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

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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

[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

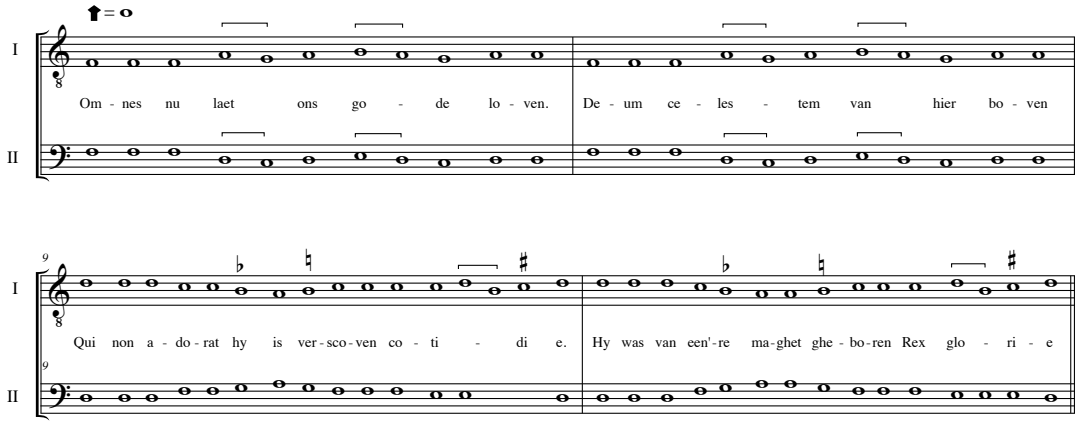
[184] On the term 'simple polyphony' and its definition see 'The Definition of Simple Polyphony Some Questions', in *Le Polifonie Primitive in Friuli e in Europa. Atti del Congresso Internazionale Cividale del Friuli, 22-24 Agosto 1980.*, ed. by Cesare Corsi and Pierluigi Petrobelli (Rome: Edizione Torre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

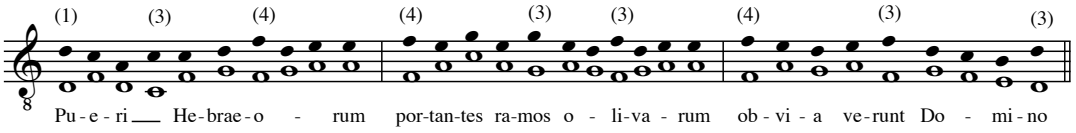
More surprising perhaps than the amount of extant organal pieces from the later Middle Ages is the fact that we possess a number of treatises that teach singers how to extemporise this kind of polyphony. Sarah Fuller has called attention to four short treatises from the late thirteenth to the early fifteenth 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]

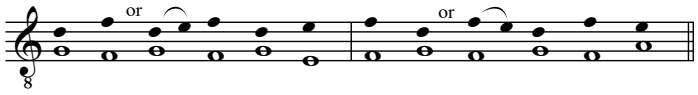
When we apply these rules to a plainchant we obtain a result that looks something like the following example. (Every time the *quintizans* sings an octave the corresponding rule is indicated).



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

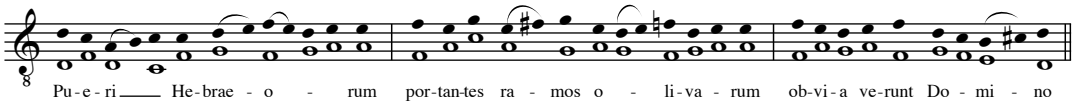
As opposed to the strictly parallel type of the *Enchiriadis* treatises, the singer is no longer required to follow the melody as if singing and unison, and should be able to sing a fifth as well as an octave above every note of the cantus firmus.[195] In order to comply with rules 3) and 4), the singer 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.



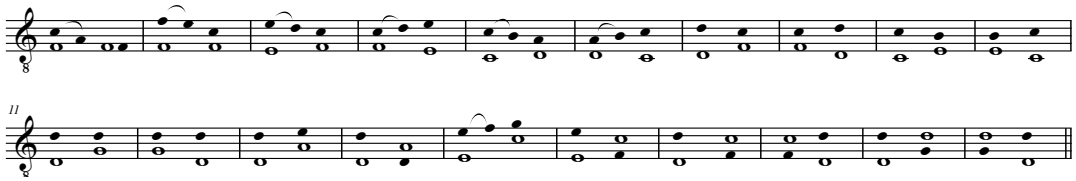
Example 3.3 Fifth-octave and octave-fifth progressions.

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]

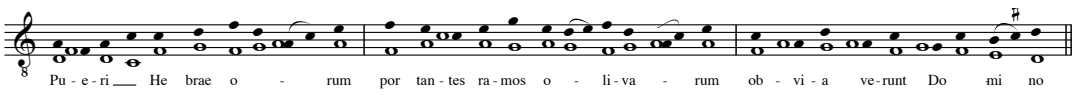


Example 3.5 Interval progressions from *Discantus positio vulgaris*.

[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

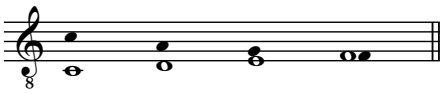
[198] See Ernest H. Sanders and Peter Lefferts, 'Discant', *Grove Music Online* [accessed 16 August 2016]. This definition is for instance found in the the third chapter of Liber VII of Jacobus Leodensis's *Speculum Musicae*: 'As for the first, discantus is so named in one sense, from "dya" which means 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:

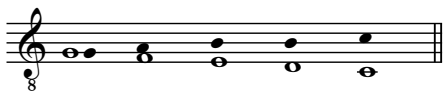


Et si cantus descendat gradatim per voces sese immediate sequentes, ut dictum est, et discantus sit in unisono, tunc debemus facere post unisonum ditonum addendo dictum diapente, post tonum cum diapente et ultimo diapason, ut patet in sequenti exemplo:

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.

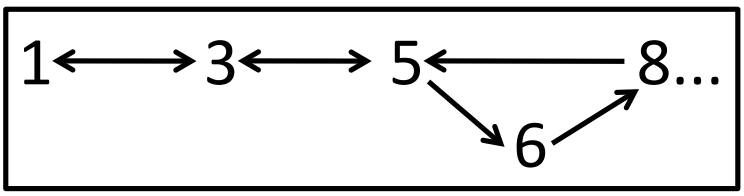
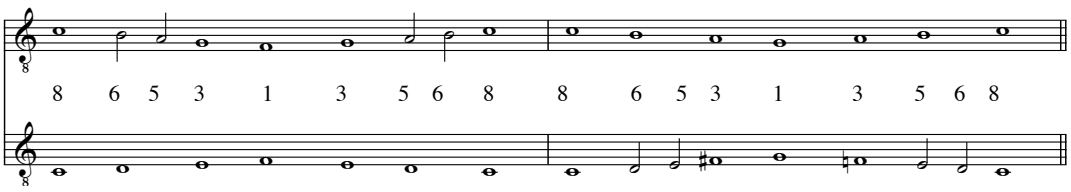


Figure 3.1 Diagram of the adjacent consonances principle.

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.

