Peter Woetmann Christoffersen

Josquin and the sound of the voices
Analysing vocal instrumentation – a suggestion

('Josquin og stemmernes klang. Et forslag om analyse af vokal instrumentation',
Musik & Forskning 27 (2002) pp. 7-24)

The startling dissimilar, but in its substance still nicely familiar, as a sound from another and better world, enthrals a modern audience to the same degree as we must assume that it was enjoyable to listeners in the early sixteenth century. We find the sound utterly beyond the everyday in the last Agnus Dei in *Missa L'homme armé Sexti toni* by Josquin Desprez. He lived between c. 1455 and 1521 according to the latest research in his biography.[1] *1

During the years after 1500 the fame of Josquin spread so far that he to his contemporaries, to the following generations, and not least in far later times to writers of music histories came to stand as the prototype of the modern composer, as a 'genius', whose musical perfection decided future standards.[2] His renown was much furthered by a new medium, music in print, not least when Ottaviano Petrucci in Venice in 1502 published his masses as *Misse Josquin*, the very first publication of large representative works by a single composer. In this way his music could reach a wider audience than by copies laboriously written by hand. In addition to reprints of this edition Petrucci followed up by publishing two further collections of masses by Josquin.[3]

The first printed collection of masses appeared precisely at a time when music, even outside the circles of scholars and professional musicians, began to be perceived as something more than its sounding reality, as more than the serviceable sounding result of the singers' work on the basis of improvisatory practice or by performance of written music. The composed, written-down music, *res facta,* began to claim an identity of its own as an

1 Cf. Paul A. Merkley & Lora L.M. Merkley, *Music and Patronage in the Sforza Court* (Studi sulla storia della musica in Lombardia III). Turnhout 1999, pp. 425 ff.

2 On the development in the view of Josquin, see Edward E. Lowinsky, 'Musical Genius – Evolution and Origin of a Concept', *The Musical Quarterly* 1964, pp. 321-340 & pp. 476-495; Jessie Ann Owens, 'Music Historiography and the Definition of the »Renaissance«', *Notes* 47 (1990), pp. 305-330; Jessie Ann Owens, 'How Josquin Became Josquin: Reflections on Historiography and Reception' in J.A. Owens & A. Cummings (eds.), *Music in Renaissance Cities and Courts: Studies in Honor of Lewis Lockwood* (Detroit Monographs in Musicology/Studies in Music, No. 18) Warren 1996, pp. 271-279; Rob C. Wegman, 'From Maker to Composer: Improvisation and Musical Authorship in the Low Countries, 1450-1500', *Journal of the American Musicological Society* 49 (1996), pp. 409-479; Rob C. Wegman, '»And Josquin Laughed . . .« Josquin and the Composer's Anecdote in the Sixteenth Century', *The Journal of Musicology* 18 (1999), pp. 319-357; Rob C. Wegman, 'Who Was Josquin?' in Richard Sherr (ed.), *The Josquin Companion*. Oxford 2000, pp. 21-50; Andrew Kirkman, 'From Humanism to Enlightment: Reinventing Josquin', *The Journal of Musicology* 17 (1999), pp. 441-458; Patrick Macey, 'Josquin des Prez. §9. Reputation' in Stanley Sadie (ed.), *The New Grove Dictionary of Music and Musicians. Second Edition.* London 2001, vol. 13, pp. 227-229.

3 *Missarum Josquin liber secundus*, Venezia 1505; *Missarum Josquin liber tertius*, Fossombrone 1514.

art form that could be evaluated and discussed, in short, as musical works. Concurrently, the names of composers became of interest to a larger public's discussion of music and art.[4]

Misse Josquin includes no less than two masses built on the well-known *L'homme armé* tune, which almost all composers since Du Fay, Ockeghem and Busnoys had to try their hands at.[5] Evidently, both publisher and composer have accorded these masses a special significance; their placements are revealing. *Missa L'homme armé Super voces musicales* opens the collection with a contrapuntal *tour-de-force* with extensive use of canon, where the popular tune in an unchanged notated shape is manipulated and brought forth on a new beginning note in each section of the mass, while rising up through the six steps in the C-hexachord. *Sexti toni* closes the collection and nearly makes the tune disappear in fantasy and free exploration of a sound world very like modern F-Major in Hypolydian mode notated with a one-flat signature.

In both masses, the outstanding culminates in the last Agnus Dei. In *Super voces musicales* the tune sounds without rests and in prolonged note values in the highest voice. Hereby it looses its melodic identity in spite of its exposed placement, and it becomes a string of sound floating slowly above the lower voices' web of polyphony. In *Sexti toni,* Josquin expands the four voices of the mass into six voices in *Agnus Dei III* – or rather, he redistributes the singers into three sets of canons: The low, slow-moving layer of two voices is created by letting them at the same time sing the B- and A-sections of the *L'homme armé* tune as notated and in retrograd, forwards and backwards, completely dissolving the contours of the melody in a calm two-part structure. The split superius and altus voices perform unison fugues using the same free motifs, which first alternate and then catch up with each other for a four-part fugue 'ad minimam', that is, with the shortest possible temporal distance between the entries. The end of the section is shown in *Example 1*, where it as in Petrucci is without text under the voices – the singers would probably at this point begin "dona nobis pacem".[6]

Josquin's masses are quite difficult to date owing to inconsistencies in the preserved sources. Our present knowledge seems to place the two *L'homme armé* masses in Josquin's early career, in the 1480s, with *Super voces musicales* as the first, very ambitious take on this tune. It is quite possible that *Sexti toni* in its first instance consisted of no more than the *Kyrie*, *Gloria* and *Credo* sections. *Sanctus* and *Agnus Dei I* were composed later, and Josquin may have revised the mass and added *Agnus Dei II-III* shortly before Petrucci's publication of the masses – perhaps even with a view to its coming placement in Petrucci's print.[7]

