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PETRUS DE DOMARTO'S *MISSA SPIRITUS ALMUS* AND THE EARLY HISTORY OF THE FOUR-VOICE MASS IN THE FIFTEENTH CENTURY*

In 1449, the records of the church of Our Lady at Antwerp mention a new singer, Petrus de Domaro (see Figure 1).[1] He does not reappear in the accounts of 1450, and those of the subsequent years are all lost. Musical sources and treatises from the 1460s to 80s call him, with remarkable consistency, P[etrus] de Domarto, and reveal

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The manuscript sigla used here are as follows. AostaS D19: Aosta, Biblioteca del Seminario Maggiore, MS A[1]D19; BrusBR 5557: Brussels, Koninklijke Bibliotheek, MS 5557; LucAS 238: Lucca, Archivio di Stato, MS 238; ModE M.1.13: Modena, Biblioteca Estense, MS α.M.1.13 (*olim* lat. 456); MunBS 3154: Munich, Bayerische Staatsbibliothek, Mus. ms. 3154; MunBS Germ. 810: Munich, Bayerische Staatsbibliothek, MS Germ. 810 ('Schedelsches Liederbuch'); NapBN 40: Naples, Biblioteca Nazionale, MS VI E 40; ParisBNN 4379: Paris, Bibliothèque Nationale, nouvelles acquisitions françaises, MS 4379; PozU 7022: Poznań, University Library, MS 7022; TrentC 87–92: Trent, Castello del Buon Consiglio, MSS 87–92; TrentM 93: Trent, Museo Diocesano, MS BL ('Trent 93'); VatS 14, 15, 51: Vatican City, Biblioteca Apostolica Vaticana, Cappella Sistina, MSS 14, 15 and 51; VatSP B80: Vatican City, Biblioteca Apostolica Vaticana, MS San Pietro B80; VerBC 755: Verona, Biblioteca Capitolare, MS DCCLV.

[1] First published in J. van den Nieuwenhuizen, 'De koralen, de zangers en de zangmeesters van de Antwerpse O. L.-Vrouwekerk tijdens de 15e eeuw', *Gouden jubileum gedenkboek van de viering van 50 jaar heropgericht knapenkoor van de Onze-Lieve-Vrouwekatedraal te Antwerpen* (Antwerp, 1978), p. 38. Domarto served as a vicar-singer in the left choir of the church; he received a *signum* or *loot* for every service in which he participated. The *loten* were marked 'J', 'Sp' and 'M', and differed in value according to the type of service: $2\frac{1}{4}$ Brabant groats for 'M' (Matins), 1 groat for 'J' (unknown) and 5 miten [$=\frac{5}{24}$ groat] for 'Sp' (Lesser Hours). Altogether 49 *loten* are recorded for Domarto between 24 June and 24 December 1449, equivalent to a total sum of nearly 33 Brabant groats. The payments survive in Antwerp, Cathedral Archive, Rekeningen van de kapelanen 1430–1450 (register 142):
'petrus de domaro xxj signa [J] valent xxj groten' (fol. 205[v]);
'petrus de domaro xxv signa [Sp] valent v groten v miten' (fol. 208[v]);
'petrus de domaro iij signa [M] valent vj groten xviij miten' (fol. 210[r]; see Figure 1).

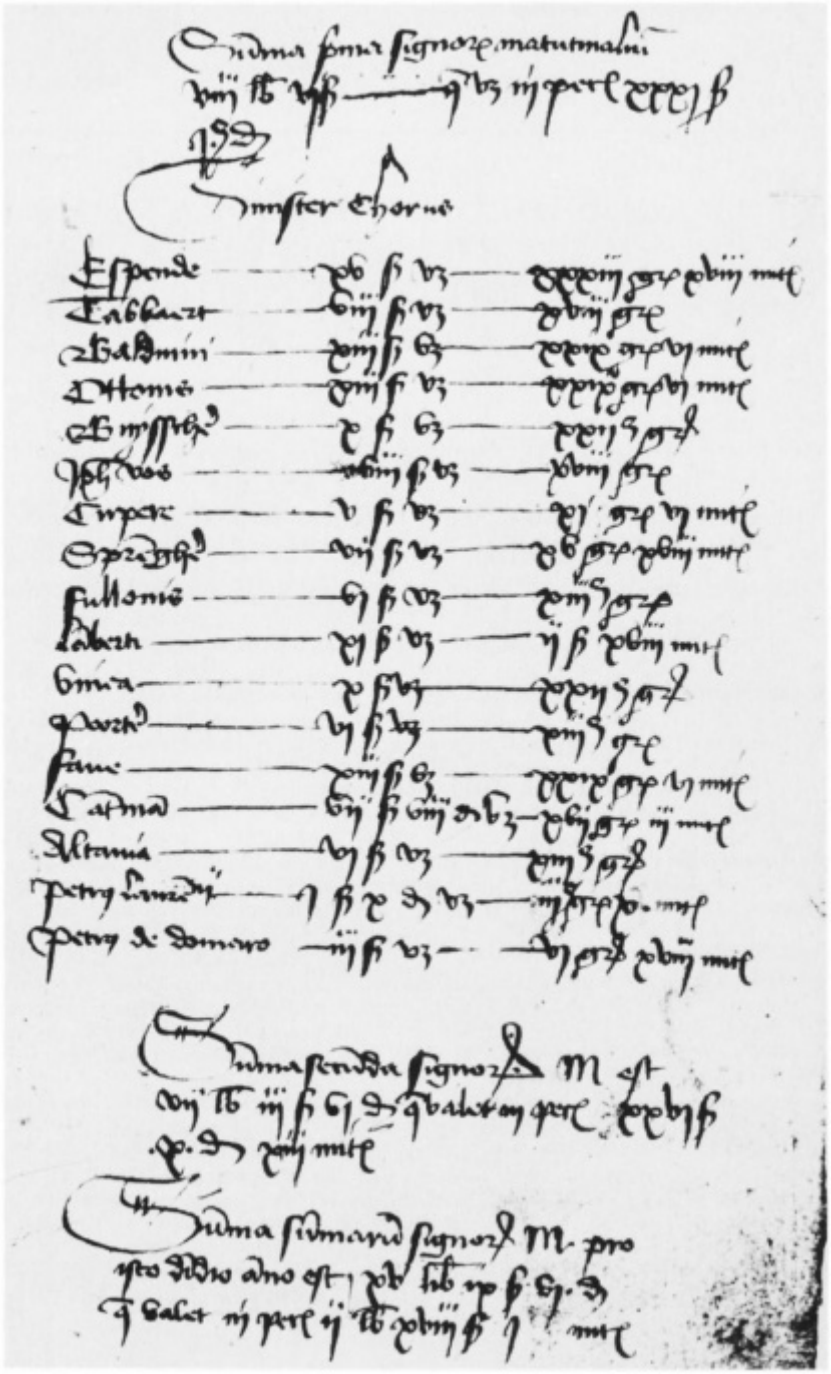


Figure 1 Payment to 'Petrus de Domaro' for 3 *loten* earned in Matins services at the church of Our Lady, Antwerp, between 24 June and 24 December 1449 (Antwerp, Cathedral Archive, Rekeningen van de kapelanen 1430–50 (register 142), fol. 210[r]). For transcription of payment and explanation see note 1.

that he was an internationally famous composer in the third quarter of the fifteenth century.[2]

Domarto's surviving output consists of two masses and two songs. The three-voice *Missa quinti toni irregularis* existed by 1458, and is attributed to him both in its main source, VatSP B80, and in Tinctoris's *Liber imperfectionum notarum* of 1474–5.[3] The earliest surviving copy of the four-voice *Missa Spiritus almus*, in TrentC 88, must date from around 1462. The latter mass is also transmitted in four later sources: LucAS 238, PozU 7022, VatS 14, and ModE M.1.13.[4] Again there is no shortage of attributions. All sources

The maximum number of *loten* that could be accumulated between 24 June and 24 December was approximately 190. A total of 33 *loten* suggests a stay of at least three or four weeks. Reinhard Strohm has suggested that Domarto worked at Antwerp as a 'visiterer', i.e., a visiting priest who sang in the choirstalls – a common arrangement in musical centres in the Low Countries (private communication, 20 February 1990).

2 Reinhard Strohm has tentatively identified Domarto with Pierre Maillart *dict* Petrus, who had been a choirboy at Notre Dame in Paris in 1405, was a chaplain of Philip the Good in 1436–51, and died in 1477. See: R. Strohm, *Music in Late Medieval Bruges* (Oxford, 1985), pp. 25 and 124; more on Maillart in B. H. Haggh, 'Music, Liturgy, and Ceremony in Brussels, 1350–1500' (Ph.D. dissertation, University of Illinois at Urbana-Champaign, 1988), p. 626.

The surname '[de] Domarto' is exceedingly rare. I have come across only three other occurrences of the name in the fifteenth century. The earliest is in a document of the Court of Hainaut, dating 1417, which mentions a Josse de Dommart, merchant in Paris; see L. Devillers, ed., *Cartulaire des comtes de Hainaut*, VI/1 (Brussels, 1896), p. 36. A Reginaldus de Dom(m)arto worked as master of the choirboys in Lille, 1457–8 (see below). And a Michiel Domart was clerk of the Audit Chamber at Mechlin in 1476; see J. T. de Smidt and E. I. Strubbe, *Chronologische lijsten van de geëxtendeerde sententiën en procesbundels berustende in het archief van de Grote Raad van Mechelen* (n.p., 1966), p. 113. Gérard de la Garde (d. 1345), cardinal and professor of theology at Paris, was variously styled G. de Gerria/Guardia and G. Domarus/de Daumaro/Damarus; see A. Franklin, *Dictionnaire des noms, surnoms et pseudonymes latins de l'histoire littéraire du moyen âge [1100 à 1500]* (Hildesheim, 1966), pp. 281–2.

Reinhard Strohm suggests that Petrus de Domarto may have come from the little town Domart-en-Ponthieu, near Doullens, in the diocese of Amiens (*Music in Late Medieval Bruges*, p. 124). This assumption is strengthened by the presence, in 1457–8, of a Reginaldus de Dom(m)arto as master of the choirboys at the church of St Pierre at Lille, 90 km north-east of Domart-en-Ponthieu (R. Strohm, 'Insular Music on a Continental Island', paper read at the February Meeting of the Royal Musical Association, London, 4 February 1989).

3 Christopher Reynolds has argued that the scribe of VatSP B80, Nicholas Ausquier, copied Domarto's *Missa quinti toni irregularis* from a lost source dating from 1458 (C. Reynolds, 'The Origins of San Pietro B80 and the Development of a Roman Sacred Repertory', *Early Music History*, 1 (1981), pp. 257–304). The title of the mass (which is in B♭ Lydian) comes from Tinctoris's *Liber imperfectionum notarum*; see A. Seay, ed., *Johannis Tinctoris opera theoretica*, Corpus Scriptorum de Musica 22/I (n.p., 1975), p. 154. Ausquier's copy of the mass lacked the Kyrie; a later scribe added a Kyrie ascribed to Egidius Cervelli. The Sanctus also appears in TrentC 89, fols. 57^{v}–58^{r}.

4 TrentC 88, fols. 401^{v}–410^{r}; LucAS 238, fols. 11^{v}–17^{r}; VatS 14, fols. 38^{v}–47^{r}; ModE M.1.13, fols. 117^{v}–129^{r}; and PozU 7022, fols. II/8^{r}–9^{v} and II/11^{r}–12^{v}. For the date of TrentC 88, see S. E. Saunders, 'The Dating of the Trent Codices from their Watermarks,

except PozU 7022 (where most of the mass, including the first page, is missing) ascribe the cycle to '[P.] de Domarto'. Moreover, Tinctoris mentions both mass and composer four times in his *Proportionale musices* of 1472–3 (three times with musical examples) and once in his *Liber de arte contrapuncti* of 1477 (again with a musical example). Domarto's two songs, *Je vis tous jours* and *Cheluy qui est tant plain de deul*, survive in three chansonniers from the 1460s to 80s.

Domarto's reputation in the fifteenth century is puzzling. A recent writer called him 'Tinctoris's perennial whipping boy'.[5] It is indeed remarkable that in his *Proportionale* Tinctoris blamed Domarto for incorrectly using the mensuration signs O2, C3 and ϵ in *Spiritus almus*, even though several other composers committed the same errors.[6] And when the theorist could find no fault in Domarto's vertical juxtaposition of the signs C and ¢ (in the same

with a Study of the Local Liturgy of Trent in the Fifteenth Century' (Ph.D. dissertation, King's College, University of London, 1983), pp. 87–91. The layer of LucAS 238 containing the *Spiritus almus* cycle was copied in Bruges presumably in 1467–9 (Strohm, *Music in Late Medieval Bruges*, pp. 120–3 and 193). PozU 7022 is discussed in M. Perz, 'The Lvov Fragments: A Source for Works by Dufay, Josquin, Petrus de Domarto, and Petrus de Grudencz in 15th-Century Poland', *Tijdschrift van de Vereniging voor Nederlandse Muziekgeschiedenis*, 36 (1986), pp. 26–51. Domarto's mass is found in the second gathering, which dates from the third quarter of the fifteenth century. Adalbert Roth has proposed a date of *c.* 1474 for VatS 14; see A. Roth, 'Studien zum frühen Repertoire der Päpstlichen Kapelle unter dem Pontifikat Sixtus' IV. (1471–1484): Die Chorbücher 14 und 51 des Fondo Cappella Sistina der Biblioteca Apostolica Vaticana' (Ph.D. dissertation, University of Frankfurt am Main, 1982), pp. 237–40. ModE M.1.13 was copied in Ferrara in 1481; see L. Lockwood, *Music in Renaissance Ferrara 1400–1505* (Oxford, 1984), pp. 222–4. Three of the five sources (TrentC 88, VatS 14 and ModE M.1.13) transmit the full cycle. PozU 7022 contains two trimmed leaves with portions of the Credo and Sanctus, and a few snippets with music for the Kyrie and Gloria. LucAS 238 contains portions of the Kyrie, Gloria, Sanctus and Agnus.

5 R. Taruskin, 'Antoine Busnoys and the *L'homme armé* Tradition', *Journal of the American Musicological Society*, 39 (1986), p. 284.

6 Seay, ed., *Johannis Tinctoris opera theoretica*, II (n.p., 1978), pp. 48–9, 55 and 56. Some of Tinctoris's comments were echoed by Franchinus Gaffurius in his *Tractatus practicabilium proportionum* of *c.* 1481–3 (unpublished; the treatise survives in Bologna, Civico Museo Bibliografico Musicale, MS A 69; see C. A. Miller, 'Early Gaffuriana: New Answers to Old Questions', *The Musical Quarterly*, 56 (1970), pp. 373–83). The relevant passages are: 'don Marto [*sic*] in Missa spiritus almus proportionam duplam unica binarij scilicet numeri ziphra pluries inconuenienter signauit' (fol. 5^{r}), and the list of composers committing the 'inexcusable error' of *prolatio maior* augmentation: 'Busnoÿs in Missa Lome arme et Bernardus ycart in Missa de Amor tu dormi et don Marto in missa spiritus almus atque Gaspar in Missa Venusbant' (fol. 12^{v}). Gaffurius's comments have little independent value; his treatise is strongly influenced by the views of Tinctoris, with whom the young man had discussed matters of music theory during his stay at Naples in 1478–80 (cf. A. Atlas, *Music at the Aragonese Court of Naples* (Cambridge, 1985), pp. 80–2, and Miller, *op. cit.*, pp. 377–8).

mass), he stated, almost reluctantly, that the practice was 'tolerable'.[7] In his *Liber de arte contrapuncti*, Tinctoris criticised *Spiritus almus* again (along with Busnoys's song *Maintes femmes*), now for incorrectly handling a passing dissonance.[8] Finally, he reprimanded Domarto in the *Liber imperfectionum notarum* for erroneously imperfecting a dotted long in the *Missa quinti toni irregularis*.[9]

Evidently Tinctoris did not think very highly of Domarto's skills. At the same time it is puzzling that the theorist gave so much attention to his masses, for they could well have been over twenty years old by the time his treatises were written, and their relevance to a man whose opinions reflected the tastes and ideals of the 1470s rather than the 1450s must have been limited.[10] Yet the wordings of Tinctoris's criticisms seem to suggest that he blamed the composer not so much for committing the errors as for introducing them. For instance, while Domarto had 'sinned intolerably' by using 𝅝 as a sign of augmentation, other composers – such as Ockeghem, Busnoys, Regis, Caron and Faugues – had merely 'imitated him in this error'. Similarly, it was Domarto who had 'failed many times' in using O2 as equivalent to 𝅗𝅥 in perfect minor modus (rather than to 𝅘𝅥), and although Busnoys, Regis and others had done the same, Tinctoris considered this no excuse for *his* having done it in the first place. Busnoys in particular seems to have been a follower of Domarto. Although a generation younger, he is criticised in one breath with Domarto in the *Liber de arte contrapuncti*. And in the *Liber imperfectionum notarum* it is 'Busnoys and many others' who imitate Domarto and Barbingant in their erroneous practice of imperfecting dotted longs.

It would appear that by singling out Domarto as the culprit for errors that were widely committed in the 1470s, Tinctoris was obliquely attesting to his influence, for good or bad, on composers of the Ockeghem generation.[11] That impression is confirmed when

[7] *Opera theoretica*, IIa, pp. 45–6.

[8] Seay, ed., *Johannis Tinctoris opera theoretica*, II (n.p., 1975), p. 139.

[9] Tinctoris objected to this also in Barbingant's song *L'homme bany*; cf. *Opera theoretica*, I, pp. 153–4.

[10] I have argued elsewhere that the years 1455–75 saw profound changes in the style, scope and production of polyphonic masses (R. C. Wegman, 'The Anonymous Mass *D'ung aultre amer*: A Late Fifteenth-Century Experiment', *The Musical Quarterly*, 74 (1990), pp. 566–94). By the mid-1470s, Domarto's *Missa Spiritus almus* must have sounded noticeably antiquated (see below).

[11] This was noted earlier by Strohm, *Music in Late Medieval Bruges*, p. 124.

the theorist describes both him and Jean Cousin as composers 'non parvae auctoritatis'.[12] And it accords well with the fact that the *Spiritus almus* Mass survives in no fewer than five musical sources, copied as far apart as Italy, Flanders and Poland and together spanning the period *c.* 1462–81 (see note 4 above). Of all the Continental four-voice masses that were composed before about 1460, none seems to have enjoyed more widespread and enduring fame than Domarto's.[13]

But what distinguishes the *Spiritus almus* Mass from other four-voice cycles of the period? Why was the mass so famous? If it was an influential work, where can its influence be traced? These questions take us into one of the most shadowy phases of Renaissance music history, the early development of the four-voice mass. If studied in that context, Domarto's *Missa Spiritus almus* does indeed appear to have been a seminal work. It casts new light on the early development of Johannes Ockeghem, and can be shown to have been a major influence on Antoine Busnoys. Domarto's mass appears in the late fifteenth-century repertory as an isolated piece, and its context can be reconstructed only by carefully evaluating other pieces that seem to fit it in some way. But the light that these pieces shed on the *Missa Spiritus almus* is reflected by that mass, and illuminates them in turn. What emerges is the contours of a new pattern in the fascinating but dark history of fifteenth-century music.

Domarto's *Missa Spiritus almus* belongs to the small group of fifteenth-century cycles that are based not on entire chants, but only on internal sections of chants. Its cantus firmus is the final phrase 'spiritus almus' from the responsory *Stirps Jesse* for Marian feasts, transposed up a fifth. The text of the responsory runs: '℟. The tree of Jesse brought forth a twig, and the twig a flower:* and upon this

[12] *Opera theoretica*, IIa, p. 56.

[13] In the eighteenth century, Domarto was among the first fifteenth-century composers to regain his former fame. In his letter to Eugenio de Ligniville of 3 March 1767, Padre Martini mentioned 'Firmino Caron, Gio[vanni] Regis, Antonio Busnois, Pietro de Domart, Enrico Isaac, Giacomo Obrect, Giovanni Okenheim, Jusquin del Prato, etc.' as especially proficient in the art of canonic writing (see A. Schnoebelen, ed., *Padre Martini's Collection of Letters in the Civico Museo Bibliografico Musicale in Bologna* (New York, 1979), pp. 331–2). The source of Padre Martini's information is unclear; it cannot be Tinctoris, since the latter never made a statement to this effect. Martini did have access to his treatises, though; see *Tinctoris opera theoretica*, I, p. 10.

flower rests *the nourishing spirit.* ℣. The twig is the Virgin, the Mother of God, the flower her son' (words of cantus firmus in italics).[14] Other masses based on internal sections of chants include the anonymous English *Caput* Mass, the anonymous *Missa Thomas cesus*, Ockeghem's *Missa Ecce ancilla Domini* and Obrecht's *Missa Sicut spina rosam*.[15]

Domarto's reasons for singling out the phrase 'spiritus almus' were probably of a liturgical or theological nature. The tree of Jesse symbolises the genealogy of the Virgin Mary, and the reference to the Holy Spirit is to be seen as an allusion to the virgin birth.[16] Other evidence tends to confirm the special significance of the 'spiritus almus' melody: Antoine Busnoys used the entire responsory *Stirps Jesse* as a cantus firmus in his motet *Anima mea liquefacta est*,[17] and he, too, placed special emphasis on the final section of the chant. It is worth taking a closer look at Busnoys's setting.

Anima mea is a three-part motet in so-called treble-dominated scoring, for top voice and two equal parts approximately a fifth

[14] '℟. Stirps Jesse virgam produxit, virgaque florem:* et super hunc florem requiescit *spiritus almus*. ℣ Virga dei genitrix virgo est, flos filius eius' (after Isaiah 11:1). The cantus firmus was identified by Strohm, *Music in Late Medieval Bruges*, p. 124. The responsory *Stirps Jesse* is printed in the *Processionale monasticum* (Solesmes, 1893), p. 186. A responsory which is musically identical with *Stirps Jesse* is *Comedetis carnes*, for Corpus Christi; see *Liber usualis* (Tournai, 1962), p. 927.