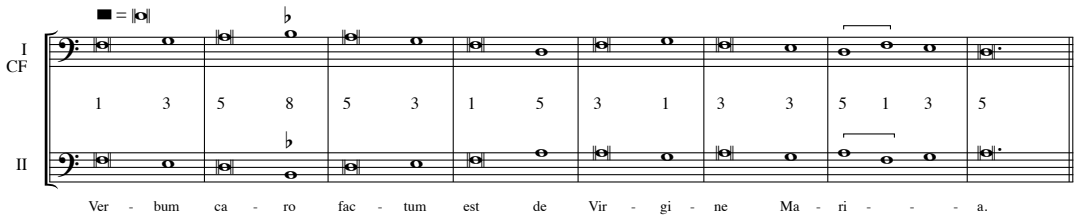
3.1.3 The Adjacent Consonances in Two-Voice Compositions

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.

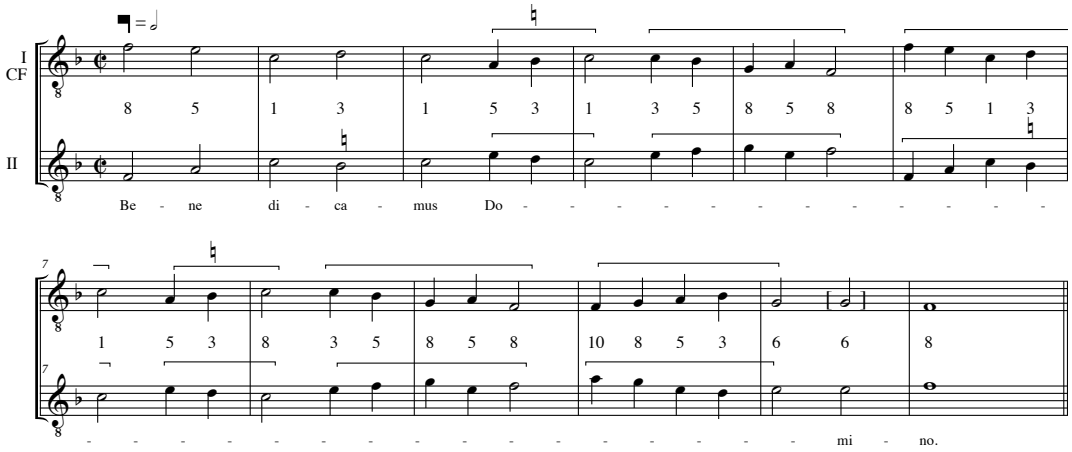
application of the rule also would have been possible, with the lower voice singing f e f g in bb. 5-6.



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.

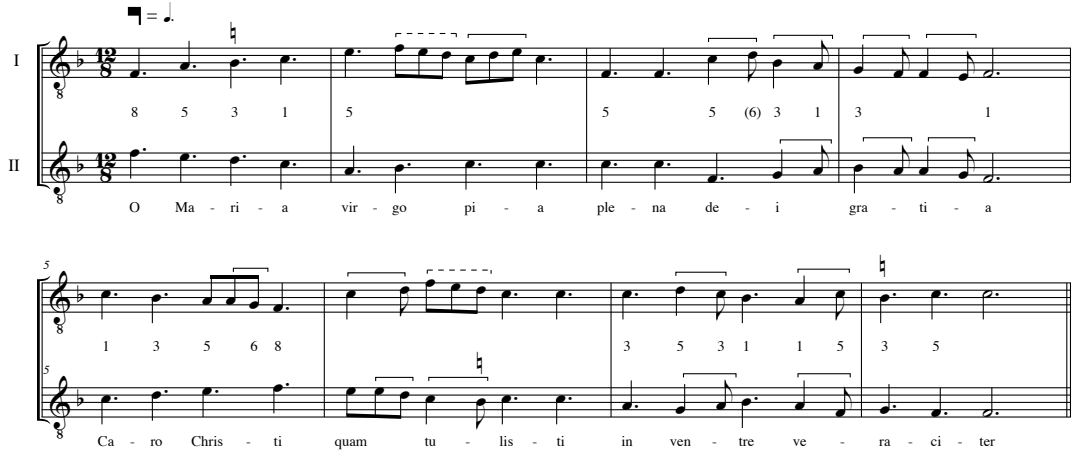


Example 3.9 *Benedicamus Domino* (Paris, Institut de Musicologie de l'Université, no shelfmark, fol. 2v).

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).

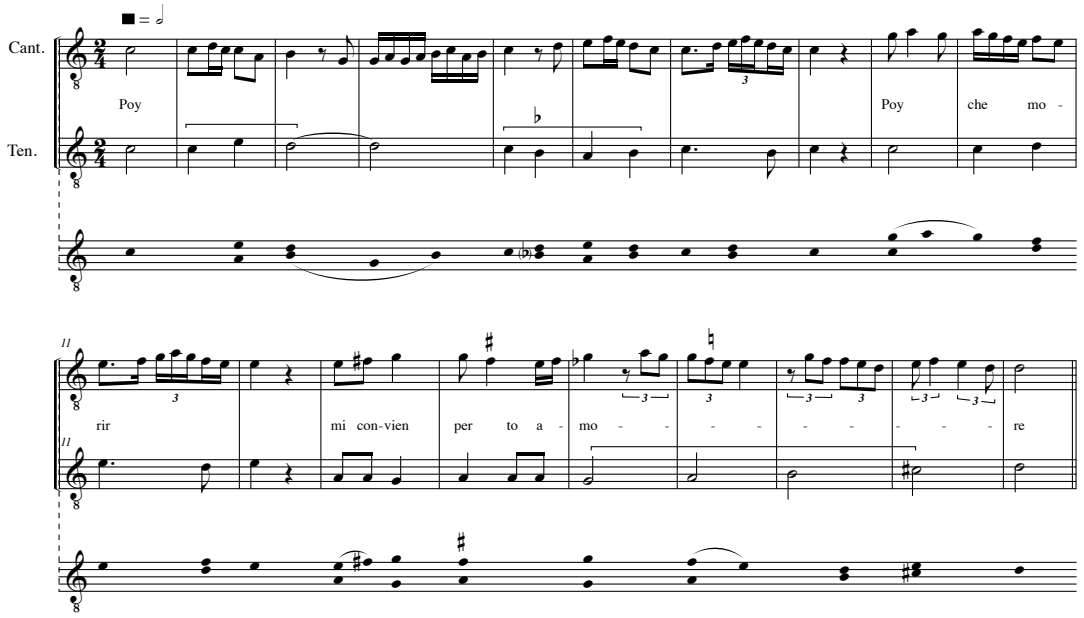
In one of his essays, Pirrotta explores the relation between an oral tradition of singing 'siciliane' and a number of trecento compositions featuring an 'unorthodox style of accompaniment' in fifths and adjacent consonances. Comparing these pieces to the ballata *Poy che morir* ascribed to Johannes Ciconia (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.