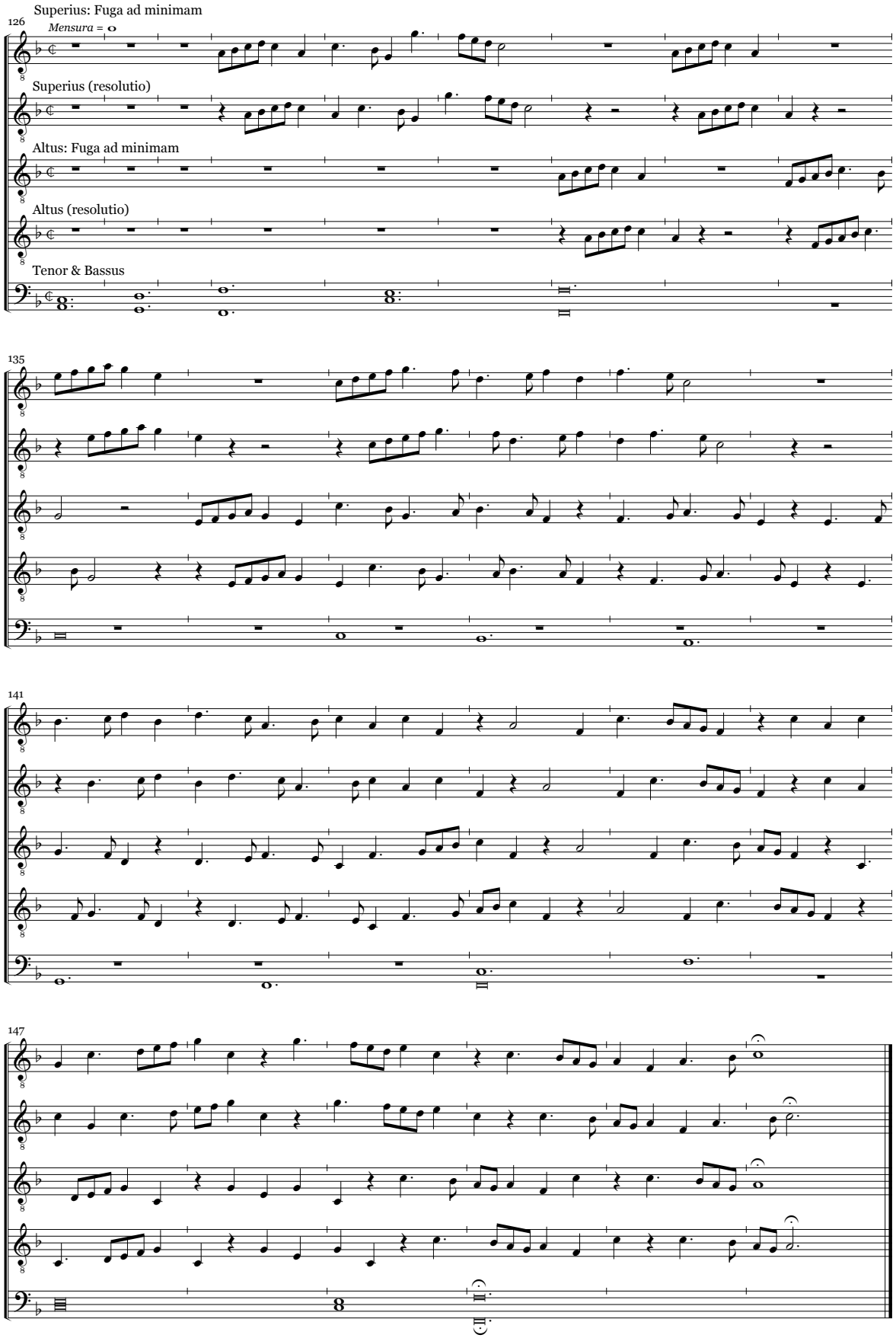
4 Cf. Bonnie J. Blackburn, 'On Compositional Process in the Fifteenth Century', *Journal of the American Musicological Society* 40 (1987), pp. 210-284, and Wegman 'From Maker to Composer'.

5 *Misse Josquin.* O. Petrucci, Venezia 1502, contains *Missa L'homme armé Super voces musicales, Missa La sol fa re mi, Missa Gaudeamus, Missa Fortuna desperata, Missa L'homme armé Sexti toni.* All are published in A. Smijers (ed.), *Werken van Josquin des Prés. Missen I.* Amsterdam 1926-31.

6 As suggested in Smijers, *Werken van Josquin Missen I*, pp. 127 ff. For practical reasons, the example adheres to the bar numbering of this edition.

7 Cf. the discussion in Bonnie J. Blackburn, 'Masses Based on Popular Songs and Solmization Syllables' in Sherr, *The Josquin Companion*, pp. 51-87 (at pp. 65 ff).

Ex. 1, Josquin, *Missa L'homme armé Sexti toni* – Agnus Dei III (bars 126-152).



I

This *Agnus Dei III* can be perceived in several ways. The two cd-recordings, which I have had access to,[8] choose to interpret the music as an aural bath in euphony, very slow and devout and transposed up a fourth in order to place the voices in ranges convenient for modern mixed choirs. Bonnie Blackburn's description of it as a carefully calculated culmination of a great fantasy upon the *L'homme armé* motifs is far more in accordance with the preserved sources "... ending the movement in a swirl of sound, as if the angels were beating their wings."[9] Compared with the recordings this demands a reversal of the perception of the tempo relations. The manuscript sources clearly prescribe an acceleration of the tempo through the three *Agnus Dei* sections, which results in a ratio
*2 between their *semibreves* corresponding to 3:4:6, that is, ending with a doubling of the opening tempo.[10] Petrucci was, however, out of consideration for his customers and his restricted selection of music type forced to simplify the notation and to supply resolutions of the cryptic canons. Josquin himself probably only indicated by means of a canon rule how the low voices should be made to fit together forwards and backwards.[11] The fast tempo combined with the exposed ranges of the divided male voices would indeed in *Agnus Dei III* generate "a swirl of sound".

Agnus dei III may also be viewed as a high point of a tradition for competition between learned musicians that began in the generations of Du Fay and Ockeghem. Composers tried to outdo each other in musical ingenuity and technical mastery, to create new music on a foundation that had won common approval in order to achieve personal fame and attractive employments. *L'homme armé* masses early on became the preferred battleground for this competition due to the tune's rich possibilities for mensural transformation and for transposition without loss of identity – around 35 masses are known to come in existence before the end of the sixteenth century – and *Agnus Dei III* became the stage for the decisive skirmishes.[12] Ockeghem here placed the tune an octave lower, added a one flat signature, and changed the mode and, more important, the whole tonal picture. Du Fay alienated the tune in retrograd in doubled note values before it returned in its normal shape. Busnoys brought it in inversion, and Obrecht trumped in retrograd inversion. Josquin surpasses with *Super voces musicales* his predecessors and contemporaries in mensural transformation and in modal transposition – and in contrapuntal density with the inserted mensuration canons inspired by Ockeghem's *Missa Prolationum* (*Benedictus* and *Agnus Dei II*). Against this background, the freedom in *Sexti toni* is striking. It is as if Josquin here is setting up an alternative sound picture, even though the *Sanctus* strongly features canons. However, when the tune appears in canon with its own retrograd in *Agnus Dei III* Josquin nevertheless challenges his successors to a difficult test, and at the same time he places the tune in a new world of sound.

8 The Tallis Scholars directed by Peter Phillips, Gimell CDGIM 019 (1989), and Oxford Camerata directed by Jeremy Summerly, Naxos 8.553428 (1995).

9 Blackburn, 'Masses Based on Popular Songs', p. 64.

10 Cf. Richard Sherr, 'The performance of Josquin's L'homme armé Masses', *Early Music* 1991, pp. 261-268.

11 Cf. James Haar, 'Josquin in Rome: Some Evidence from the Masses' in Richard Sherr (ed.), *Papal Music and Musicians in Late Medieval and Renaissance Rome.* Oxford 1998, pp. 213-233 (see pp. 222-223 and Plates 19-20).

12 David J. Burn, '« Nam erit haec quoque laus eorum » Imitation, Competition and the « L'homme armé » Tradition', *Revue de Musicologie* 87 (2001), pp. 249-287. This article offers a good overview of the competition and its conditions.

