Symbolic Innovation: The Notation of Jacob de Senleches

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Sic nunc successive venientes, habentes et intellegentes que primi magistri relinquerunt maiores subtilitates per studium sunt confecti ut quod per antecessores imperfectum relictum fuit per successores reformatur.¹

With this statement, the late fourteenth century anonymous author of the *Tractatus Figurarum* concludes his prologue.² The subsequent chapters in this treatise detail a rich vocabulary of novel signs used to achieve a new, subtle rhythmic freedom. From the grammatical tense of the previous passage, it is clear that this treatise is concerned with innovations that have already occurred. While very few of the actual signs in the treatise are found in the surviving sources containing this repertoire, the concerns expressed by the author of the *Tractatus* clearly reflect the notational situation apparent in surviving works in the *ars subtilior* style. Prior to the twentieth century, no greater diversity of notational signs (*figure*)³ are found in a mensural context than in the surviving versions of works by Jacob de Senleches, his contemporaries and his immediate successors. The use of special figures in his *La harpe de melodie* and *En attendant esperance* is only exceeded by Rodericus' *Angelorum psalat* and matched by the works of composers such as Guido (*Ch* 27, 28).⁴ The compositions of Matheus de Perusio

¹ Thus, those now coming after, possessing and understanding that which the first masters left behind, have accomplished by study greater subtleties so that which was left imperfect by predecessors might be reformed by those who follow them., P.E. SCHREUR (ed.), *Tractatus Figurarum*. = Greek and Latin Music Theory 6 (Lincoln and London 1989), p. 68.

² With regards to the dating of the treatise, the earliest source appears to be the Chicago, Newberry Library Ms. 54.1 given a *terminus post quem* of 1391. q.v. K. VON FISCHER, *Eine wiederaufgefundene Theoretikerhandschrift des späten 14. Jahrhunderts*, in: *Schweizer Beiträge zur Musikwissenschaft* 1.1 (1972), p. 28. Ursula Günther's *terminus post quem* of 1375 for this treatise must be disregarded in light of Schreur's examination of the transmission of the *Tractatus Figurarum* and the fact that the citation of the motet *Rex Carole*, upon which she bases her observation, occurs in only the Faenza MS from 1473-74, and not in earlier sources. See Günther's statements in her *The Motets of the Manuscripts Chantilly musée condé (olim 1047) and Modena, Biblioteca estense a, M.5.24 (olim lat. 568)* = *Corpus Mensurabilis Musicae* 39 (Rome 1965), p. XXXb. See Schreur's critical notes and discussion of transmission in Schreur, *op.cit.*, p. 66 & pp. 59-63; On the authorship of the *Tractatus* *vid. ibid.*, pp. 3-9.

³ Medieval Latin orthographies are used throughout this paper.

⁴ Manuscript sigla are used in this article as follows:

- Ch* Chantilly, Musée Condé, ms 564 (*olim* 1047) = Codex Chantilly (RISM # F-CH 564)
- Chic* Chicago, Newberry Library, ms 54.1 (RISM # US-Cn 54.1)
- Mod* Modena, Biblioteca estense e Universitaria, ms a.M.5.24 (RISM # I-MOe5.24)
- Pit* Paris, Bibliothèque Nationale, fonds italien 568.
- PR* Paris, Bibliothèque Nationale, fonds nouvelle acquisition française 6771 = Codex Reina (RISM # F-Pn 6771).

also show a great variety of signs.⁵ However, as observers of this repertoire, we are left few clues when deciphering the meaning of the many special figures, frequently peppered throughout the repertoire, due to the paucity of contemporary record concerning their nature and origin.

One purpose of this paper is to examine the meaning of those special figures and coloration, which occur in the works ascribed to the late fourteenth century composer Jacob de Senleches, drawing on theoretical discussion from the period and observing principles in sources inherited from both notational traditions of the French *Ars nova* and early Italian *trecento*. The examination of technical problems occurring in the realisation of the notation was primarily motivated by Laurie Koehler's criticism of Gordon K. Greene's transcription of *En attendant esperance*, namely that "each note of a specific form and color <sic> has a consistent value throughout <En attendant esperance>".⁶ In a broader sense, these special signs represent discrete, unequivocal values within the cultural context of the music inside the bounds of the music's mensuration and they are unlikely to be duplicating another form unless there is a logical purpose.⁷ It is abundantly clear that in most cases the context of the figures was important, as was emphasised by the theorists usually examining special forms in the context of a certain *tempus* or *prolation*.