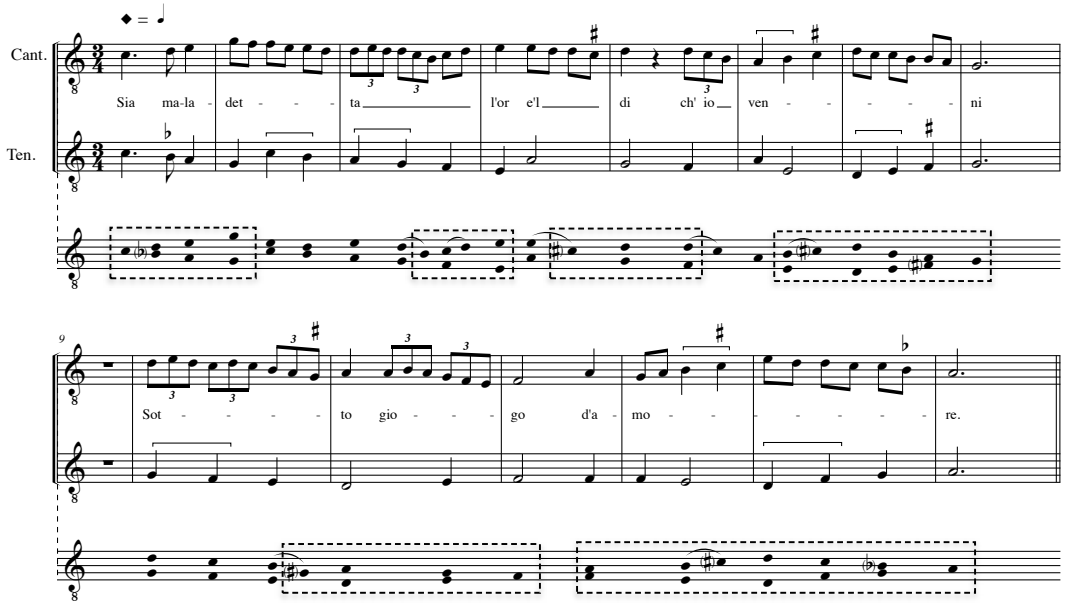
discussed earlier in this chapter, but the underlying contrapuntal procedure is virtually identical.



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.

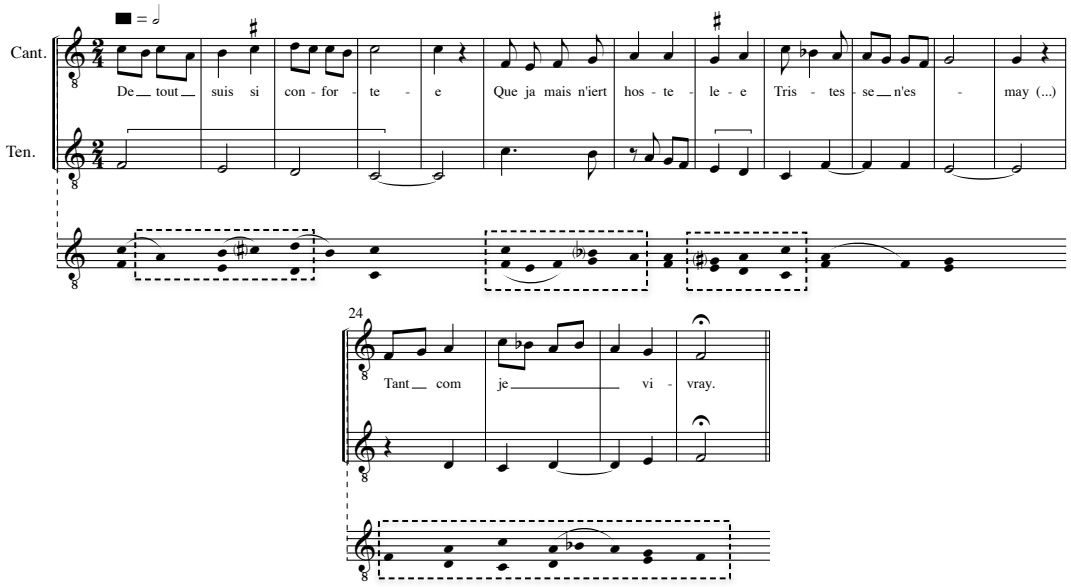
[214] See no. 13 in *Two-Part Ballate*, Francesco Landini Complete Works 2 (Monaco: Éditions de l'Oiseau-Lyre, 1982), p. 19.



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).

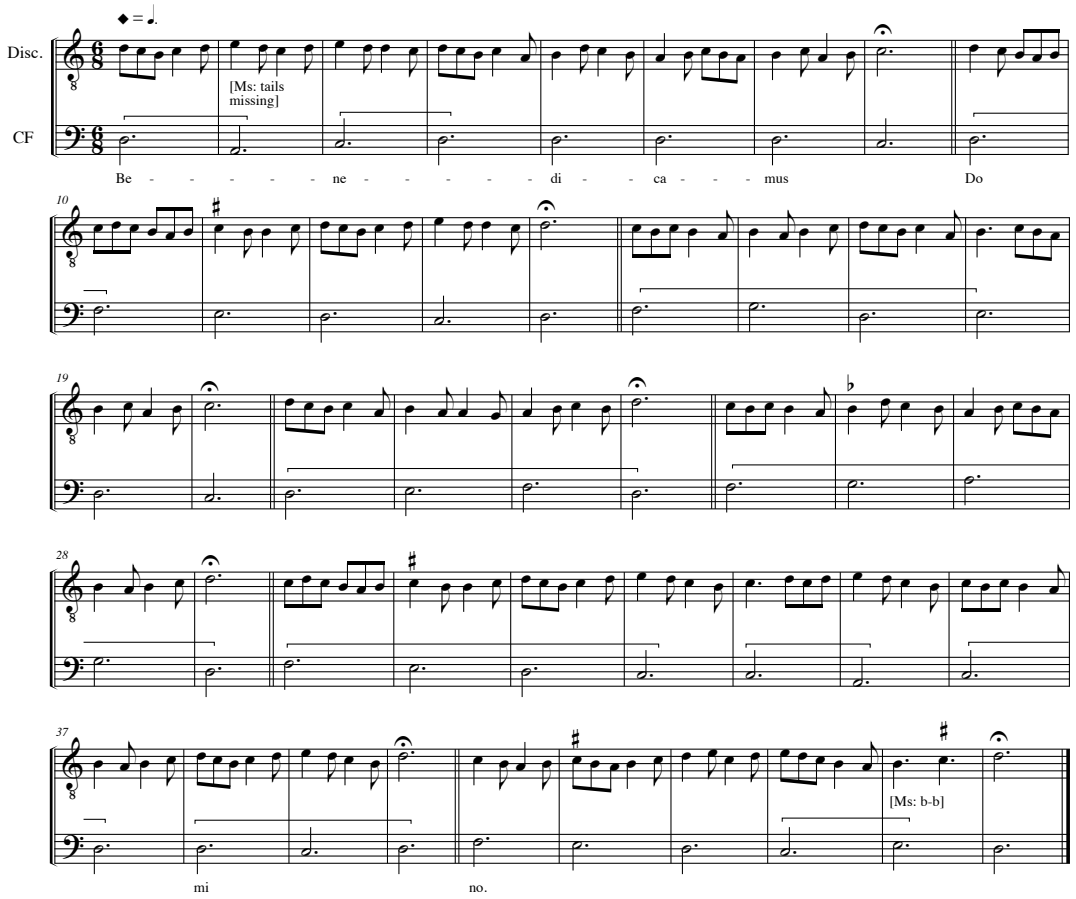
[215] See no. 32 in Leo Schrade, *Les Rondeaux, Les Virelais*, Guillaume de Machaut Oeuvres Complètes 5 (Monaco: Éditions de l'Oiseau-Lyre, 1977), p. 53.



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.

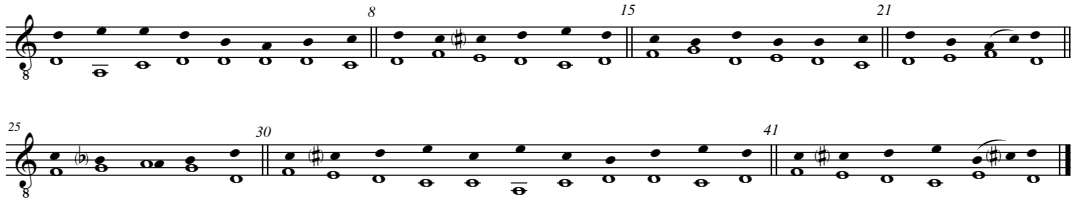


Example 3.14 *Benedicamus Domino* (Messina, Biblioteca del Seminario Arcivescovile, Ms. O.4.16, fol. 169r).