The *L'homme armé* tradition has sent many scholars hunting in the rich medieval realm of symbols to find an explanation for why just this tune was so attractive. Recently, Flynn Warmington has investigated masses for popes, emperors/kings and princes, where a drawn sword is part of the rituals, and where polyphonic *L'homme armé* masses might fit into the context.[13] Michael Long has examined its possible role in the defence of Christianity against the threat from the advancing, victorious Turks in the 1450s.[14] We find the richest interpretation of the phenomenon in Craig Wright's book *The Maze and the Warrior,*[15] where the historical and political conditions of the mid-fifteenth century combined with an anchoring in old Christian symbols form a complex network of meanings. The armed man is Jesus or St Michael, the defenders of the faith, and for example the use of retrograd is brought into context with the ritual dancing on the labyrinths that were laid in the floors of some French cathedrals, a symbol of the journey of Jesus to hell and back again, the downfall of the devil and the deliverance of the souls. *Agnus Dei III* in Josquin's *Missa L'homme armé Sexti toni* thus portrays Jesus both as the victorious warrior and as the sacrificial lamb, the beginning and end of everything: "The Armed Man is moving forward and backward simultaneously, just as the dancers do on the maze on Easter Sunday. When the exact midpoint of the section is reached, the roles are reversed ...".[16]

Josquin's *Agnus Dei* section reveals the wealth of meanings inherent in medieval intellectual production: The music can be perceived as a sound phenomenon representing a feeling or an experience (the angels, the climax of the Communion), it can stand as an abstract work of 'art' with technical artifice as a constitutive trait, by which the author may measure his accomplishment and status, and it vitalizes complex Christian symbols. The first element especially, the sound, has always appeared to me as not sufficient researched and discussed in the extensive Josquin literature. This view was recently thrown in relief by something seemingly totally unrelated to vocal music around 1500. It was during my reading of a Phd thesis on the role of instrumentation in the orchestral music of the nineteenth and twentieth centuries.[17] Jens Hesselager criticises the old metaphor that hears instrumentation as a layer of colour complementing the firm lines drawn by the musical structure. The thesis suggest "... that one may conceive of musical understanding as relating to how the music is realised in a concrete situation rather than to what structural qualities one may find if one seeks to reduce the musical texture and disregard the surface."[18] In particular, the discussion of Wagner's contrapuntal texture and the 'al fresco' technique and especially of the *stretto* technique in the prelude to *Das Rheingold*[19] reminds of parallel phenomena in Josquin's *Agnus Dei*. The myriad of individual voices fuses in Wagner into pure sound – the individual expressions of the voices are cancelled in favour of a palette of tonal colours that serves the composer's aims of expression.[20]

13 Flynn Warmington, 'The Ceremony of the Armed Man: The Sword, the Altar, and the *L'homme armé* Mass' in Paula Higgins (ed.), *Antoine Busnoys. Method, Meaning, and Context in Late Medieval Music.* Oxford 1999, pp. 89-130.

14 Michael Long, '*Arma virumque cano:* Echoes of a Golden Age' in Higgins, *Antoine Busnoys*, pp. 133-154.

15 Craig Wright, *The Maze and the Warrior. Symbols in Architecture, Theology and Music.* Cam. Mass. 2001.

16 *Ibid.* p. 189.

17 Jens Hesselager, *Sound and Sense, The Role of Instrumentation in Nineteenth- and Twentieth-Century Conceptions of Musical Understanding.* Phd thesis, University of Copenhagen 2001.

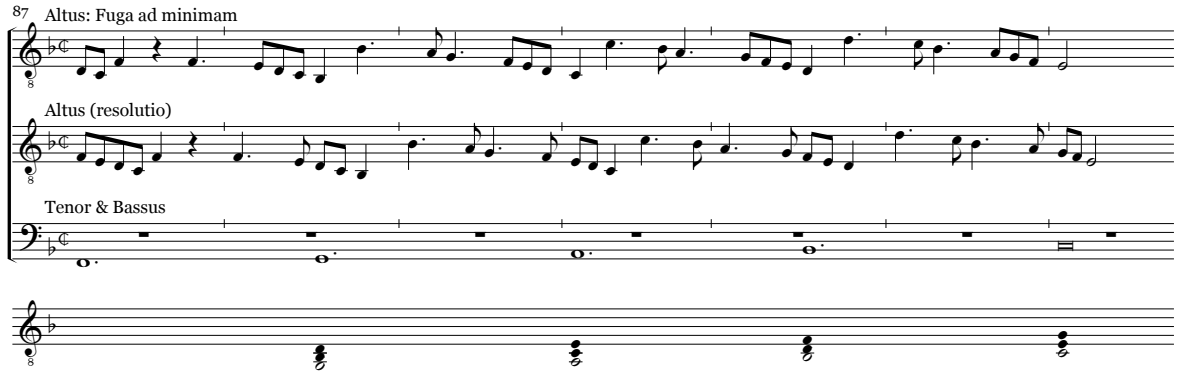
18 *Ibid.,* quote from *Abstract,* p. 224.

19 *Ibid,.* pp. 67 ff and 109 ff.

20 *Ibid*., p. 73.

Of his cantus firmus material Josquin designs a slow-moving two-part structure, which for long stretches functions as a self-supporting *contrapunctus*. He then sets this structure in sound – 'orchestrates' it – by the two fast unison canons, whose motifs are triadic or form chains of parallel thirds. Where one of the voices in the cantus firmus duet comes to sing a scale segment alone, it is 'harmonized' by patterns of sequences, which – if the structure is reduced to a contrapunctus skeleton – is more like parallel passages in thirteenth-century organum than an actual contrapunctus structure. The parallel putting-
*3 in-sound technique lived on for centuries in improvised polyphony. *Example 2* shows an example for three voices (bb. 88-93), while a more elaborate passage for five voices can be seen in *Example 1* (bb. 137-143). The two canons in the upper voices are so closely bound to the slow cantus firmus structure that they almost seem like a 'thickening' of it. By the alternation of the higher duets, repeats and sequencing of simple figures and stretto-like piling up of tones and not least rests, Josquin creates a structure in sound in waves of changing density completely without cadence formulas or dissonances apart from passing notes. Its progress is precisely controlled: From the calm alternation of the upper voice canons at the beginning, it reaches the highest note clad in the sound of six voices in bar 98; from here on the music gradually winds down, nearly reaching a standstill with only the sound from the two cantus firmus voices, who then through the progression third-fifth-octave open the space for the final stretto (bb. 126 ff, cf. *ex. 1*).

Ex. 2, Josquin, *Missa L'homme armé Sexti toni* – Agnus Dei III (bars 87-93, reduced)



It is thought-provoking that Josquin, during the period when composed music through the efforts of Tinctoris and Gaffurius had become something that could be discussed and evaluated, goes a step further and reshapes the contrapunctus into a composition where the sound of voices appears as a key element[21] – and not least the prominent position this composition was granted in the first collection of masses in print. His inspiration may have been the everyday improvised sacred music, in which *cantus super librum* (singing

21 *Ibid.* p. 47, Walter Gieseler is quoted for the reversed litmus test "Je mehr instrumentaler Klangfarbe zum Wesen einer bestimmten Komposition gehört, desto weniger sinnvoll wird dagegen ein Klavierauszug." ('Instrumentation' in Ludwig Finscher (ed.), *Die Musik in Geschichte und Gegenwart. Zweite, neubearbeitete Ausgabe. Sachteil.* Bd. 4, Kassel 1996, Sp. 911-951). In this connection it is striking that neither Josquin's *Agnus Dei III* nor the compositions by Brumel and Gombert, which will be discussed below, make any sense performed on the piano.

upon the book) for three or more voices could take the shape of free canon for equal voices using stock melodic figures in consonant concords and avoiding cadential formulas that would be difficult to coordinate in oral arrangements. In sound the result might be something like this *Agnus Dei,* but in the nature of things it would lack Josquin's careful design of the development and its rich world of symbols.[22] Joachim Thuringus described in his treatise *Opusculum Bipartitum de Primordiis Musicis,* printed in Berlin in 1625, Josquin's famous five-part motet *Stabat mater* as a work composed "ad imitationem sortisationis"; that is, in imitation of improvised polyphony by flourishing melodic lines over a sacred tune.[23] *Stabat mater* does not build on a sacred tune, but on a symbolic cantus firmus, the tenor from Gilles Binchois' rondeau *Comme femme desconfortée,* which without rests forms the tenor of the motet in triple augmented note values.[24] The four voices around it are composed much closer to the words of the *Stabat mater* sequence than the sound picture we experience in *Agnus Dei III*; they exhibit some imitation and melismatic lines and expressive chordal recitation. However, its type of setting with the governing, far drawn-out tenor, the freely declamatory, quickly changing combinations of voices, the Lydian mode with a signature of one flat, which to modern ears sounds like F Major all the way through, and its almost dissonance-free euphony was enough to bring to mind a still alive improvisatory practice more than a hundred years later.[25] In sound they are quite similar.