The head-motif of the mass seems to quote the trope *Spiritus alme adest* for the Introit of the Mass of the Holy Ghost, *Spiritus domini* (Strohm, *Music in Late Medieval Bruges*, p. 124). In this context it is worth pointing out that Domarto's head-motif is itself quoted at the beginning of the anonymous motet *Salve mundi gloria*, a setting of a *Salve regina* trope (MunBS 3154, fols. 67^{v}–69^{r}; edition in T. Noblitt, ed., *Der Kodex des Magister Nicolaus Leopold*, Das Erbe deutscher Musik 80 (Kassel, 1987), pp. 230–7). This motet was copied in a layer whose paper has been dated 1476 (T. Noblitt, 'Die Datierung der Handschrift Mus. ms. 3154 der Staatsbibliothek München', *Die Musikforschung*, 27 (1974), p. 41). In several ways this interesting piece seems to be a musical reflection of Domarto's mass (cf. the descriptive analysis of the cycle below): it is in D Dorian, with generally low ranges, unusual ficta, slow harmonic movement, and little imitation in the full passages. Beyond the head-motif, however, the motet shares little with the *Missa Spiritus almus* in terms of melodic content. So long as the cantus firmus (in the lowest voice) has not been identified, and the *Salve regina* trope located, it is difficult to assess the significance of the apparent relationship.

[15] The cantus firmi of these masses were identified by Manfred Bukofzer (*Studies in Medieval and Renaissance Music* (New York, 1950), pp. 229–30 and 308–9) and Reinhard Strohm (see Reynolds, *op. cit.*, p. 285).

[16] See Strohm, *Music in Late Medieval Bruges*, p. 124, with implicit cross-reference to p. 71. Barbara Haggh informed me that high solemn Masses of the Holy Spirit and the Virgin Mary were common at important funerals (private communication, 16 January 1990; cf. Haggh, *op. cit.*, p. 351). This combination could perhaps explain Domarto's choice of cantus firmus and suggest that the *Missa Spiritus almus* was written for a funerary context.

[17] Edition in A. Smijers, ed., *Van Ockeghem tot Sweelinck*, I (2nd, revised edn, Amsterdam, 1952), pp. 22–6.

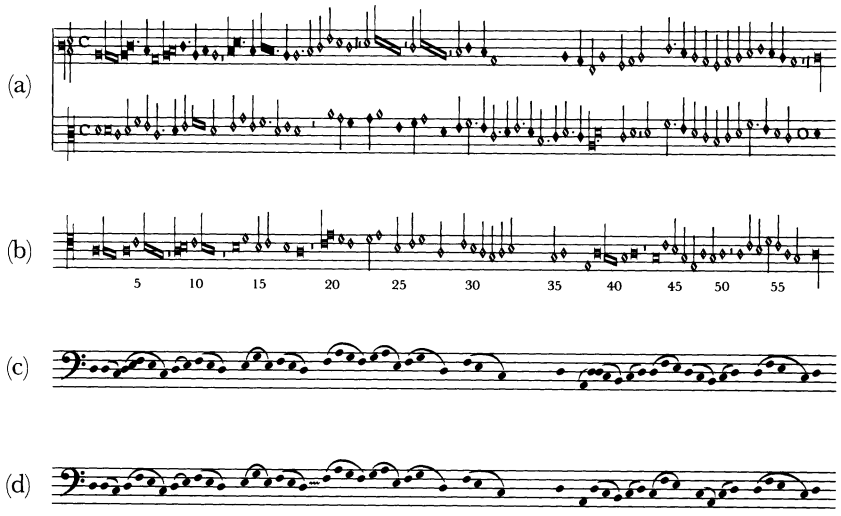
lower. The responsory *Stirps Jesse* is stated in one of the latter voices, the tenor, but two extended statements of chant appear in the top voice when the tenor is silent. The first occurs at the beginning (bars 1–15), the other about two-thirds of the way through (bars 87–107). Both statements relate to the proper tenor statements as quasi-fore-imitations. In the most reliable source, BrusBR 5557,[18] the chant statements in the top voice are supplied with two simultaneous texts: the appropriate words of *Anima mea* and, written through the staves, those of *Stirps Jesse* (not printed in Smijers). The texting of the top voice in the two passages is as follows: 'Anima mea liquefacta est'/'Stirps Jesse' (bars 1–15), and 'tulerunt pallium meum custodes murorum'/'spiritus almus' (bars 87–107). The beginning of the chant, and its final phrase 'spiritus almus', are thus given special emphasis. The parallelism between the two top-voice statements was probably intentional. Although *Anima mea* is through-composed, the music is interrupted in bar 86 by a drawn-out chord on A major (in D Dorian), just before the 'spiritus almus' quotation in the top voice starts. The contratenor has here a *signum congruentiae*, which suggests that a midpoint division analogous to that in a courtly song is intended. The suspicion that Busnoys implied a structural division is strengthened by the fact that the following duo opens in almost exactly the same way as does the introductory duo at the beginning of the motet.

So the 'spiritus almus' phrase is highlighted by Busnoys in three interrelated ways: first, by reserving to that phrase the 'second section' of the motet; secondly, by the extended top-voice statement of the phrase, foreshadowing the statement in the tenor; and thirdly, by the structural position of that statement in the motet as a whole. There is thus reason to believe that Busnoys's *Anima mea* and Domarto's *Missa Spiritus almus* were written for similar Marian contexts, in which the final section of *Stirps Jesse* apparently carried independent significance. A direct geographical or historical connection between the two works seems unlikely, however, for

[18] Busnoys's *Anima mea liquefacta est* appears as an anonymous composition in VatS 15, fols. 239^{v}–242^{r}. In BrusBR 5557 the motet was copied presumably under the composer's supervision, on paper datable to 1476–80. See F. Warmington, '"A Very Fine Troop of Bastards?": Provenance, Date, and Busnois's Role in Brussels 5557', paper read at the annual meeting of the American Musicological Society, Philadelphia, 1984; for the date see R. C. Wegman, 'New Data Concerning the Origins and Chronology of Brussels, Koninklijke Bibliotheek, Manuscript 5557', *Tijdschrift van de Vereniging voor Nederlandse Muziekgeschiedenis*, 36 (1986), p. 14.

Domarto and Busnoys seem to have used different versions of the responsory. Example 1 gives a vertical alignment of their cantus firmi, together with two plainchant versions, one from 's-Hertogenbosch and the other from the Use of Sarum. Domarto and Busnoys appear on the whole to be in agreement; most of the discrepancies between their versions can be attributed to differences in embellishment (for instance, notes 28–31 in Example 1). However, in the final part of the melody Domarto is closer to 's-Hertogenbosch, Busnoys to Sarum (notes 39, 43, and 47). Although it must therefore be concluded that the two composers used different versions of *Stirps Jesse*, Busnoys's motet helps to pro-

Example 1. Comparison of cantus firmus statements of the melisma 'spiritus almus' from the responsory *Stirps Jesse*, in (a) Antoine Busnoys, *Anima mea liquefacta est/Stirps Jesse* (tenor, top voice) and (b) Petrus de Domarto, *Missa Spiritus almus*. The original chant is given in (c) according to the Sarum Antiphonal* and in (d) from a 's-Hertogenbosch Antiphonal.**



* W. H. Frere, ed., *Antiphonale Sarisburiense*, The Plainsong and Mediaeval Music Society (repr. Farnborough, 1966), p. 519.

** 'Codex Smijers', now in the possession of the Confraternity of Our Lady at 's-Hertogenbosch; see A. Smijers, ed., *Van Ockeghem tot Sweelinck*, I (2nd, revised edn, Amsterdam, 1952), p. 22.

vide the context in which Domarto's choice of the 'spiritus almus' melody is to be understood.

The *Missa Spiritus almus* employs schematic cantus firmus manipulation.[19] When this technique is applied, the cantus firmus remains unchanged in its notated form throughout the cycle. As a sounding voice, however, it appears in various transformations derived from the notated form with the help of different external clues to its interpretation (usually mensuration signs or verbal canons). The schematic procedures by which the different tenors are derived are essentially non-musical: intervals, notes and note values are treated as isolated particles with manipulable properties rather than as elements of a musical structure.

The type of schematic manipulation employed by Domarto is mensural transformation.[20] Throughout the mass the *Spiritus almus* tenor is invariably notated as in Example 2a, except that the number of breve rests varies from section to section.[21] Variety is provided by presentation in different mensurations (see Table 1), leading to differences in the rhythmic interpretation of the tenor. Example 2b shows the various rhythmic shapes which the tenor assumes. The example gives the relative durations of the tenor notes, not in terms of fixed tempo units but in multiples of minims. This allows direct comparison between tenor statements in different mensurations, irrespective of whether diminution or augmentation has been applied.[22] As can be seen at a glance, the tenor assumes four different rhythmic shapes in the course of the mass, all derived from the same notational archetype.

It could be argued that the changes of mensuration need not have been introduced with the express purpose of generating rhythmic permutations – indeed, that the latter may well have been fortuitous by-products of some other purpose, for instance, the creation of rough length relationships. That objection can safely be dismissed. Length relationships were almost certainly not Domarto's primary concern. If we add up, for each mensuration, the relative durations given in Example 2b, we arrive at the total

[19] The following description is based on R. C. Wegman, 'Another Mass by Busnoys?', *Music & Letters*, 71 (1990), p. 5.

[20] This term was coined by Reinhard Strohm in his paper 'The Music of the 1450s', Fifteenth Annual Conference on Medieval and Renaissance Music, Southampton, 1987.

[21] The breve rests are not indicated in the example; they always precede sections A and B.

[22] See Wegman, 'Another Mass by Busnoys?', p. 6, n. 18.

Example 2. Petrus de Domarto, *Missa Spiritus almus*: (a) notation of mass tenor; (b) relative durations of cantus firmus notes in the mensurations O, C, ʘ, Ɔ, and C3 (counted in multiples of minims)

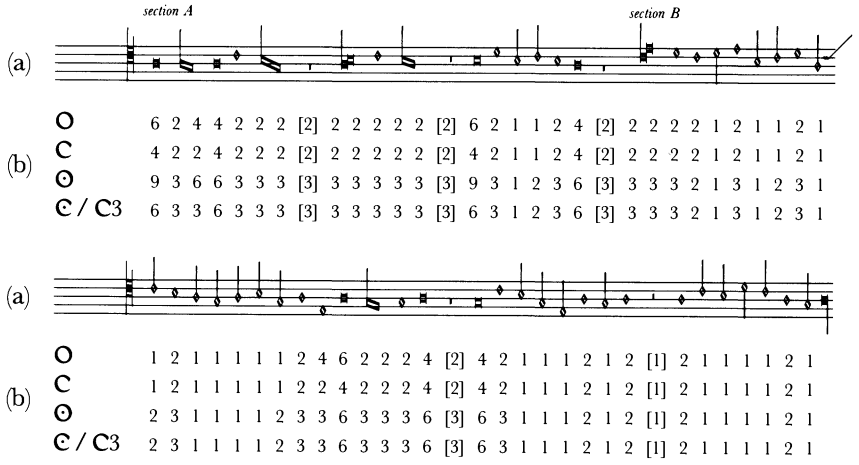


Table 1 *Structure of Domarto, 'Missa Spiritus almus'*

Section	Signature	Tenor signature	Cantus firmus phrase	Relative length[a]	
Kyrie I	O	O	AB	72	
Christe	[¢]	C	AB	64	208
Kyrie II	O	O	AB	72	
Et in terra	Ɔ	Ɔ	AB	198	
Qui tollis	O2	O	AB	81	339
Cum sancto	C2	C3	AB	60	
Patrem	O	ʘ	AB	225	
Crucifixus	O2	O	AB	99	406
Et in Spiritum	C2	C3	AB	82	
Sanctus	O	Ɔ	A	99	
Pleni	O	—	—	60	
Gloria tua–Osanna	O	Ɔ	B	90	359
Benedictus–Osanna	[¢]	C	AB	110	
Agnus I	O	O	AB	81	
Agnus II	[¢]	—	—	61	223
ut supra					

[a]Relative lengths are counted in semibreves in O, and in breves in O2 and C2/¢.

lengths of each tenor statement (counted in minims). After conversion to a common denominator, the semibreve beat in O, these lengths turn out to be as follows:

C3	54 semibreve beats in terms of O
C	58
O	63
C (augmentation)	162
O (augmentation)	171

Not surprisingly there is a rough 3:1 length ratio between the mensurations that call for augmentation and those that do not.[23] But, setting aside that division, the differences in length *within* the two groups are marginal. If large-scale length relationships had been Domarto's primary concern, two mensuration signs (possibly combined with proportion canons) would have sufficed to achieve them. Since he used five rather than two signs, the conclusion must be that rhythmic permutations were indeed his primary goal.

Other evidence tends to support that conclusion. Mensural transformation depends for its success entirely on the notational shape of the tenor. It is by no means easy to find or invent tenors that lend themselves well to the procedure. The problem is not how to achieve maximum rhythmic variety, but how to keep the tenor, metrically speaking, landing on its feet in every mensuration. For instance, the *L'homme armé* tune is by its nature unsuited to mensural transformation. Its innate *prolatio maior* rhythm and notation virtually preclude successful performance in O and C, and changes between ʘ and Ɔ hardly affect its rhythm. Conversely, it is exceptional for song tenors in O or |¢ to allow of interpretation in major prolation without the occurrence of frequent across-the-bar rhythms and metric shifts.[24] In view of this it can hardly be coincidence that Domarto's mass tenor runs so naturally in every

[23] Although *prolatio maior* notation implied 2:1 augmentation, the length ratio found here is roughly 3:1 since the basis for comparison is the semibreve: one semibreve in major prolation is equivalent to three semibreves in minor prolation. Had the basis of comparison been the minim, then the length ratio would have been 2:1, since one minim in major prolation equals two in minor prolation.

[24] Among the few exceptions are the tenors of the songs *N'aray-je jamais* by Robert Morton and *De tous biens plaine* by Hayne van Ghizeghem. These tenors are mensurally transformed in the masses *N'aray-je jamais* by Jacob Obrecht and Johannes Ghiselin-Verbonnet, the *Missa De tous biens plaine* by Obrecht, and the motet *Omnium bonorum plena* by Compère. However, the procedure is not applied systematically in these pieces.

mensuration in which it is presented. This, no doubt, was the result of a deliberate attempt to make the melody suited to mensural transformation: from the moment Domarto turned the 'spiritus almus' melody into the notational archetype of the mass, he must have envisaged a cycle in which mensural transformation was to play the central role.

Mensural cantus firmus transformation is not found in any surviving mass predating *Spiritus almus*.[25] Did Domarto invent the technique, or do its origins lie elsewhere? The schematic nature of the technique would suggest origin in the Ars Nova motet.[26] This was the virtual cradle of such schematic devices as augmentation, diminution, transposition, retrograde and inversion.[27] In several later fifteenth-century masses we find the latter devices in combination with mensural transformation (see below), suggesting that composers did indeed perceive the procedures as related. Moreover, it was customary for motet composers in the late fourteenth and early fifteenth centuries to achieve different propor-

[25] A minor exception could perhaps be the anonymous, and presumably early, *Missa Te Deum* in TrentC 89, fols. 71^{r}–80^{v}, based on the opening phrase 'Te Deum laudamus: te Dominum confitemur' of the hymn *Te Deum*, transposed up a fourth. The chant is rhythmicised in a highly schematic fashion: it is split up, by two groups of nine breve rests each, into three sections, each of which has a total duration of nine breves. The entry of the cantus firmus is invariably preceded by eighteen breve rests, so that the total durational layout of the tenor is 18:**9**:9:**9**:9:**9** (counted in breves; cantus firmus statements in bold type). The tenor appears in three different mensurations, ¢, O and O2 (the latter indicated by the uncommon signature ⊗). However, the changes of mensuration hardly affect the rhythmic shape of the tenor, since it is written almost entirely in maximas, longs and breves. There are only two (consecutive) semibreves on the same pitch (*d'*) whose rhythmic interpretation varies according to the mensuration signs, but in each case they still add up to one breve. Contrary to Domarto, who clearly tried to exploit the inherent possibilities of mensural transformation, the anonymous composer of *Te Deum* seems to have introduced the changes of mensuration only to create large-scale proportional structures. The durational proportions within the movements are either 1:1:1 (Kyrie and Agnus Dei) or 3:1:3 (Gloria, Credo and Sanctus). The overall durational relationships in the mass are 3:7:7:7:3. This mass is the exception that proves the rule: the mensural transformation in Domarto's mass betrays a unique attitude.

[26] The following paragraphs are strongly indebted to the work of Margaret Bent, who has kindly shared with me her thoughts on mensural transformation in the Ars Nova motet (private communication, 4 March 1990). In a forthcoming publication Professor Bent questions the twentieth-century concept of 'isorhythm' and proposes a definition based on sameness of notation rather than sameness of results: 'The starting point is an isomorphically notated tenor, subjected to one or more kinds of manipulation' ('The Late-Medieval Motet', *The Everyman Companion to Medieval and Renaissance Music*, ed. D. Fallows and T. Knighton). Bent's removal of the restrictions imposed by the concept of isorhythm clears the way for a better understanding of Domarto's compositional backgrounds.

[27] See R. L. Todd, 'Retrograde, Inversion, Retrograde-Inversion, and Related Techniques in the Masses of Obrecht', *The Musical Quarterly*, 64 (1978), pp. 52–4.

tions between successive tenor statements by means of mensural changes. This frequently results in rhythmic differences. However, in most cases these differences seem incidental rather than intentional (as with Domarto). The reason for this is that the tenors are mostly written in long note values, so that the rhythmic variations occur only on the level of modus. Moreover, the opportunities for alteration and imperfection are often limited, since only two different note values are used.[28] By contrast, Domarto operated on two mensural levels (tempus and prolation) and, by employing four different note values, exploited their potential for rhythmic transformation to the full.

But the *Missa Spiritus almus* does have a direct forerunner in the fourteenth-century motet repertory, in the shape of the 'mensural essay' *Inter densas/Imbribus/Admirabile* of *c.* 1380–90.[29] Analysis of this piece helps us to understand the significance of Domarto's contribution. The anonymous composer of *Inter densas* operated on four different mensural levels: major modus, minor modus, tempus and prolation (ruling the divisions of Mx, L, B and S, respectively). On each of these levels the division can be either duple or triple, and hence the number of possible mensurations (or 'species') is in theory 2×2×2×2=16 (see Table 2).[30] Only four of these were regularly employed in practice (i.e. species 11–12 and 15–16). The brief tenor of *Inter densas* has the rhythmic pattern M-M-S-B-L-Mx;

[28] A good example is *Portio nature / Ida capillorum / Ante thronum*, composed before 1376. The *talea* of this motet consists of repeated B-B-L patterns. During the first *color* statement the minor modus is perfect, and thus the second note of each pattern is altered. However, a verbal canon specifies that the subsequent *color* statements are to be performed in imperfect minor modus, so that alteration ceases. See the edition in U. Günther, ed., *The Motets of the Manuscripts Chantilly, Musée Condé, 564 (olim 1047) and Modena, Biblioteca estense, α.M.5, 24 (olim lat. 568)*, Corpus Mensurabilis Musicae 39 (n.p., 1965), pp. 57–65. For the date of the motet, see *ibid.*, pp. lvii–lviii.

[29] Edition in Günther, *op. cit.*, pp. 66–70; for the date, see *ibid.*, pp. lxii–lxiii. I am grateful to Margaret Bent for pointing out this motet to me.

[30] The system is fully explained in Tinctoris's *Tractatus de regulari valore notarum* of *c.* 1474–5 (*Opera theoretica*, I, pp. 121–38). For an important discussion of the mensural relationships and species see B. J. Blackburn, 'A Lost Guide to Tinctoris's Teachings Recovered', *Early Music History*, 1 (1981), pp. 29–116. The species are described in the present article according to the system of designation introduced by W. Apel, *The Notation of Polyphonic Music, 900–1600* (Cambridge, MA, 1953), pp. 97–100. In Apel's system, mensural relationships are indicated in square brackets as follows: major modus by Roman numerals II or III in italics; minor modus by Roman numerals in Roman type; tempus by Arabic numerals 2 or 3; prolation by Arabic numerals in italics. For instance, imperfect time in perfect minor modus (species 15) can be indicated as C [*II*, III, 2, *2*] or abbreviated to C [III] on the principle that divisions are binary unless otherwise indicated.

Table 2 *The sixteen species of the mensural notation system: (a) in numerical order and (b) in systematic order*[a]

(a)	1	*III*, III, 3, *3*	9	*III*, III, 3, *2*
	2	*III*, II, 3, *3*	10	*III*, II, 3, *2*
	3	*II*, III, 3, *3*	11	*II*, III, 3, *2*
	4	*II*, II, 3, *3*	12	*II*, II, 3, *2*
	5	*III*, III, 2, *3*	13	*III*, III, 2, *2*
	6	*III*, II, 2, *3*	14	*III*, II, 2, *2*
	7	*II*, III, 2, *3*	15	*II*, III, 2, *2*
	8	*II*, II, 2, *3*	16	*II*, II, 2, *2*

(b)		tempus and prolation			
		3, *3*	2, *3*	3, *2*	2, *2*
major and minor mode	*III*, III	1	5	9	13
	III, II	2	6	10	14
	II, III	3	7	11	15
	II, II	4	8	12	16

[a]See Johannes Tinctoris, *Tractatus de reguli valore notarum*, ed. A. Seay, *Johannis Tinctoris opera theoretica*, Corpus Scriptorum de Musica 22/I (n.p., 1975), pp. 121–38. Mensural divisions are indicated according to the system of W. Apel, *The Notation of Polyphonic Music, 900–1600* (Cambridge, MA, 1953), pp. 97–100 (see note 30).

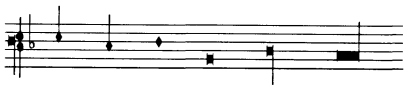
a verbal canon specifies that it is to be stated in eight different species.[31] Whenever either of the two modi is perfect, the final maxima of the tenor is to be silent for the last third of its duration.[32] In transcription, this results in the rhythmic shapes shown in Example 3.

Inter densas shows that Domarto's technique of mensural transformation was not a new invention: the principle was known by the end of the fourteenth century. But there are important differences. *Inter densas* is more extreme in its economy than the *Missa Spiritus almus*. The six-note tenor is presented in eight different rhythmic shapes; Domarto's tenor has nearly ten times as many notes, but

[31] See Günther, *op. cit.*, p. lxiv. The canon defines the various mensural relationships in abbreviated manner, and does not match the transcription in tenor statements 3, 5, 7 and 8.