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.

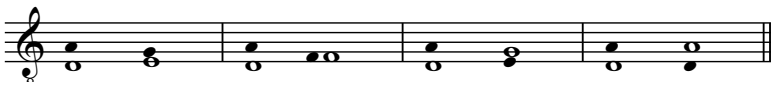
Obviously, the identification of passages in adjacent consonances in itself is insufficient for a meaningful analysis of the musical discourse of any particular piece, for which one needs to consider the tonal plan, the relation of text to music, and the numerous other contrapuntal procedures that have 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

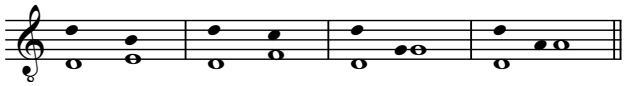
[220] For an instruction on the use of adjacent consonances in thirteenth-century discant see Margriet Tindemans, 'Improvisation & Accompaniment before 1300', in *A Performer's Guide to Medieval Music*, ed. by Ross W. Duffin (Bloomington, Indianapolis: Indiana University Press, 2000), pp. 454–469. No 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.

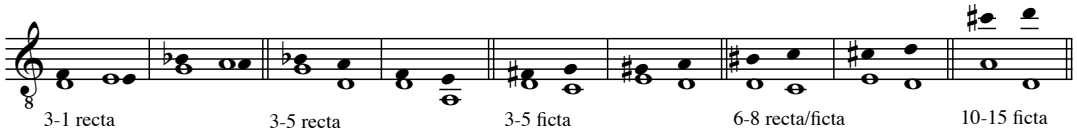


Example 3.17 Progressions outside the central fifth.

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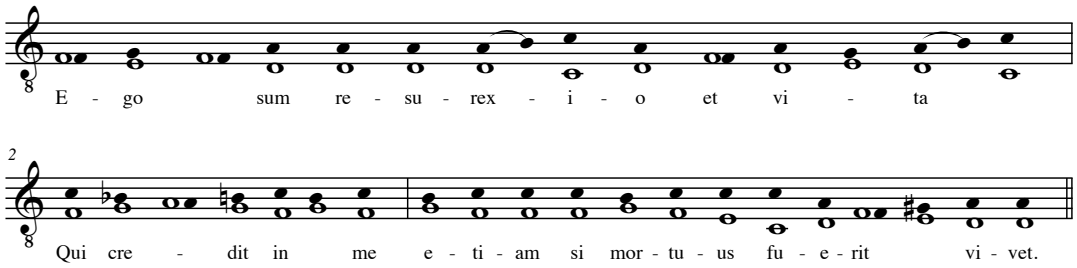
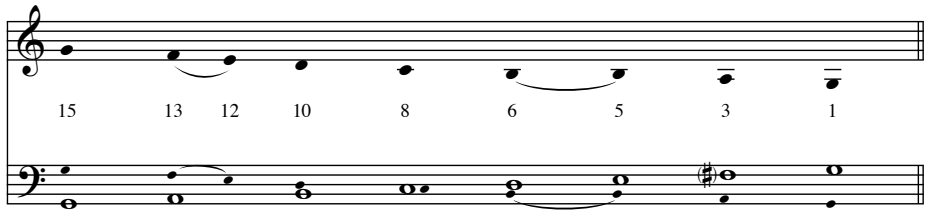
[222] See Sarah Fuller, 'Tendencies and Resolutions: The Directed Progressions in Ars Nova Music', *Journal of Music Theory*, 16 (1992), pp. 61–86.
[223] See for instance cap. VI and VII in Marchetus de Padua, 'Lucidarium, Tractatus Quintus', *Thesaurus Musicarum Latinarum* <http://boethius.music.indiana.edu/tml/14th/MARLU5_TEXT.html>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



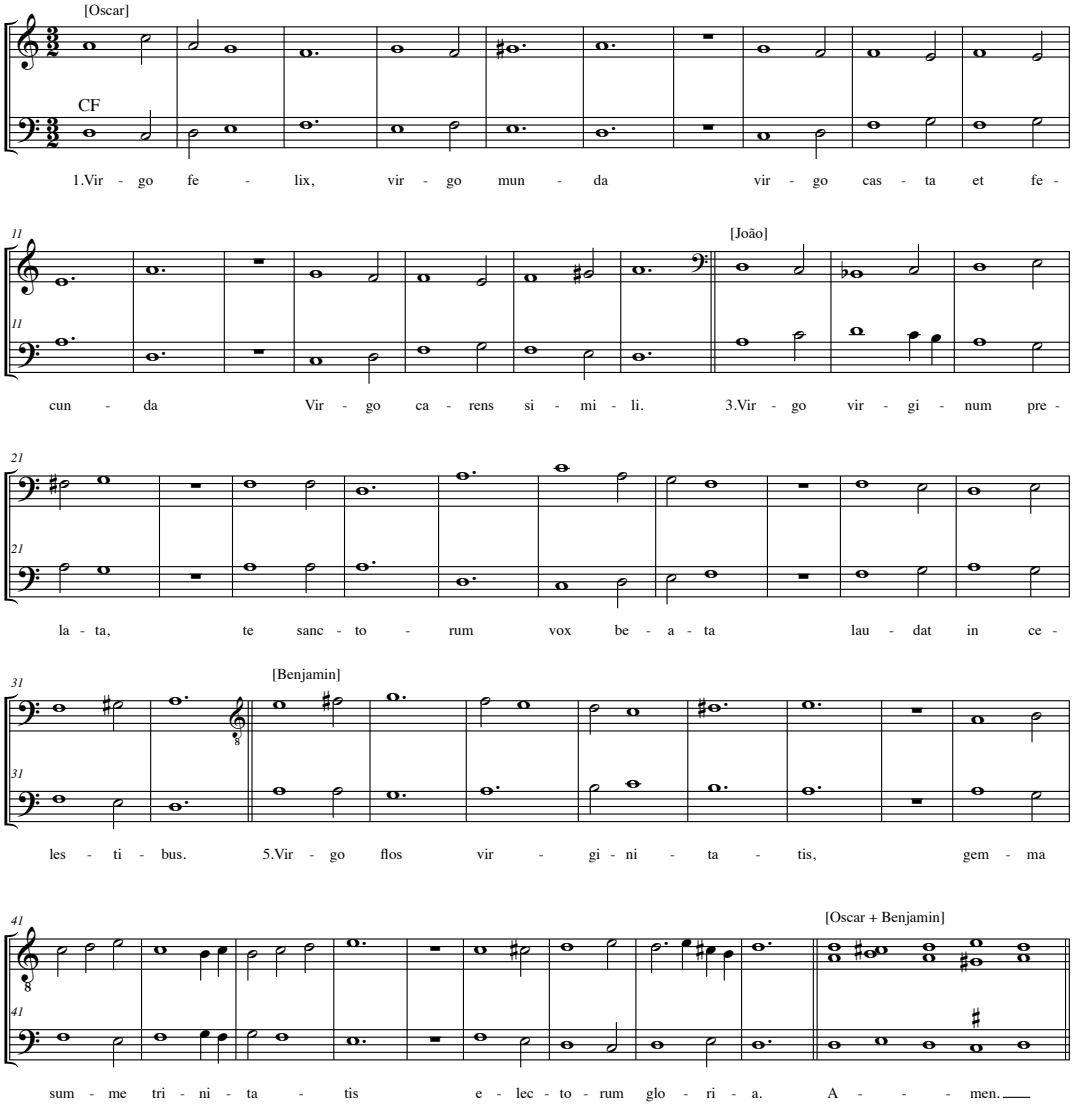
Example 3.20 Visualisation of a treble part in adjacent consonances.