II

Josquin was not alone in creating music with the sound of voices as a key feature. His contemporary Antoine Brumel (*c.* 1460 – after 1512) who in the years 1505-10 was chapel master in Ferrara, the position which Josquin had in 1503-04, and whose *Misse Brumel* (containing five masses, incl. a *Missa L'homme armé*) was published by Petrucci in 1503, created a twelve-part *Missa Et ecce terrae motus.* It is based on a quote from an antiphon for Easter morning "And behold, the earth shook", which is used in free canon in prolonged note values. The huge work is structured with alternating combinations of voices and contrasts between homorhythmic and imitative passages, but most impressive are the many-voiced sections, where a massive sound vibrates of teeming triadic figures running from voice to voice in slowly changing harmonies.

22 Willem Elders mentions in 'Symbolism in the Sacred Music of Josquin' in Sherr, *The Josquin Companion*, pp. 531-568, that unison canon is connected with the notion of 'heavenly music' (*Musica caelestis*) and points as example to the canon prescription in *Sanctus* in *Missa Sexti toni*, "Duo seraphim clamabunt alter ad alternatum" (Two seraphim cried out, the one calling the other – this prescription is found in the manuscript sources), which indicates unison canon between altus and tenor (p. 560). Elders might have prolonged this interpretation to include *Agnus Dei.*

23 Cf. Ernest T. Ferand, 'Improvised vocal counterpoint in the late Renaissance and early Baroque', *Annales musicologiques* IV (1956), pp. 129-174 (at pp. 134-135), and Ernest T. Ferand, '"Sodaine and unexpected" Music in the Renaissance?', *The Musical Quarterly* 37 (1951), pp. 10-27 (p. 22).

24 Published in Smijers, *Werken van Josquin Motetten II*. Amsterdam 1959, pp. 51-57.

25 On improvisation, see the articles by Ferand mentioned above. The discussion of *Sortisatio* appears in den theoretical music literature, especially the German, since Nicolaus Wollick used the term in *Opus aureum* from 1501, cf. '"Sodaine and unexpected" Music' pp. 11 ff. The term was first mentioned in the treatise *Capiendum erit et ultimum* in the MS Regensburg, Bischöfliche Zentralbibliothek, Proske-Musikbibliothek, Th 98, p. 355 (c. 1476), cf. Klaus-Jürgen Sachs, *»De modo componendi«. Studien zu musikalischen Lehrtexten des späten 15. Jahrhunderts* (Studien zur Geschichte der Musiktheorie 2), Hildesheim 2002, p. 103.

The mass is known only from one single source coming from the court chapel in Munich and copied under the supervision of Orlando di Lasso in 1568-70. Lasso himself supplied the parts with the names of the 33 court singers responsible for the performance of the nine male voice parts of the mass, while the boys took care of the three high parts.[26] At its core, the mass is four-part for superius, altus, tenor and bassus. Each voice category has then been triplicated with an enormous 'thickening' of the sound as result – and for long stretches also with an abandonment of the contrapunctus foundation as a consequence. Even two generations after the death of Brumel, Lasso found the mass interesting to perform, although he never composed something similar himself. The date for the genesis of the mass is difficult to guess owing to the slender source material. It may be older or contemporaneous with Josquin's *Agnus Dei III*. For that matter, they may have begun a competition of writing such music for Easter, whoever started. The only sure thing is that the two works must have the same background in inspiration from the sound of improvised sacred music.[27]

That Brumel's *Missa Et ecce terrae motus* had an impact in his time and in the following decades is witnessed by Nicolas Gombert who in his six-part Easter mass *Missa Tempore pascali* incorporated a homage to Brumel.[28] In the last *Agnus Dei* the number of voices is expanded to twelve and the same cantus firmus as in Brumel's mass, "Et ecce terraemotus", is sung in very long note values in the tenor, while the eleven other voices in triadic figures, fast scale runs and insistent recitation paint a sound picture of the trembling of the earth, the resurrection and the radiance of the Pascal lamb in slow, majestic changes of chords – all with clear reference to Brumel. In the *Credo*. Gombert expands the number of voices to eight, but here he maintains his own dense imitative writing with clearly profiled motifs modelled on the words of the text. The biography of Gombert (*c.* 1495 to *c.* 1560) remains in mist. During the 1520s he was a singer in the imperial chapel of Charles V and from 1529 its *maistre des enfant*s. Heinrich Finck describes him in his *Practica musica* from 1556 as a pupil of Josquin, information that cannot be verified, but which is not contradicted by the character of his music.[29] The reference of Gombert to Brumel underlines the need for renewed research in the overlooked, versatile and very style- and sound-conscious Brumel[30] and – after the newest discoveries concerning Josquin's year of birth[31] – in the relationship between the productions of Brumel and Josquin.

26 Published in Antoine Brumel (ed. Barton Hudson), *Opera omnia I-VI* (Corpus mensurabilis musicae 5) 1951-72, vol. III.

27 Clytus Gottwald has in 'Antoine Brumels Messe »Et ecce terrae motus«', *Archiv für Musikwissenschaft* 26 (1969), pp. 236-247, analysed the mass for the purpose of comparing with certain elements in György Ligeti's work for choir, *Lux aeterna*, and the orchestral *Lontano*. Especially his analysis of *Klangfarbenmelodik* and Brumel's manipulation of the structure's density and colour is rewarding.

28 Published in Nicolas Gombert (ed. Joseph Schmidt-Görg), *Opera Omnia I-XI* (Corpus mensurabilis musicae 6), vol. III, p. 53.

29 Cf. G. Nugent & E. Jas, 'Gombert, Nicolas' in Sadie (ed), *The New Grove Second Edition,* vol. 10, pp. 118-124.

30 As an example of this, one can mention Brumel's tribute to Ockeghem in his reworking of Ockeghem's *Fors seulement l'attente* into the double rondeau *Du tout plongiet / Fors seullement* for four very low voices in a deliberately old-fashioned style, published in Brumel, *Opera omnia* VI, p. 74.

31 Cf. note 1.

III

It is evident that Josquin as well as Brumel and Gombert with the compositions just mentioned created music that falls outside the normal scope for sacred music around 1500. Moreover, there can hardly be any doubt that music showing up such effects in their sounding presence was created at least partly with a view of functioning as symbols for something outside the music, most often as sounding Christian symbols.

