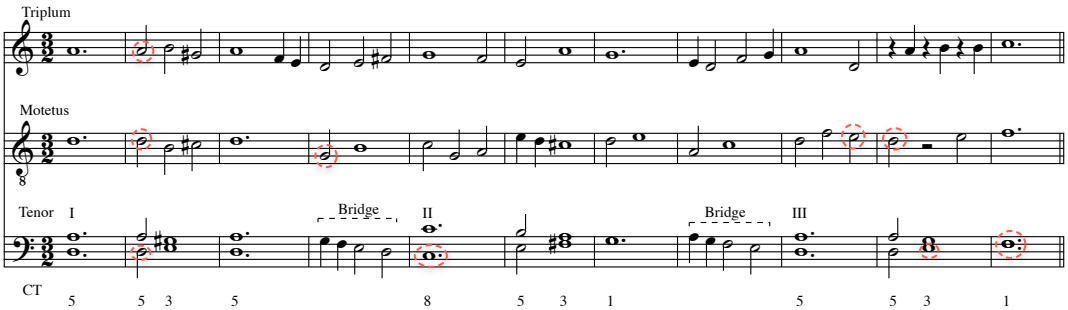
[490] For a transcription see Philippe Mercier, 'Une nouvelle transcription de la Messe de Tournai', in*: La Messe de Tournai. Une messe polyphonique en l'honneur de Notre-Dame à la cathédrale de Tournai au XIVe siècle*, Tornacum 4, ed. by Jean Dumoulin and others (Tournai, Louvain la Neuve: Tournai, Art et Histoire, 1988), pp. 66–77, 96–100 and 100–103.

[491] This would not only strengthen Anna Maria Busse Berger's thesis that such pieces could be sung from memory, but indicate that similar musical edifices could be created also by musicians singing *super librum*. See Busse Berger, pp. 210–251.

[492] Some fourteenth-century songs appear with different contratenors from one manuscript to another, while the cantus and tenor remain basically identical. A good example is the song *Esperance qui en mon cueur*, which appears with no less than four different contratenors. See Cuthbert, pp. 314–316.

[493] After Schrade, *La Messe de Nostre Dame, Double Hoquet, Remède de Fortune*, p. 1.

'bridge' pattern at the end of every *talea* when the tenor is silent. Such a tenor-contratenor duet, in other words, can be predicted by the triplum and motetus, who can improvise their parts on top, harmonising with the dyads of the lower voices. An occasional 'bifocal collision' between the upper parts would be consistent with Machaut's style, and would certainly not disturb the overall musical result.



Example 6.1 Hypothetical improvisation based on Guillaume de Machaut, *Messe de Nostre Dame*, *Kyrie I* (bb. 1-11), adaptations marked red.

In addition to its benefits for improvisation, an improved understanding of fourteenth- and early fifteenth-century polyphony can be of tremendous help in 'restoring' incomplete compositions from this period. As many sources of *Ars Nova* polyphony are damaged and a substantial number of them survive only as fragments used in bookbindings, many of the compositions known to us are also fragmentary.[494] I have already been able to use some of my findings on late medieval counterpoint in producing reconstructions for the CD *Veneto 1440* by the Ascoli Ensemble.[495] An upcoming program of the Ensemble Diskantores with fourteenth-century polyphony from the northern Netherlands, developed in collaboration with musicologist Eliane Fankhauser, will also contain reconstructions of fragmentary pieces from the so-called Utrecht and Leiden

[494] We already encountered this problem in Chapter 3, Examples 3.25 and 3.26.
[495] *Veneto 1440. Music from a new Veneto manuscript c. 1440.* The Ascoli Ensemble, dir. by Sasha Zamler-Carhart (CD, Verlag der Österreichischen Akademie der Wissenschaften, OEAW PHA CD 36, 2014). My reconstructions can be heard on tracks 10, Antonius de Feltro's *Credo*, and 11, the section *Contra vos arguitur* of Du Fay *Iuvenis qui puellam* [02:00-02:47].

fragments.[496] Like the English repertoire, the Dutch corpus of fourteenth-century music can benefit greatly from such reconstructions, rendering a much larger portion of it fit for performance.