[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-

[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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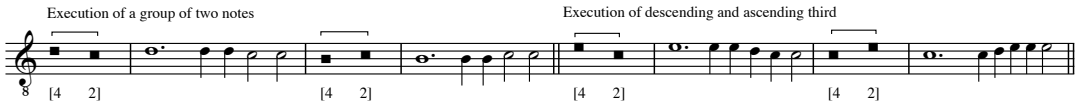
[235] Sanders, 'Cantilena and Discant in 14th-Century England', p. 47, n. 137.
[236] Aluas, p. 140.
[237] In the last sentence of the chapter (line 9) a *fifth* singer is called optional. This is easily explained by the fact that the singer of the discant is now included in the total number, however, 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.

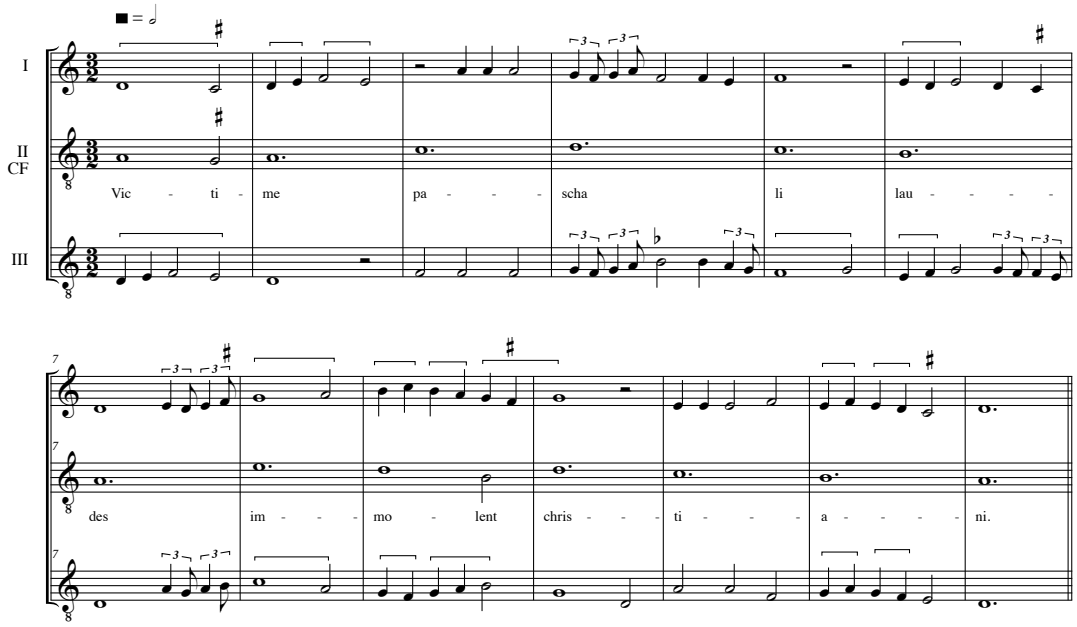
number of *tempora*.[240] The plainchant notes—conceived of as longs— receive a kind of ornamentation which consist of breaking them into repeated semibreves and breves.[241] Jumps of thirds, fourths and fifths are also to receive a kind of diminution, consisting of semibreves or a *plica*.[242] The 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]

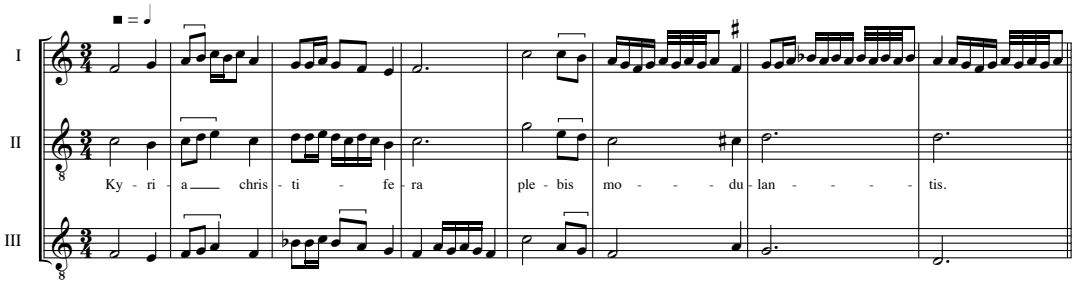
[240] Ibid., pp. 359-372 (trans. pp. 644-649).
[241] The division of a long into breves is referred to as *duplicatio*, and into semibreves as *florificatio* or *fractio* in the treatise. Ibid., p. 360 (trans. p. 645).
[242] Ibid., p. 368-371 (trans. p. 648-649).
[243] Plainchant neumes are transcribed 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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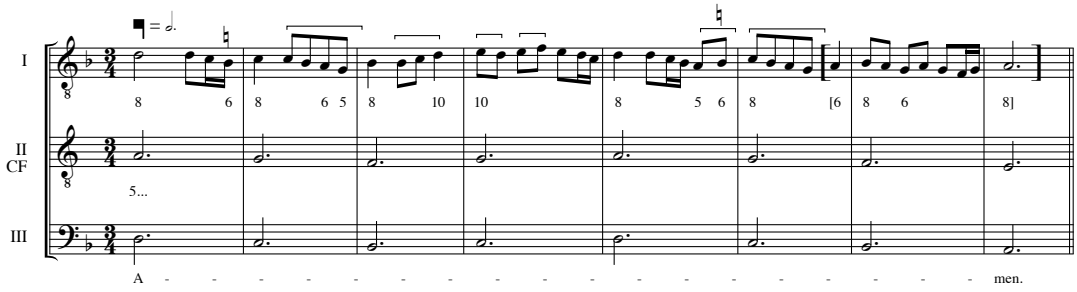
discurro in a similar way as 'to proceed' or 'carry on'. See Michael Bernhard, 'Discurro', *Lexicon Musicum Medii Aevi* <http://woerterbuchnetz.de/LmL> [accessed 16 August 2016].

[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.