Also one of the earliest masses based on a secular model, Du Fays *Missa Se la face ay pale,* uses a sounding phenomenon as a constitutive element. It was probably written for the wedding between Amadeus IX of Savoy and Yolande de France, daughter of Charles VII, in 1452.[32] The main reason for linking the mass with this occasion is its model, Du Fay's own three-part ballade *Se la face ay pale*, which possibly was written for the wedding of the bridegroom's parents celebrated in Savoy in 1434 with Du Fay serving as chapel master.[33] The end of this quite unusual ballade is striking. It is formed as a festive fanfare in C, in which all three voices participate (bb. 25-29). We must assume that this effect was a main inducement for Du Fay to compose the mass on the song's tenor.[34] The polyphonic fanfare appears very audibly in all five main sections of the mass. Its appearance is strongest in the two longest sections, *Gloria* and *Credo,* in which the tune is sung three times, and where, like in an isorhythmic motet, it is accelerated. From being nearly unrecognizable in tripled notes, it ends triumphantly in the original tempo of the ballade and involves the other voices even more. The fanfare is a celebratory mimetic gesture, and if the interpretation of the occasion for and the driving force in the creation of the mass is correct, the fanfare must be among the decisive elements in its design. *4

We encounter a different situation with the earliest mass by Ockeghem, *Missa Caput.*[35] It builds on an anonymous English mass, which previously was attributed to Du Fay,[36] or, more accurately, it is modelled on the English mass.[37] The English *Missa Caput* had gained wide circulation and was often imitated, maybe also by Du Fay in his *Missa Se la face*. Apparently, its appeal lay in its successful organization of the four-part structure in two clearly separated layers (a calm tenor coupled with a lower contratenor against two livelier upper voices) and proceeding in alternation between free duets and full-voiced cantus firmus passages. Ockeghem turned this upside down: He quoted the English tenor, so that it on the page came out unchanged, but in a Latin instruction he ordered the singer to perform it an octave lower. Above it he put three higher voices, which primarily move in the *Dorian* mode and differ audibly from the borrowed, *Mixolydian* tenor. These two interventions give the mass, in addition to almost insurmountable difficulties with *musica ficta,* a distinctive sounding identity that can be hard to interpret. Fabrice Fitch

32 Cf. David Fallows, *Dufay* (The Master Musicians) London 1987 (rev. ed.), p. 70. The mass is published in Guillaume Dufay (ed. H. Besseler), *Opera omnia I-VI* (Corpus mensurabilis musicae 1) 1951-66, vol. III.

33 Fallows, *Dufay,* p. 41. The song in published in Dufay (ed. H. Besseler, rev. D. Fallows), *Opera omnia VI – Cantiones*. 1995, p. 36.

34 The tenor tune, moreover, has some similarities with the *L'homme armé* tune; for example, the high central passage (bb. 11-16) triggers similar effects with note repetition and descending fifth.

35 Published in J. Ockeghem (ed. Dragan Plamenac), *Collected Works.* New York 1959-66 (2. ed.), vol. II, p. 37, and in J. Ockeghem (ed. Jaap van Benthem), *Masses and Mass Sections.* Utrecht 1994-, fascicle I,1. The mass is discussed in Fabrice Fitch, *Johannes Ockeghem: Masses and Models.* Paris 1997, pp. 42 ff.

36 Published in Dufay. *Opera omnia* II, p. 75.

37 Cf. Fitch, *Johannes Ockeghem: Masses*, p. 43.

speaks frankly of a 'subversive streak' in Ockeghem's procedure.[38] The ritual of washing the feet in imitation of Jesus (*pedilavium*) on Maundy Thursday, to which the *Caput* melisma (from the antiphon "Venit ad Petrum") belongs,[39] was a recurrent ceremony at the French court and is an obvious occasion for the young Ockeghem to show his prowess in the years after 1450. But which symbolic frame, except for the liturgical, that might have motivated the mass' singular appearance in structure and sound is left to the imagination – could the final French victory in the Hundred years war be influential?

The wide circulation of the anonymous English *Missa Caput* on the Continent and the inspiration that Continental composers received from it, created an ideal of sound for 'great' polyphonic music around and after 1450. Yet we hear the most prominent composers breaking this ideal in quite different ways. Du Fay by incorporating festive sound associations in *Missa Se la face ay pale,* and Ockeghem by 'overthrowing' the sound ideal.

IV

In the previous sections I have assumed the establishment of a sound ideal around 1450, and that the masses by Josquin, Brumel and Gombert infringed the prevailing norms for sound during the years around and after 1500. But is it fair to set it up in this way? With this I not only imply that norms for sound did exist, that they evolved and changed over the generations, but also that composers worked out consciously the music's tonal appearance. Something like this is discussed only sporadically in the scholarly literature, and not at all in any tangible form in the music literature of the period.

It is common historical knowledge that different models for setting polyphonic music existed during the period from the end of the fourteenth century and until the generations of Josquin and Ockeghem, models which were linked with different genres and changed over time, and that the selection of notes to use was expanded and thereby also the number of voice categories at composer's disposal. Likewise, musicology has a huge selection of tools and observation points for analysis and comparing of the music at its disposal. Usually one examines the use of cantus firmus, contrapuntal procedure, the roles, tessitura and distribution of the voices, the level of ornamentation, disposition of cadences, dissonance treatment and the elusive determination of mode. All this can in certain combinations help to date and place compositions when the evidence of the sources is insufficient. Taken together these and other points of analysis also describe a large part of the sounding presence of compositions, but one usually refrains from discussing this important issue.[40] This may make an analysis of Josquin's *Agnus Dei III*

38 *Ibid.*

39 Cf. Manfred F. Bukofzer, '*Caput:* A Liturgico-Musical Study' in *Studies in Medieval and Renaissance Music.* New York 1950, pp. 217-310 (at pp. 230 ff).

40 For example, the aspect of sound does not get much mention in the new Josquin book, *The Josquin Companion.* Richard Sherr writes in his introduction: "Further, this inventiveness is to be found at all levels of his musical output, from large-scale structure to the surface elements of counterpoint and melodic invention, down to the details of motivicity, yet all this inventiveness does not overwhelm the actual aural event of the music itself, which delights and moves us on its own terms." (p. 7) This statement quite precisely captures the preoccupation of scholarship with discovering coherence and structure in the music, while its sounding presence is more of an side benefit. Not surprisingly, the most insightful contribution in the book as terms of sound is by Alejandro Enrique Planchart, who is active as a conductor, see for example his description of *Missa de beata Virgine* pp. 124 ff; and among others John Milsom succeeds in showing that a motet, *Gaude Virgo,* which appears strikingly regular, rigid and ascetic

strangely unreal, when the exceptional originality of the music disappears behind a review of the fascinating canon technique. Only realizing that Josquin here uses his contrapuntal abilities to manipulate a complex of sound, does one dare to suggest that he for symbolic reasons borrowed the sound image of improvised sacred music.

The title of this article announces a 'suggestion'. My suggestion is – not surprising in this connection – that we in historical research incorporates the music's sounding presence as a decisive factor in the understanding of musical phenomena. The reasons for often to disregard it are not difficult to unearth: The music theorists of the fifteenth century mention music's sound only in vague terms, and apparently the musicians' employers primarily valued sacred music for its ability to fill liturgical and social functions. A modern scholarly tradition has relegated the realisation of music to a sister discipline, 'performance practice', which enjoys its own issues of sources and theory. Hereby sounding music has been placed outside scope of music analysis and the historical reflection. An understanding that in comparison with the musical expressions of later periods the music was abstract and foreign has led to a tendency to – to return to the classic orchestration metaphor – perceive the preserved musical work as a drawing, which with the help from performance practice can be painted out in colour.[41] To establish a satisfactory well-developed alternative to this perception, however, exceeds the boundaries of this article. I will outline a few points only.

1) The fifteenth-century system of teaching polyphonic music builds on simple two-part contrapunctus, note-against-note, which was taught by ear, possibly helped by simple textbooks and first and foremost through endless repetitions. Along with more advanced rules for subdividing the note values in the counter voice in rhythmisized passages (*cantus fractus*), for the placements of dissonances and for making cadences, this knowledge formed the basis for all music, whether it was rehearsed and performed only in its sounding form, or it was further worked out and regulated before being secured in writing. The sounding presence of polyphonic music is thus found in two related forms, one produced primarily while singing (for example *cantus super librum*) and one relying on careful prepared written music (*res facta*). There are many indications that the contrapunctus structure was the means of that age for thinking about musical progressions even if it was superposed with other elements (imitation etc.) and even if composers eventually in practice relied on notions of triads.