The other purpose of this paper is to examine why particular forms were used and their historical foundations. Two theoretical treatises from this period figure prominently in the examination of this style's notation. They are the aforementioned *Tractatus Figurarum* and *Tractatus de figuris et temporibus*. When considering these two tracts, the question arises of whether the system which is described by these treatises is inherently Italian or French in its conception. While the author may have been Italian, it seems likely that the *Tractatus Figurarum* represents a French system especially when considering its use of a French word *traynour* which stems from the verb *trainer* ('to drag, draw out').⁸ It is also evident that the author of this treatise is seeking to rationalise a set of recently invented figures. Furthermore, the *Tractatus de figuris et temporibus* refers to the same forms in the *Tractatus Figurarum* as *figure francigene* ('French

The inventories of Codex Chantilly are found in G. REANEY, *The Manuscript Chantilly*, Musée Condé, in: *Mus. Disc.* VIII (1954), pp. 88-95, and IDEM (ed.), *Manuscripts of Polyphonic Music (c.1320 1400)*. = Repertoire internationale des sources musicales BIV 2 (Munich-Duisburg 1969), pp. 128-160. The item numbers given in this study apply to both inventories. URSULA GÜNTHER's inventory, *Das Manuskript Modena*, Biblioteca Estense a.M.5.24 (olim lat 568 = Mod), in: *Mus. Disc.* XXIV (1970), of Mod, and KURT VON FISCHER's *The Manuscript Paris*, Bibl. Nat., nouv. acq. frç. 6771 (Codex Reina = PR) in: *Mus. Disc.* XI (1957), pp. 38-78 are used throughout this article.

⁵ W. APEL (ed.), *French Secular Music of the Late Fourteenth Century* (Cambridge/Massachusetts 1950), p. 8a.

⁶ L. KOEHLER, *Review: Gordon K. Greene, Polyphonic Music of the Fourteenth Century*, XVIII-XX, etc., in: *JAMS* 39 (1986), p. 636.

⁷ The author of this study regards this practice as a musical manifestation of the principle known as Ockham's Razor (*Pluritas nunquam ponenda est sine necessitate ponendi*). For an excellent thesis regarding the influence of Ockamite thinking on the music of the fourteenth century *vid.* D. E. TANAY, *Music in the age of Ockham: The interrelations between music, mathematics, and philosophy in the fourteenth century* (Ph.D. University of California 1989).

⁸ *Traynour* would appear to refer to the practice of syncopation (i.e. division of time) using proportional notation. q.v. SCHREUR, *op. cit.*, pp. 20-24. Schreur maintains that the treatise has an Italian author, *ibid.*, p. 7.

notes'),⁹ indicating that in the theorist's mind these were true French forms, and were not borrowed from Italian music.

Anne Stone has recently argued that the author of the *Tractatus Figurarum* is seeking to redivide the *brevis* through invented figures in a process which she sees as analogous to Italian *trecento* notation.¹⁰ While it is reasonable to suppose that Italian music influenced the music of the *ars subtilior*, the author of this article maintains that the musical figures *per se* are essentially French in their conception for the very reason that they rely on the principle of small notes, that is the *minima* and *semiminima*, which have an absolute value regardless of the mensuration. This concept is clearly foreign to the *trecento* notion of a constant *brevis* with various *divisiones* and without absolute values smaller than a *brevis*. Thus the actual role of Italian notation in the formation of these note forms is negligible and the notational devices used to construct the figures in the *Tractatus Figurarum* are based on the principles of French notation.

It is proposed that the figures in Senleches' music are also essentially French in that they rely on the extension of the principles of French *ars nova* notation. This view openly contests many scholars' assertions that the forms encountered in these treatises and pieces in the repertoire are Italianate. Particular focus on this problem is found in Günther's and Stone's discussions of Guido's *Or voit tout en aventure* (Ch 28).¹¹ Significantly, the text of this work employs the verb *traire*, which is closely related to *traynour* which is found in the *Tractatus figurarum*. While Günther argues that the text can be interpreted from the viewpoint of an Italian composer who was seeking to free himself from the restrictions of

⁹ Anonymous, *Tractatulus de figuris et temporibus*, 3b.21, in F. A. GALLO (ed.), *Mensurabilis Musicae Tractatuli*. = *Antiquae Musicae Italicae Scriptores I* (Bologna 1966).

¹⁰ A. STONE, *Writing Rhythm in Late Medieval Italy: Notation and Musical Style in the Manuscript Biblioteca Estense, Alpha.M.5.24* (Ph.D. Harvard University 1994), p. 203.

¹¹ The text with translation drawing heavily on Anne Stone, *op.cit.*, p. 170, cf. U. GÜNTHER, *Das Ende der ars nova*, in: *Mf XVI* (1963), pp. 107 f., is as follows:

Or voit tout en aventure
Puis qu'[a]insi me conveient fayre
A la nouvelle figure
Qui doit a chascun desplayre.
Que c'est trestout en contraire
de bon art qui est parfayt:
Certes ce n'est pas bien fayt.

Now everything is left to chance
Because it is thus necessary for me
to compose with the new figures
which displease everyone.
It is completely contrary
To the good art which is perfect.
Certainly this is not done well.

Nos faysons contre nature
de ce qu'est ben fayte deffayre;
Que Philipe qui mais ne dure
Nos dona boin examplaire.
Nos laisons tous ses afayres
Por Marquet le contrefayt.
Certes ce n'est pas bien fayt.

We compose against nature
to destroy that which is done well.
For which Philippe, who just died,
gave us a good example.
We lay aside all his works
Because Marchettus does the opposite.
Certainly this is not done well.

L'art de Marquet n'a mesure,
N'onques riens ne sant parfayre;
C'est trop grant outrecuidure
D'ansuir et de portayre
Ces figures, et tout traire
L'oull varieus de bon trayt.
Certes ce n'est pas bien fayt.