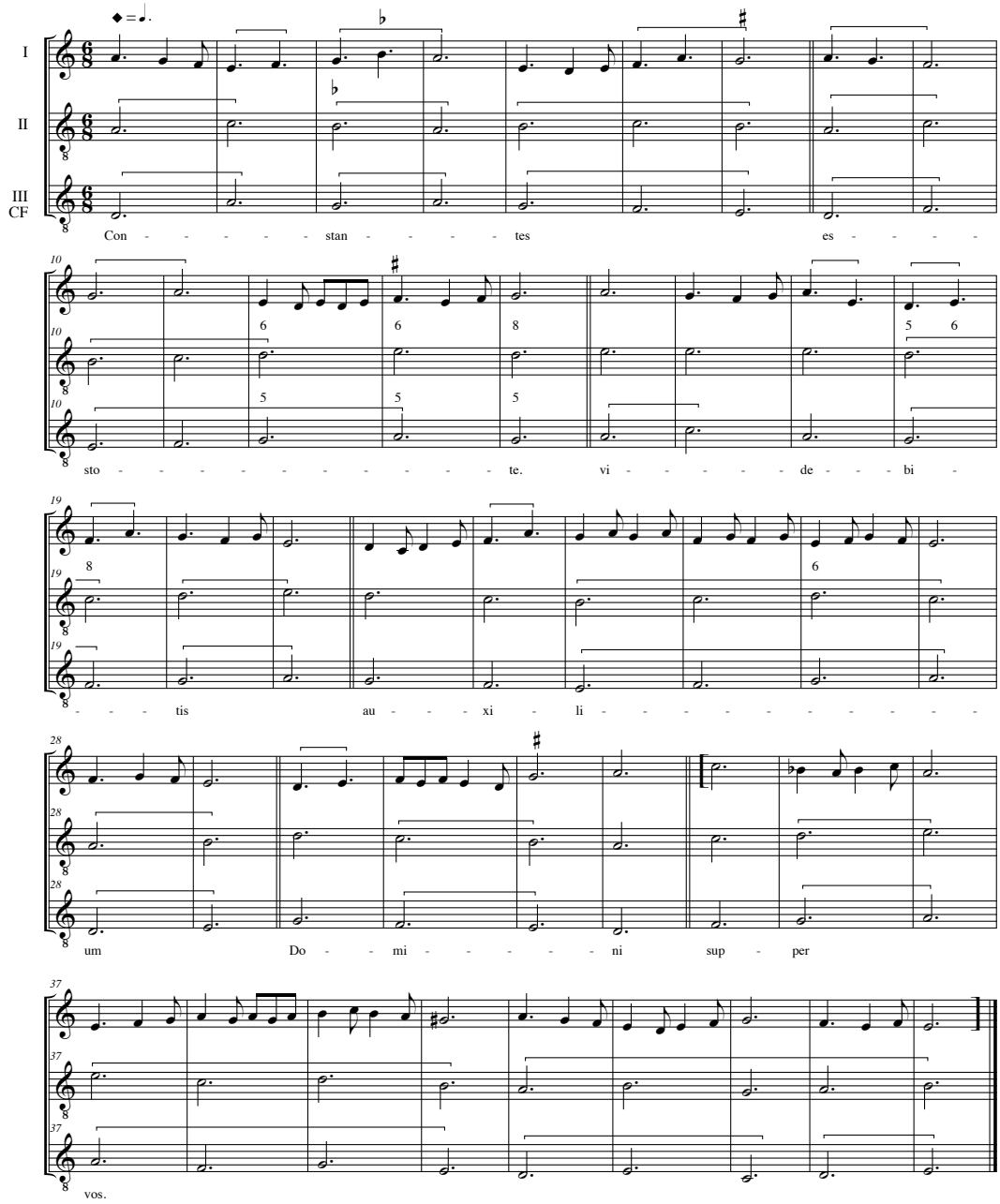


Example 3.25 *Credo*, excerpt (London, British Library, Ms. Sloane 1210, fol. 1v).

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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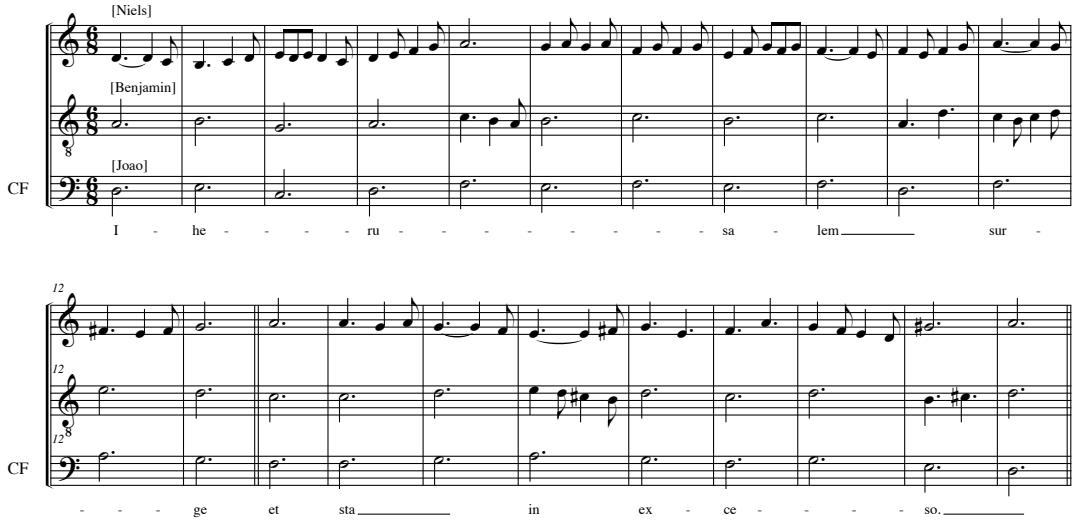
[255] Margaret Bent correctly states of such parallel perfect consonances in the *Gloria* of the Machaut Mass that 'a parallel interval with the tenor is somehow annulled by the occurrence of the cadential articulation'. See Margaret Bent, 'The "Harmony" of the Machaut Mass', in *Machaut's Music: New 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.

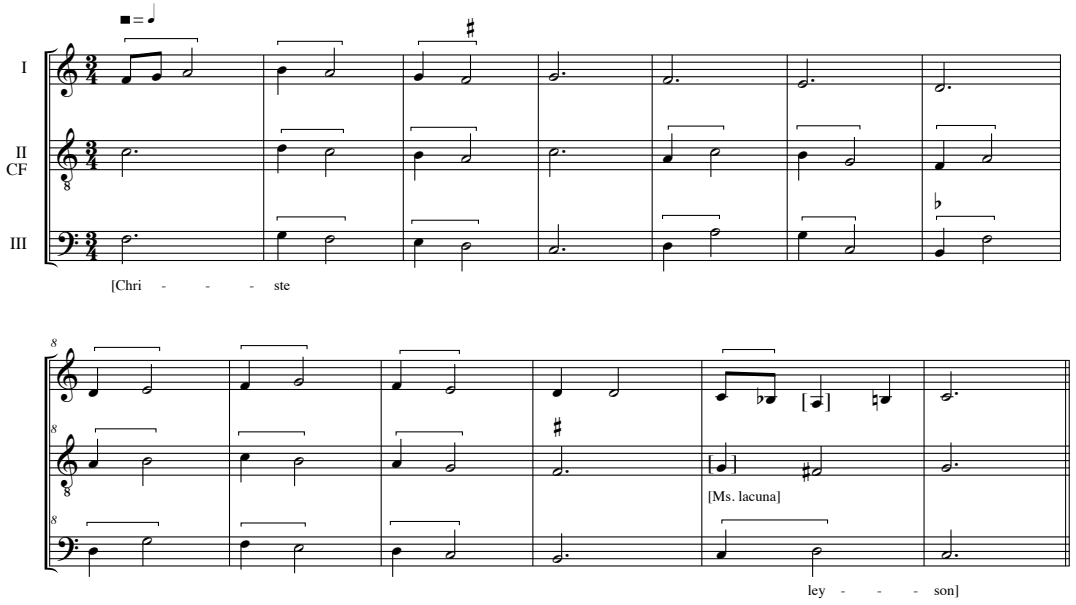
in the spirit of the *Quatuor Principalia*'s description— 'improve' on the repertoire examples, by singing a slightly more ornate middle part. As may be seen in bb. 5, 10-11 and 17, 'breaking up' the parallel fifths of this part can result in a kind of texture which may—indeed—fool the listener into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