[32] 'cludendo pausam ut modus sit perfectus' (Günther, *op. cit.*, p. lxiv). Günther states that this applies only to major modus, but her transcription shows that not to be the case. In statements 2 and 6 not the major modus but the minor modus is perfect; the dissonant clashes between the tenor and the other voices in bars 37–8 and 83–4 confirm that the tenor is to be silent here.

Example 3. Anonymous, *Inter densas/Imbribus/Admirabile* (*c.* 1380–90): Notation of tenor, and relative durations of cantus firmus notes (counted in multiples of minims) in eight different species. The 'silent' parts of the final maximas (in species with perfect minor or major modus) are printed between square brackets (cf. note 32). Based on U. Günther, ed., *The Motets of the Manuscripts Chantilly, Musée Condé, 564 (olim 1047) and Modena, Biblioteca estense, α.M.5, 24 (olim lat. 568)*, Corpus Mensurabilis Musicae 39 (n.p., 1965), pp. lxii–lxv and 66–70.

tenor statement	*species (see Table 2)*	*relative durations*					
							
1	1 [*III*, III, 3, *3*]	1	2	6	18	54	54 + [27]
2	7 [*II*, III, 2, *3*]	1	2	3	12	18	24 + [12]
3	10 [*III*, II, 3, *2*]	1	1	4	6	24	24 + [12]
4	16 [*II*, II, 2, *2*]	1	1	2	4	8	16
5	9 [*III*, III, 3, *2*]	1	1	4	12	36	36 + [18]
6	15 [*II*, III, 2, *2*]	1	1	2	8	12	16 + [8]
7	2 [*III*, II, 3, *3*]	1	2	6	9	36	36 + [18]
8	4* [*II*, II, 3, *3*]	1	2	6	9	18	24 + [12]

* The eighth tenor statement falls outside the logical arrangement of the species: the species to be expected here is 8 [*II*, II, 2, *3*], not 4. However, the tenor produces awkward counterpoint if it is rhythmicised according to species 8.

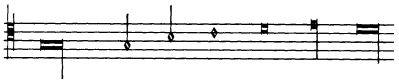
appears in only four shapes. Domarto seems less concerned to make a theoretical point. He chose not to operate on such levels as major and minor modus, whose practical relevance was limited. And the technique of mensural transformation does not overshadow the identity and function of the cantus firmus itself. The 'spiritus almus' melisma is stated in full: it gives the mass its stamp precisely because it has retained its melodic integrity. By contrast, the brief motif in the tenor of *Inter densas* is of little melodic interest.[33]

These differences become all the more evident when we compare the *Missa Spiritus almus* with a cycle that seems to have been directly inspired by *Inter densas*: Eloy d'Amerval's five-voice *Missa Dixerunt*

[33] The role and nature of the tenor could be compared to that of bass grounds like the passacaglia or romanesca (cf. Günther, *op. cit.*, p. lxiv). Although texted 'admirabile est nomen tuum' (Psalm 8:1), the voice was probably freely composed (*ibid.*).

discipuli of *c.* 1470.[34] This mass is a didactic work, written to demonstrate the four mensural levels recognised in music theory. The tenor states the first seven notes of the antiphon *Dixerunt discipuli* from the Office of St Martin of Tours. Its notation closely resembles that of the tenor of *Inter densas*: Mx-M-M-S-B-L-Mx. In the course of Eloy's mass, the tenor runs through all sixteen species listed in Table 2, and assumes sixteen different rhythmic shapes (see Example 4). Comparison of Examples 3 and 4 shows that Eloy

Example 4. Eloy d'Amerval, *Missa Dixerunt discipuli*: notation of tenor, and relative durations of cantus firmus notes (counted in multiples of minims) in the sixteen species of the mensural notation system. The 'silent' parts of the first maximas are printed between square brackets (cf. note 35). Based on unique source, VatS 14, fols. 56^{v}–65^{r}.

species (see Table 2)	*section of mass*	*relative durations*						
								
1	Et in terra	[27] + 54	1	2	6	18	54	81
2	Qui tollis	[27] + 27	1	2	6	9	36	54
3	Qui tollis	[27] + 27	1	2	6	18	27	54
4	Patrem	[27] + 9	1	2	6	9	18	36
5	Patrem	[18] + 36	1	2	3	12	36	54
6	Et resurrexit	[18] + 18	1	2	3	6	24	36
7	Et resurrexit	[18] + 18	1	2	3	12	18	36
8	Et resurrexit	[18] + 6	1	2	3	6	12	24
9	Sanctus	[18] + 36	1	1	4	12	36	54
10	Osanna I	[18] + 18	1	1	4	6	24	36
11	Kyrie I	[18] + 18	1	1	4	12	18	36
12	Kyrie II	[18] + 6	1	1	4	6	12	24
13	Agnus Dei I	[12] + 24	1	1	2	8	24	36
14	Agnus Dei III	[12] + 12	1	1	2	4	16	24
15	Osanna II	[12] + 12	1	1	2	8	12	24
16	Agnus Dei III	[12] + 4	1	1	2	4	8	16

[34] Unique source: VatS 14, fols. 56^{v}–65^{r}; no modern edition. Eloy's mass existed by 1472–3, since Tinctoris mentioned it in his *Proportionale* (*Opera theoretica*, IIa, pp. 55–6); it is unlikely that the cycle was much older than about 1470, since it contains many imitations for three and four voices, which often assume the character of points of imitation.

has simply copied and extended the principle of *Inter densas*: he subjects the same notation to sixteen species (rather than eight), and thus realises the potential already latent in the motet. That Eloy may well have known the motet is suggested by his verbal canon, which specifies that the first maxima of every statement is to be 'silenced' for the first three tempora of its duration.[35] This recalls *Inter densas*, where the final maxima is to be silent for the last third of its duration whenever the major or minor mode is perfect.

The different approaches of Domarto and Eloy tell us a lot about their attitudes. The cantus firmus treatment in Eloy's *Missa Dixerunt discipuli* seems to have been motivated primarily by didactic considerations. Although the mass aroused the interest of theorists as late as the 1530s,[36] it added nothing new to an idea that had already been worked out by the 1380s. If *Dixerunt discipuli* exerted any influence on later composers, it can be traced only in compositions exemplifying music theory, for instance by Hothby and Tinctoris.[37] With Domarto the picture is different. The application of mensural transformation in the *Missa Spiritus almus* never stood in the way of his practical concern with the nature and function of the mass tenor. He turned a mere mensural game into a viable practical technique, by fusing it successfully with the principle of the cantus firmus.

In hindsight that was a momentous step, and it is worth exploring its ramifications in some later masses. But first we must turn to another outstanding feature of Domarto's *Missa Spiritus almus*, its unusually colourful mensural usage. Three practices in particular need to be discussed (see Table 3):

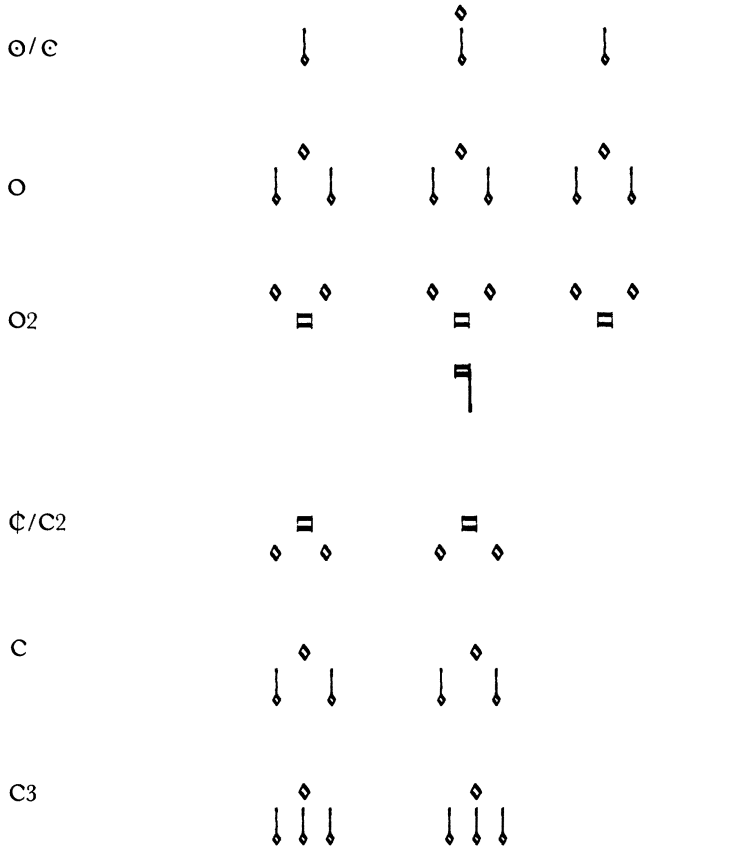
(a) ⊙ and ☾ with implicit 2:1 augmentation (the 'error Anglorum'),
(b) the use of ☾3 to indicate perfect prolation equating with ○ at the level of the semibreve, and
(c) the use of ○2 to indicate perfect minor modus in ¢.

[35] VatS 14, fol. 56^{v}: 'Canon tenoris pro tota missa: non faciens pausas sed signis capiens has tempora prima tria prime semper bene pausa sexdecies currens cunctaque signa videns' ('You must always pause well during the first three tempora, and not execute the rests [before the mensuration sign] but interpret them as signatures [see below], [thus] running sixteen times, and observing all signs').

[36] The mass was studied and discussed by Italian theorists as late as 1539. See Blackburn (*op. cit.*, pp. 29–30 and 90–1), who provides a theoretical context for the mass and discusses similar didactic compositions by Hothby and Tinctoris.

[37] Blackburn, *op. cit.*, pp. 90–1.

Table 3 *Mensural relationships in Domarto, 'Missa Spiritus almus'*



As mentioned earlier, Tinctoris strongly criticised Domarto for all three of these practices in his *Proportionale*. Two other noteworthy practices are: perfect minor modus under O (indicated here as O [III]), and vertical juxtaposition of C and ¢.

The *Missa Spiritus almus* may well have been the earliest Continental mass cycle to adopt the 'English error'. This, at any rate, is what Tinctoris seemed to imply when he stated that Domarto was 'imitated in this error' by Regis, Caron, Boubert, Faugues, Cour-

bet, Ockeghem and Busnoys.[38] In the eyes of Tinctoris, augmentation by means of major prolation was not just an isolated aberration. It was a contamination of the mensural notation system, which caused more confusion and error in its turn. Elsewhere in his treatise the theorist had listed three different (and incompatible) meanings of major prolation signs, in compositions by Le Rouge, Pullois and Dufay. Who of these dissenting composers should be believed? Tinctoris left no doubt about that, and attributed the confusion to the fourth meaning, the one adopted by Domarto:[39]

> Regarding this signature [𝐂], since these three most distinguished composers disagree, put your trust in Dufay rather than the others. For the first of them [Le Rouge] is the most presumptuous of all users of proportions, since he falls into the English error of knowing no proportions and teaching them all. The second [Pullois], however, is entirely guileless.

Tinctoris may give the impression of a nagging old pedant, but it is not difficult to sympathise with his position. He was one of the few men to have a truly intellectual interest in the mensural notation system;[40] the confusion created by those 'but slightly read' dragged down music as a science and impaired its practical potential. This, if we are to believe Tinctoris, had started with the 'English error'. The root problem here was that the sign 𝐂 had been made to denote both a mensuration and, implicitly, a proportion. According to music theory these two elements ought to have been specified separately, for instance as follows: $\mathbf{C}_{\frac{1}{2}}$, or 𝐂-*crescit in duplo*. Failure to indicate the proportion could have only one result: the sign itself became unavailable to express what it had originally meant.[41]

[38] *Opera theoretica*, IIa, pp. 48–9.

[39] 'In quoquidem signo, quoniam isti tres famosissimi compositores dissentiant, Dufay potius quam aliis crede, quorum primus omnium proportionantium arrogantissimus, nam Anglorum errore labefactus nullas proportiones sciens, omnes praecipit. Secundus autem simplicissimus est' (after Seay, *Tinctoris opera theoretica*, IIa, pp. 47–8). The translation given here is from R. Woodley, 'The *Proportionale musices* of Iohannes Tinctoris: A Critical Edition, Translation and Study' (D.Phil. dissertation, University of Oxford, 1982), p. 361.

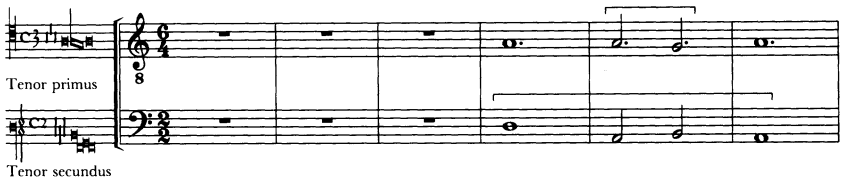
[40] As is illustrated by the precision and method of Tinctoris's definitions in his *Terminorum musicae diffinitorium* (Treviso, 1494; facs. New York, 1966), a compilation of statements made in his treatises. This is an indispensable reference book to anyone writing on the fundamentals of fifteenth-century music as perceived by those who had fully mastered the art. The notion that Tinctoris was a rigid conservative is contradicted by the enthusiasm with which he welcomed new stylistic trends, and his quickness to acknowledge the talents of young composers.

[41] This is true in any case of tenors, although there is one exception: if major prolation signs are used in all voices, augmentation is probably not implied. See for this Taruskin,

Remedies compounded the error. By the time Tinctoris wrote his treatise, other signs were already in use to denote what could be expressed unequivocally only by a perfect prolation sign in some proportion.

Domarto, for instance, used the signature C3 to denote perfect prolation equating with O at the level of the semibreve (cf. Table 3). By using that sign he was able to write sections of roughly the same length as those without augmentation, while retaining perfect prolation in the tenor (see the relative lengths in Table 1). This earned him even more criticism from Tinctoris:[42]

Moreover, this same De Domarto has erred on more than one occasion in this regard, in his aforementioned *Missa Spiritus almus*, for he wished for notes in sesquialtera [$\frac{3}{2}$] set under the sign of *prolatio minor* [C] to be reckoned as though they were in *prolatio maior*, as follows:



The reasoning behind Tinctoris's criticism is simple, and watertight in its logic: so long as there is no dot in the sign C, the division of the semibreve cannot be other than duple (i.e., the prolation is minor). That is what the absence of the dot means. The addition of the figure 3 (meaning sesquialtera proportion: $\frac{3}{2}$) cannot possibly alter that meaning, for a sign of proportion must not contradict (let alone overrule) a sign of mensuration.[43] Indeed, to Tinctoris the addition of the figure 3 to C was a downright absurdity, for it leads to a contradiction in terms: the sign C says that both tempus and prolation are duple, but the figure 3 dictates that either of these levels be triple.[44] This defies mensural logic.

'Busnoys and the *L'homme armé* Tradition', p. 261, n. 15; R. C. Wegman, Communication, *Journal of the American Musicological Society*, 42 (1989), p. 438. Nor was it implied when voices other than the tenor made brief excursions to major prolation mensurations.

[42] *Opera theoretica*, IIa, p. 56; translation from Woodley, 'The *Proportionale musices*', p. 371.

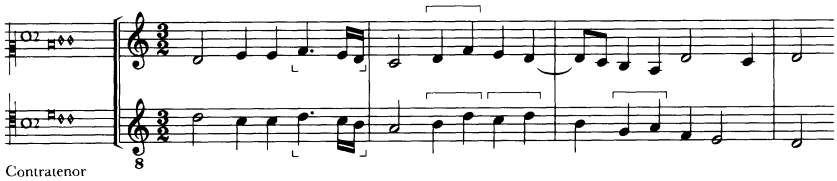
[43] This is the very point Tinctoris makes in book 3, chapter 5, of his *Proportionale*, where he criticises Domarto's use of C3: when a composer introduces a proportion in the course of a musical composition, he must always observe the nature of the modus, tempus and prolation that are in force, for '[proportions] cannot alter the essential nature of the mensurations in which they occur' (*Opera theoretica*, IIa, pp. 53–6; Woodley, *op. cit.*, p. 368).

[44] Triple division of the *breve* under C3 was by far the most common practice in the

Tinctoris's impatience with the inconsistency is understandable, particularly since the mensural notation system offered a correct and unequivocal alternative for the proportion Domarto sought to notate. According to the theorist, he ought to have used the signature C_2^3, in short C3 (in which C proper is seen as equating with O at the level of the minim).[45] Curiously, it is this particular sign which we actually find as a variant for C3 in one of the sources for Domarto's mass, LucAS 238 (fol. 14^v). Was this Domarto's original notation, or was Waghes, the main scribe of LucAS 238, made aware of the inconsistency, perhaps even by Tinctoris himself? Only a filiation of the sources can throw light upon this question; that matter will be dealt with below.

Domarto's use of O2 provides a comparable case of confusing mensurations with proportions. Strictly speaking, the sign is synonymous with ϕ. But Domarto used it, in his Qui tollis and Crucifixus, to denote ¢ with triple division of the longa, or perfect minor modus:[46]

Domarto has failed many times in his mass *Spiritus almus*; for, having written *dupla* under the sign of *tempus perfectum*, he then allows the notes to be reckoned in *tempus imperfectum*, thus:



And notwithstanding Busnois and Regis, who follow his example both in their *L'Homme armé* masses[47] and in all their works, the excuse cannot be

fifteenth century. Tinctoris objected to this practice as well, citing as an example the lost *Missa Nigra sum* by Jean Escatefer *dit* Cousin (*Opera theoretica*, IIa, p. 56). Other examples are cited in Wegman, Communication (*JAMS*), p. 439.

45 This confirms Leeman Perkins's assumption that in Robert Morton's [?] song *Il sera pour vous/L'homme armé*, in which all parts are cast in C3, 'the implicit proportion is probably sesquialteral, indicating that three minims are to be sung to the same time as two under the integral mensuration of imperfect tempus' (L. Perkins and H. Garey, eds., *The Mellon Chansonnier* (New Haven, 1979), II, p. 331). Perkins's assumption was questioned by Richard Taruskin, who argued that the setting was originally written in C ('Busnoys and the *L'homme armé* Tradition', pp. 290–2; other objections that could be raised against Taruskin's hypothesis are given in note 52 below).

46 Tinctoris, *Opera theoretica*, IIa, p. 55; translation from Woodley, 'The *Proportionale musices*', pp. 370–1. See also Wegman, 'Another Mass by Busnoys?', pp. 2–3.

47 Curiously, Johannes Regis's surviving *Missa L'homme armé* employs neither O2 nor perfect minor modus in any other mensuration. Regis was not unfamiliar with the sign, though:

made that in sections of the mass written in this way the *modus minor* is perfect, indicated as such by the circle of perfection with the figure 2, since this very circle of perfection (as is shown in countless works even of their own composition) is a sign not of *modus*, but rather of *tempus perfectum*. The figure 2, however, although deficient in the way they have indicated it, is in fact a sign of *dupla*.

Again, Tinctoris's objection is understandable: how can the circle denote tempus in one case and modus in another, and how can a cipher denote a proportion in one case and tempus in another? The correct alternative was to write ¢, and to indicate perfect minor modus by grouping breve rests in threes, either before the mensuration sign (in which case they are not counted) or after. That is what Eloy d'Amerval (whom Tinctoris regarded as 'most learned in the matter of modus')[48] had done in his *Missa Dixerunt discipuli* (see note 35 above). And, curiously, this is what Domarto himself had done to indicate perfect minor modus under O, in the Patrem. The latter practice, O [III], is extremely rare in fifteenth-century masses, but it was to become characteristic of Busnoys's mensural usage in sacred music.[49]

Another mensural peculiarity to which Tinctoris drew attention was the superimposition of ¢ and C, in the Christe and Benedictus.[50] This time the theorist did not object, 'because of a certain equivalence of the former proportion and the latter prolation'; in other words, because the relationship ¢𝅜=C𝅝 is logical and unambiguous. The purpose of the superimposition was to achieve a 2:1 proportion between the tenor and the contrapuntal voices: what Domarto had done was simply to write out 'augmentation' of the tenor by means of contrasting mensuration signs.[51] Interestingly, Domarto also obtained 2:1 proportions between the tenor and its surrounding voices by vertically combining the 'erroneous' proportional signatures C and O2 with *ut iacet* mensurations (cf. Table 1). It would appear that the composer had a reluctance to specify augmentation by means of verbal canons.

he used it in his motet *O admirabile commercium*. Possibly he composed two *L'homme armé* masses.

48 *Opera theoretica*, IIa, p. 55.

49 See Wegman, 'Another Mass by Busnoys?', p. 3; and note 60 below.

50 *Opera theoretica*, IIa, pp. 45–6.

51 Tenor augmentation by means of juxtaposition of C and ¢ is extremely rare, but it is also found in the Qui tollis and Crucifixus of the anonymous *Missa Rex dabit mercedem* (VerBC 755, fols. 54r–63r), and in three other masses to be discussed below.

None of the practices discussed here was unique to Domarto, and he was certainly not the first to employ them (as Tinctoris seemed to imply).[52] But three points need to be emphasised. First, it is most unusual to find all these practices together in one cycle. Secondly, there are not very many mid-fifteenth-century masses that employ, like *Spiritus almus*, as many as eight different mensurations: O, O [III], O2, C, ¢/C2, C3, ʘ, and Ɔ. The overwhelmingly predominant practice was to alternate simply O and ¢. Thirdly, it may well be that the *Missa Spiritus almus* was instrumental in making the practices more widespread, and that it was for that reason that Tinctoris singled out this work for criticism.

In this context it seems of more than passing interest that a few masses from the 1460s and 70s adopt nearly all of the mensural practices that characterise *Spiritus almus*. While it would be rash to attribute these correspondences to any influence on Domarto's part, the situation becomes different when we find, in the very same masses, the extremely rare technique of mensural cantus firmus

[52] The use of Ɔ with implied augmentation had been a regular practice in England from at least the second decade of the fifteenth century onwards. The practice seems to have been adopted on the Continent in the 1440s.

C3 with triple division of the semibreve was a uniquely Continental manifestation. Among the first sacred works to use the sign in this sense are the anonymous Gloria in TrentC 92, fols. 116^{v}–118^{r} and 147^{r}–149^{r}, and Johannes Pullois's *Victimae paschali laudes* in TrentC 90, fols. 286^{v}–287^{r} (see J. A. Bank, *Tactus, Tempo and Notation in Mensural Music from the 13th to the 17th Century* (Amsterdam, 1972), pp. 136 and 145). Significantly, Pullois was active at the church of Our Lady at Antwerp until 1447, that is, two years before Domarto came to work there.