Concerning fifteenth-century music, I intend to pursue my investigations of the 'fauxbourdon hybrids'discussed in Section 4.2.6. in a future publication, shedding more light on the relation between three- and four-voice fauxbourdon.

A practical application of my findings, which I have not discussed so far, is the use of improvised polyphony in public performances. The original 'biotope' of *discantare super planum cantum* was of course the Latin liturgy of the Roman Catholic Church, with its corresponding chant repertory. However, since the Second Vatican Council (1962-1965), these are no longer in general use.[497] When performances take the approach of a 'liturgical reconstruction', singing a polyphonic mass ordinary together with propers in plainchant, one can use improvisation to provide polyphony also for the *proprium missae*. Especially for lengthy, repetitive chants, like sequences and hymns, it can be refreshing to use polyphony in some of the verses.[498] Besides literally improvising in concert, experience with improvisation can be useful to devise performances in which one deals in a less 'literal' way with compositions, for instance adding or subtracting ornaments from one's part, giving the impression of a more 'improvisatory' execution, or 'deconstructing' a song by presenting it in different voice-combinations in different verses. These and similar ideas may be helpful to early musicians in developing performance approaches which present the early repertoires in ways that stress their rootedness in oral traditions.

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[496] Fankhauser, who is preparing a dissertation on the subject of the Utrecht fragments, has published some of her findings in Eliane Fankhauser, 'A Collection of Collections: New Insights into the Origins and Making of the Utrecht Fragments, NL-Uu 37.1', *Tijdschrift van de Koninklijke Verening voor Nederlandse Muziekgeschiedenis*, 64.1/2 (2014), pp. 3-29. The premiere of our programme will take place on 26/1/2017 in The Hague, The Netherlands. See <http://musantica.nl/concerten/56> [accessed 16 August 2016].

[497] Since 2007, the old Tridentine Mass can again be used as a *forma extraordinaria* of the Roman rite. The reason I have not explored the option of performing in such masses is that they are part of a right-wing, conservative movement within the Roman Catholic church, with which—for political and moral reasons—I do not wish to ally myself.

[498] I have done this, for instance, with the *Dies Irae* sequence of the Requiem in a performance of the *Missa pro fidelibus defunctis* by Antoine de Févin. This concert of the Renaissance Ensemble of the Royal Conservatoire of The Hague, lead by Isaac Alonso de Molina and myself, took place on 27/11/2015 in Voorschoten, The Netherlands. See <http://www.koncon.nl/en/news-and-concerts/concert-diary/?item=591> [accessed 16 August 2016].

6.3 Postlude: The Singer's Perspective

A short treatise from ca. 1400, the *Tractatulus de differentiis et gradibus cantorum* by Arnulf de St. Ghislain, provides us with an intriguing description of skills and talents — or lack thereof — attributable to different types of singers in the later Middle Ages.[499] Arnulf's first category is the Guidonian stereotype of a *cantor* who is ignorant of the art of music but nonetheless berates his expert colleagues and 'always produces dissonance with those who are concordant.'[500] The second category consists of singers lacking in the *ars* of music but strongly drawn to its *dulcedo* ('sweetness'), who make up for their lack in knowledge and skill through diligent practise.[501] Arnulf's third category consists of 'practising theorists', who have a bad voice but are nonetheless able to teach others what they cannot themselves perform. Instead of becoming 'musical sophists', these musicians prefer teaching 'real music'.[502] The fourth and final category consists of those 'perfect musicians', 'nightingales' possessing a sweet voice and a natural ability to learn music. If taught by musicians of the third category, they are able to perform music with a great variety of 'mode, mensuration, number and *color*'.[503]