Marchettus' art has no measure
and never can anything be perfected.
It is very presumptuous
to follow and to draw
these figures, and to drag
the eye away from the good manner.
Certainly this is not done well.

French notation,¹² Stone contends that the work could be a parody of the *ars subtilior* style itself.¹³

However, Stone's insistence that the *figure caudate* in this work are meaningless is contestable.¹⁴ As shall be shown below, the subtle division and grouping of divisions, which she views as meaningless, were fundamental to many special note forms in this repertoire, especially in Senleches' music, and intrinsic to the subtle division of time. The diversity of signs is not the mere yearning for complexity but instead, as suggested by the author of the *Tractatus Figurarum*, represents the achievement of a school of composition seeking to capture and enhance the subtleties of musical performance at the rhythmic level. In the case of

Guido's composition, the distinction between the forms and , which represent the same duration, lies in respectively the two-fold and three-fold division of prolation.¹⁵

In many respects, the text of *Or voit tout* suggests, through the device of *littotes*, that the musician is abandoning the dogma of the traditions of both musical figureheads mentioned in the text, namely Philippe de Vitry and Marchettus de Padua, and in doing so, he "creates" a new notation which embraces the freedoms of both Italian and French music through the invention of new note forms. The text of *Or voit tout en aventure* could equally describe the plight of a French composer wishing to extend his notation beyond the confines of his indigenous notation, thereby seeking to reproduce the freedom apparent in Italian music's division of time. Such a composer is Jacob de Senleches.

1. Coloration and Particoloured figures

With the advent of the French *ars nova*, the invention of a new device enabled proportional relationships contrasting with the inherent mensuration in a piece of music to be notated using different coloured inks. This is termed coloration. The earliest known example of this device is found within Philippe de Vitry's *Garrit gallus/ In nova fert animus/ [Neuma]* in the *Roman de Fauvel*,¹⁶ where notes written in solid red ink rather than the usual black ink are used to indicate a 2:3 proportion within the *modus*. This early usage amounted to a reversal of *tempus*, whereby the perfect *tempus* becomes imperfect, and *vice versa*. Void black notes (*note vacue*) were initially equivalent to full red notes,¹⁷ and appear to be favoured by Italian scribes, although, on the basis of the red notation in *Mod* and

¹² GÜNTHER, *Das Ende der ars nova*, p. 111.

¹³ STONE, *op. cit.*, p. 177.

¹⁴ STONE, *op. cit.*, pp. 173-175.

¹⁵ cf. GÜNTHER, *Das Ende der ars nova*, p. 109.

¹⁶ Paris, Bibliothèque Nationale, fonds frç. 146, f. 44v (= *Roman de Fauvel*).

¹⁷ For example, de Vitry's aforementioned piece in the *Roman de Fauvel*, which is notated using red ink for coloration, is also found in the ms Paris, Bibliothèque Nationale, Collection de Picardie, ms 76, f. 67r [facsimile found in F. GENNRICH, *Übertragungsmaterial zum Abriß der Mensural Notation des XIV. und der Ersten Hälfte der XV. Jahrhunderts*. = Musikwissenschaftliche Studienbibliothek 4 (Langen bei Frankfurt 1965), Tafel III], where black void forms are used in the place of the red forms.

Ch, it appears that Italian scribes frequently adopted the French practice towards the end of the century.¹⁸

The *ars subtilior* saw coloration being used in new ways and with new forms. In Senleches' music, as with much of the music of his contemporaries, not only red and void black figures occur in the same piece, but also void red and parti-coloured figures, the latter being notes or ligatures where one part is black and the other void or full red.¹⁹ Red or void black notes, particularly *minime*, were at times used to prevent alteration or imperfection. This device is similar to the *punctus divisionis* and relies on the equivalence of red (or void black) *minime* to black *minime*. Another application sees an extension of the proportional properties of coloration to create passages in diminution or augmentation.

In order to understand the use of isolated coloured notes, one needs to firstly look at the *punctus* ('dot') and *syncopatio* theory. In this period, the use of the dot in French music had two functions. In his *Tractatus Practice De Musica Mensurabili*, Prosdocimus de Beldemandis states that there are two types of *puncti*, namely the *punctus perfectionis* (p.p.) and the *punctus divisionis* (p.d.).²⁰ The p.p. is also called the *punctus additionis*. The p.p. is used after a note that is imperfect according to the mensuration to make the note perfect, that is to increase the note's value by half, similar to our dot. The p.d. serves to separate one note from the other, usually to prevent the alteration or imperfection of an adjacent note. The p.d. is put to use in *syncopatio* or *syncopa*, as illustrated by the anonymous author of the *Ars cantus mensurabilis mensurata per modos iuris* treatise, who writes:

In maiori prolatione multe syncope inveniuntur et varie, quamvis sint idem in substantia, et primo invenio in motetto Ida capillorum talem syncopam ut hic:

*Illa prima minima reducitur cum illis duabus posterioribus, scilicet cum pausa minime et minima.*²¹

In conjunction with the definition given by this theorist that

¹⁸ R. RASTALL, *The Notation of Western Music* (London 1983), p. 82.

¹⁹ Blue notes are also found in the Old Hall MS, *vid.* W. APEL, *The Notation of Polyphonic Music (900-1600)* (Cambridge/Massachusetts 1953), pp. 405-434.