The mensuration is also used prominently in several French combinative songs from the 1450s and 60s, e.g. *O rosa bella/Hé Robinet*, *Je soloie/Héz bergères*, *L'aire bien frique/J'ayme/Galoise*, *Je vous pri/Tant que/Ma très douce*; see the recent edition by M. R. Maniates, *The Combinative Chanson*, Recent Researches in the Music of the Renaissance 77 (Madison, 1989). These chansons provide a context for the best-known combinative song that employs the mensuration, Robert Morton's [?] *Il sera pour vous/L'homme armé*. The vertical juxtapositions with other mensurations in *O rosa bella/Hé Robinet* and *Je vous pri/Tant que/Ma très douce* are in agreement with those in Domarto's *Missa Spiritus almus*, and confirm that Richard Taruskin's interpretation of the sign C3, on which his tentative ascription to Busnoys hinges, is incorrect ('Busnoys and the *L'homme armé* Tradition', pp. 290–2; see also note 45 above).

Among the few sacred works after the *Spiritus almus* Mass to employ C3 are Busnoys's *Missa L'homme armé*, and the Naples *L'homme armé* Mass III (see Taruskin, 'Busnoys and the *L'homme armé* Tradition', pp. 286–9; Wegman, Communication (*JAMS*), pp. 441–2; R. Taruskin, Communication, *Journal of the American Musicological Society*, 42 (1989), pp. 450–1).

The use of O2 meaning perfect minor modus in imperfect cut-time occurs in Dufay's proper cycles in TrentC 88, which must date from the late 1440s (see A. E. Planchart, 'Guillaume Du Fay's Benefices and his Relationship to the Court of Burgundy', *Early Music History*, 8 (1988), pp. 117–71).

transformation. Three pieces in particular merit discussion: the anonymous cycle *Gross senen*, Busnoys's *Missa O crux lignum* and the anonymous *Missa L'ardant desir*.

The first, *Gross senen*, survives uniquely in TrentC 89, where it was copied around 1462.[53] Its cantus firmus is the tenor of the German lied *Gross senen ich im herczen trag* (MunBS Germ. 810, fols. 57^{v}–58^{r}); it seems likely that the mass itself is German as well.[54] The lied tenor is used in its original form as the notational archetype for the entire cycle. In most movements of the mass, the tenor statements are presented in two alternative notations: first, the unchanging archetype itself, with mensuration signs and canons, and second, the resolution, 'translated' into the mensuration of the other voices. It seems likely that the composer himself provided only the archetype and some of the canons, and that the resolutions and most of the signatures and canons in the archetype were added by a later scribe.[55] If that was the case, the mass might originally have looked like the anonymous *Missa Quant ce viendra* (TrentC 89, fols. 318^{v}–330^{r}), where the unchanging archetype is given without mensuration signs, its various proportions being left to the singers

[53] TrentC 89, fols. 26^{v}–41^{r}. For the date of this source, see Saunders, 'The Dating of the Trent Codices', pp. 87–91. The mass is discussed in L. E. Gottlieb, 'The Cyclic Masses of Trent Codex 89' (Ph.D. dissertation, University of California at Los Angeles, 1958), R. Schmalz, 'Selected Fifteenth-Century Polyphonic Mass Ordinaries Based upon Pre-existent German Material' (Ph.D. dissertation, University of Pittsburgh, 1971), and R. Strohm, 'Meßzyklen über deutsche Lieder in den Trienter Codices', *Liedstudien Wolfgang Osthoff zum 60. Geburtstag*, ed. M. Just and R. Wiesend (Tutzing, 1989), pp. 77–106.

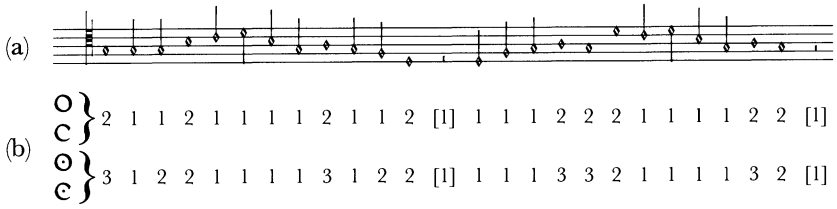
[54] Some doubts could be raised as to whether this lied has always carried the text *Gross senen ich im herczen trag*. Although the tenor incipit occurs with this same text in a quodlibet in the Glogauer Liederbuch (I thank David Fallows for pointing this out to me) and the poem fits the music convincingly (as shown by Strohm, 'Meßzyklen über deutsche Lieder', p. 91), there is a marked disparity between the quality of transmission of the text and that of the music in the Schedelsches Liederbuch. The musical text is extremely corrupt: as so often happens in Schedel, there are no mensuration signs and accidentals, the clefs in the superius and tenor are incorrect, and the contratenor is incomplete. Moreover, numerous errors and missing notes and rests render performance from the source virtually impossible. In contrast with this, the five stanzas of the text appear to be quite accurate. And, significantly, there is no attempt at text underlay: the stanzas are just crammed in the space between the staves, with complete disregard for the music. Moreover, some arrangements of the anonymous rondeau *J'ay pris amours* have also been underlaid with the *Gross senen* poem in German sources. That the *Gross senen* lied in the Schedelsches Liederbuch is a contrafact of a Franco-Flemish song seems unlikely, however, on both formal and stylistic grounds. Whatever its original text may have been, *Gross senen* was very probably a German lied.

[55] Something similar seems to have happened in the anonymous *Missa L'ardant desir* (see below) and Jacob Obrecht's *Missa Petrus apostolus*. In these two cases, only the scribal resolutions of the tenors have survived; the archetypes themselves are lost (see Wegman, 'Another Mass by Busnoys?', p. 7).

to work out.[56] The scribe of *Gross senen* apparently attempted to clarify the interpretation of the archetype, by providing clues such as mensuration signs and augmentation canons. It is unlikely that he had the mass in score, for transcription reveals that most of these clues are incorrect. The resolutions, however, do fit the music.

Example 5 shows phrase A of the archetype, and its rhythmic shapes under the mensuration signs ○, C, ⊙ and ☾. The composer uses essentially the same signs as Domarto, and yet he achieves less rhythmic variety. The reason for this is simple: the *Gross senen* tenor was taken over in its original form, and in that form the melody offered no more scope for rhythmic transformation. There are no statements of phrase B in perfect prolation, probably because the augmentation implied by ⊙ and ☾ would render the sections based on that phrase too long (the cycle is unusually long as it stands).

Example 5. Anonymous, *Missa Gross senen*: (a) mass tenor (phrase A); (b) relative durations of cantus firmus notes in the mensurations ○, C, ⊙, and ☾ (counted in multiples of minims)



Apart from mensural transformation, the *Gross senen* tenor is also subjected to three further procedures, indicated by canons in the source. The first is straightforward tenor augmentation. The second procedure initially involves 4:1 or 3:1 augmentation, but the singer is required to reduce the notes by half or a third after each cadence, until they are sung *ut iacent*: 'In quadruplum/triplum crescit, sed clausulando decrescit'. In the Qui tollis, this procedure leads to the successive proportions 4:2:1, in the Osanna to 3:1. In the Crucifixus the second procedure is to be combined with a third, in which the singer is required to double every first of two consecutive minims: 'Inter binas minimas, prima alteratur'. Transcription

[56] The *Missa Quant ce viendra* applies proportional cantus firmus transformation, like Dufay's *Missa Se la face ay pale* and the anonymous *Missa Gentil madona mia* (TrentC 91, fols. 247^{v}–256^{v}). It was attributed to Antoine Busnoys by Richard Taruskin (cf. Taruskin, 'Busnoys and the *L'homme armé* Tradition', pp. 292–3).

reveals that this canon is to be applied even to consecutive minim rests.

The composer's intentions are on the whole clear and consistent, and can be easily reconstructed, even though in the manuscript they have become confused in a muddle of erroneous mensuration signs and canons. The *Missa Gross senen* employs all eight mensurations that had been used in Domarto's *Missa Spiritus almus*, with the possible exception of C3.[57] With regard to the 'erroneous' signs C and O2, it is worth adding that the anonymous composer compounds Domarto's 'errors' by vertically combining the signs *with one another*. Thus he achieves a 4:1 proportion between the tenor and its surrounding voices. Busnoys was to take over the same practice in his *O crux lignum* and *L'homme armé* masses.[58] Two additional correspondences strengthen the relationship between *Spiritus almus* and *Gross senen*. First, the two signs ʘ and O [III] occur only once in each mass, and in both cycles in the same section, the Patrem. Secondly, the *Missa Gross senen* presents, like *Spiritus almus*, the signs C and ¢ in vertical juxtaposition (in Kyrie II and Qui tollis).

Each of the mensural practices in the *Missa Gross senen*, taken by itself, is rare enough for a mid-fifteenth-century mass. But their combination, both in Domarto's *Missa Spiritus almus* and in this cycle, seems more than coincidental. Since the *Gross senen* Mass moreover employs mensural cantus firmus transformation, it is difficult to resist the conclusion that one of the two composers was influenced by the other. The question is: which? Both cycles must have been copied in Trent around 1462. But the style of *Gross senen* is definitely more advanced than that of *Spiritus almus*, for reasons to be presented below. While the *Spiritus almus* Mass could well date from around 1450, *Gross senen* is unlikely to have been more than a few years old when it was copied in TrentC 89. Domarto's mass was probably the model, *Gross senen* the emulation. From the viewpoint of transmission that conclusion is not surprising: if *Spiritus almus* reached Poland (in PozU 7022), there is no reason to assume that it would not have been distributed in Germany as well. But one question remains: what could have induced a German com-

[57] The anonymous composer introduces sesquialtera proportion at the end of the first Agnus Dei (which is in C|), but the passage in which this happens is too short to determine whether the composer intended triple division of the semibreve or the breve.

[58] Cf. Taruskin, 'Busnoys and the *L'homme armé* Tradition', pp. 284–5, who credits Busnoys with this innovation.

poser working around 1460 to adopt some of the typical structural and notational features of the *Missa Spiritus almus*? To address that question we will have to turn to the other masses that seem to show Domarto's influence.

The second relevant mass is Busnoys's *Missa O crux lignum*.[59] The tenor of this cycle is the twelfth verse of the Holy Cross sequence *Laudes crucis attollamus*. As in Domarto's mass, the chant melody is slightly ornamented and freely rhythmicised into a fixed notational archetype for the whole work (numbers of breve rests do vary, however). In the course of the mass, Busnoys presents the archetype in the same mensurations that Domarto had used for his tenor, with the exception of C3. But unlike *Spiritus almus*, this yields two different rhythmic shapes, not four: the notation of the tenor is such that only changes of prolation affect its rhythm, not changes of tempus. But the relationship with Domarto is evident: in fact, there is no other fifteenth-century cycle which so closely resembles *Spiritus almus* in its approach to the cantus firmus as *O crux lignum*.

To confirm the relationship, Busnoys's mass shares with *Spiritus almus* the very same mensurations as the *Missa Gross senen*, while adding two more signs, O3 and ϕ. Again, the signatures ʘ and O [III] occur together in the Patrem (though this time also in the Sanctus). The vertical juxtaposition of C with O2 in Busnoys's mass strongly recalls Domarto's combination of C and ¢, since O2 is an alternative sign for ¢ [III]. Finally, *O crux lignum* shares with *Gross senen* the vertical combination of Ɔ and O2 (the latter mensuration indicated in the unique source, VatS 51, as ¢ with triple groupings of breve rests, as recommended by Tinctoris).[60]

The Domarto–Busnoys relationship has important historical implications. These concern first of all the younger composer's

[59] Edition in D. W. Shipley, ed., *Antoine Busnois: Missa O crux lignum triumphale*, Das Chorwerk 123 (Wolfenbüttel, 1978); cantus firmus treatment discussed in E. H. Sparks, *Cantus Firmus in Mass and Motet 1420–1520* (Berkeley and Los Angeles, 1963), pp. 172 and 458–9, and Wegman, 'Another Mass by Busnoys?', pp. 5–6.

[60] The mensural usage in Busnoys's sacred music is a vast and complex subject, which fully deserves detailed study. It would therefore seem unwise to restrict the comparison with Domarto's *Missa Spiritus almus* to *O crux lignum*, and to pass over the evidence that is provided by Busnoys's other sacred compositions. Table 4 presents an inventory of Busnoys's mensural usage and provides a context for the relationship between the two composers. In this inventory, the mensural divisions are indicated, where necessary, as in Apel, *The Notation of Polyphonic Music* (see note 30 above). Of the eighteen mensurations employed by Busnoys, nine are found in Domarto's *Missa Spiritus almus* (i.e. 1, 2, 5, 6, 8, 11, 12, 13, 14). Two others, 7 and 9, are found in Domarto's three-voice *Missa quinti toni irregularis*.

Table 4 *Mensural usage in the Latin-texted works by Antoine Busnoys*

	Sign	Mensural divisions	Note value(s) equivalent to perfect breve in O	Works employing the mensuration (see list below)
(1)	ʘ	III, 3, *3*	1 S	1, 2 [implied augmentation]
(2)	ϵ	III, 2, *3*	1 S	1, 2 [implied augmentation]
(3)	¢	III, 2, *3*	4 S	1
(4)	ↄ	III, 2, *3*	3 B[a]	14
(5)	O	III, 3, *2*	—	1, 2, 7, 14
(6)		II, 3, *2*	—	6, 9, 10, 12
(7)	ϕ	III, 3, *2*	2 B	2, 10
(8)	O2	III, 2, *2*	3 B	1, 2, 4, 5, 7, 10, 11, 14
(9)	O3	III, 3, *2*	3 B	2, 7, 8, 9, 12, 13, 14
(10)	C	III, 2, *2*	3 S	2
(11)		II, 2, *2*	3 S	6, 10
(12)	¢	2, *2*	3 B	2, 3, 6, 8, 13
(13)	C2	2, *2*	3 B	8, 12
(14)	C3	2, *3*	3 S	1
(15)		3, *2*	9 M	2, 8
(16)	¢3	3, *2*	3 B	8, 12
(17)	ↄ	2, *2*	4 S	6, 12
(18)	ↄ	2, *2*	4 B	1

Compositions: [1] *Missa L'homme armé*; [2] *Missa O crux lignum*; [3] *Patrem de village*; [4] *Ad cenam agni*; [5] *Alleluia verbum caro*; [6] *Anima mea liquefacta est*; [7] *Anthoni usque limina*; [8] *Conditor alme siderum*; [9] *In hydraulis*; [10] Magnificat sexti toni; [11] *Noel, noel*; [12] *Regina celi* I; [13] *Regina celi* II; [14] *Victime paschali*. Mensural divisions are indicated according to the system of W. Apel (see note 30).

[a]The sign ↄ probably denotes sesquialtera proportion, carried out on the level of the minim (A. Seay, ed., *Johannis Tinctoris opera theoretica*, Corpus Scriptorum de Musica 22/IIa (n.p., 1978), p. 48). It is thus identical with the above mensuration 14 (C3).

musical development. Busnoys was active in Tours in 1460 and 1465 (and almost certainly in the intervening years) and began to work irregularly for the Burgundian chapel in 1465–7.[61] There are two indications that the *Missa O crux lignum*, copied in VatS 51 around 1474,[62] was probably written after his move to the north. First, the somewhat unobvious choice of the twelfth verse of *Laudes crucis* was probably determined by local liturgical usage in the Netherlands. Reinhard Strohm has pointed out that in Bruges and

[61] P. Higgins, '*In hydraulis* Revisited: New Light on the Career of Antoine Busnois', *Journal of the American Musicological Society*, 39 (1986), pp. 69–75.

[62] Roth, *op. cit.*, pp. 237–40.

Utrecht (and probably elsewhere in the Low Countries), the verse 'O crux lignum' alone was sung on the Exaltation of the Cross (14 September), whereas the sequence *Laudes crucis* itself belonged to the liturgy of 3 May.[63] Secondly, Jacob Obrecht also singled out the verse 'O crux lignum' in his motet *Salve crux arbor vite*.[64] Comparison of Obrecht's and Busnoys's elaborations of the melody shows that the two composers must have used identical versions of the chant (see Example 6).[65] Identical versions of chants in different polyphonic compositions are exceptional. The correspondence becomes all the more significant if one considers that the only place of activity common to both men's careers was Bruges, and that this was one of the places where the 'O crux lignum' verse had a separate liturgical significance.[66] Evidently Busnoys's *Missa O crux lignum* was written in the Burgundian Netherlands, between about 1465 and 1474.

In the context of other Flemish-Burgundian masses from the 1450s to 70s,[67] Busnoys's debt to Domarto becomes all the more striking. None of Busnoys's contemporaries in the Southern Netherlands (e.g. Wreede, Tick, Heyns, de Clibano) is known to have had any interest in mensural transformation, even though Domarto's mass was well known there (it was copied in the Bruges choirbook LucAS 238 in *c.* 1467–9; see note 4 above). So, whatever his musical backgrounds had been in Tours, Busnoys must have become strongly influenced by Domarto's *Missa Spiritus almus* after about 1465.

It would be speculative to suggest that Busnoys and Domarto came to know each other personally after the mid-1460s. Domarto's whereabouts after 1449 are unclear, and he might well have died by the time Busnoys came to the north. Moreover, it is doubtful whether Busnoys's travels with the Burgundian chapel would have left him much time to receive personal tuition from a master work-

[63] Strohm, *Music in Late Medieval Bruges*, pp. 145 and 177.

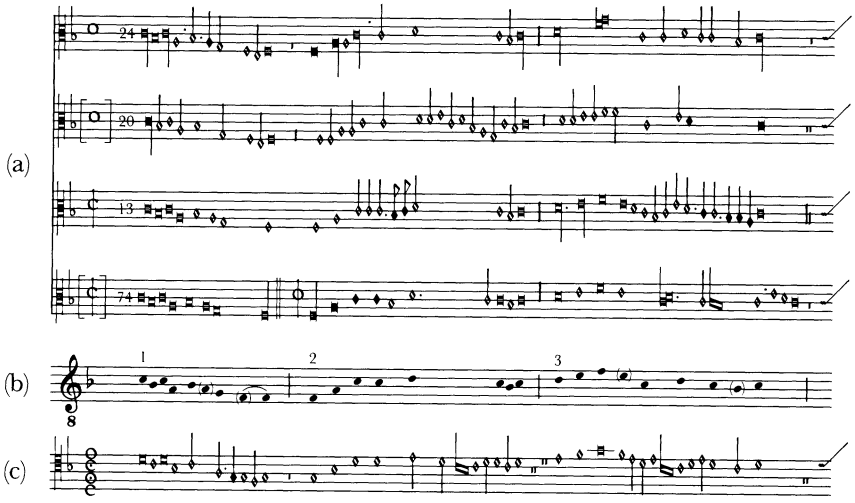
[64] Edition in A. Smijers, ed., *Jacob Obrecht opera omnia editio altera*, II/1 (Amsterdam, 1956), pp. 17–35.

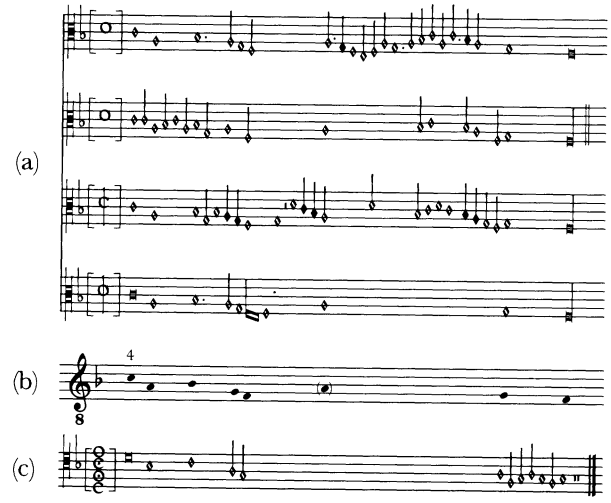
[65] This is all the more significant since, as Donald W. Shipley has pointed out, the third line of 'O crux lignum' in Busnoys's mass (and Obrecht's motet) is completely different from that line in the original sequence by Adam de Saint-Victor (*Missa O crux lignum triumphale*, p. iii).

[66] Strohm, *Music in Late Medieval Bruges*, pp. 38–41, 54–5 and 145.

[67] Discussed in Strohm, *ibid.*, pp. 120–44.

Example 6. Comparison of cantus firmus statements of the verse 'O crux lignum' from the sequence *Laudes crucis attollamus*: (a) Jacob Obrecht, *Salve crux* (four tenor statements); based on unique source, *Liber selectarum cantionum quas vulgo mutetas appellant, sex, quinque et quatuor vocum* (Augsburg, 1520; RISM 1520[4]), fols. 128[v]–143[r]; (b) reconstruction of Obrecht's cantus firmus (four phrases); (c) Antoine Busnoys, *Missa O crux lignum*; based on unique source, VatS 51, fols. 104[v]–113[r]





ing in the Netherlands.[68] The conditions under which Ockeghem might have influenced him in 1460–5 had surely been more favourable than those under which Domarto could have done so after that period. And yet there is surprisingly little trace of any influence of Ockeghem in Busnoys's surviving sacred works.[69] The problem that faces us here is not very different from the one that arose in our discussion of the *Gross senen* Mass. In both cases there is a clear and (in the context) unusual relationship with Domarto's *Missa Spiritus almus*, and yet the assumption of direct contact raises more questions than it provides answers.