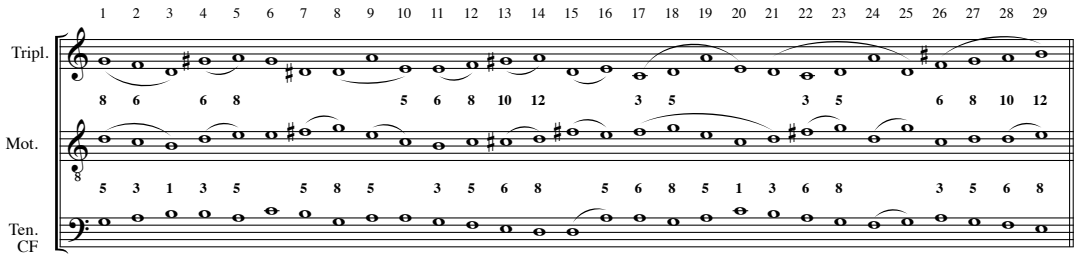
[278] 'Quomodo sub plano cantu discantandum est.' Ibid., p. 519 (transl. p. 746).

[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.

[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.

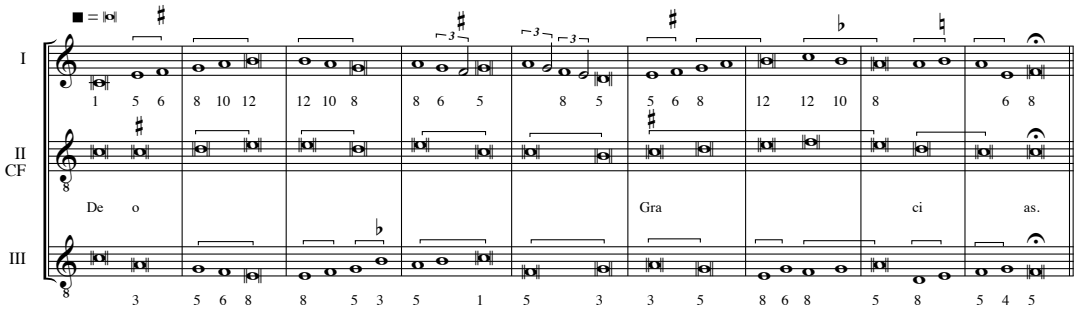
In my view, two conclusions can be drawn from this example: first, it need not be the case that when one voice is sung or composed in stepwise contrary motion against a tenor the other voice must perforce fill in 'left-over' consonances without consideration for its own melodic outline. Secondly, the 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).

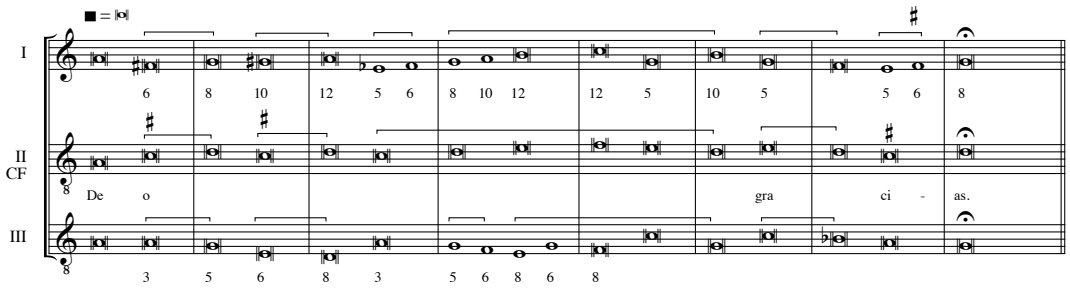
Almost the entire counterpoint of Example 3.30 can be explained in relations of adjacent consonances: The tenor is constructed in strict contrary motion with

[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.



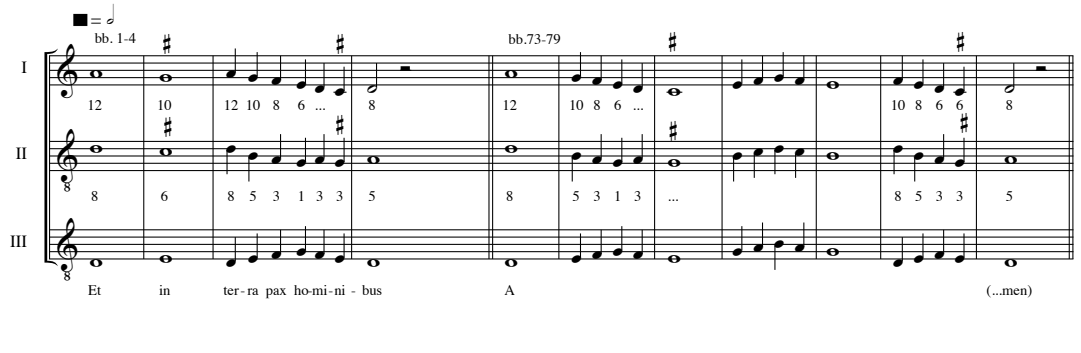
Example 3.31 *Deo gracias II* (Cambridge, University Library Ms. Kk.i.6, fol. 246r).

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.

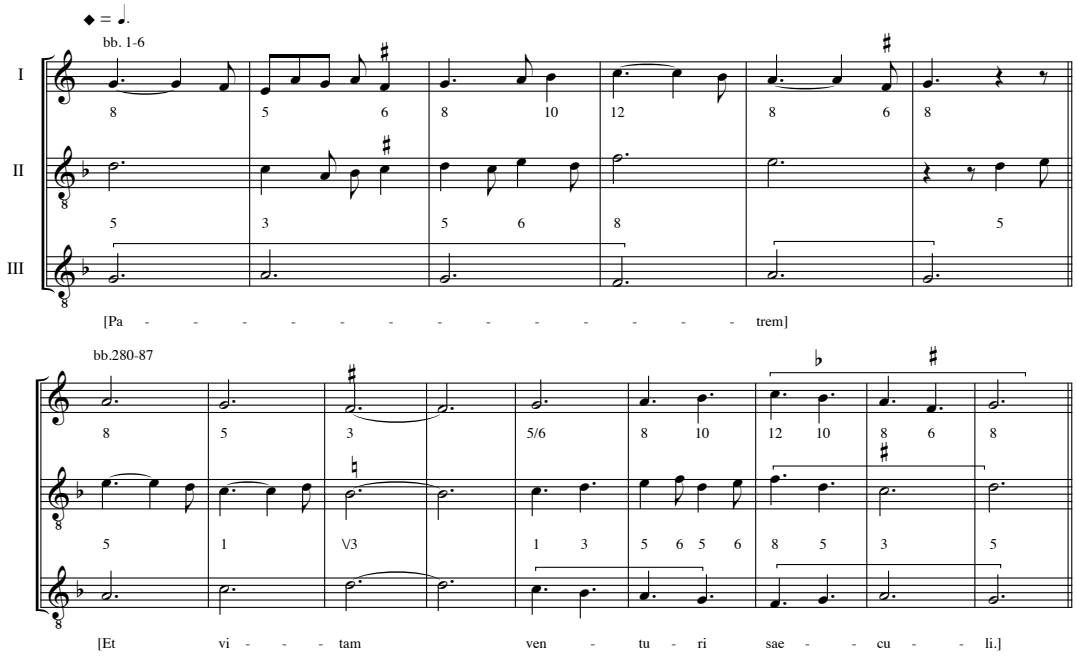
A *Gloria* setting in the Apt manuscript, attributed to Johannes Susay, shows extensive passages in parallel 3/6 and 6/10 sonorities, but contrary motion is also frequently used between the parts. Example 3.32 gives two fragments of this composition, in which the upper voices accompany the stepwise tenor 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.