A modern analysis of modal relations and larger structures in written music, which wants to be loyal to the concepts of the age, often uses a contrapunctus reduction as a tool. This approach has many features in common with the technique of *Schenker* analysis, and a modified Schenker analysis is often applied, especially in American musicology. The relationship between the surface of the music and the first layer in a reduction resembles the relation between an orchestrated score and a piano reduction in later music. One could say that the reduction represents the structures that are shared by improvised music and *res facta,* while the carefully worked out and detailed surface, what we meet in the

(not of interest for research), is highly effective and typical for its time is its sounding realisation of its text (pp. 264 ff). In both instances, however, the discussions do not systematically include the element of sound.

41 In his *Musikästhetik* (Köln 1967) Carl Dahlhaus expressed it in this way in a discussion of how many 'layers' (*Schichten*) music contains: "Die Klangform eines musikalischen Werkes, die Instrumentation oder Besetzung, ist seit dem 17. oder 18. Jahrhundert ein Teil der Komposition, während sie in früheren Epochen Sache der Aufführungspraxis war." (p. 122).

sources, represents what is characteristic for *res facta,* namely that all the voices relate to each other instead of to the tenor part only.[42] It is in this layer too that we find the composer's design of the music's sounding presence.

2) The development of sound elements, which musicians could work with in a sort of 'vocal instrumentation', is bound up with the expansion of the total range of the complex of voices and especially with the emergence of differentiated categories of voice types, each with a clearly defined role to fill. With this a tonal space was established with room for unfolding of the characteristics of the voice categories, the 'instruments' of the composers. This development depended on a demand for polyphonic music and the creation of musical institutions employing specialized singers able to fulfil the functions in an increasingly more complex sacred music.

When Machaut remarks in *Voir dit* about his tenors in the ballade *Nes que on porroit* (Ballade 33) that they are as "sweet as unsalted gruel",[43] it is a precise aesthetic assessment of a special use of concords, and it hardly refers to the sound of the in range undifferentiated tenor parts. The differentiation of range and sound happened mostly by virtue of the development of and growing independence of the role of the contratenor(s) in the contrapunctus structure. The development of improvisation involving several voices may naturally have led to the establishment of specialities in singing, which were transferred to music in notation. Each singer obtained an identity as upper voice (falsettist) or tenor (*tenorista*, also the leader of improvised polyphony), or as high or low contratenors, singers of extended range and vocal agility, and even regional differences evolved owing to the linguistic and educational qualifications of the singers.[44] The specialization of the singers caused that they only reluctantly sang parts outside their professional identity. This meant that if one function in an ensemble was missing owing to illness or absence, polyphonic music could not be performed. Concurrently, successful types of ensembles were formed at the leading musical institutions, which were imitated by other institutions. These ensembles might be rather different depending on whether they were based on a few adult falsettists on the upper voice or on boys with a few adult singers on the lower voices.[45] The composer used these general role characters in his sound image when a setting was planned; likewise, unusual features in compositions may be explained by being written for singers with special personal qualities.[46] This development falls chronologically within Du Fay's long career.

42 Cf. Tinctoris' distinction in *Liber de arte contrapuncti* (1477) quoted and translated in Blackburn, 'On Compositional Process', p. 249.

43 "Et sont les teneurs aussi douces commes papins dessales", quoted and commented on pp. 50 ff in Daniel Leech-Wilkinson, '*Le Voir Dit* and *La Messe de Nostre Dame*: aspects of genre and style in the late works of Machaut', *Plainsong and Medieval Music* 2 (1993), pp. 43-73.

44 Cf. Rebecca Stewart, '*In principio erat verbum.* A Physiological and Linguistic Study of Male Vocal Types, Timbres and Techniques in the Music of Josquin des Prez', *Tijdschrift van de Vereniging voor Nederlandse Muziekgeschiedenis* 35 (1985) pp. 97-193.

45 This paragraph owes much to the articles by David Fallows, 'Specific information on the ensembles for composed polyphony 1400-1474' in Stanley Boorman (ed.), *Studies in the performance of late medieval music.* Cambridge 1983, pp. 109-159, and 'The Performing Ensembles in Josquin's Sacred Music', *Tijdschrift van de Vereniging voor Nederlandse Muziekgeschiedenis* 35 (1985), pp. 32-66. See also Wegman, 'From Maker to Composer', pp. 444 ff.

46 See for example K. Kreitner, 'Very low ranges in the sacred music of Ockeghem and Tinctoris', *Early Music* 1986, pp. 467-479.

3) In the very idea of freezing the sounding presence of music, which is central for the worked out *res facta,* lies an awareness that the product is something special. This awareness can more precisely be described as a 'consciousness of style and genre', and it goes back to the earliest polyphony – with Machaut as a rather late and significant example. This gives rise to a number of types of compositions, each of which has a relatively well-defined sounding presence. To mention just a few:

> *The 'isorhythmic' motet* for official occasions with a carefully designed tenor as the lowest part in the structure and faster moving upper voices with different text, where primarily the rhythmic differentiation is decisive for the two layers of sound. Perhaps Ockeghem played with this tonal formula in his *Missa Caput*.
>
> *The cantus firmus mass around and after* 1450, the replacement for the isorhythmic motet as 'big' occasional music, with alternation between duos and compact cantus firmus sections, is well suited for symbolic representation, and provides in its schematic simplicity the composers with space for the development of personal stylistic traits.
>
> *The leaner type of setting around 1500 with even more differentiated voice parts*, in which imitation plays a significant and constructive role, and where some transparency in sound is a condition for a higher degree of rhetoric word interpretation and mimetic representation. It is the model that Josquin relates to in *Agnus Dei III.*

With these rough deliberations, I suggest that the question posed at the start of this section, whether it is possible to describe sound ideals, which the composers could relate to, and whether sound ideals may be defined for generations, for regions, for groups of composers or applicable to a single composer, in general must be answered in the affirmative. A large part of the material that is needed to answer the question in more detail has already been examined by the existing research. What is needed is a renewed view on this material and probably several new enquiries to answer new questions.

4) I suggest a view of the sounding presence of music in the fifteenth and sixteenth centuries that unites two apparently opposite insights: That music's surface (*res facta* or the shape in which music is found in the sources) is an integral part of the whole, and that, in addition, *res facta* represents a frozen realization in sound of the music, which contains a lot of concrete information, but that this realization is not the only possible one. For the time it seemed unthinkable that music should have only one form of manifestation. The amount of research categorized as 'performance practice' deals with the primary realization of *res facta* as well as with all the alternative ones. In short, the sounding form of music is available to us in two shapes, one specifically based on written music and one speculatively based on performance traditions in distant times. This duality in our handling of the music is a natural consequence of the basic foreignness that is caused by the great distance in time and culture, and which we in a superficial familiarity with the period best not forget – something often happening in heated debates on 'authentic' performances of ancient music. The primary realization, which research in composers' handling of music's sounding presence should deal with, has as its starting point the background of the composers and the environment and the institutional framework in which they worked. The vocal music and the sound of voices are here

domineering, first and foremost because the living of composers depended on the singing of liturgy in an eternal cycle.[47]