²⁰ E. DE COUSSEMAKER (ed.), *Scriptorum de Musica medii aevi: novam seriem a Gerbertina alteram*, 4 vols (Paris 1869) [hereafter cited as CS], III, pp. 213b. Jean de Muris calls the former the *punctus augmentationis* in his *Ars Contrapuncti*, CS III, p. 92a.

²¹ 'In major prolation many and varied syncopations are found, although they are the same in principle, and I first found this kind of syncopation in the motet *Ida capillorum* as here: ... That first minima is grouped together with those two later ones, namely with the minima pause and the minima.' C. M. BALENSUELA, *Ars cantus mensurabilis mensurata per modos iuris* = Greek and Latin Music Theory 10 (Lincoln 1994) [hereafter ArsM], p. 212.

...*syncopa est quo ad totum alicuius note mediante imperfecto vel divisio facta in modo, tempore, vel prolatione. Dixi imperfectio quo ad modum, tempus, vel prolationem perfectam; dixi divisio et hoc quo ad modum, tempus, vel prolationem imperfectam...*²²

we may understand that *syncopa* is the process whereby a perfection is divided into smaller values.²³ By extension, the example given by this theorist shows that, by effectively protecting each division of a 'syncopated' perfection from adjacent notes, the p.d. allows these divisions to be interpolated by other notes or perfections.²⁴ This device, which Willi Apel terms displacement syncopation,²⁵ is first found in the late works of Machaut which suggests its development after *circa* 1360 within the French tradition.

In the sources of Senleches' works, this p.d. in conjunction with *minima* is avoided in favour of coloured *minime*. Its consistent use between sources and the close apposition in the MSS of those pieces avoiding the p.d. to those that do use it, suggests that the practice was particular to the composer and not the scribe, although it is evident that some pieces employ both methods, sometimes simultaneously. The practice arose out of the principle of *minima* equivalence in French music and, just as in the technique of employing the p.d., it occurred only in major prolation. With respect to Senleches, examples of this device can be found throughout *En attendant*. In the first system of this work,²⁶ before the first *pausa semibrevis*, the following is found:

In this example, an imperfect *semibrevis* is divided into two *minime*, namely the initial red *minima pausa* and the last red *minima*. The last of the two *minime* cannot be altered before the final *semibrevis* because it is essentially a different figure to the preceding black *minima*. Elsewhere in the repertoire, one finds equivalent passages notated using the p.d., such as the following example from the refrain of the S²⁷ voice in the *Mod* version of the ballade *En attendant souffrir m'estuet* which is ascribed in that MS to Philipoctus de Caserta.²⁸

²² *'syncopa* is made in *modus, tempus* or prolation whenever the whole of any note is split by imperfection or division. I have said imperfection whenever *modus, tempus* or prolation are perfect. I have said division and this is whenever *modus, tempus* or prolation are imperfect', ArsM, p. 212.

²³ cf. W. FROBENIUS (ed.) *Johannes Boens Musica und seine Konsonanzenlehre* = Freiburger Schriften zur Musikwissenschaft II (Stuttgart 1971), p. 163.

²⁴ cf. APEL, *Notation*, pp. 395-402 & 414-17.

²⁵ APEL, *Notation*, p. 414.

²⁶ Apel's facsimile of this work (*Notation*, p. 423) is incorrectly printed with the first *minima* rest black. In the manuscript, it is red.

²⁷ Abbreviations for vocal appellations used throughout this article are as follows: S = vox superius, Ct = Contratenor, contreteneur, T = Tenor, teneur.

²⁸ *Mod* 34; cf S in first and third systems of Anthonellus de Caserta's *Dame d'onour en qui, Mod* #81. A facsimile of that piece may be found in F. FANO, *La Cappella musicale del Duomo di Milano* (Milan 1956), Plate XVIII. The strongest support for the equivalence of both manners of notating using either coloured *minime* or the p.d. is found in the anonymous composition *Sans joie avoir*, which occurs in both *Ch* #23 and *Pit* 45. The *Ch* version contains many red *minime* and *semibreves* in a syncopated style. The *Pit* version of this work sees the red *minime* notated as black

It can be suggested, on the basis of the previous example from *En attendant esperance*, that Senleches would have instead notated this passage with the *minima pausa*, the *brevis* and last *minima* all in red ink. As shown in the following example, Senleches plays on *minima* equivalence and the role of red *minime* in the passage subsequent to the previous example from his *En attendant esperance* where a sole black *minima* is found amongst a collection of red notes.

The black *minima* in this example remotely imperfects the next black *brevis*, thereby completing the perfection.

Further examples of Senleches' use of coloured *minime* and the avoidance of the p.d. occur in *Je me merveil*, whose only surviving version occurs in *Ch*. The void black notes in this piece assume *minima* equivalence and a *sesquialtera* proportion at the *semibrevis* level. Their behaviour is identical to that of the red notes in *En attendant esperance*. Red notes in *Je me merveil* instead presume *brevis* equivalence and result in augmentation at the *minima* level. The individual void black *minime* scattered throughout the *stollen* of C1 of this piece achieve a high degree of syncopation.

