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

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2 MEDIEVAL MUSIC, IMPROVISATION AND ORALITY

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

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

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

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

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

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

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

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

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

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

2.1.1 Dahlhaus's Conception of Improvisation

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

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

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

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

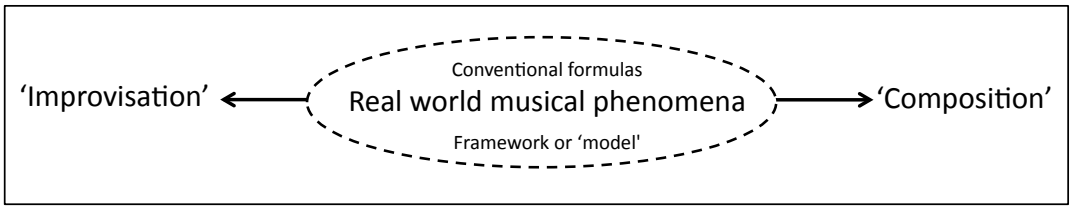

Figure 2.1 Diagram of Dahlhaus's continuum of musical activities.

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

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

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

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

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

2.1.2 Nettl's Conception of Improvisation

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

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

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

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

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

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

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

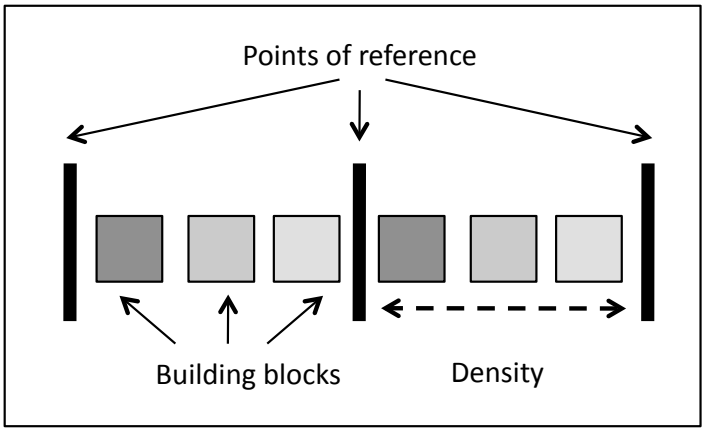

Figure 2.2 Diagram of Nettls model of improvisation.

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

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

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

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

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

2.1.3 Conceptions of Orality and Improvisation in Medieval Music

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

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

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

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

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

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

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

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

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

[61] Ibid., p. 4.

[62] Ibid., p. 1.

[63] Ibid., p. 6.

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

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

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

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

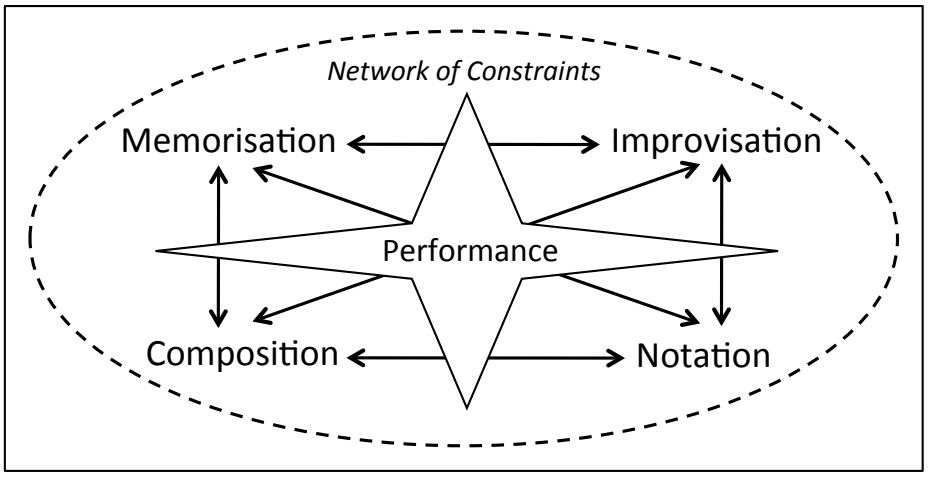

Figure 2.3 Diagram of Treitler's 'aural paradigm'.

2.1.4 Summary

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

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

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

[70] Pirrotta, p. 54.

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

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

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

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

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

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

2.2 Oral Polyphony: Contrapunctus and Cantare super Librum

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

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

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

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

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

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

2.2.1 Written and Non-Written Polyphony

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

2.2.2 The Teaching of Improvised Polyphony.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[140] See Fiorentino, pp. 376–377.

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

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

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

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

2.2.3 The Coordination of *Super Librum* Performances

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

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

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

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

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

collectively be improvised on a plainchant.[152]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[170] See Section 2.1.2.

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

2.2.4 Summary

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

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

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

[171] See Section 2.1.2.

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

2.3 Conclusions and Observations from Practice

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

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

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

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

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

[173] See Sections 3.1 and 4.1.

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

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

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

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

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

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

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