What to call research in the treatment of sound in the fifteenth and sixteenth centuries poses a problem. 'Instrumentation' immediately sounds wrong. At its core, however, the word 'instrument' just denotes a tool, so the term 'vocal instrumentation', which previously has been used about the composers' disposition of voice parts and their ranges, can well be extended to cover the entire treatment of sound in the sense of 'the composer's use of vocal sound tools'. As previously mentioned, this field can accommodate almost all the analytic strategies that so far have been used in research. It just needs a slight adjustment towards sounding phenomena. For example, an examination of the density of dissonances gets a different significance in this connection, and the intense debate on tempo relations, which has been prominent in scholarly circles during the last decade,[48] is obviously of importance. Points of special interest are composers' choices of voice types (combinations, dominance of low or high voices, exceptional mixtures of voices), the relationship between figural setting and homorhythmic declamation (movement, effect of immobility, 'figured stillness'), the design of the single voice (use of the different parts of its range, in particular the high/low tension of the registers according to our knowledge of the singing technique of the time), the balance of voice distribution (the impact of exposed voices, crossing of parts), the obvious vocal virtuosity – for example found in duos in some masses by Josquin, in music by Agricola and Brumel, what have often been called 'instrumental' style, etc.

*5

A short, illustrative example from a Josquin mass may help to clarify my notion of vocal instrumentation. *Kyrie I* from *Missa Hercules Dux Ferrariae*[49] can be described as building on motivic patterns in symmetrical formations.[50] An analysis of the vocal instrumentation in the first bars may serve to nuance this picture (*Example 3*). *Cantus* presents in a low tension register the completely regular cantus firmus, which musicalizes the name of Duke Ercole I d'Este of Ferrara as solmization syllables. The forced repetition of the first notes (*Hercules Dux* = re, ut, re, ut) Josquin instruments by letting *Contratenor altus* sing an elementary figure, which could be found in improvisatory praxis, as a counter voice to the two descending notes in consonant intervals (octave-fifth-sixth/fifth-third-fifth-sixth), rhythmisized buoyantly to tie the phrase together.[51] This figure is repeated exactly by *Contratenor bassus* in the two following bars. However, while altus sounds in its lowest and presumably weakest register (later in the mass altus is up to an octave higher), the bassus sings in a comfortable and resounding register. There will be a notable difference in sound and not just a repetition. In the continuation, the exchange of motifs

47 This sketch concerns the 'big' sacred music only. The views expressed are of course also of relevance for the lesser sacred genres and secular music, although the daily use of instruments in secular surroundings has probably been far more pronounced. For an attempt at describing sound awareness in French chansons in the 1460s, see my article 'Æslets skryden og sang gennem tårer. Billeder i musik i 1400-tallets populære og kunstfulde traditioner', *Musik & Forskning* 26 (2001), pp. 97-134 (at pp. 117 ff).

*6

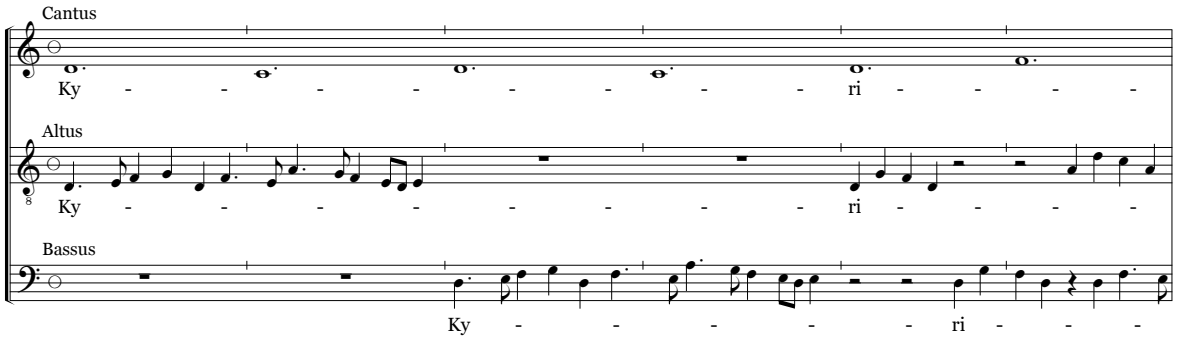
48 Cf. *ibid*., pp. 128 ff (especially note 69).

49 From *Missarum Josquin Liber secundus*. Petrucci, Venezia 1505. Published in Smijers, *Werken van Josquin Missen II,* p. 19.

50 Cristle Collins Judd, 'Josquin des Prez: Salve regina (à 5)' in Mark Everist (ed.), *Music before 1600* (Models of musical analysis). Oxford 1992, pp. 114-153 (at pp. 133-138).

51 See further James Haar's comments on the same example in 'Monophony and the Unwritten Tradition' in Howard Mayer Brown & Stanley Sadie (eds.), *Performance Practice: Music before 1600.* London 1989, pp. 240-266 (at pp. 259-261).

Ex. 3, Josquin, *Missa Hercules Dux Ferrariae* – Kyrie I (bars 1-6; Tenor has rests only in these bars)



happens faster, and altus moves up into a higher range along with cantus, until the tenor enters with the cantus firmus, followed up by an increased rhythmic activity in the three other voices. Across the symmetrical pattern of motifs, Josquin in this way composes a *crescendo* in sound and rhythmic activity, which is highly effective and makes the Kyrie sound not nearly as awkward as the structural description hints. While this works for singing voices, there is nothing to hinder that the composition could be performed to great effect by an ensemble of wind instruments, which was in high demand in Ferrara,[52] or, more plausible, that the musicians taking Josquin as model improvised something similar on the ducal *soggètto*.

V

Rob C. Wegman has commented on related topics in his article "Musical understanding' in the 15th century'.[53] He discusses the demands from humanism and from composers, who as producers of art became still more self-aware, for an understanding of music that extends, on the one hand, beyond the sensual joy of music and, on the other, the mathematical proportions of intervals as the basis for euphony. But what was there to understand? It can be hard to know, especially since the writers of the time incl. Tinctoris as descriptive words for the appeal of music speak almost exclusively of its *dulcedo* (sweetness, niceness) or other synonyms for it, and often express that this *dulcedo* is incomprehensible, inexplicable or wonderful:

> Undoubtedly, many listeners must have received training in counterpoint, and acquired a thorough understanding of the rules by whose application sweetness could be effected. Yet rules of composition did not necessarily determine the criteria for aesthetic appreciation. In fact, they might not even have been particularly helpful. Even the most knowledgeable musicians of the period, for all their understanding of the art of counterpoint, could confess to utter perplexity when they heard the sheer magic of consonant sweetness as listeners. Indeed, such perplexity was often considered a tribute to the effectiveness of musical sound as heard. A good example is the following, from one of the earliest treatises by Tinctoris, the *Proportionale musices*:

52 Cf. Lewis Lockwood, *Music in Renaissance Ferrara 1400-1505: The Creation of a Musical Centre in the Fifteenth Century.* Oxford 1984, pp. 141 ff.

53 *Early music* 30 (2002), pp. 47-66.