A possible solution is provided by the third cycle, the anonymous *Missa L'ardant desir*. I have described and analysed this remarkable work elsewhere, arguing that it was probably written by Busnoys, so its relevant features need be only briefly summarised here.[70] The cantus firmus of the mass is the tenor of the song *L'ardant desir*, of around 1400.[71] This tenor serves, in its presumably original form, as the notational archetype for the whole mass, down to scribal details such as ligaturing and ligature shapes. In most of the sections the cantus firmus is subjected to mensural transformation, by presentation in the signatures O, C, Ɔ and Ↄ. Indeed, this is the dominating type of cantus firmus treatment in the mass. But in several sections the mensural transformations are preceded by sophisticated manipulations such as omission of the stems, turning the notation upside down, exchanges of note values, and combinations of all three. In these and other respects, as I have argued, the *Missa L'ardant desir* forms the 'missing link' between the masses of Busnoys and Obrecht. At the same time there is a strong debt to

[68] On the other hand, Busnoys was not permanently associated with the chapel until 1470; before that date, his services were on a freelance basis (Higgins, *op. cit.*, pp. 41–53). During the irregular periods of Busnoys's activity in 1467–70, Charles the Bold was mostly in Flanders and Brabant; this may suggest that the composer was living somewhere in this area. From 1471 onwards, he is found travelling in the retinue of the duke through the entire Burgundian state (*ibid.*, pp. 53–61). If Domarto and Busnoys ever met, it was most probably in the period 1465–70.

[69] Some typical central French tendencies that occur in Busnoys's secular motet *In hydraulis* of 1465–7 are discussed in R. C. Wegman, 'Guillaume Faugues and the Anonymous Masses *Au chant de l'alouete* and *Vinnus vina*', *Tijdschrift van de Vereniging voor Nederlandse Muziekgeschiedenis*, 41 (1991), pp. 27–64.

[70] See Wegman, 'Another Mass by Busnoys?'; and Wegman, Communication, *Music & Letters*, 71 (1990), pp. 633–5.

[71] See D. Fallows, 'Busnoys and the Early Fifteenth Century: A Note on "L'ardant desir" and "Faictes de moy"', *Music & Letters*, 71 (1990), pp. 20–4.

Domarto, which is confirmed by the mensural usage of the mass.[72]

The most remarkable aspect of the cantus firmus treatment of the *L'ardant desir* composer is that he regarded and treated the mensurally notated tenor as an indivisible entity. More widely employed types of treatment, such as isomelism and embellishment, reduced tenors to sets of intervals, and would play on their melodic aspect only. The *L'ardant desir* composer played on much more than that: his procedures worked on note values as conceptual symbols, on notes and ligatures as graphic shapes, and on their behaviour under different visual and mensural conditions. His mentality was that of an experimenter; the *L'ardant desir* tenor served as a guinea pig. But what did the procedures have in common, and what did the 'experiments' reveal? And why was mensural transformation the dominant technique in the mass?

It is my contention that the key to these questions, and to the ones raised earlier, lies in the specific nature of the mensural notation system. Although it would go beyond the scope of the present article to explore fully the depths of that system – one of the great intellectual achievements of the late Middle Ages – it is nevertheless vital to our discussion to outline briefly some of its essential features.

The aim of mensural notation was not primarily to describe, as accurately and efficiently as possible, music as sound, but to represent it abstractly, according to what was perceived as its true nature. Mensural notation offered the information necessary to realise music in space and time, but a composition was seen as more than just its realisation: it had an independent existence on paper. Here it was shaped according to a conceptual logic, a logic that no performance (or modern transcription) could fully bring out. That logic was seen as essential to the piece. And it is that logic which the mensural notation system embodied.

Most relevant to the present discussion is the mensural understanding of concepts such as note and note value. Although we tend to speak of longs, breves, semibreves etc. as note values, in the

[72] The *Missa L'ardant desir* shares fewer signs with Domarto's *Missa Spiritus almus* than do the anonymous *Missa Gross senen* and Busnoys's *Missa O crux lignum*. A direct context for *L'ardant desir*'s mensural usage is provided by the sacred works of Busnoys (see note 60 above): the mass employs all but four of the mensurations listed in Table 4 above (i.e. mensurations 1–2, 5–13, 15 and 17–18). Other correspondences with Busnoys's mensural usage are discussed in Wegman, 'Another Mass by Busnoys?', pp. 2–5.

mensural notation system these were simply called notes. By the *value* of a note was understood the number of next-smaller notes to which it was equivalent. The value was not an intrinsic quality of the note (as it is now), but a variable property: any note could assume several different values. Therefore, a given series of notes signified nothing if that property was not defined in advance (i.e. by a mensuration sign). It is important to stress that mensural theory avoided speaking of relative duration; this was an irrelevant pragmatic concept, not synonymous with either note or note value.

A brief example may illustrate this. In ʘ a semibreve can, depending on the context, assume several different values (expressed in numbers of minims): 2 (imperfection), 3 (perfect), 4 and 5 (alteration plus imperfection), and 6 (alteration). Although the values are different, conceptually there is only one note, a semibreve. It may seem that *value* here is synonymous with relative duration, but that is not in fact the case. For different values can express the same durations: in ʘ an imperfect semibreve (value: 2 minims) has the same duration as an altered minim (indivisible), and an altered semibreve (value: 6 minims) has the same duration as an imperfect breve (value: 2 semibreves). The durations are the same, but the notes and values are different. To modern eyes this seems needlessly inefficient and confusing: present-day transcriptions of fifteenth-century music simply equate the concepts of note, value and relative duration. Yet despite the evident gains in explicitness, this inevitably involves straitjacketing the extreme flexibility that is one of the strengths of the mensural system. To treat essentially different concepts as synonymous is to lose a wealth of inherent meaning.

This is most clearly seen in works whose complex structures present-day notation is unable to represent adequately, for example, Ockeghem's *Missa prolationum*. It may be perfectly defensible from our point of view to edit this mass, for instance, with barlines drawn through all staves, since 'the mensurations of the individual voice-parts may be thought to conceal a basic pulse which in an edition ought to take precedence over their metrical peculiarities'.[73] Such an edition would grasp the music as a listener attempts to

[73] J. Caldwell, *Editing Early Music*, Early Music Series 5 (Oxford, 1985), p. 28.

grasp it, namely, with reference to an intuitively postulated basic pulse. It would convert all notes to their durational equivalents in the uniform time signature which represents that hypothetical pulse. But mensural theory did not recognise such a concept as a 'basic pulse' (at least not before the sixteenth century), and its proponents would argue that the edition states untruths. It negates the underlying mensural processes, by turning strings of notes which interact under the influence of mensurations into merely additive sequences of rigid symbols. It replaces the inherent mensural order with an extraneous one, by drawing barlines for convenience. It represents as different what is intrinsically identical (e.g. different resolutions of the same canonic melody), and equates what is distinct. It is, moreover, inefficient, since it frequently represents long notes as successions of several tied notes. In a word, it is, as Tinctoris would have put it, an edition for the 'unlearned'.

Because of the distinction between what music is conceptually and what it is aurally, the notation of a melody was often seen *as part of its identity*. To rhythmicise a non-mensural tune was to give it such an identity. For that reason composers often respected the notational shapes of borrowed melodies with meticulous care. For instance, when Ockeghem took over the tenor of the anonymous *Caput* Mass for his own cycle, he '[left] the ligatures as well as the clef of the borrowed voice essentially unchanged', for he wanted to keep the melody 'untouched *in its external appearance*, although it is actually transposed to the bass register [by a verbal canon]'.[74] Indeed, the Sanctus of Ockeghem's mass 'retains even the trifling irregularities of [the *Caput* Master's] Sanctus, the omission of [bars] A43 and A55'.[75] Many more such instances could be given. There is even one case in which a composer took over only the rhythmic shape of his model, not the actual melody itself, the anonymous *Missa de Sancto Johanne Baptista*.[76] Here, notation takes precedence over every other aspect of the pre-existent melody. A direct consequence of the attitude described here is that composers who held the attitude were not able to change their pre-existent

[74] Bukofzer, *op. cit.*, pp. 266–7.
[75] *Ibid.*, p. 267.
[76] R. C. Wegman, 'Another "Imitation" of Busnoys's *Missa L'homme armé* – and Some Observations on *Imitatio* in Renaissance Music', *Journal of the Royal Musical Association*, 114 (1989), pp. 189–202.

tenors by anything but *external* (and hence schematic) means: mensural changes or verbal canons.

It is in this context that the procedures of the *Missa L'ardant desir* are to be understood. What these procedures (including mensural transformation) have in common is that they work on the *notation* of the original tenor, affecting both its graphic and conceptual nature. What the 'experiments' reveal is, ultimately, the nature and workings of the mensural notation system. This is the crucial difference from more traditional schematic techniques such as augmentation, diminution, transposition, retrograde and inversion. The latter techniques can conceivably remain effective even if the tenor is renotated (e.g. in different note values or in present-day notation). The most that is needed, if anything, is minor readjustments in the verbal canons, to change the actual ratios or intervals. In contrast, the *L'ardant desir* Mass is all *about* notation; the slightest change in the shape of its tenor would destroy the mass's very structure. To find mensural transformation as the dominant procedure in this context is surely significant. It indicates how the anonymous composer perceived Domarto's technique, and why he was fascinated by it. Mensural transformation, it is now apparent, was not just another trick in the vast stock of *Kanonkünste* of the Netherlands composers. It was a procedure motivated by an essentially different philosophy: the exploration of the possibilities inherent in the notation of a tenor. That philosophy had been the main innovation in Domarto's *Missa Spiritus almus*.

We may now draw some broader conclusions. The masses discussed here, *Gross senen*, *O crux lignum* and *L'ardant desir*, seem to be the only surviving products of a 'school' of mass composers who, following Domarto, were fascinated by mensural notation and its inherent possibilities. If they borrowed tunes from existing compositions, they adopted them as they found them, leaving their notational shapes intact. If they borrowed non-mensural tunes, as in the case of *O crux lignum* (and *Spiritus almus* itself), they provided them with fixed notational shapes. The range of cantus firmus procedures was limited by the desire to respect the notational shape of the tenor; hence composers had no option but to apply schematic procedures. The actual choice of procedure depended on the possibilities inherent in the tenor. Thus Busnoys, in his *L'homme armé* Mass, had to restrict himself to augmentation, inver-

sion and transposition, since the notational shape of the *L'homme armé* tune rules out mensural transformation (see above). The *L'ardant desir* tenor, on the other hand, offered a wide range of possibilities, and the anonymous composer of the mass fully exploited those as he transplanted the tenor in the new context. In this latter mass, the cantus firmus treatment assumes almost the character of 'variations on a theme'. The crucial underlying philosophy is that notation is an inalienable part of the 'theme', and a potentially rich source of 'thematic' transformations. This philosophy – and probably Domarto's example – rather than direct contact with the older master himself, was the binding element of the 'school'.

Additional support for that conclusion comes from the fact that the philosophy remained a source of inspiration even to a composer of the Josquin generation, Jacob Obrecht. The procedures that are unique to Domarto's 'school' were to become the virtual hallmark of Obrecht's masses. Although it would exceed our terms of reference to give a full account of Obrecht's cantus firmus treatment, it is worth outlining the most relevant features. It has often been remarked that Obrecht had a consistent tendency to respect the original notation of voices quoted from polyphonic works. Mensural transformation was among his stock procedures. We find it particularly in the masses with segmented cantus firmi (e.g. *Je ne demande*, *Malheur me bat*, *Rose playsante*). Here the individual segments, in their original notation, are usually repeated in different mensurations. This results in a 'degree of rhythmic dissimilarity between statements that is not characteristic of framework tenors as a class'.[77] In a number of masses based on non-mensural tunes, Obrecht gave the tenors fixed notational shapes, and then transformed them mensurally. This was the case in *Maria zart* and *O lumen ecclesie*, and almost certainly in *Petrus apostolus*; another mass in which this may have happened is *Grecorum*. Some of Obrecht's more arbitrary procedures recall the *Missa L'ardant desir*: in the *Missa De tous biens plaine*, for instance, the tenor notes are to be sung in order according to their value, following the canonic instruction 'digniora sunt priora'. Elsewhere in the same mass Obrecht repeated this procedure in retrograde. Notationally, his masses

[77] Sparks, *op. cit.*, pp. 266–7.

have little in common with the *Missa Spiritus almus*.[78] This need not be surprising, since Domarto's mass must have been composed at least thirty years earlier than any of Obrecht's works. Nevertheless, it seems clear that Obrecht was a late follower of the philosophy of which Domarto had been the most important, and probably the earliest, exponent.

We shall never know whether Domarto was actually the founder of the 'school' (if we may call it that), since it is always possible that he adopted his procedures from earlier masses that are now lost. On the other hand, the unusually wide distribution of his mass, and Tinctoris's grudging admission that he was 'non parvae auctoritatis', would suggest that he was at least its chief missionary.

While the distribution and fame of Domarto's mass explain its apparent influence, they raise new questions in turn. It is extremely rare for a mid-fifteenth-century mass to have survived in five sources – one of which may have been copied as late as thirty years after the mass was composed (ModE M.1.13, of 1481). Two better-known contemporary masses, Dufay's *Se la face ay pale* and Ockeghem's *Caput*, are both found in fewer manuscripts, and neither of these cycles received anything like the attention Tinctoris gave to *Spiritus almus*. It may be, of course, that the chances of survival have favoured Domarto's mass more than any other contemporary cycle, and that the original patterns of transmission were quite different. On the other hand, the assumption that Domarto was a mere *Kleinmeister* compared to great names like Dufay and Ockeghem could well be a twentieth-century prejudice, stemming from our tendency to conceive music history in terms of great names. Only a critical examination of the transmission and style of the *Missa Spiritus almus* can throw light upon these questions.

Comparison of the five sources for the mass reveals that three, LucAS 238, TrentC 88, and VatS 14, form a closely knit group, and must be closest to the composer's original. The last two of these sources can even be shown to go back to a common exemplar. They alone share a scribal peculiarity in the notation of the tenor of the

[78] The mass that comes closest to Domarto's mensural usage is *Ave regina celorum*, which contains, like *Spiritus almus*, the vertical juxtapositions O2/O, C/ ¢, and C/ O. It may be significant that there are some elements of mensural transformation in this mass, but the procedure is not applied systematically. Reinhard Strohm has argued that Obrecht's *Missa Ave regina celorum* was composed in Bruges, *c.* 1485–90 (*Music in Late Medieval Bruges*, p. 147).

Example 7. Variant in notation of tenor notes 1–7 of Petrus de Domarto, *Missa Spiritus almus*: (a) TrentC 88 and VatS 14: Agnus Dei; (b) TrentC 88 and VatS 14: other movements, and all surviving movements in LucAS 238, PozU 7022, and ModE M.1.13

Agnus Dei (see Example 7): instead of combining notes 6 and 7 into one ligature – as all other manuscripts do, and as these sources do elsewhere – they ligate notes 5 and 6. Musically this makes no difference, of course, but since it is the point of Domarto's mass that the notation of the tenor remain unchanged, and since the two sources have this peculiarity at the very same place, it is unlikely that the variant cropped up in TrentC 88 and VatS 14 independently.[79] PozU 7022 and ModE M.1.13 must be separated from Domarto's original by longer lines of transmission: each in its own way introduces various changes in the musical text.[80] In ModE M.1.13 these changes almost assume the character of editorial reworkings; the scribe seems to have attempted to bring the mass in line with practices current in the 1470s. Tinctoris's four musical examples (all taken from the Gloria) provide too little information to relate them to any of the surviving sources.

A few peculiar features in the transmission of the *Missa Spiritus almus* deserve comment. Text placement is most carefully worked out in the Bruges manuscript LucAS 238, but the three southern sources follow basically the same underlay. LucAS 238, TrentC 88 and VatS 14 tend not to write Mass Ordinary text in the tenor; instead they provide the text of the original chant. In LucAS 238 this is done with the same careful text placement that characterises the underlay of the other voices, namely, with a long melisma separating the syllables 'al' and 'mus'. TrentC 88 retains this feature only in the Cum sancto but otherwise gives 'spiritus almus' as a mere incipit, as does VatS 14. In the Gloria tua both these latter sources omit the incipit and provide the appropriate Mass text instead. ModE M.1.13 consistently places Mass text in all

[79] According to Strohm, 'a filiation of the . . . sources based on the variant readings suggests that [VatS 14] itself depends directly or indirectly on [LucAS 238]' (*Music in Late Medieval Bruges*, p. 142). I have found no conclusive evidence to support this suggestion, and the common ancestry of TrentC 88 and VatS 14 seems to me to contradict it.

[80] Cf. Perz, *op. cit.*, p. 34.

tenor statements. It would appear from this that Domarto meant his tenor to be sung to its original words, and that the substitution of Mass Ordinary text was a later, southern tendency.[81]

Throughout the three most reliable sources there is a tendency not to provide the mensuration sign O in the contrapuntal voices when perfect tempus is intended. None of these manuscripts, indeed, gives that signature in the Sanctus and Agnus Dei. In the Patrem, neither TrentC 88 nor VatS 14 indicates perfect tempus, while the movement has not survived in LucAS 238. In the remaining movements, the sign O tends to be given in only one or two of the contrapuntal voices, never in all three. This would seem to suggest that Domarto never provided any sign in the first place, as is frequently seen in mid-fifteenth-century masses.

The three sources also show some confusion with regard to the indication of imperfect tempus in the contrapuntal voices. In the Christe, Benedictus, and Agnus II, the implied signature was almost certainly ¢. But in the Agnus II (a duo) only VatS 14 gives that sign; the other two sources write C. In the Christe and Benedictus there is more disagreement with regard to imperfect tempus. In both sections it is imperative that the mensuration be diminished, since the intended proportion with the tenor (which is in C) is 2:1. Nevertheless, TrentC 88 and (the top voice excepted) LucAS 238 erroneously write C in the Christe; LucAS 238 repeats this error in the Benedictus. In this latter section, VatS 14 gives ¢ and TrentC 88 C2. Again it would seem that Domarto's autograph looked different from the versions as we have them. If he provided a mensuration sign at all, it was most likely C with implied diminution.[82] This was an English practice,[83] but it was sometimes adopted on the Continent: we find it, for instance, in a northern copy of Dufay's *Missa Ave regina caelorum*. ModE M.1.13, predictably, has resolved all mensural ambiguities.

There is no ready explanation for the unique occurrence of the (correct) variant C3, for C3, in LucAS 238 (see above). Geographi-

[81] The same conclusion is reached in A. E. Planchart, 'Parts With Words and Without Words: The Evidence for Multiple Texts in Fifteenth-Century Masses', *Studies in the Performance of Late Mediaeval Music*, ed. S. Boorman (Cambridge, 1983), pp. 227–51.

[82] Precedent for the use of C in all voices with implied 2:1 proportion between tenor and contrapuntal voices is found in Leonel Power's *Missa Alma redemptoris mater*.

[83] See R. C. Wegman, 'Concerning Tempo in the English Polyphonic Mass, C. 1420–70', *Acta Musicologica*, 61 (1989), pp. 47–8.

cally this source, copied in the north, is closest to Domarto, and a critical comparison of the various versions of *Spiritus almus* confirms its authority. On the other hand, it seems unlikely that all the other sources (including Tinctoris) would have independently converted Lucca's sign to C3. Moreover, we have already observed that the use of C3 with triple division of the semibreve was an established practice, both before and after *Spiritus almus* was composed.[84] The Lucca sign, on the other hand, is an anomaly. In view of this, it seems most likely that the addition of the dot in LucAS 238 was the result of Tinctoris's influence, either when the source was copied, or when the *Proportionale* reached its users.[85]

The final feature relevant to our discussion of transmission is the use of ficta in *Spiritus almus*. Sharps figure prominently in every copy of the mass except ModE M.1.13. Their actual number and placement, however, differ in each source. Altogether, there are thirty-six sharps, whose distribution is as follows: 24 C♯, 5 G♯, and 7 F♯ (in D Dorian). The closely related versions VatS 14 and TrentC 88 together contain twenty-nine of these sharps, of which seventeen are identically placed. The Lucca fragment shares seven sharps with these manuscripts, and adds another six of its own; the Poznań fragment shares two sharps with VatS 14 and TrentC 88, and adds one. ModE M.1.13, significantly, has removed all sharps. It would seem from these figures that accidentals were among the notational symbols most likely to get lost in transmission; but that is not necessarily the case, for the three *flats* in Domarto's mass are faithfully transmitted in every copy. Even the Modena scribe, who had consistently purged the music of sharps, did not fail to copy any of the flats. It would appear that scribes tended to omit sharps rather than insert them, otherwise we should find similar variation with regard to ficta in many other masses. If that impression is correct, the conclusion must be that all thirty-six sharps in

[84] See notes 45, 52 and 60 above.

[85] The addition of the dot could perhaps be attributed to the theorist John Hothby, who was choirmaster and chaplain of Lucca Cathedral from 1467 to 1486. He had access to LucAS 238 by 1472, when the manuscript had been donated to the cathedral by Giovanni Arnolfini (Strohm, *Music in Late Medieval Bruges*, p. 122; suggestion made to me by Reinhard Strohm in a private communication, 20 February 1990). A similar addition of a dot to the signature C3 is found in ParisBNN 4379, fol. 11^{v}, in the top voice of *Hé Robinet / Trigalore / Par ung vert pré* (the other two voices remain undotted). This is another combinative chanson to use the signature C3 (cf. note 52 above).

Domarto's mass may be original, and that the composer's autograph could well have contained more sharps.

The transmission of the *Missa Spiritus almus* sheds little light on the question of its date. The earliest *terminus ante quem* is provided by the TrentC 88 copy, which must have existed by about 1462 (see note 4 above). A more precise date must be established on the basis of stylistic evidence, but here we face an almost insurmountable problem: there is no uncontestably Continental four-voice mass (i.e. with a low contratenor)[86] which we know to have been copied before 1460.[87] Nor, indeed, is there any four-voice English mass which we know to have been copied before 1450.[88] The net result of these facts is that there are no criteria by which to establish a chronology of four-voice mass composition on the Continent before 1460. Consequently, any attempt to propose a precise date for Domarto's *Missa Spiritus almus* must be extremely tentative.

On the face of it, the source situation would seem to suggest that the Continental four-voice mass had taken off very rapidly, perhaps within about five or ten years. This would be in line with the dazzling style changes that evolved after about 1460,[89] and it would, moreover, explain the surprising absence of any Continental four-voice masses in such sources as TrentM 93 (*c.* 1450–6), TrentC 90 (*c.* 1452–8), and the early layer of TrentC 88 (fols. 1–24; *c.* 1456).[90] On the other hand, the Trent codices are obviously peripheral manuscripts for music from the north, and their value in this regard would seem at best dubious. Ultimately, it must be by a

[86] Four-part writing was, of course, hardly a novelty in the fifteenth century, but the four-part texture with low contratenor must have been a late invention (presumably in the 1440s). The significance of this invention is explored below.