The consistent use of coloured *minime* to achieve syncopation in the collective transmissions of *En attendant esperance* and the presence of the same device in *Je me merveil* suggests that this device is a particularly idiosyncratic feature of the notational style of Senleches. The use of the device is obviously twofold: firstly to simplify notation by not employing the p.d. and secondly, emphasising the components of perfections to assist the performer. This device plainly relies on principles of French notation and operates within the bounds of the syncopated style first evident in the music of Machaut and his late contemporaries.

The simple void red forms found in *En attendant, esperance confort* provide an example of the new proportional usage of coloration to express richer rhythmic relationships. This piece illustrates the use of void red *minime*, *semibreves* and *breves*.²⁹ There are obvious four-fold and two-fold groupings of these notes, and Apel was the first to suggest that these forms, respective to the full-black notes, represent a *sesquiertia* proportional relationship, that is 4:3 at the *minima* level

with the p.d., red *semibreves* as *dragme* and red *breves* as void black *breves*. The variance in *Pit* may be explained as the result of scribal avoidance of red ink, but it does show the equivocal nature of this two devices.

²⁹ This author's solution to the passage with void red *breves* can be seen in the transcription follow this article. The correct value of the void red *breves* is half a black *brevis* or a perfect *semibrevis*. The *minima pausa* (quaver rest in b. 36) serves to displace the melody one *minima* so that in b. 37 both S and Ct appear displaced correlatively with respect to the T. This *minima pausa* and the *minima* d in b. 39 imperfect the *brevis* in that bar, that is one imperfects remotely, the other directly.

and *dupla* (2:1) at the *semibrevis* level.³⁰ Ursula Günther³¹ provided valuable insight into this use of coloration in Codex Chantilly, looking especially at the sources and also briefly mentioning the theorists.³² Recently, Anna Maria Busse Berger has examined this device's origin and use, especially in relation to mensural signs in a wider range of pieces.³³

An examination of the theorists will give this practice greater chronological weight. In his *Expositiones tractatus practice cantus mensurabilis magister Johannes de Muris*, written some thirty years after the practice had come into use, Prosdocimus de Beldemandis states:

Item quod non sint ponende octo rubee vacue <minime> pro sex nigris plenis aut quatuor pro tribus potest sic probari, quoniam aut vis quod rubee plene amittant terciam partem valorum ipsarum si evacuentur et quod nigre plene per evacuationem vel mutationem coloris nichil amittant de ipsarum valore sed solum assumant prolationem oppositam, aut vis quod tam rubee plene quam nigre plene per evacuationem aut per mutationem coloris assumant diminutionem tercie partis... Quidam tamen huius artis magister qui ad presens magister magistorum reputatur, volens manutenere hanc figuratorem pro bona, dicit has figurationes in proportione cantari, ignorans quid loquatur de proportionem, cum in rei veritate quicquid cantatur, in aliqua proportionem cantatur. Et dicit ulterius quod tales figure cantantur in proportionem sexquitercia <sic>, et dum huius causam quererem, nescivit michi reddere aliam causam quam: sic volo.³⁴

In this passage reprimanding musicians for using such an illogical device, we read that the practice of singing void red *minime* in the *sesquitercia* proportion is perpetuated by an essentially oral tradition and without a strict mathematical

³⁰ APEL, *Notation*, p. 424.

³¹ U. GÜNTHER, *Die Anwendung der Diminution in der Handschrift Chantilly 1047*, in: *AfMw* XVII (1960), pp. 1-21; IDEM, *Der Gebrauch des tempus perfectum diminutum in der Handschrift Chantilly 1047*, in: *AfMw* XVII (1960), pp. 277-297. In the former article, Günther, in arguing that diminution was a French development of the *ars subtilior*, examines the methods by which diminution is notated in twenty-three works from Codex Chantilly. The most consistent usage is the void red form to denote a *sesquitercia* proportion at the minima level. Full red notation, aside from its usual meaning, is also used to achieve the same diminution and also a *sesquialtera* proportion at the minima level (*Ch* 61). Other devices discussed include note caudate, mensural signs, combinations of mensural signs and coloration, the numerals 2 and 3 to denote duple and triple diminution respectively, and canons.

³² GÜNTHER, *Der Gebrauch des tempus*, p. 297.

³³ A. M. BUSSE BERGER, *The Origin and Early History of Proportion Signs* in: *JAMS* 41 (1988), pp. 403-33. This article examines the historical development of the use of proportion signs. The use of mensuration signs alone or combined with coloured notes is viewed by Berger as an early stage in the development of proportional notation. The use of numerals and ciphers represents the first steps to the cumulative proportional signs evident in the second half of the fifteenth century.