> "But alas! I am astonished not only at [moderns like] Ockeghem, Busnoys, Regis and Caron but also at many other composers, for while they compose so ingeniously and with such refinement, and with incomprehensible sweetness, I have known them either to ignore musical proportions altogether, or to designate wrongly the few they did know."[54]

I do not know if any contemporaries did comment that Josquin's *Agnus Dei III* was of an 'astounding sweetness', but it would have been quite appropriate. However, the words were used of the occasion for which Du Fay's isorhythmic motet *Nuper rosarum flores* was composed, the dedication of the cathedral in Florence in 1436.[55] This motet has been regarded, authorized by Tinctoris' well-known declaration in *Liber de arte contrapuncti* that no music more than 40 years old was worth hearing, as the start of a 'new music'.[56] It can stand as a representative of a new perception of sound, first and foremost due to Du Fay's ingenious use of two cantus firmus tenors in free canon at the fifth, which gives the sound's foundation a new sonority and self-supporting direction, and which is supported by divisions in the upper voices, which enrich the sound, combined with a logical structure of alternating duos and four-part harmony. Here (and in other big motets by Du Fay) several 'sound spaces' are defined with far greater authority than before. In a way, the motet anticipates the ideal of sound around the middle of the century, and it is in truth 'astounding'.

With this, 'vocal instrumentation' is offered as part of the frame of understanding when we set out to discover what musicians of the time themselves did not have words for in their admiration for the music's *dulcedo.* Tinctoris and others in the second half of the fifteenth century began wishing to 'understand' music intellectually and to evaluate it according to new criteria – as Wegman writes: "The ideal of consonant sweetness for its own sake began to be qualified, and another ideal was to become equally influential: that of the musical work which is *intrinsically good* – that is, well composed."[57] The well-composed work includes not only the contrapuntal skill, but also the composer's disposition and mastery of the music's development in sound, an amazing facility for which even composers with dire deficiencies in other respects could be praised. In his *New Grove* article on Obrecht, Wegman began to outline a new concept:[58]

54 *Ibid.* p. 53, the emphasizing in the Tinctoris quote is Wegman's.

55 In Giannozzo Manetti's description of the occasion, quoted *ibid.* p. 53. The motet is published in Dufay, *Opera omnia I*, p. 70.

56 Cf. Blackburn, 'On Compositional Process', pp. 268 ff, and Reinhard Strohm, 'Music, Humanism, and the Idea of a »Rebirth« of the Arts' in Reinhard Strohm & Bonnie J. Blackburn (eds.), *Music as Concept and Practice in the Late Middle Ages* (The New Oxford History of Music. New Edition. Vol. III.1) Oxford 2001, pp. 344-405 (at p. 351).

57 Wegman, '»Musical understanding«', p. 56.

58 Rob C. Wegman, 'Obrecht, Jacob' in Stanley Sadie (ed.), *The New Grove Second Edition,* vol. 18, pp. 290-307. Wegman's initial classification of the 'sound' of the generations of composers is fruitful too. Yet his characterization of the sound ideal of the Dufay-Ockeghem-Busnoys generations as a "wall of sound" is too summary (p. 300). The euphony of the full-voiced sections was certainly important, but one must not hear the duos as less sonorous and euphonic. The characterization seems more aimed at puttimg Obrecht's personal style in relief than to present a nuanced picture of the 'sound' of the older generations.

> When his works are heard in performance, the technically superlative part-writing reveals, in addition, an unparalleled ear for sonority and vocal timbre. Motets such as the five-part *Salve crux* and especially the six-part *Salve regina* have emerged as awesome edifices of sound, and may do much to explain Ambros's perception of Obrecht as 'a great, profound, serious and manly master, whose works show, almost throughout, a strain of stern loftiness'. Even the four-part music, including many of the cantus-firmus masses, turns out to be far more effective in performance than its often unassuming appearance on paper might suggest. In sound, Obrecht's use of the musical idiom of his time seems so inexhaustibly imaginative and inspired as to reduce the notorious tenor manipulations to virtual aesthetic irrelevance. The effect of all this on the modern image of Obrecht cannot be calculated as yet. (p. 294)

> Obrecht's mature style foregrounded the composer's creative purpose by shifting the aesthetic focus onto intelligible compositional design. In this design one might discern the composer's voice resounding, as it were, through the singers' voices. And it was this design that would now come to be regarded as the defining dimension of the musical work *qua* work, and the touchstone of intrinsic quality – reducing consonant sonority to a mere surface quality, satisfying only to the undiscriminating ears of inexperienced listeners. (p. 300)

It may be advantageous to incorporate in Wegman's 'design' the concept of a conscious control of the sound of the voices, a vocal instrumentation, as it is clearly observable in the article's music example showing Obrecht's *Kyrie I* from *Missa Fortuna desperata*.[59] Obrecht uses repeats of motifs, which are 're-instrumentations' (including octave shifts) of musical elements in a sure-handed building of a sounding development – related to Josquin's *Missa Hercules* (*Example 3*). Wegman's new concept for describing the music of Obrecht seems to be a first step towards speaking about vocal instrumentation, but his concept in addition includes other important elements such as music's temporal organization and the construction of motifs.

59 *Ibid.* pp. 296-297.

Supplementary notes (2023)

*1 In his big Josquin book David Fallows estimates Josquin's year of birth to 1450-53, cf. David Fallows, *Josquin*. Turnhout 2009, p. 21. Another recent book worth mentioning is Jesse Rodin, *Josquin's Rome. Hearing and Composing in the Sistine Chapel,* New York 2012.

*2 I did not here enter into an discussion of the different mensuration signs. To this possibly too short reference, I should like to add that the sequence of signs in manuscript sources is O – ₵ – O2 producing the relation 3:4:6, while Petrucci's revision of the mass has O – ₵ – ₵ (3:4:4).

*3 On improvisation and simple polyphony, see my e-book *Songs for funerals and intercession. A collection of polyphony for the confraternity of St Barbara at the Corbie Abbey. Amiens, Bibliothèque Centrale Louis Aragon, MS 162 D.* Edited by Peter Woetmann Christoffersen (2 vols. September 2015, at http://amiens.pwch.dk/).

*4 I am no longer convinced that Du Fay's mass was created for a wedding or for any of the other occasions that have been proposed, and I prefer a dating around 1450. See further my edition, Guillaume Du Fay, *Missa Se la face ay pale. Edited with an introduction by Peter Woetmann Christoffersen* (June 2018) at http://www.sacred.pwch.dk/Ma_Duf02.pdf.

*5 This article has been followed up by two other articles, which approach the matter from quite different angles, 'Hvad enhver kordreng skal kunne. Betragtning af motetten *Ut Phebi radiis* af Josquin Desprez', *Musik & Forskning* 28 (2003) pp. 97-118 (English version, 'What every choirboy should know. Considering the motet *Ut Phebi radiis* by Josquin Desprez', at http://www.pwch.dk/Publications/PWCH_Ut_Phebi.pdf); and 'Kirkemusik i stramme tøjler. Om alternatim-messer til Santa Barbara i Mantova', *Dansk Årbog for Musikforskning* 30 (2002), pp. 9-50 (English version, 'Liturgical music in a tight rein. *Alternatim* masses for Santa Barbara in Mantua', at http://www.pwch.dk/Publications/PWCH_Mantua.pdf). Further on the sound of sacred music in the article, 'An experiment in musical unity, or: The sheer joy of sound. The anonymous *Sine nomine* mass in MS Cappella Sistina 14', *Danish Yearbook of Musicology* 42 (2018), pp. 54–78 (at http://www.dym.dk/dym_pdf_files/volume_42/dym42_1_03.pdf) with the companion edition, *The anonymous Missa Sine nomine in MS Cappella Sistina 14. Edited with an introduction by Peter Woetmann Christoffersen.* October 2018 (at http://www.sacred.pwch.dk/Ma_An01.pdf).

*6 It has since then appeared in an English translation as 'The braying of the ass and singing through tears. Images in music in the popular and artful traditions of the fifteenth century' (at http://www.pwch.dk/Publications/PWCH_braying.pdf).