Like most medieval categorisations, Arnulf's divisions should probably be taken with a grain of salt, especially his 'bestial' first category. Nonetheless, it may be revealing to see that at the turn of the fifteenth century, as now, singers were not all supermen. Talents and abilities must have been distributed among them in different ways. Essential, to my mind, is that the 'perfect musicians' of Arnulf's final category combine the virtues of his less-than-ideal second- and third-grade musicians. I have found, in practice, that collective improvisation works best with an ensemble consisting not only of 'nightingales' but of 'hard-working singers' and 'practising theorists' as well. In terms of my own

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[499] Christopher Page, 'A Treatise on Musicians from ? c. 1400: The Tractatulus de Differentiis et Gradibus Cantorum by Arnulf de St Ghislain', *Journal of the Royal Musical Association*, 117.1 (1992), pp. 1–21.
[500] '(...) semper cum consonantibus nicholominus dissonantes (...)' Ibid., p. 15 (rr. 1-21 [transl. pp. 17-18]).
[501] Ibid., p. 15 (rr. 24-40 [transl. pp. 18-19]).
[502] 'Tales non sophisticantur in musica sed realem musicam profitentur.' Ibid., p. 15-16 (rr. 41-55 [transl. pp. 19]).
[503] '(...) in quibus nobilis acquisitio artis cantorie organum natural dirigit regularit in modo, mensura, numero et colore (...)' Ibid, p. 16 (rr. 65-92 [transl. pp. 19-20]).

development, improvising has also allowed me to combine my analytical and 'productive' musical skills (developed as a composer) and my vocal and aural skills (learned as a singer) into a kind of 'polyphonic consciousness', active in improvising as well as sight-reading and performing polyphony.

Creating new practices of improvised polyphony together with the Ensemble Diskantores, my students, and others, I have also had to reflect on what it means to be the 'carrier' of a tradition. Scholar of English literature John Niles has stressed the importance of the role of gifted storytellers in living traditions of oral poetry: 'If we (...) liken tradition to a machine—one that may stall from time to time—then the strong tradition-bearer is its engine. Strong tradition-bearers constitute the force that keeps the process of oral literature in movement through the impact of their personal character and style.'[504] He explains how such a 'strong tradition-bearer', the Scottish storyteller Duncan Williamson (1927-2007), developed a highly critical consciousness of his repertory, enabling him to 'acquire fresh materials as long as he live[d], inventing some new songs as well as partially refashioning the ones that he ha[d] heard.'[505]

Undeniably, the modern revival of improvised polyphony is a somewhat artificial construct, not entirely comparable to a living oral tradition such as Williamson's. Nevertheless, it also depends on creative and dedicated individuals to be 'kept in movement'. Through this dissertation, but mostly through my pedagogical practice, I hope to have contributed to this continuing development by branching out into new styles and genres. I will, somewhat like Williamson, continue gathering techniques, formulas, tunes and forms, integrating them into my repertory and 'polyphonic consciousness'. And I hope that my colleagues and students will, like Arnulf's 'nightingales', build yet further on these experiences and ideas, taking the 'young' tradition of extempore polyphony in still other directions.

[504] Niles, p. 173.
[505] Ibid., pp. 192-193.