³⁴ 'Similarly, it is recommended that eight void-red *minime* should not be substituted for six full black *minime* or four (void-red *minime*) for three (full-black *minime*), since either full-red (*minime*) lose a third part of their value if hollowed out and full black (*minime*) by hollowing out or changing their colour lose nothing of their value but only assume the opposite prolation, or just as full-red (*minime*) so too do full-black (*minime*) assume a diminution of a third through hollowing out or through changing their colour... However, a certain master of this art, who at the present time is regarded as the master of masters, wishing to retain this figuration for good reasons, says that these figures are to be sung proportionally, ignoring what was said concerning the proportion (by the theorist), since anything actually sung is sung in another proportion. And the former says that such figures are to be sung in a 4:3 proportion, and while I might question the reason for this, I do not know any other reason for it other than: I will.'; F. A. GALLO (ed.), *Prosdocimi de Beldimandi Opera: Expositiones tractatus practice cantus mensurabilis magister Johannes de Muris* (Bologna 1966), LX.44-50 f.

premise apparent to the theorist. The second Berkeley treatise of *circa* 1375 writes that void red notes can yield a *sesquialtera* proportion,³⁵ however this is usually achieved in MSS of this period with an accompanying mensuration sign and/or canon.³⁶ More telling is the previously mentioned *Tractatulus de figuris et temporibus* which contains the following passage:

Si volumus augmentare supra tempus imperfectum majoris prolationis in proportione sexquitercia, appone octo minimas vacuas pro tempore, ut hic: ³⁷

In the *Ars cantus mensurabilis mensurata per modos iuris*, in a chapter on red and void black notes and after explaining the traditional use of coloration, the author states that, although it is not technically correct (*quod hoc non est bene positum*), four red or void semibreves (or four *dragme*) can be placed for one *tempus* in *tempus imperfectum cum prolationis maioris*, and that four red or void *minime* can be placed for a prolation in the same mensuration.³⁸

Examples of this red or void black *sesquitercia* coloration in the music of the time may be noted in the anonymous *Laus detur* (Ch 10), Suzoy's *Pictagoras, Jabol et Orpheus* (Ch 39) and the *contratenor* of Hymbert de Salinis' *En la saison* [Tenor: Jo. Cunelier] (Ch 72).³⁹ Pieces using a mensural sign before the *vacue* or *rubeae* forms to represent *sesquitercia* proportions are also common and perhaps represent a 'refinement' of the practice.⁴⁰ The use of the void red form is obviously derived from the practice mentioned in both the *Tractatulus* and *Ars cantus mensurabilis mensurata*,⁴¹ and it is well represented in the *ars subtilior* repertoire, most notably in the anonymous *Un crible plein* (Ch 4), *De tous les moys* (Ch 76) and of

³⁵ *Item sunt aliqui ponentes diversos colores in brevibus, semibrevibus, et minimis, et in unum illorum colorum diminuere volent, ponunt eum vacuum sic, videlicet ut sunt 3 rubeae semibreves valent duas nigras, minimis nigris et rubeis eiusdem valoribus existentibus, ita 3 minime rubeae vacuae valebunt duas minimas plenas, semibrevibus ipsis rubeis tam plenis quam vacuis eiusdem valoris existentibus.* ('Likewise there are some men writing different colours on *breves*, *semibreves* and *minime*, and wishing to diminish one of those colours, they write them hollow so that just as three red *semibreves* are worth two black <*semibreves*>, with the black and red *minime* having the same values, so too are three void red *minime* worth two full red *minime*, with both the red and void *semibreves* having the same value'), O. B. ELLSWORTH, *The Berkeley Manuscript: University of California Music Library, MS. 744 (olim Phillipps 4450) = Greek and Latin Music Theory 2* (Lincoln and London 1984), p. 128-30.

³⁶ *vid.* BERGER, *op. cit.*, pp. 407-409.

³⁷ 'If we wish to augment above imperfect time with major prolation in the 4:3 proportion, (it is done) by placing eight void *minimas* for (one) *tempus*, as here, etc.' *Tractatulus*, ch.1.6 in: GALLO, *Mensurabilis Musicae Tractatuli*. The infinitive *augmentare* is obviously used in a technical sense meaning to increase the number of *minime*. Prosdodimus also writes: ... *quod moderni ponentes pro fractione sexquitercia notas rubeas plenas vel nigras vacuas, et hoc figuracione comunissima ut quatuor pro tribus vel octo pro sex, pessime ponunt*; GALLO, *Prosdodimi, etc.*, ch. LXI.35 ('but the moderns placing for the 4:3 proportion full-red note or black-hollow (notes), place most poorly in this very common figuracion four for three (notes) or eight for six (notes).')

³⁸ *ArsM*, pp. 226-228. The opposite effect of *subsesquitercia* proportion using the same notation in minor prolation is also explained by this theorist, *ibid.*, p. 228. CUNELIER's *Lorsque Artus* (Ch 61) employs red notes in this manner.

³⁹ GÜNTHER, *Die Anwendung*, pp. 14-17.

⁴⁰ BERGER, *op. cit.*, p. 411, Table 4.

⁴¹ Interestingly, Anne Stone has recently revealed that a passage of solid red notes, used to represent the *sesquitercia* proportion, was erased and replaced by void red notes in Anthonellus de Caserta's *Amour m'a le cuer mis* (Mod#62), STONE, *op.cit.*, pp. 111 f. This suggests that the scribe modified the passage from that which occurred in the older exemplar to suit his current notational tastes.

course in *En attendant esperance conforte*.⁴² Prosdocimus' admonishment of this practice unwittingly provides the best insight into its use and existence, while the writings of earlier theorists clearly establish a foundation for the practice that is mirrored in the surviving sources.