[87] If the anonymous four-voice *Missa Thomas cesus* in the '1458' layer of VatSP B80 is Continental (despite the English origin of its tenor, see Reynolds, *op. cit.*, p. 285), it would push back the *terminus ante quem* for four-part mass writing on the Continent to 1458. Apart from this possible exception, the earliest copies of Continental four-voice masses are found in TrentC 88, TrentC 89, and the second layer of VatSP B80, all of which must date from the early 1460s.

[88] The earliest surviving copy of an English four-voice mass dates from *c.* 1451–2 (*Missa Caput*, in TrentM 93; for the date, see S. E. Saunders, 'The Dating of Trent 93 and Trent 90', *I codici musicali Trentini a cento anni dalla loro riscoperta*, ed. N. Pirrotta and D. Curti (Trent, 1986), pp. 60–83). The anonymous *Missa Salve sancta parens*, in the same source, also has four voices but does not include a low contratenor (see below); Margaret Bent has argued that the fourth voice may have been a later addition (M. Bent, ed., *Four Anonymous Masses*, Early English Church Music 22 (London, 1979), p. 181).

[89] See Wegman, 'The Anonymous Mass *D'ung aultre amer*'.

[90] For the dates, see Saunders, 'The Dating of the Trent Codices', pp. 87–91, and 'The Dating of Trent 93 and Trent 90'.

comparative analysis of the earliest surviving four-voice masses that we can attempt to establish a relative chronology – perhaps even a tentative time scale. This article is not the place to carry out such an investigation. I will merely attempt to show that there is a huge stylistic gap separating Domarto's *Missa Spiritus almus* from the most advanced masses that existed by the early 1460s. The question whether this gap corresponds to a span of five, ten or perhaps even fifteen years cannot be answered. But whatever the actual duration of that span, one conclusion will become increasingly clear: Domarto's mass must have been among the very first four-voice cycles to be written on the Continent.

As a point of reference the ideal cycle seems to be the anonymous *Missa Gross senen*, which we have already discussed above. First, like *Spiritus almus* this mass has a *terminus ante quem* of *c.* 1462. Secondly, the *Gross senen* Mass was very probably influenced by the structure and mensural usage of Domarto's mass, so if the anonymous composer decided *not* to imitate its style – the aspect most likely to become obsolete as the years went on – this indicates that fashions had significantly moved away from the styles that were current when *Spiritus almus* was composed. Thirdly, it is important not to select a mass by a composer who might be 'ahead of his time' and which may therefore give a distorted picture of current fashions. A work like the *Missa Gross senen* exactly satisfies this demand: composed probably in Germany, it is more likely to have followed fashions than to have led them. But fourthly, and most important, this mass is arguably among the most advanced pieces that existed by the early 1460s. Indeed, on its own terms it is an outstanding composition.

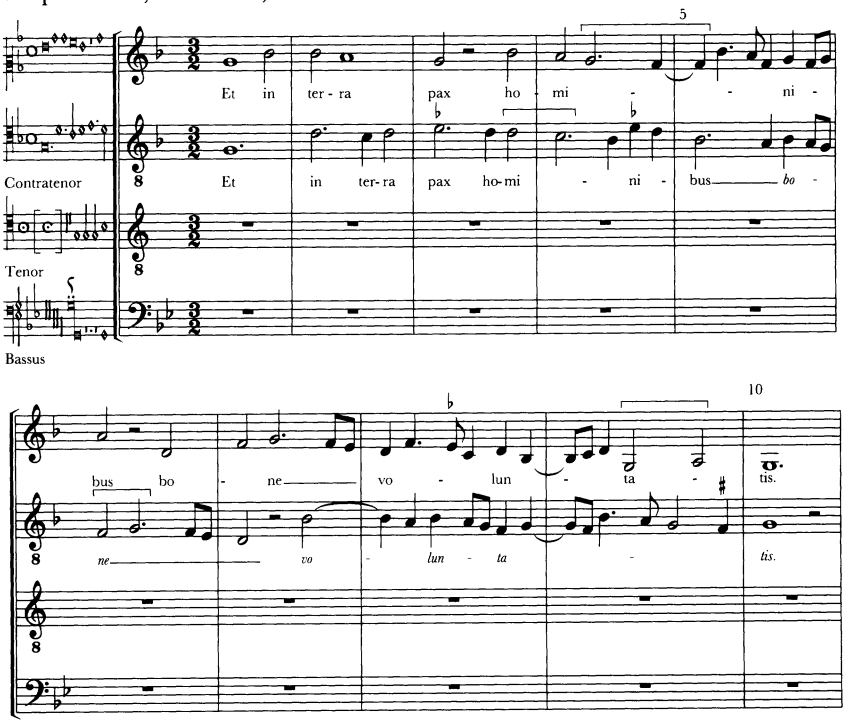
One could underpin these latter claims by pointing to readily identifiable features that are known to have been 'modern' in the 1460s and 70s.[91] Both contratenor and bass have assumed contrapuntal independence, and are written with pronounced rhythmic and melodic fluency. The handling of harmonic progressions is remarkably assured. There is a tendency to organise melodic lines

[91] A brief but important description of the style of the *Missa Gross senen* is in Strohm, 'Meßzyklen über deutsche Lieder', pp. 92–3. Strohm concludes: 'Der Komponist der *Missa Gross senen* ist ein Pionier der franko-niederländischen Messenkunst in der unmittelbaren Nachfolge Dufays ... Seine Identität oder wenigstens sein Tätigkeitsbereich wären der Erforschung wert!' (p. 93).

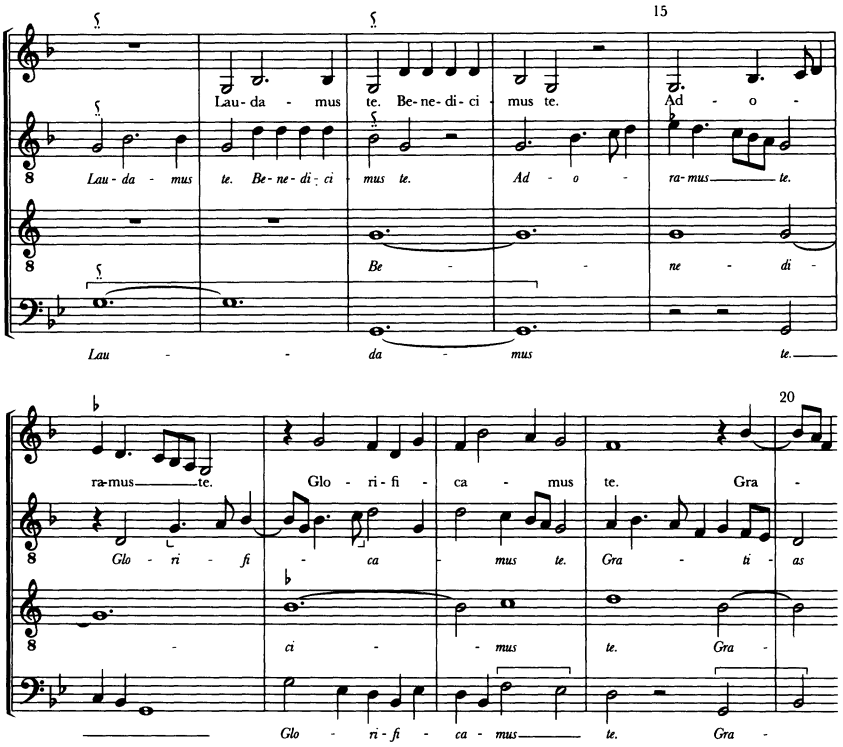
by means of repeated motifs, although this does not as yet result in actual sequences. The counterpoint is at times infused with imitation. Phrases of the cantus firmus are frequently imitated in the contrapuntal voices, particularly when the tenor is to be sung *ut iacet* (Agnus Dei III, Confiteor). Otherwise, most imitation in the four-voice sections tends to be between the top two voices only. In the tenorless sections there are frequent imitations of extended phrases between pairs of voices; in a number of cases the imitations even involve three parts (Pleni, Osanna II). The presence of such progressive elements, which were to be developed in the masses of Ockeghem, Dufay and Busnoys, indicates that the *Gross senen* composer was well aware of current stylistic trends. And, significantly, these same elements are virtually absent in the *Missa Spiritus almus*, as will be seen below.

But the progressiveness of the *Missa Gross senen* is evident from more than just these isolated elements. Example 8 shows how

Example 8. Anonymous, *Missa Gross senen*: bars 1–20 of Et in terra. Based on unique source, TrentC 89, fols. 28v–29r.



Example 8 *continued*



Bass 15_{1-2}: semibreve rests separated by *punctus divisionis*; bass 16_3: breve dotted. The two dots cause the passage 15_1–16_3 to be shifted by one semibreve, but the contrapuntal context indicates that this must be incorrect.

radically innovatory Continental approaches to four-voice mass composition had become by the early 1460s. The example gives the first twenty bars of the Et in terra. The tenor carries the sign ⊙, but the actual ratio of augmentation is not 2:1 but 4:1 (the source states 'in triplo crescere debet'). Thus the quick upward move of a fifth which opens the *Gross senen* melody (see Example 5) is turned into a prolonged arsis lasting seven bars. The composer seized on this opportunity to write a most impressive musical build-up.

The section starts with a self-contained, introductory duo in which the top two voices explore their modal ranges (bars 1–10). The duo stops three bars short of the tenor entry, with both voices cadencing on the same pitch, *g*. This cadence was traditionally the

signal for all voices to enter simultaneously, and to surge forward in a thick, dynamic layer of sound (as in English masses such as *Caput* and *Veterem hominem*). But the *Gross senen* composer knew how to play his cards, and he played them in masterly fashion. The entry of contratenor and bass, in bar 11, is kept as unobtrusive as possible: both voices simply state, in unison, the note on which the introductory duo had ended. While the bass holds this note for two bars, the contratenor expands the combined range from unison to third, and – after the top voice has entered – to the fifth. Thus what happens in bars 11–12 is simply the gradual unfolding of a minor triad, out of a single note. When the tenor enters, in bar 13, the composer further expands the chord, by having the bass leap down an octave. So while the passage is kept static in harmonic terms, there is a progressive development of sonority and 'orchestration'. That development is reinforced by other means. The imitations between the top two voices give a sense of increasing momentum. The motifs are moreover shaped in such a way as to produce a gradual rhythmic intensification: from bars 11 to 16, the basic semibreve beat becomes increasingly filled in with minim and fusa patterns. Then the harmonic stasis is finally lifted (bar 16): the bass moves briefly in parallel tenths with the top voice – a major musical event after the prolonged G minor chord in bars 11–16. Bars 17–19 carry all these developments to their natural conclusion. Both top voice and bass leap up an octave (bars 16–17) and, while the tenor rises to the fifth, expand their combined range to two octaves (bar 18). The three contrapuntal voices now assume full melodic and rhythmic equality. By the time the cadence in bar 19 is reached, the music is in full motion.

This is an opening worthy of a Josquin. Although seemingly very simple, the passage shows a superb handling and coordination of musical parameters such as tone colour, pitch, rhythm and harmony. The composer uses these elements with refinement and a keen sense of drama: each new bar witnesses a further step in the gradual unfolding of sonority, the intensification of rhythm, and, finally, the unloosening of harmonic stillness. Rather than taking the standard four-part counterpoint for granted by simply stating it at the outset, the composer builds it up in an impressive, written-out crescendo.

The opening of the Et in terra is not an isolated example, but

illustrates a broader trend. Throughout the 1460s we see Continental composers breaking away from the rigid patterns of their English exemplars, experimenting with new styles and approaches, and exploring the musical language in search of eloquent musical effects.[92] Increasingly they abandoned the evenness and balance that had characterised earlier mass styles and began to infuse their music with dramatic elements: sudden contrasts in scoring and rhythmic intensity, dazzling melodic rises and descents, and the use of imitations as rhythmic propellants.[93] The opening of the Et

[92] See Wegman, 'The Anonymous Mass *D'ung aultre amer*'.

[93] The best illustration of these trends is provided by Ockeghem's *Missa L'homme armé*, which must have existed by 1467–8 (Strohm, *Music in Late Medieval Bruges*, p. 30; all following references to D. Plamenac, ed., *Johannes Ockeghem: Collected Works*, I (2nd, corrected edn, American Musicological Society: Studies and Documents 3 (n.p., 1959), pp. 99–116). This mass is a virtual study in musical contrast. Particularly striking are the contrasts in rhythmic density. Most sections open in breve–semibreve movement, and end in minim–semiminim movement; Ockeghem alternates the two types of movement in between (compare, for instance, Et in terra bars 1–6 and 15–19 with bars 10–13 and 42–5). The maximum feasible speed depends on the rhythmic movement in the closing bars: if a section starts too fast, the music will sound increasingly huddled towards the end. On empirical grounds, the optimum tempo for the semibreve in O is unlikely to be much in excess of 60 M.M. At that speed, which seems right for the rhythmically most active passages, the opening bars sound extraordinarily 'slow': Ockeghem seems to have consciously 'written out' majestic, chordal openings. These contrast sharply with the floridity displayed elsewhere, especially in the tenorless sections (see particularly the Benedictus and Agnus Dei II).

Other contrasts exploited by Ockeghem are those of scoring and tone colour. These occur first of all on a structural level. In the Agnus Dei the cantus firmus is transposed down an octave, and the voice ranges in this movement are approximately a fourth lower than in the remainder of the mass. There is thus a clear shift to a darker and denser sound – the sound we know so well from Ockeghem's later 'low' works (see particularly the Agnus Dei, bars 85–103). The suspicion that the composer was concerned to create a special effect at the end of his mass is confirmed by the expressive Agnus Dei III, which opens with remarkable (and unprecedented) 'soloistic' flourishes above the drawn-out notes of the cantus firmus. In the Credo, the cantus firmus has been transposed, too, from *G* down to *C*. This time, however, the transposition hardly affects the overall ranges, although it does affect the modality (this procedure was to be repeated in the Credo of Ockeghem's *Missa Ecce ancilla Domini*).

Ockeghem employs several means to heighten the variety of tone colour in his mass, the most simple being that of scoring. In the Gloria and Credo, full scoring is employed with considerable restraint: most of the time, either two or three voices are sounding. The ways in which these are combined, and in which the various voice groupings flow into one another, are so irregular that this gives the style an almost impressionistic quality. In all sections, the combined range of the voices continuously contracts and expands, from as little as a fifth to two octaves plus third (compare Credo bar 39 with 43, bar 83 with 93, and Sanctus bar 22 with 24). If the combined range is contracted, all voices can together easily remain below or above *c'* (compare Gloria bars 17–19 with Credo bars 122–3). Such collective shifts to either side of *c'* occur frequently in Ockeghem's mass and constitute one of its most distinctive features.

Other noteworthy special effects in Ockeghem's *L'homme armé* Mass are: the entry of a cantus firmus phrase on a musical culmination point (Credo bars 13–14; the entry is

in terra of the *Missa Gross senen* should be seen in that context. In terms of the handling of musical momentum it is a virtual counterpart of the well-known Continental device of the 'drive to the cadence'. If it were not for its copying date of *c.* 1462, and the German origin of its model, one could easily mistake the *Missa Gross senen* for a Franco-Flemish cycle from the late 1460s. Without doubt the cycle was a recent composition when it was copied in the Trent manuscript.

When we turn now to Domarto's *Missa Spiritus almus* we seem to be entering a different world, a world that must already have sounded archaic by the time TrentC 88 was copied. We are struck immediately by the dark, vibrant sonorities; the frequent modally incongruous progressions, dissonant combinations, and closely spaced cross-relations; the slow harmonic rhythm; the sparseness of imitations and cadences; and the undistinctive melodic style. Compared to *Gross senen* and other masses from the early 1460s this is a crude work, going back, it seems, to the very prehistory of the four-voice mass cycle. Yet, whatever its apparent position in long-term stylistic developments, Domarto's mass must be judged on its own terms and compared with closely related works. A closer inspection of its style seems therefore in order.

Although the *Missa Spiritus almus* is scored with a low contratenor (called 'tenor secundus' in all sources except ModE M.1.13 and PozU 7022), only eight of the ninety-nine cadential progressions are of the 'dominant–tonic' type; the remainder (including all final cadences) are of the VII_6–I type. In the final cadences Domarto invariably lets the contratenor state the third of the final chord (in four cases a major third), which note he then resolves into the fifth.

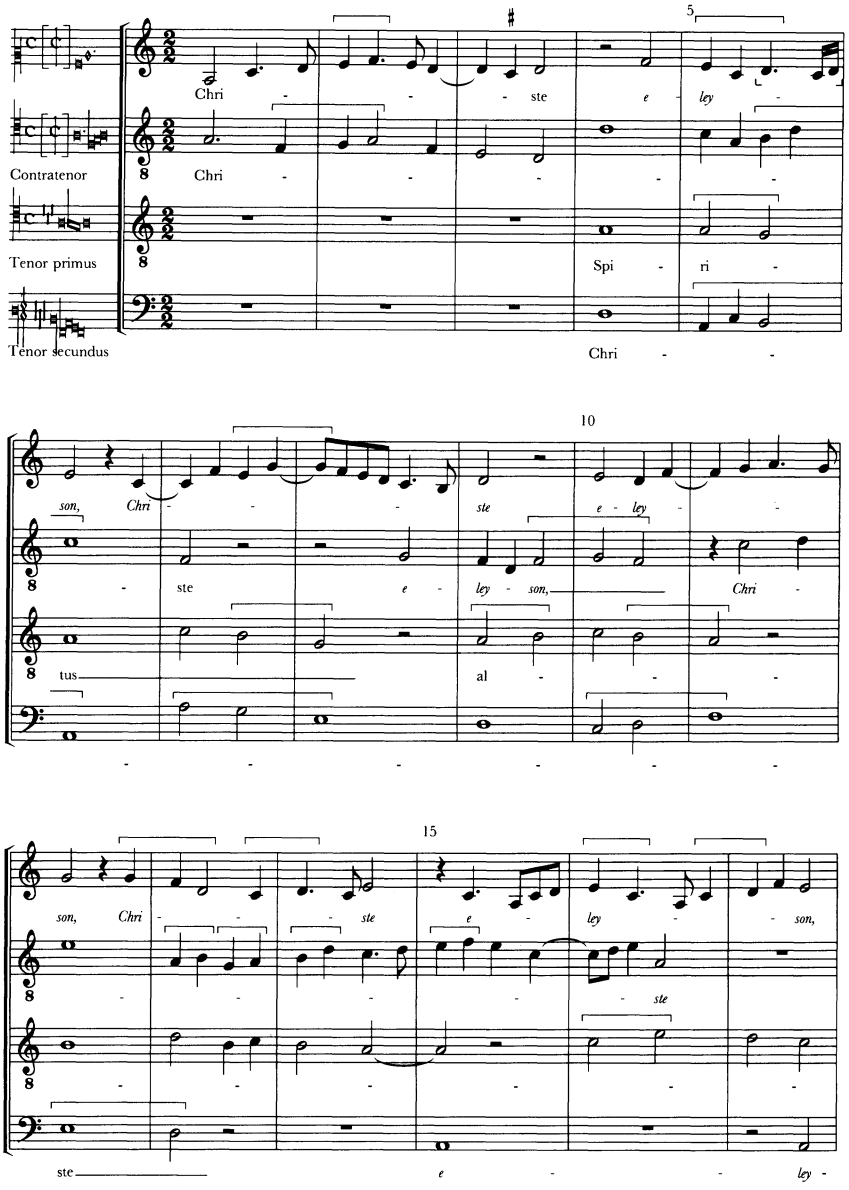
The rhythmic movement of the bass closely follows that of the tenor: it moves mainly in longs, breves and semibreves when the tenor is in augmentation, and in semibreves and minims when the tenor is stated *ut iacet*. As a consequence, the augmented-tenor sections are characterised by slow harmonic rhythm and show a sharply delineated stratification in two layers of rhythmic activity: the two active upper parts move above a harmonically solid layer of

accidentally misplaced by one bar in Plamenac's edition, p. 104); the dazzling melodic rise in the top voice and bass in Credo bars 110–13; the introduction of ficta in Credo bars 122 and 176–7; and the opening of the third Agnus Dei, mentioned above.

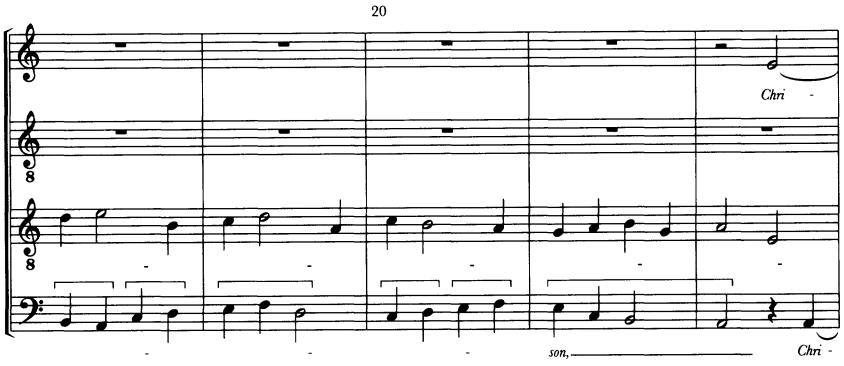
long, drawn-out notes. Apart from the duos, it is only in sections such as these that Domarto ventures to introduce occasional imitations between the upper voices. In the sections with the tenor *ut iacet*, the stratified texture gives way to a more integrated contrapuntal fabric, and imitation is almost totally absent. In either type of section the tenor and bass are hardly ever involved in the imitations. Even in sections or passages without cantus firmus, Domarto shows no great inclination to imitation.