APPENDIX A. THE ADJACENT CONSONANCES PRINCIPLE IN TREATISES

Title	Author	Incipit	Date	Terminology	Progressions	TML/SMI[506]
Ars contrapuncti secundum Johannem de Muris	Johannes de Muris (?)	Quilibet affectans scire contrapunctum	14th cent.	X requirit naturaliter post se Y	1-m3, 5-M6, 8-M6, m3-1, M3-5, M6-8	14th/MURARSC
<Berkeley Manuscript>	Goscalus (?)	Quoniam in antelapsis temporibus	1375[507]	X requirit post se Y de sui natura	1-m3, 1-M3, 5-3, 5-M6, m3-1, M3-5, M6-8	14th/BERMAN
Compendium de discantu mensurabili	Petrus dictus Palma Ociosa	Ad honorem Sanctae et Individuae Trinitatis et intemeratae viriginis Mariae	1336[508]	Debemus facere post X Y	8-5, 5-m3, m3-1, 1-M3, 3-5, 5-M6, M6-8	14th/PETCOM
<De discantu proportionibus et tonis>	Anon.	<M>oderni cantores antiquorum ab usu discrepare volentes	14th cent.	X requirit post se Y de sui natura	1-m3, 1-M3, m3-1, M3-5, 5-m3, 5-M3, 5-M6, M6-8	14th/BERMAN4_MBAVR114
De preceptis artis musicae	Guillelmus Monachus	Nota quod duplex est prolatio, scilicet, maior et minor	ca. 1470	X requirit Y	1-3, 3-5, 5-6, 6-8, 8-10, 10-13, 13-15, 15-17, 17-19, 19-20, 20-19, 19-17, 17-15, 15-13, 13-10, 10-8, 8-6, 6-5, 5-3, 3-1	15th/MONPREC
Liber Musicalium	Philippe de Vitry (?)	Quoniam de arte mensurabili tractare proponimus	14th cent.	X debet habere post se Y	5-3-1, 12-10-8, 8-5, 5-8, 1-3-5	14th/VITLIBM
Optima introductio in contrapunctum pro rudibus	Johannes de Garlandia (?)	Volentibus introduci in arte contrapunctus	13th cent.	Post X sequitur generaliter Y	1-3, 3-5, 5-6, 6-8, 10-12, 12-13, 13-15, 15-13	13th/GAROPT
Regulae de contrapunto	Antonius de Leno	Dinanzi se dito dele mutazione a presso dirassi dele voxe che se trovan nel contraponto	Early 15th cent.	Se fai la X, seguiterai dreto la Y	1-3, 3-5, 6-8, 8-10, 12-13	quattrocento/LENREG_TEXT
Regule contrapuncti	Theodonus de Caprio	Set in primis ostendendum est que et quot sunt consonancie tam perfecte	Early 15th cent.	X requirit post se X de sui natura	1-m3, 1-M3, 3-5, 5-M3, 5-M6, 8-6, 8-10, 15-13	15th/THEOREG_MBAVB307
Tractatus de Musica	Anon.	Consonantiae sunt quinque: scilicet unisonus, diapente	15th cent.	X requirit post se vel ante se Y propter naturam	1-m3, 1-M3, m3-1, M3-5, M6-8	15th/CICNM[509]
<Tractatus de musica plana et mensurabili>	<Anonymus XI>	Item diceres, quare musica studetur?	15th cent.	X requirit post se vel ante se Y propter naturam	1-3, 3-1, 3-5, 5-3, 5-6, 6-8, 8-6	15th/ANO11TDM_TEXT

[506] References to the *Thesaurus Musicarum Latinarum* and the *Saggi Musicali Italiani*, which is currently offline, of the Indiana University, accessible through <http://www.chmtl.indiana.edu/> [last accessed 16 August 2016].
[507] See Ellsworth, *The Berkeley Manuscript*, p. 11.
[508] See Wolff, 'Ein Beitrag zur Diskantlehre des 14. Jahrhunderts', p. 504.
[509] Two excerpts from this anonymous treatise were transcribed in Adrien de la Fage, *Essais de dipthérographie musicale* (Paris: Legouix, 1864), pp. 375-383, and included in the *Thesaurus* with de la Fage's edition of Ciconia's *Nova Musica*.