The presence of this void red coloration is a significant indication of the *ars subtilior* style through its redivision of *tempus* and prolation. Its use as, in *En attendant*, sees the *tempus* and prolation effectively divided four-fold, a division which is relatively new and outside the possibility of the notational system of the *ars nova*. However, the equivalent device was fully available in the *octonaria* division of *trecento* notation through the use of the Italian *punctus divisionis*. In light of Prosdocimus' statements, it is clear that this coloration served to remind the performer of an existing oral tradition. Although this notation is found in both major sources of the repertoire (*Mod* & *Ch*), the notation represents not an Italianisation of the French system, but the extension of the French device of coloration in order to satisfy the need to notate new rhythmic divisions. The fact that Prosdocimus discusses this particular notation in a commentary on a treatise by Johannes de Muris is also a significant indication of the French provenance of this notational device.

Senleches' *La harpe de melodie* also sees coloration used in conjunction with a canon⁴³ to indicate how particular coloured notes should be performed. The Newberry source (*Chic*) of this piece has a rondeau running down the right arm of the harp illustration, while the same rondeau appears below the music in *Ch*. This rondeau is a canon which not only informs the performer how to add the second upper voice, but also specifies: *Par blanc et noir per mi sans oblier / lay le tonant ou tu li feras tort* ('Let the black and white notes sound by half without forgetting or you will do them wrong').⁴⁴ Observing this instruction results in the black figures in the upper voice being half the length of the red notes in the same voice and half the length of the black notes in the tenor. In the upper voice, aside from being diminished, the void white notes behave in the normal manner, providing a *sesquialtera* proportion with *minima* equivalence. Hence, in this piece, besides retaining their usual property of indicating the opposite mensuration,

⁴² Other examples of this particular meaning of notation are found in the *superius* of the aforementioned *En la saison*, the anonymous *Va, fortune* (*Ch* 37), Philipoctus de Caserta's *De ma dolore* (*Ch* 42), *Par le grant senz d'Adriane* (*Pit* 185 & *Ch* 54. Latter uses full red) and *En remirant* (*Ch* 57 only, *Mod* 67 uses mensuration signs instead), Cune-lier's *Se Gallas et puissant Artus* (*Ch* 55), and Magister Zacharias' *Sumite karissimi* (*Mod* 15) cf. Table by GÜNTHER, *Die Anwendung*, pp. 12 f.

⁴³ The canon is quite common in pieces from this period. The Berkeley treatise contains the following passage which condones the use of this device: *...unde qualitercumque in subscriptionis habetur, ita est cantandum, eciam si fuerit contra artem. Nam communiter canones ponuntur quando commode taliter secundum artem non posset in cantu procedi, etsi posset tamen hoc latet.* ('... whatsoever is contained in written instructions, must be sung accordingly, even if should be against art. For canons are commonly added when it is not wholly possible to proceed easily in a song according to art, [or] even if able [to proceed according to art], but the latter is obscure.'). ELLSWORTH, *op.cit.*, p. 170-72. In *Ch*, there are at least seventeen pieces which utilise a canon in one form or another (*Ch* 2 [text], 8, 9, 26, 33, 34, 39, 46, 47, 53, 55 [text], 58, 61, 63, 67, 71, 77 [text?]). There are no less than fourteen occurrences in *Mod* (1, 4, 6, 16, 30, 36, 51, 52, 59, 72, 81, 82 [text], 101, 102).

⁴⁴ Translated by R. HOPPIN, *Anthology to Medieval Music* (New York 1978), p. 171. Nors Josephson correctly interpreted the canon in his article, *Die Konkordanz zu "En nul estat" und "La harpe de melodie"*, in: *Mf* XXV (July-Sept. 1972), p. 299, fn. 13; cf. IDEM, *Vier Beispiele der Ars Subtilior*, in: *AfMw* XXVII (1970), pp. 45-47.

red notes are used as signifiers to which the canon can be applied. Jean Haspre's *Puis que je sui fumeux* (Ch 47) contains a similar device whereby the performer is instructed to sing the red notes *in proporcione dupla*. Although not identical to this usage, several pieces from the repertoire use mensural signs as signposts to which their accompanying canon refers.⁴⁵

One final form of coloration apparent in the composition *Je me merveil* involves simple figures which are half black and half red or void. These particular forms are referred to as particoloured figures in reference to the festive style of medieval livery. The duration of these particolours may be reckoned as the value of a figure in the colour of the first half of the note imperfected or augmented by half the value it would lose or gain through full coloration.⁴⁶ Therefore, the term 'half-coloration' can also be used to describe these note forms. Alternatively, their value can be calculated by the addition of half the value of the equivalent red or void figure and half the value of the equivalent black figure. However, the former approach appears to be that most concurrent with theoretical thought during this period. Clearly, the value of these forms is dependant on the mensuration in which they occur.

While the particoloured *brevis* occurs frequently in the Modena manuscript, the particoloured *semibrevis* is found only in Codex Chantilly in Senleches' *Je me merveil* and Rodericus' *Angelorum psalat*. In both cases it has the value of two-and-a-half *minime*. Once again, this device represents an attempt to broaden and refine *ars nova* notation. Whilst such values could be expressed by imperfection, the very independence of the particoloured figures to those adjacent to it, supplies the freedom for the bold rhythmic experiments evidenced by *Je me merveil*.