There is also a tendency to couple the rhythmic movement of tenor and bass *within* sections. The preconceived tenor is structured in such a way that it has longer notes at the beginning and after about two-thirds of the melody, and smaller notes in the middle and towards the end (see Example 2). Thus every section has two 'built-in' drives, which the bass underscores by following the tenor's rhythmic movement. But, significantly, Domarto nearly always plays down the middle drive, by reductions of scoring. This can be seen, for instance, in the Christe (Example 9). The bass is clearly linked to the tenor in its rhythmic movement, stating longs and breves in bars 4–15, and breves and semibreves in bars 17–22. But while the former passage is in full scoring, thus exemplifying Domarto's typical dense and placid sonorities, the latter is merely a duo providing relief from those sonorities – the very place where one would expect an increase in rhythmic activity. It is noteworthy that the cantus firmus is 'laid bare' as the leading voice in this duo. A nearly identical passage is in the Crucifixus (cf. Example 11c below); here the tenor–bass duo is preceded by an extended, dovetailing duo for top voice and contratenor. Similar dovetailed duos involving the tenor are found in early English masses such as *Caput* and *Veterem hominem*, but English composers generally tended to couple the tenor with the top voice or contratenor and thus avoided giving it the prominence that it received in Domarto's mass. Dufay, in the Confiteor of his *Missa Se la face ay pale*, also 'exposed' the cantus firmus in a duo. Duos involving a scaffold tenor are a typical feature of early Continental four-voice masses (Dufay, *Se la face ay pale*; Ockeghem, *Missa Caput*); they are not found in isorhythmic motets. This English-inspired habit was to disappear in the 1460s: by then composers tended to regard the presence of the cantus firmus as something to be articulated musically, by means of full scoring.

Example 9. Petrus de Domarto, *Missa Spiritus almus*: bars 1–22 of Christe. Based on TrentC 88, fols. 401^{v}–402^{r} (variant readings in the other sources not listed except when preferred to those of TrentC 88).



Example 9 *continued*

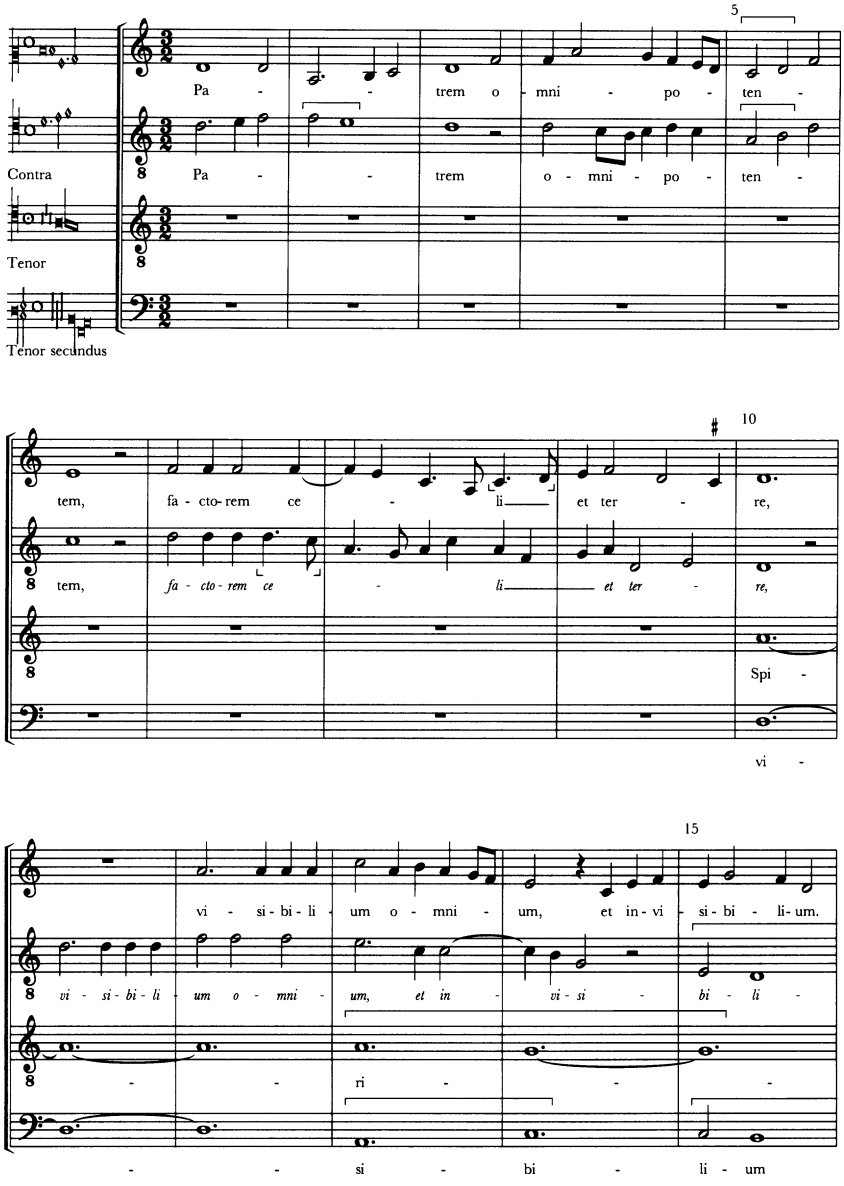


Top voice 2_3: MS reads *d'*; emended after all other sources except PozU 7022, which does not transmit this section.

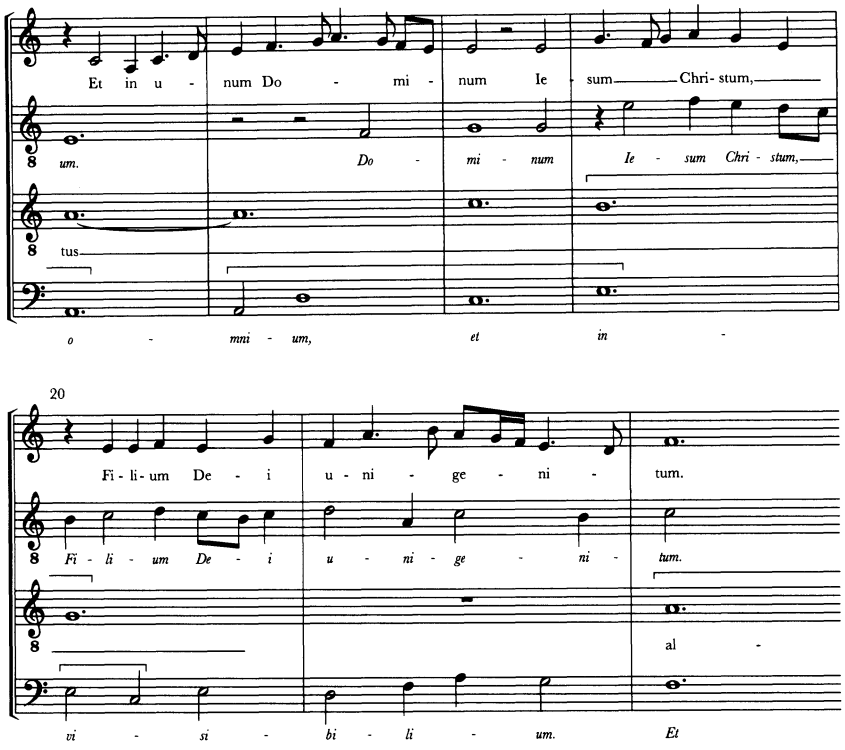
Unlike the bass, the top voices are not linked to the tenor in their rhythmic activity, but rather tend to move independently. This is particularly obvious in sections with augmented tenor, for instance the Patrem (Example 10). After a brief, introductory duo for top voice and contratenor, the cantus firmus enters, accompanied by the bass in long note values. Above this slow-moving layer the top voices deliver the text, typically in brief melodic patches, with occasional hints of imitation. The origins of this stratified style evidently lie in the Ars Nova motet. We find the same style in such early cycles as Dufay's *Se la face ay pale* and Ockeghem's *Caput*,[94] but

[94] For the approximate date of Ockeghem's *Caput*, see below. Dufay's *Missa Se la face ay pale* was copied in TrentC 88 before *c.* 1462. The internal evidence of this mass is difficult to evaluate. Close parallels to its cantus firmus treatment are found in the (presumably later) anonymous Masses *Quant ce viendra* and *Gentil madona* (see note 56 above). As regards mensural usage, the Mass alternates ☉ [III] and C [III]; this seems to relate it to the masses of Busnoys (cf. Wegman, 'Another Mass by Busnoys?', pp. 2–5). Since *Se la face ay pale* is written entirely in perfect minor modus, it is not a notational twin of the anonymous English *Missa Caput*, as claimed by Charles Hamm (*A Chronology of the Works of Guillaume Dufay Based on a Study of Mensural Practice* (Princeton, 1964), p. 129). The *Missa Se la face ay pale* is stylistically far removed from Domarto's *Missa Spiritus almus*; direct comparisons reveal little about the historical position of either cycle. Although the two masses could well have been composed around the same time, they seem to belong to different compositional traditions. After this article had gone to press I found a third source for Dufay's *Missa Se la face ay pale*: Siena, Biblioteca Comunale degli Intronati, MS K.I.2, fols. 222^{r}–223^{v} (portions of Credo and Sanctus).

Example 10. Petrus de Domarto, *Missa Spiritus almus*: bars 1–22 of Patrem. Based on TrentC 88, fols. 404^{v}–405^{r} (variant readings in the other sources not listed except when preferred to those of TrentC 88).



Example 10 *continued*



Top voice $\dot{2}1_{3-6}$: MS gives rhythm F-F-M-M; emended after VatS 14 and ModE M.1.13 (passage does not survive in PozU 7022 and LucAS 238). Text placement in contratenor, bars 7–22, and second tenor, bars 16–22, based on the fundamentally identical underlays of ModE M.1.13 and VatS 14.

it was to disappear in masses from the 1460s (*Gross senen* provides an example). Noteworthy in Example 10 is the simultaneous rest in bar 6; a similar break in a duo occurs in the middle of the Pleni (edited out in ModE M.1.13 and PozU 7022). This was a typical English practice, which was rarely adopted on the Continent; it does figure prominently, however, in Ockeghem's *Missa Caput.*

The melodic style in the top voices is undistinctive. Sharply profiled motifs, and phrases of great melodic individuality, are absent. Instead, brief clichés that recur elsewhere in the mass are

repeatedly encountered (one such cliché appears in bars 15–16 of Example 9 and bars 16–17 of Example 10). The overall impression is that Domarto wrote more or less *ad hoc* counterpoint to see the predetermined tenor through each statement. Cadences are comparatively rare in this counterpoint, again a feature which recalls the Ars Nova motet. In fact, the *Missa Spiritus almus* employs hardly any means of structuring the musical flow. Although the internal duos are sometimes clearly set off against the full passages, the general impression remains one of inarticulate counterpoint pushing steadily forward, with voices irregularly dropping in and out.

Yet the *Missa Spiritus almus* is a work of considerable individuality. The piece derives this quality from its stylistic homogeneity, the characteristic D Dorian flavour (to which the frequently prescribed ficta adds spice), and the typically low, dense sonorities. Domarto is particularly fond of writing sixth chords in the lowest three voices, often in parallel motion. Since the ranges as such are comparatively low, the frequent parallel thirds between the tenor and bass give the sound a dark, vibrant quality.

Domarto's use of ficta consists basically of two types: (a) harmonic ficta, to create major triads on D, E and A; (b) melodic ficta, to write melodic lines structured on diminished fourths (G♯–C, F♯–B♭, C♯–F). Sometimes the use of ficta leads to problematic situations which are difficult for the editor to resolve. For instance, in bar 9 of the second Kyrie (Example 11a), the *g*♯′ prescribed in the top voice in TrentC 88 and VatS 14 belongs to the second type of ficta (the sharp is not transmitted in ModE M.1.13 and LucAS 238). It requires a simultaneous sharpening of the *g* in the bass, leading to a first-inversion chord of E major, which is then resolved into an F major triad – a most unusual progression, since the bass has to sing the interval of an augmented second (*g*♯–*f*). It is interesting to note that the top voice quotes notes 3–12 of the cantus firmus in this passage (indicated by asterisks in the example). Further on in the same movement, there is a closely spaced cross-relation: an A major triad (*c*♯′ prescribed by TrentC 88 and VatS 14) is directly followed by one on C major (Example 11b). One could argue that these two problematic situations might have been caused by scribal corruption, since the ficta occurs only in the interdependent sources TrentC 88 and VatS 14. However, there are similar passages where PozU 7022 or LucAS 238 supports the

readings of these manuscripts, for instance, the Crucifixus, bars 26–8 (Example 11c), and Et in terra, bars 9–10 (Example 11d). It would seem, therefore, that the 'strange' progressions and cross-relations were an integral part of the style of *Spiritus almus*.

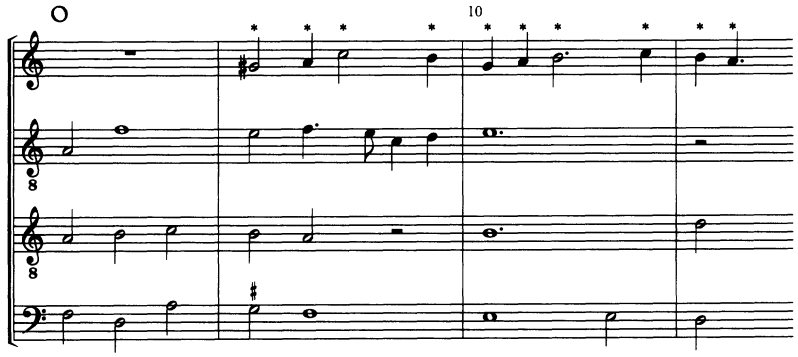
A companion piece to Domarto's *Missa Spiritus almus* is the *Missa Caput* by Johannes Ockeghem. Although well known from Manfred Bukofzer's brilliant descriptive analysis,[95] this mass remains a little-understood work, mainly because no context for its apparently anomalous features has been found – even among Ockeghem's other masses. Thus the cycle has tended to portray Ockeghem as a man determined to assert his independence at the very beginning of his career. And by extrapolation, it has led to the view that the composer remained an individualist throughout his creative life, whereas it is now becoming increasingly clear that stylistic individualism was a general tendency for mass composers in the 1460s and 70s.[96] The root problem may lie in Bukofzer's point of departure: he compared Ockeghem's *Caput* Mass with an English cycle from the 1440s (the anonymous *Missa Caput*) and a Continental cycle from after about 1480 (Obrecht's *Missa Caput*) in order to illustrate different approaches to the same mass tenor. Although the comparison was most illuminating, it was perhaps inevitable that Ockeghem's mass would emerge as a highly individual work, and its composer as virtually an extremist.

If the *Missa Caput* is compared with Domarto's *Missa Spiritus almus* it becomes apparent that Ockeghem may have been neither an extremist nor an individualist. Bukofzer's verdict[97] that Ockeghem 'renounces with amazing consistency all customary means of articulating a composition: cadences, profiled motives, symmetrical phrase structure, lucid interrelation of parts, imitation, sequences, prominence of one voice over the others, and so forth' is valid, but leaves room for qualification. One of the features to which Bukofzer drew attention was the marked 'avoidance of cadences'.[98] However, at least 104 cadential progressions can be detected in Ockeghem's mass, and although this is a relatively

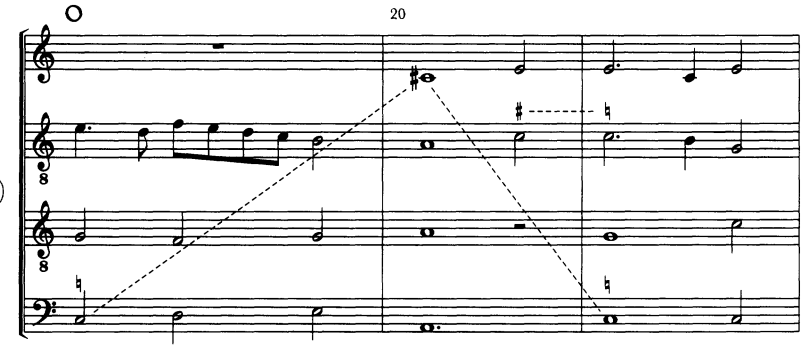
[95] Bukofzer, *op. cit.*, pp. 278–92.
[96] Wegman, 'The Anonymous Mass *D'ung aultre amer*'.
[97] Bukofzer, *op. cit.*, p. 291.
[98] *Ibid.*, p. 284.

Example 11. Ficta in Petrus de Domarto, *Missa Spiritus almus*: (a) Kyrie II, bars 8–11 (top voice 9_1: sharp in TrentC 88 and VatS 14; passage does not survive in PozU 7022); (b) Kyrie II, bars 19–21 (top voice 20_1: sharp in TrentC 88 and VatS 14; passage does not survive in PozU 7022); (c) Crucifixus, bars 22–9 (top voice 26_3 and contratenor 26_1: sharps in TrentC 88, VatS 14, and PozU 7022; passage does not survive in LucAS 238); (d) Et in terra, bars 8–11 (contratenor 9_1: sharp in LucAS 238 and TrentC 88; passage does not survive in PozU 7022).

(a)

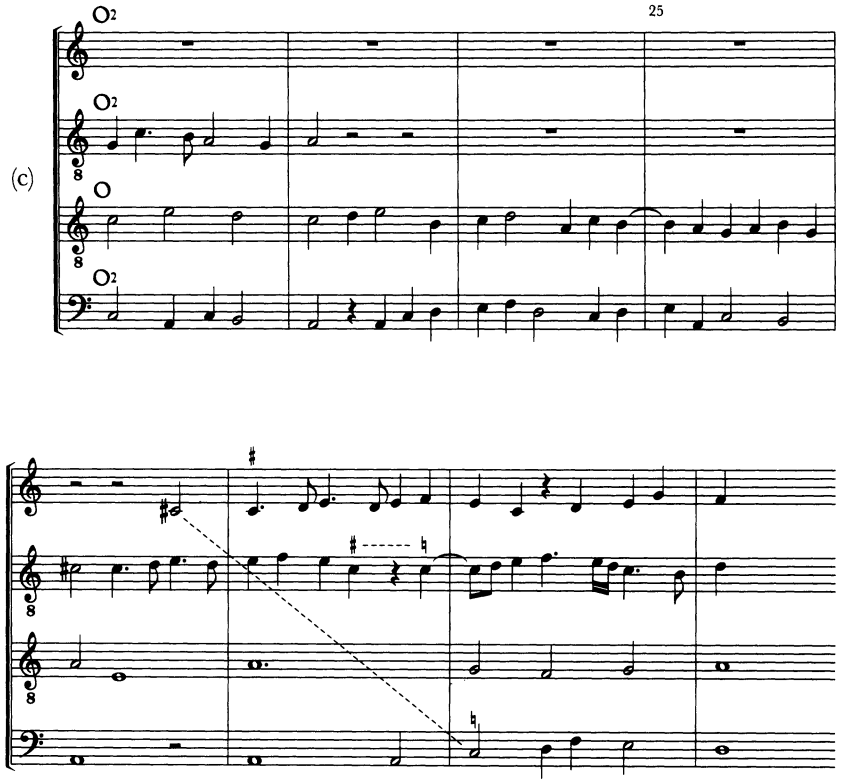


(b)

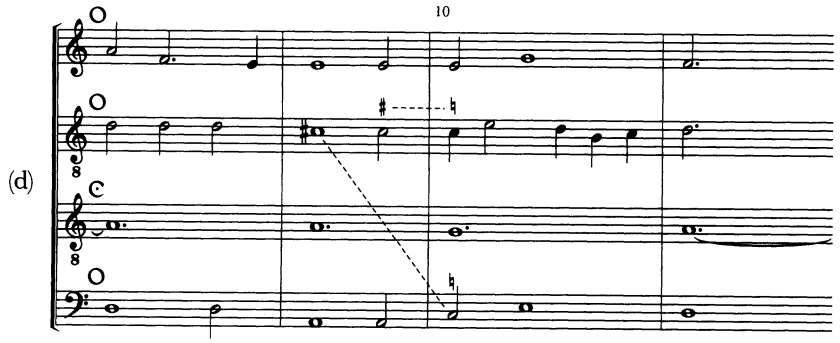


Example 11 *continued*

(c)



(d)



small number, it compares well with Domarto's ninety-nine cadential progressions. The ratio between 'V–I' and 'VII_6–I' cadences is also very similar: 5:99 in Ockeghem, and 8:91 in Domarto (this relationship was to be reversed dramatically in the early 1460s). Of course, these figures should be related to the lengths of the masses, since substantial differences in length could render these comparisons meaningless. However, the two cycles are of approximately the same length: *Spiritus almus* has a length of 1535 tempo units (i.e. semibreves in O; breves in ¢ and O2), whereas this figure is 1679 in *Caput*. On average, then, Ockeghem has one cadential progression in every 1679/104=*c.* 16 tempo units, while Domarto has one in every 1535/99=*c.* 15.4 tempo units.

One could argue that Ockeghem may have conceived his mass at a completely different speed from Domarto's, and that tempo units may not therefore represent a reliable standard. The only objective means of deciding on this is to measure the relative rhythmic densities in the two upper voices, and to express them in terms of average note values.[99] Application of this method leads to the surprising discovery that Ockeghem and Domarto appear to have conceived their masses at virtually the same speeds: the average note values under O are 0.897 semibreve in *Spiritus almus* and 0.891 semibreve in *Caput*, while those under ¢ are 1.251 and 1.222, respectively. It is quite rare for fifteenth-century compositions to approach one another so closely in terms of rhythmic density.[100] The relationship observed here may well indicate that the two masses are of approximately the same date.[101]

Bukofzer's remarks on the use of imitation in the *Missa Caput* also need to be qualified.[102] Although imitation does not occur particularly often in Ockeghem's mass, there are some interesting attempts to introduce imitation involving three voices (Credo bars 49–51; Agnus I bars 27–9), imitation of relatively long phrases (Credo bars 49–51; last three bars of Agnus III) and even a short

[99] See Wegman, 'Concerning Tempo in the English Polyphonic Mass'.
[100] See, for example, the tables in Wegman, 'Concerning Tempo in the English Polyphonic Mass', pp. 49 and 55.
[101] *Ibid.*, pp. 54–8.
[102] Bukofzer, *op. cit.*, pp. 281–2.

sequential repetition (Sanctus bars 72–4).[103] These do not affect the general picture outlined by Bukofzer – which is remarkably similar to that in *Spiritus almus* – but they may indicate that Ockeghem's mass was slightly more advanced than Domarto's.

Other parts of Bukofzer's analysis read like a description of the *Missa Spiritus almus*: the D Dorian modality, with frequently prescribed ficta; the undistinctive melodic writing; the low ranges, dark sonorities, and the frequent sixth chords in the lowest voices; the sometimes unorthodox dissonance treatment; and the closely spaced cross-relations.[104] Additional correspondences have been mentioned above. Ockeghem's mass seems somewhat more advanced, though, particularly in that the 'bass' (i.e. not the transposed tenor) is at times more equal, contrapuntally speaking, to the upper voices, and that the build-ups towards the final cadences are more energetic and less tentative than those in *Spiritus almus*.[105] Even so, placing the two cycles side by side, one cannot help being struck by their close stylistic similarities.