APPENDIX B. COUNTERPOINT IN DE PRECEPTIS ARTIS MUSICAE

Chapter and section title[510]	Subject	Ms. text[511]	Ms. examples[1]	Park's ed. and transl.[512]	Park's examples[2]	My description[513]	My examples[3]
[IV] Ad habendum veram et perfectam...	Fauxbourdon I	fol. 19v	fol. 19v	p. 43 (transl. 159)	Ex. 45	Section 4.2.1	Ex. 4.12
	Third-gymel	fol. 20r	fol. 20r	p. 44 (transl. 160)	Ex. 46	Section 4.1.1	Ex. 4.1
[IV] Regula ad componendum...	Third-gymel + bassus	Fol. 20r	fol. 20v	pp. 44-45 (transl. pp. 160-161)	Ex. 47	Section 4.2.5	Ex. 4.23
[VI] Incipit tractatus...	Consonances	fol. 24v		pp. 52-54 (transl. pp. 168-170)			
[VI] Sequuntur regulae dicti contrapuncti	Rules of counterpoint	fol. 25r		pp. 54-57 (transl. pp. 170-173)			
[VI] Sequuntur palmae contrapunctorum	Consonance tables	fol. 26r		pp. 57-60 (transl. pp. 173-175)			
[VI] Incipiunt regule contrapuncti Anglicorum...	Fauxbourdon II	fol. 27v-29r	fol. 28r-28v	pp. 61-64 (transl. pp. 176-178)	Ex. 54	Section 4.2.1	Ex. 4.12
	Mixed gymel	fol. 29r	fol. 30r-30v	p. 64 (transl. pp. 180)	Ex. 56-1, 56-2, 56-3	Section 4.1.1	Ex. 4.4
	Gymel + bassus	fol. 29r	fol. 29v, 31v	pp. 64-66 (transl. pp. 180-181)	Ex. 55, 58	Section 4.2.5	Ex. 4.24
	Gymel + mixed contratenor	fol. 29v	fol. 31r	pp. 62-63 (transl. pp. 181)	Ex. 57	Section 4.2.4	Ex. 4.20
[VI] Sequitur alique regulae...	Four-voice Fauxbourdon	fol. 32r, 33r	fol. 32r-33r	pp. 69-71 (transl. pp. 188-191)	Ex. 59, 60-1, 60-2	Section 4.2.7	Ex. 4.29, 4.30
[VI] Alius modus componendi [A]	Parallel sixth-tenth model	fol. 34r	fol. 34r-34v	pp. 71-72 (transl. pp. 192)	Ex. 61	Section 4.2.4	
[VI] Alius modus componendi [B]	Parallel tenths + cantus firmus	fol. 35r	fol. 35r-35v	pp. 73-74 (transl. pp. 194)	Ex. 62		
[VIII] Regula circa cognitionem syncoparum	Syncopation	fol. 42v	fol. 42v	pp. 95-96 (transl. pp. 218)	Ex. 66-1	Section 4.1.3	Ex. 4.6
	Second- and third-species counterpoint	None	fol. 42v		Ex. 66-2	Section 4.1.3	Ex. 4.7

[510] Chapter numbers given according to Park's edition, section titles according to the manuscript (see below).
[511] References to. Venice, Biblioteca Nazionale di San Marco, Ms Lat. 336 (Contarini), coll. 1581.
[512] References to the corresponding pages of Park's edition and translation (1993).
[513] References to the discussions and transcriptions of techniques and musical examples in the present dissertation.

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CURRICULUM VITAE

Niels Berentsen (The Hague, 1987) is a singer, researcher, and music educator. He originally trained as a composer and his works include the chamber-operas *Pontormo* (2006) and *Serenade* (2008). He received his Master's degree in composition from the Royal Conservatoire of The Hague in 2011, with a minor in singing. A specialisation in early music performance followed, including master classes with acclaimed performers such as Evelyn Tubb, Marcel Pérès, Jill Feldman, Eric Mentzel and Corina Marti.

As a singer, Niels regularly appears as a tenor-soloist in cantatas and oratorios, and performs with vocal ensembles such as The Ascoli Ensemble (The Hague) and Capella Sancta Maria (Amsterdam). With the former, he has recorded two CD's: *I Frammenti Ascolani* (2010) and *Veneto 1440* (2014). His opera debut, as Grimoaldo in a production of G.F. Händel's *Rodelinda regina de' Longobardi*, took place in 2015. He is the artistic director of the ensemble Diskantores, specialising in fourteenth- and fifteenth-century music.