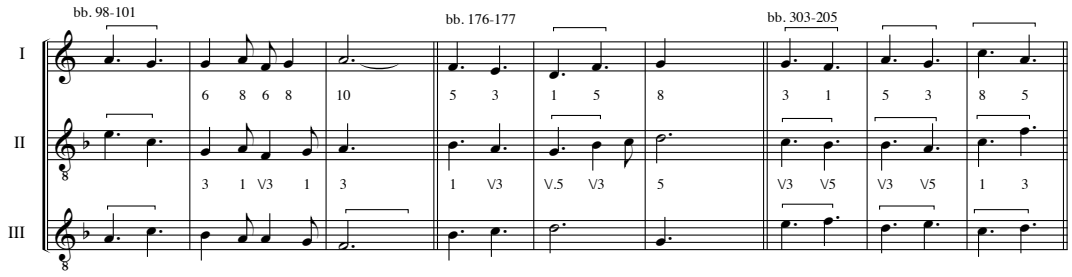
[286] See also no. 50 in Giulio Cattin and Francesco Facchin, *French Sacred Music B*, Polyphony Music of the Fourteenth Century 23b (Monaco: Éditions de l'Oiseau-Lyre, 1991), pp. 213–223.



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.



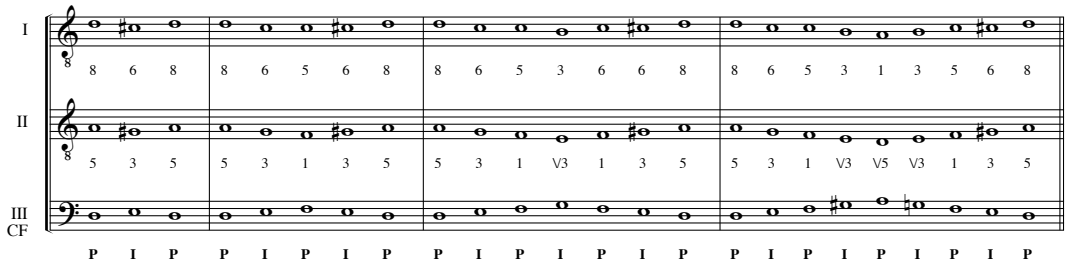
Example 3.34 *Credo*, excerpts (Apt, Cathédrale Ste Anne, Ms. Trésor 16 bis fol. 27v-29r).

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

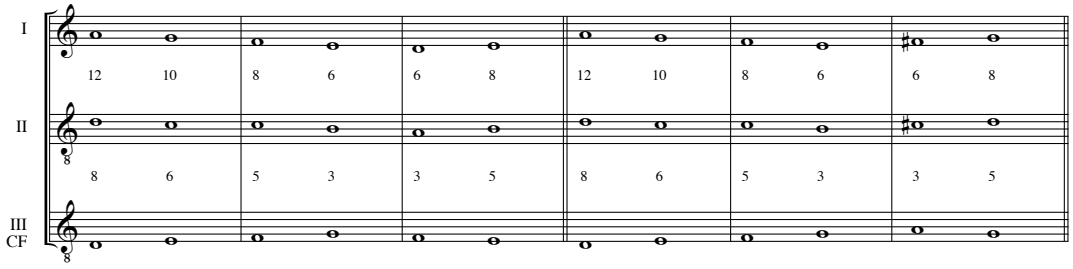
practising this technique in exercises above a stepwise ascending and descending tenor, as shown in here:



Example 3.35 Exercises in three-voice discant.

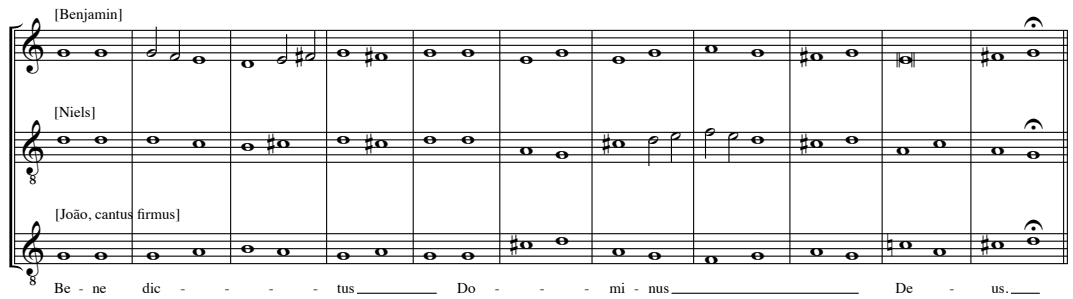
As we can see in the example, the technique provides a constant alternation between perfect and imperfect sonorities. However, the exercise has a slightly different 'harmonic trajectory' at every stage, and one should take the time to get accustomed to the different cadential relationships and the chromatic 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.

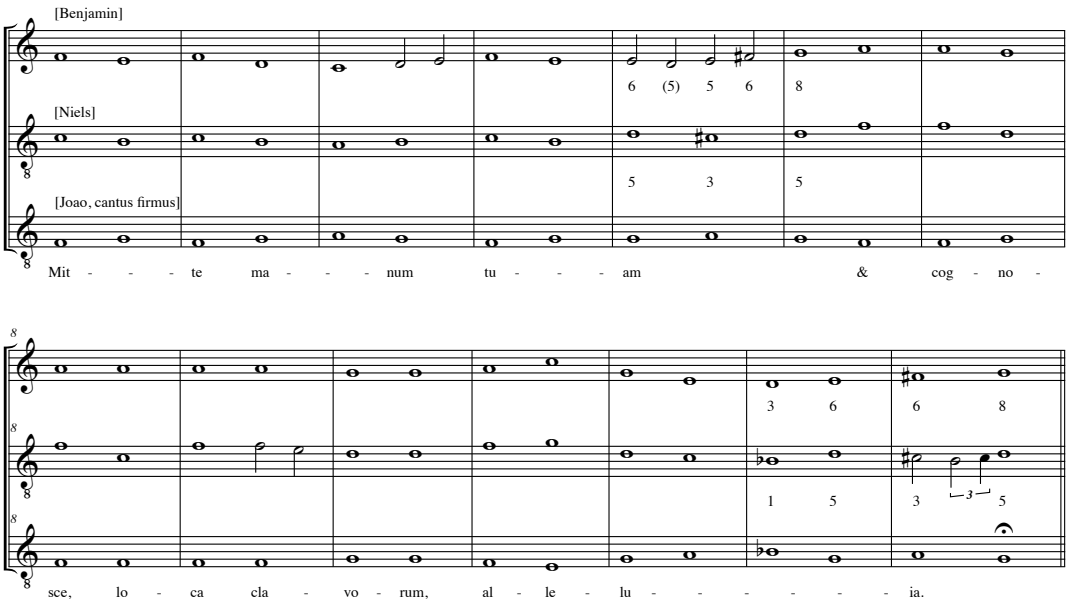
To practise singing above longer and more disjunct plainchants, we have found it useful to improvise the two voices successively against the cantus firmus. Example 3.36 is a transcription of such an exercise. João first sang the cantus firmus alone, so we could 'pre-programme' our counterpoints. Then 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.