It may be significant that both Domarto and Ockeghem were associated with the church of Our Lady at Antwerp in the 1440s. However, the documentary evidence does not support the hypothesis of a possible 'Antwerp connection'. Ockeghem worked at Antwerp for only about half a year (1443–4) and he had already moved to Moulins by the time Domarto came to work there (Ockeghem has been traced in Moulins in 1448).[106] Domarto himself seems to have worked at Antwerp for only about three or four weeks (see note 1 above). If, as I suggest, Ockeghem's mass is somewhat more advanced than Domarto's, it becomes impossible to attribute the strong similarities in style to both composers' association with Antwerp. The most one can say is that the two

[103] All references to Plamenac, ed., *Johannes Ockeghem: Collected Works*, II (2nd, corrected edn), American Musicological Society: Studies and Documents 1 (n.p., 1966), pp. 37–58.

[104] Bukofzer, *op. cit.*, pp. 279–89.

[105] *Ibid.*, pp. 283–6.

[106] For Ockeghem's activity at Antwerp, see the transcriptions of the relevant documents in M. Bovyn, '(Van) Ockeghem's te Dendermonde', *Johannes Ockeghem en zijn tijd* [exhibition catalogue] (Dendermonde, 1970), p. 58. Ockeghem earned 145 *loten* between 24 June and 24 December 1443; these would have covered at least twenty weeks (cf. note 1 above). Between 25 December 1443 and 23 June 1444 he earned 67 *loten*, which would have covered at least nine weeks.

pieces seem to have been written in a common stylistic idiom. That idiom may well have been widespread outside Antwerp.[107]

On the other hand, the evidence collected here does add up to a suggestive pattern, converging with amazing consistency on the Low Countries. The *Missa Caput* is the only mass by Ockeghem to respect and maintain the notational shape of the pre-existent tenor. Ockeghem built his mass on a borrowed structural plan, a procedure which was to be repeated in three masses from the 1480s or 90s, all three probably associated with the Southern Netherlands: Obrecht's *Missae Caput* and *L'homme armé*, and the anonymous *Missa de Sancto Johanne Baptista*.[108] The relationship between Ockeghem and Obrecht is strengthened by several allusions to the former's *Caput* Mass in the latter's 'imitation'.[109] Obrecht's other cycles show him to have been a late follower of the 'school of Domarto'. Busnoys had joined that 'school' earlier, very probably after his move to the Low Countries. The latter's *Missa O crux lignum* faithfully adopts the techniques that Domarto had applied in his *Missa Spiritus almus*. The choice of the *O crux lignum* melody indicates that Busnoys's mass was most probably written in the Southern Netherlands, like Obrecht's motet *Salve crux* which uses the same tenor. Domarto's mass, in turn, can be associated with the Southern Netherlands on the basis of its relationship with Busnoys's motet *Anima mea liquefacta est*. Finally, Ockeghem's *Missa*

[107] It should be pointed out, however, that the later careers of some of the musicians employed at the church of Our Lady in the 1440s (cf. Van den Nieuwenhuizen, *op. cit.*, pp. 38–40) suggest that it was one of the major musical centres in the Low Countries. Johannes Pullois was not the only Antwerp singer to move to the Papal Chapel. *Heer* Lucas Wernerii (1430–4) is almost certainly the Lucas Warner / Varnery who has been traced in the Papal Chapel in 1443–50 (F. X. Haberl, 'Die römische "schola cantorum" und die päpstlichen Kapellsänger bis zur Mitte des 16. Jahrhunderts', *Vierteljahrsschrift für Musikwissenschaft*, 3 (1887), pp. 223–5). *Heer* Jan Philiberti (1441–2) worked at the Ducal Chapel in Ferrara in 1445–50 and from 1450 to 1482 at the Papal Chapel (Lockwood, *op. cit.*, pp. 48–52 and 316–17; Haberl, *op. cit.*, pp. 226–31). *Heer* Claus Philippi (1441–2) is presumably identical with the Ferrarese singer Niccolò Philippo di Olanda, who worked in the Ducal Chapel in 1446–81 (Lockwood, *op. cit.*, pp. 47–50 and 316–22). Leonard Bruynbaert (1444–6) has been traced at Ste Gudule, Brussels, in 1464–5 (Haggh, *op. cit.*, p. 561). Jan Kijc (1441–3) worked at 's-Hertogenbosch from 1443 until his death in 1467–8 (A. Smijers, *De Illustre Lieve Vrouwe Broederschap te 's-Hertogenbosch* (Amsterdam, 1932), pp. 87–133). Pieter Laurentii (1449; cf. Figure 1) also worked at 's-Hertogenbosch, in 1469–71 (Smijers, *De Illustre Lieve Vrouwe Broederschap*, pp. 142–4).

[108] See Wegman, 'Another "Imitation" of Busnoys's *Missa L'homme armé*'.

[109] Bukofzer, *op. cit.*, pp. 270–1.

Caput is in terms of style a virtual twin of Domarto's *Missa Spiritus almus*. To summarise: with the exception of the anonymous *Missa Gross senen*, all the evidence – both direct and circumstantial – points to the Low Countries as the area where a small group of composers shared the same compositional ideals and habits. Their combined output abounds with cross-references, interrelationships, and identical approaches to compositional problems.

So there are good grounds for believing that Ockeghem's *Missa Caput*, if perhaps not composed in Antwerp, was at least written in the north. Although the mass stands alone in the composer's output, its anomalous features fit remarkably well into the pattern outlined above. The stylistic divide between the *Caput* Mass and Ockeghem's later cycles could be explained by the composer's move to central France, which was permanent by 1451 at the latest (his whereabouts in the periods 1444–8 and 1448–51 are unknown).[110] The use of a canon 'per totam missam' could be seen as the direct consequence of Ockeghem's decision to respect the notational shape of the tenor, something for which a context can be found in the north. Admittedly we are entering the realm of speculation, and it would be rash to propose a date in the 1440s (when Ockeghem was not yet permanently in France) purely on these circumstantial grounds. Yet there is additional evidence that seems to point to the same conclusion.

To present that evidence, however, we need to shift our angle radically and examine Domarto's and Ockeghem's masses from an entirely different standpoint: the early history of the four-voice mass. If the two cycles are as archaic as their style seems to indicate, there is a strong probability that they were among the first to be written for four voices, at least on the Continent. But was that really a momentous event? If it was, where and when did four-voice writing in the mass start? And what could this tell us about the possible date and origin of the cycles by Domarto and Ockeghem?

Although four-voice writing as such had been widespread throughout the first decades of the fifteenth century, the four-part

[110] For Ockeghem's appointment in 1451, see L. Perkins, 'Musical Patronage at the Royal Court of France under Charles VII and Louis XI (1422–83)', *Journal of the American Musicological Society*, 37 (1984), p. 522.

texture with a low contratenor (that is, a contratenor moving beneath the borrowed tenor) was a relatively late invention, probably from the 1440s.[111] This new type of scoring took Europe by storm, rapidly superseded all other textures in sacred music, and was to remain the dominant texture until well into the sixteenth century. The key to its success lay not in the fact of its four voices, but in the invention of a new contrapuntal *function*, the low contratenor. This voice added more to the three-part texture than just an element of sonority: it was free to assume total control over the harmonic progressions, a task that had not previously been associated with any single, freely composed voice. Whether contemporary composers perceived the innovation in these harmonic terms is unknown, but the distinctive nature of the new voice part was soon recognised in terminology: scribes began to specify the voice as '*low* contratenor' from the 1460s onwards. That seems but a trivial change. But its significance is apparent from the huge semantic development that the mere adjective *bassus* (and its modern derivative 'bass') have since undergone. This word rapidly assumed overtones beyond its literal meaning: rather than denoting a relative range, *bassus* came to signify the *identity* of the new voice part as a functional component in polyphonic textures.

The new four-voice texture is not yet found in such early sources as AostaS D19, TrentC 87 and 92 (all of which must have been finished by about 1445). Among the first works to employ it (albeit somewhat tentatively) are Dufay's late isorhythmic motets *Fulgens iubar* and *Moribus et genere*, both believed to date from the late 1440s.[112] But the first work to handle the texture with truly 'modern' confidence and assurance is the anonymous English *Missa Caput*, whose earliest copying date, in TrentM 93, is *c.* 1451–2 (see note 88 above). This is an extraordinarily bright and lively work, characterised by energetic harmonic rhythm, triadic sonorities and almost obsessive repetitions of melodic and harmonic progressions. The mass derives these qualities mainly from the new role of the low contratenor (labelled 'tenor secundus' in the most authentic

[111] The early development of this voice in three-part music is described in H. Besseler, *Bourdon und Fauxbourdon: Studien zum Ursprung der niederländischen Musik* (2nd edn, Leipzig, 1972), pp. 45–65.

[112] D. Fallows, *Dufay* (paperback edn, with revisions, London, 1987), pp. 60–1 and 309.

sources, but rechristened 'contratenor secundus' and 'bassus' in less authentic ones).

The *Caput* Mass must have made an enormous impact on the Continent.[113] Perhaps the invention of the low contratenor was chiefly responsible for this, in which case Ockeghem's decision to let the tenor overtake the upstart contratenor in its search for the depths seems like a comment on the novelty. As we have seen, Domarto's *Missa Spiritus almus* shows several signs of English influence: dovetailed duos involving a scaffold tenor, simultaneous rests, and the use of *prolatio maior* augmentation. The first of these English-inspired habits implies a four-part texture, so it seems likely that Domarto was acquainted with English four-voice mass music. Ockeghem's *Missa Caput* shows the same signs (with the exception of ☾ augmentation)[114] and is, moreover, an early witness to the anonymous *Caput* Mass's popularity on the Continent. Since the patterns of transmission were almost certainly unilateral (English music being distributed on the Continent, but not the other way round), it seems reasonable to assume that the new four-part mass texture was an English invention.

Continentals probably first came to know that texture in the anonymous *Missa Caput*. In Trent this was the only four-voice mass available until the copying of the likewise English *Missa Veterem hominem* in TrentC 88, around 1456.[115] I will shortly present evidence that the Trent repertory of the early 1450s may reflect the repertory available elsewhere more closely than its peripheral nature would suggest. In its earliest Continental source (TrentM 93), the *Caput* Mass appears as the first of a unified group of six cycles, whose movements (Kyries excepted) are distributed over three separate sections of the manuscript (Gloria, Credo, Sanctus–Agnus Dei). Of these six cycles it is the only one to employ a low contratenor. The remainders of the three manuscript sections were filled with miscellaneous mass movements and other compositions, all in three voices. So the *Caput* Mass stands out in this anthology, not only because of its prominent position, but also because of its unique scoring.

[113] Wegman, 'Another "Imitation" of Busnoys's *Missa L'homme armé*', pp. 189–90.

[114] The reason for this, of course, is that the tenor of the anonymous English *Missa Caput* was not written in major prolation in the first place.

[115] For the date, see Saunders, 'The Dating of the Trent Codices', p. 91.

Reinhard Strohm has pointed out that the early TrentM 93 version of the *Caput* Mass contains several Continental corruptions and adaptations,[116] so the cycle must have been in circulation for some time by the early 1450s. The early version lacked the Kyrie and contained an adapted version of the cantus firmus. It was this version on which Ockeghem modelled his own *Caput* Mass. A second, more authentic (and complete) version would reach the Continent later, probably before 1463.[117] So it is the TrentM 93 version that is relevant to Ockeghem and Domarto, and on which we must focus our attention. It need hardly be repeated that TrentM 93 is a peripheral manuscript for English music, and that it could be dangerous to rely on it too much. On the other hand, since the *Caput* version in this source was related to the one available to Ockeghem, it is extremely important to disentangle the little evidence this manuscript provides. In this context three points need to be made.

First, the original nucleus of TrentM 93 (gatherings 1–30) was organised into various sections according to a logical, preconceived plan, roughly as follows: *Asperges/Vidi aquam* (gathering 1), Introit settings (gatherings 2–8), Kyries (gatherings 9–11), other Mass settings, organised according to movement (Gloria, Credo, Sanctus–Agnus; gatherings 12–30).[118] Although several copying stages can be discerned in the original nucleus, the copying process as a whole must have taken place within a relatively short time span. This indicates that the Trent scribe had before him a sizable collection of exemplars, which he wished to copy systematically in a rationally structured anthology. Other evidence tends to support that assumption. Throughout the original nucleus, the scribe left pages blank, apparently in the expectation that other relevant pieces would reach him in years to come. However, by the time the entire original nucleus of TrentM 93 was copied into another

[116] R. Strohm, 'Quellenkritische Untersuchungen an der Missa "Caput"', *Quellenstudien zur Musik der Renaissance*, II: *Datierung und Filiation von Musikhandschriften der Josquin-Zeit*, ed. L. Finscher, Wolfenbütteler Forschungen 26 (Wiesbaden, 1983), pp. 155–65.

[117] *Ibid.*, pp. 165–9.

[118] For this and what follows, see in particular: M. Bent, 'Trent 93 and Trent 90: Johannes Wiser at Work', *I codici musicali Trentini*, ed. Pirrotta and Curti, pp. 84–111, and R. Strohm, 'Zur Rezeption der frühen Cantus-firmus-Messe im deutschsprachigen Bereich', *Deutsch-englische Musikbeziehungen: Referate des wissenschaftlichen Symposiums im Rahmen der Internationalen Orgelwoche 1980 'Musica Britannica'*, ed. W. Konold (Munich and Salzburg, 1985), pp. 9–38.

manuscript (TrentC 90, of *c.* 1452–8),[119] the only relevant pieces that could be added were six Kyries.[120] So the arrival of the TrentM 93 exemplars seems to have been a singular event, or at least a series of such events within a relatively short time span.

Secondly, Margaret Bent has shown that the Trent scribe worked from various exemplars, whose repertory he rearranged, at least in part, in his own manuscript.[121] One of these exemplars must have been a collection of six masses, arranged by complete cycles (though lacking the Kyries), of which *Caput* was one. The preconceived size and layout of TrentM 93 suggests that when the scribe started to distribute the movements of these masses over the various sections, the other movements that he would use to complete those sections were already available. These latter movements may well have been selected from various exemplars, but those exemplars, again, seem to have arrived in Trent as a group.

Thirdly, the Ordinary movements copied in TrentM 93 (including the Kyries, but excluding blank pages and miscellaneous motets) fill a total of 221 folios (or 442 pages). This was an enormous quantity of Mass music to be circulating in southern Germany around 1451–2, and it is well worth asking where that repertory might have come from. Altogether there are thirty-eight Kyrie settings, and sixty-three compositions comprising Gloria, Credo, Sanctus and/or Agnus Dei (individual movements, pairs, or cycles). Attributions are known of only twenty-seven of the 101 compositions. Dufay is the best-represented composer (with eight compositions), followed by Binchois and Power (each with three). A considerable portion of the repertory must be English, either because of ascriptions or on the grounds of style. If, as I suggest, the repertory copied by the Trent scribe came from a more or less unified collection of exemplars, that collection was most likely compiled in the north.

There is a possibility that the collection had been available in Cambrai only two years before TrentM 93 was copied. In 1449–50, the Cambrai scribe Simon Mellet was paid for copying, among other things, two (duplicate) books of *cantus modernorum*, each containing 228 folios, 'in quibus sunt Kirieleison, Et in terra, Patrem,

[119] Saunders, 'The Dating of Trent 93 and Trent 90', pp. 69–70.
[120] Bent, 'Trent 93 and Trent 90: Johannes Wiser at Work', pp. 92–7.
[121] *Ibid.*, pp. 85–8.

Sanctus, Agnus, et cetera talia'.[122] The presence of two similarly arranged repertories of Mass music within a span of about two years – one comprising 228 folios, the other 221 – is suggestive. It opens the possibility that an enormous quantity of recent Mass music, comprising about twenty gatherings, began to circulate as a unit in the north during the late 1440s, reaching Cambrai around 1449–50, and moving south to Trent around 1451–2. In both centres the repertory (if indeed it was the same repertory) was rearranged according to movement. The predominance of English music in TrentM 93 would suggest that the assembly of the collection had started after a body of previously unknown Mass music was released from England. Rearranged, and enriched with Continental products, it became a collection that any musical centre (or musician) would have been eager to copy in its entirety. In fact this is precisely what happened in Trent: only a few years after TrentM 93 had been completed, Johannes Wiser copied the entire original nucleus straight into the manuscript that has survived as TrentC 90. Even then the anonymous English *Missa Caput* was the only cycle to contain the novelty of a low contratenor.

If this hypothesis is correct, it becomes easy to see Domarto's *Missa Spiritus almus* and Ockeghem's *Missa Caput* as early Continental responses to the English *Caput* Mass. For the enormous collection of new Mass music, in which this latter cycle figures so prominently, is likely to have stimulated and inspired composers wherever it arrived. The crucial question, of course, is where that collection might have been assembled. It would be unwise to indulge too much in speculation here, since the existence of the collection is hypothetical to begin with. But two possibilities need to be examined.

First, the dominance of compositions by Dufay in the attributed part of TrentM 93 may suggest that the assembly had taken place at Cambrai. A strong counter-argument to that possibility is the fact that the Proper cycles that were copied at Cambrai in 1449–50 did not reach Trent until about 1456–62.[123] If, as I suggest, the TrentM 93 repertory represents a distinct wave of transmission

[122] C. Wright, 'Dufay at Cambrai: Discoveries and Revisions', *Journal of the American Musicological Society*, 28 (1975), pp. 225–6.

[123] They were copied in TrentC 88; see Planchart, 'Guillaume Du Fay's Benefices', pp 140–69.

from the north, the second such wave must have swept to southern Germany around 1460. This latter wave must have contained compositions that had been copied alongside the 'first wave' repertory in some centres (the TrentC 88 Proper cycles), Continental masses written in response to that repertory (Ockeghem's *Missa Caput*, Domarto's *Missa Spiritus almus*, Simon de Insula's *Missa O admirabile commercium*) and new English music (the second, more authentic version of the anonymous *Caput* Mass). So if we are correct in assuming that the TrentM 93 repertory was largely identical with the mass repertory copied at Cambrai in 1449–50, both repertories must ultimately go back to a third one; otherwise the Cambrai Proper cycles of 1449–50 ought to have been transmitted in the first 'wave'.

Secondly, the presence of a cycle attributed to the Antwerp composer Pullois, in the same set of six masses as *Caput*, may indicate that the TrentM 93 repertory had been assembled at Antwerp. But again, the case is extremely tenuous. The cycle in question was already widely distributed by about 1445 (since it appears in TrentC 87) so its inclusion in the set of six masses need not necessarily have taken place at Antwerp. Moreover, the ascription to Pullois has been questioned on good grounds by Gareth Curtis, who argued that the mass is more likely to be an English work.[124]

But whatever the origins of the 'Pullois' mass may have been, it seems at least significant that an Antwerp composer either wrote, or was widely held capable of writing, a cycle in the English style. It gives a hint of the climate in which English Mass settings were received in the Southern Netherlands: not as any old music, to be transmitted and performed passively, but as a source of exciting compositional ideas. Confirmation for that climate is provided by Simon de Insula's four-voice *Missa O admirabile commercium* (TrentC 88, fols. 304^{v}–311^{r}). Although stylistically quite distinct from Domarto's *Missa Spiritus almus* and Ockeghem's *Missa Caput*, it contains so many English-inspired features, and so resembles the English *Caput* Mass in its style, that it was once believed to be an English work.[125] It is in this climate that the *Caput* Mass must have

[124] G. R. K. Curtis, 'Jean Pullois and the Cyclic Mass – or a Case of Mistaken Identity?', *Music & Letters*, 62 (1981), pp. 41–59.

[125] See C. Hamm, 'A Catalogue of Anonymous English Music in Fifteenth-Century Continental Manuscripts', *Musica Disciplina*, 22 (1968), p. 72. Reinhard Strohm has identi-

been received in the Low Countries, and it is in this same climate, I suggest, that Domarto's *Missa Spiritus almus* and Ockeghem's *Missa Caput* were written.

We may now attempt to draw our conclusions. The evidence as it now stands suggests that four-voice mass writing on the Continent started in the Southern Netherlands in the late 1440s, in response to the recent transmission of the anonymous English *Missa Caput*. Ockeghem and Domarto may have been among the first Continental composers to imitate the novel features of that cycle. They did so in a common stylistic idiom, which, although it contains some English features, is remarkably dissimilar from that of their model. By the 1460s, when a younger generation of composers had entered the stage (Busnoys, the *Gross senen* composer), that stylistic idiom had become obsolete. Ockeghem himself would also abandon it in his later masses. However, the novel and unique philosophy underlying Domarto's cantus firmus usage was to remain a source of inspiration, until about 1500, to a small number of composers working in the Netherlands, particularly Busnoys and Obrecht.

Whether by virtue of its age, its later influence, or its musical qualities, the *Missa Spiritus almus* remained a cycle that carried special *auctoritas*. It was a work considered worth having, in Trent, Bruges, Naples, Poznań and Ferrara alike. The cycle remained important enough to be criticised by a leading theorist in the 1470s, and to remain in circulation until the 1480s, when its style must have seemed hopelessly out of date.

Now, five centuries later, outdatedness is no longer a relevant criterion. To us the historical continuum of the fifteenth century has become one-dimensional, a flat surface in which consecutive events are simultaneously present. We are able to see Domarto's mass as a work conditioned by its own past, while breaking away from it in many ways, and at the same time in terms of the future that it helped shape. From both vantage points, the *Missa Spiritus almus* emerges as a key work in the history of the fifteenth-century mass.

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fied Simon 'de Insula' with Simon de Vromont, who was master of the children at St Pierre, Lille, in 1450–1 and 1460–1 (Strohm, 'Insular Music on a Continental Island').

POSTSCRIPT

After this article had gone to press I learned that David Kidger had just completed a study entitled 'The Music and Biography of Petrus de Domarto' (M.A. thesis, University of California at Santa Barbara, 1990). His thesis unfortunately arrived too late to be taken into account here, but I would like to express my gratitude for his generosity in sending it to me. Mr Kidger is currently preparing an edition of Domarto's complete works (Newton Abbot, forthcoming).