As a researcher, Niels has investigated techniques of polyphonic improvisation in the 1300-1500 period. He has spoken on this topic, amongst others, at the Fondazione Cini's 'Con la mente e con le mani' conference (Venice, 2013), the Utrecht Early Music Festival (2014), the Medieval and Renaissance Music Conference, where he also chaired a session on historical improvisation (Brussels, 2015), and the festival Laus Polyphoniae (Antwerp, 2016). He was interviewed about his research by the newspaper *NRC Handelsblad,* and his publications have appeared in the *Journal of the Alamire Foundation* and the *Tijdschrift Oude Muziek*.

Niels has taught the theory and performance of medieval and Renaissance music at the Royal Conservatoire since 2011. Recently, he led the Renaissance Ensemble of the conservatoire in a performance of Antoine de Févin's *Missa pro fidelibus defunctis*. Guest-lessons about polyphonic improvisation have been given at the Russian Gnessin's Academy of Music (Moscow), the Israel Conservatory of Music (Tel-Aviv), the Conservatory of Amsterdam, the Kodály Institute (Kecskemét), and the House of Polyphony (Leuven).

ABSTRACT

This dissertation documents my research into late medieval and early Renaissance extempore polyphony, through music-historical scholarship as well as practical experiments with students and fellow-singers. The author's aim is to expand current knowledge of fourteenth- and fifteenth-century polyphony, and thereby to develop new music-analytical and -pedagogic tools for approaching this repertoire. An in-depth investigation of the material remains of late medieval musical culture—the extant compositions and theoretical treatises—forms the basis for experiments with vocal polyphonic improvisation above plainchants. These practical experiences, in turn, can shed new light on the historical pieces and texts.

The music-analytical, historical, experimental and didactic approaches of the research are developed in the three central chapters of this dissertation: Chapter 2 offers a general overview of *ex tempore* polyphony as a historical and socio-cultural phenomenon. It is shown that—due to the mental and communicative skills possessed by singers of polyphony—their improvisations would have been anything but 'unprepared' and 'uncoordinated', even without having been rehearsed.

Knowledge of contrapuntal techniques was an important aspect of the craft of polyphonic singing. In Chapter 3, a number of improvisation models—similar to the 'schemata' and 'Satzmodelle' of later repertoires—are identified in fourteenth-century treatises and compositions. It is shown how these can be used again by musicians of today to create two- and three-voice improvisations in *Ars Nova* style. Chapter 4 takes its departure from the treatise *De preceptis artis musicae* (ca. 1470) in describing a trajectory for learning to improvise fifteenth-century counterpoint: starting from the two-voice gymel, the student progresses to free counterpoint, and the three- and four-voice techniques described in *De preceptis*. Furthermore, the history of gymel and fauxbourdon offers an opportunity to ponder the long-term evolution of Western music, and that of simple liturgical polyphony in particular.

The opportunities offered by these findings for current pedagogic practice are discussed in Chapter 5. First, an overview is given of the available didactic

materials on improvised polyphony, pointing the reader to the advantages and disadvantages of each. Next, the author discusses his own experiences with polyphonic improvisation through self-learning, improvising with colleagues, and teaching. Finally, topical reflections are provided on important aspects of teaching improvised polyphony, such as the aural and visual imagination of counterpoint, the importance of practicing improvisation vocally, and the utilisation of historical compositions in the classroom. The didactic approach is flexible, and can be adapted to variety of pedagogic situations, from one-time workshops for beginners to multiannual courses in higher musical education.

This dissertation presents a new approach to historical polyphony, resulting from a mutually beneficial interplay between musical analysis, experiments with improvisation, and pedagogic practice. It develops new ways of understanding late medieval and early Renaissance polyphony, which are useful not only for teaching and analysis, but which may form a stimulus for contemporary performance practice of early music as well. This research, therefore, is intended first and foremost as a contribution to the further development of historically informed improvisation today.

NEDERLANDSE SAMENVATTING

Deze dissertatie documenteert mijn onderzoek naar de geïmproviseerde polyfonie van de late middeleeuwen en vroege Renaissance, doormiddel van zowel muziekhistorische beschouwingen als praktische experimenten met studenten en collega-zangers. De auteur stelt zich ten doel de huidige kennis over polyfone improvisatie in de veertiende en vijftiende eeuw te verbreden, en zodoende nieuwe, op dit repertoire toegepaste, muziekpedagogische en - analytische instrumenten te ontwikkelen. Een diepgravende analyse van de materiële overblijfselen van de laatmiddeleeuwse muziekcultuur, de composities en theoretische traktaten, legt de basis voor experimenten met vocale polyfone improvisatie op Gregoriaanse melodieën. Deze praktijkervaringen kunnen hunnerzijds een nieuw licht laten schijnen op de historische composities en teksten.

De historische, muziekanalytische, experimentele en didactische benaderingen van dit onderzoek worden uiteengezet in de drie centrale hoofdstukken van de dissertatie: Hoofdstuk 2 geeft een globaal overzicht van *ex tempore* polyfonie als historisch, sociaal-cultureel fenomeen. Aangetoond wordt dat - door de mentale en communicatieve vaardigheden die aan de zangers van polyfonie ter beschikking stonden - hun improvisaties geenszins 'onvoorbereid of 'ongecoördineerd' waren, ook zonder dat die werden gerepeteerd.

Kennis van contrapuntische technieken vormde een belangrijk onderdeel van het ambacht polyfone zang. In Hoofdstuk 3 wordt een aantal improvisatiemodellen - vergelijkbaar met de 'schemata' en 'Satzmodelle' uit latere repertoires - geïdentificeerd in veertiende-eeuwse muziektraktaten en composities. Er wordt beschreven hoe zangers van vandaag deze modellen opnieuw kunnen gebruiken om twee- en driestemmige polyfonie te improviseren in de *Ars Nova* stijl. Hoofdstuk 5 neemt het traktaat *De preceptis artis musicae* (ca 1470) as uitgangspunt, en beschrijft een leergang voor improvisatie in een vijftiende-eeuwse stijl: vanuit de tweestemmige gymel leert men 'vrij contrapunt', alsook de drie- en vierstemmige technieken beschreven in *De preceptis*. Voorts geeft de geschiedenis van gymel en fauxbourdon aanleiding

tot een overdenking van de lange-termijn evolutie van Westerse muziek, en die van eenvoudige liturgische polyfonie in het bijzonder.

De didactische toepassing van deze bevindingen wordt besproken in Hoofdstuk 5. Eerst wordt een overzicht geboden van de voorhanden zijnde pedagogische publicaties over geïmproviseerde polyfonie, waarbij de lezer wordt gewezen op de voor- en nadelen van elk. Vervolgens gaat de auteur in op zijn eigen ervaringen met polyfone improvisatie door zelfstudie, zingen met collega's en in de lespraktijk. Ook wordt er stilgestaan bij belangrijke aspecten van het aanleren van geïmproviseerde polyfonie, zoals het auditief en visueel voorstellen van contrapunt, het belang van vocale improvisatie, en het gebruik van historische muziekstukken in de les. De gepresenteerde didactische aanpak is flexibel, en kan worden toegepast op een veelheid van pedagogische situaties, van eenmalige workshops voor beginners tot meerjarige cursussen in het hoger muziekonderwijs.

Deze dissertatie biedt een nieuwe benadering van historische polyfonie en improvisatie, als resultaat van een wederzijds bevorderlijk samenspel tussen muziekanalyse, de lespraktijk en experimenten met improvisatie. Dit onderzoek ontwikkelt nieuwe manieren om laatmiddeleeuwse en Renaissance polyfonie te begrijpen, die niet alleen bruikbaar zijn voor muziekpedagogiek en -analyse, maar die ook een stimulus kunnen vormen voor de hedendaagse uitvoeringspraktijk van Oude Muziek. Het is dan ook allereerst bedoeld als bijdrage aan de verdere ontwikkeling van de hedendaagse historisch geïnformeerde improvisatie praktijk.