2. The figure caudate.

Figure caudate ('tailed notes') occur in three pieces from Senleches' repertoire, namely *La harpe de melodie*, *En attendant esperance conforte* and *Tel me voit*. These forms are distinguished especially by the addition of tails below a note, rather than the more usual form of tails above the note as in the case of *minime*, although some forms function through the addition of tails both above and below the note.

While certain signs can be attributed to the deliberate avoidance of the *semiminima* by composers of a mainly French background,⁴⁷ many signs must be

⁴⁵ These pieces are Galiot's *Le sault perilleux* (Ch 53), Haspre's *Puis je sui fumeux* (Ch 47), Golschalch's *En nul etat* (Ch 58), M. de Sancte Johanne's *Je chante ung chante* (Ch 9), Johannes de Alte Curie *Se doit il plus* (Ch 8), Johannes de Janua *Une dame requis* (Mod 16). In her discussion concerning *Le sault perilleux*, Günther's etymological analysis of the term *epogdo* is erroneous in that she maintains that the word is derived from ἑπὶ + οκτώ, which would indicate the proportion 9:1 (lit. 'one and eight'), in: *Der Gebrauch des tempus...*, p. 294. The correct etymological construction is ἑπὶ + ὄγδοος, which denotes the proportion of 9:8 (lit. 'one and an eighth').

⁴⁶ cf. J. HIRSHBERG, *The Music of the Late Fourteenth Century: A Study in Style* (Ph.D. University of Pennsylvania 1971), p. 324. Hirshberg believes that all figures are augmented, but he fails to take into account the fact that the first half of the particoloured note determines the effect of the second half.

⁴⁷ The scholastic maxim of the fourteenth century 'non est minimo dare minor' is often the argument found in theorists for the avoidance of the *semiminima*. cf. H. ULRICH (ed.), *Johannes de Muris Notitia artis musicae et Compendi-*

attributed to the scribe, or possibly the composer, seeking to represent unequivocal, discrete values in the music, often representing proportional relationships in a way not encountered prior to this period. For example, noting that *En attendant esperance* can be determined to be in *tempus imperfectum cum prolationis maioris*,⁴⁸ the *caudata seorsum et deorsum retorta dextra* shown as Figure 4 in Table 2 (s. p. 150) appears to represent one sixth of a perfect *semibrevis*. This value can be deduced by considering the groups of six of these notes in the sections corresponding to the ballade's fourth line and refrain, which without doubt must be construed within the space of a perfect *semibrevis*. This was first observed by Apel in his transcription of *Mod* and was also adopted by Greene in his edition of *Ch*.⁴⁹ While this value could theoretically be represented by the *semiminima*, it appears that many French musicians did not employ the theoretical *semiminima* possibly due to its uncertain nature.

One is tempted to proffer the *Ars nova* of Philippe de Vitry as the treatise with the earliest definition of the *semiminima* with a dating of *circa* 1320. However, present scholarship has shed sufficient light upon the uncertain transmission of the disparate set of writings which modern editors have used to form critical editions of the supposed *Ars nova* treatise so that it is very difficult to say whether the *semiminima* was codified by de Vitry at all.⁵⁰ Furthermore, the form is not mentioned by de Vitry's contemporary and fellow advocate of the new art Johannes de Muris.⁵¹ However, it becomes apparent that the *semiminima* was

already in use in the second decade of the fourteenth century as it is drawn (♠)⁵² and defined as half a *minima*⁵³ by Jacques de Liège in his attack on the new art in the seventh book of his *Speculum Musicae*. The earliest extant musical source

using a *semiminima* form ♠ is the Italian Codex Rossi.⁵⁴ However, in recent years, this manuscript's date has been moved considerably forward into the last half of the fourteenth century to undermine its significance.⁵⁵ On the other hand, the sources of Guillaume de Machaut, all after 1349, never employ the *semiminima*. Contrary to views such as those given by Cecily Sweeney in the introduction to CSM 13,⁵⁶ it is therefore reasonable to suppose that the

um musicae practicae. = Corpus Scriptorum de Musica [hereafter CSM] 17 (Rome 1972), p. 102; R. BRAGARD (ed.), *Jacobi Leodiensis Speculum Musicae*. = CSM 3, 7 vol. (s.l., 1955-1973), vol. 7, ch 7, sent. 35.

⁴⁸ The mensuration of pieces is determined using trial and error and the methods in: APEL, *Notation*, pp. 346 f.

⁴⁹ APEL, *French Secular Music*, p. 167-169; G. K. GREENE, *French Secular Music: Manuscript Chantilly Musée Condé 564, Second Part*. = Polyphonic Music of the Fourteenth Century XIX (Monaco 1982), pp. 58-61.

⁵⁰ *vid.* S. FULLER, *A Phantom Treatise of the Fourteenth Century? The Ars Nova*, in: *Journal of Musicology* IV (1985-86), pp. 23-50.

⁵¹ *vid.* U. MICHELS, *op.cit.* Prosdocius de Beldemandis in his *Expositiones* on De Muris' treatise comments on the absence of the *semiminima* in Johannes' treatise, *vid.* F. A. GALLO, *Prosdocii*, chap. 2, sent. 55-75.

⁵² BRAGARD, *op.cit.*, vol. 7, ch. XXIII, sent. 11.

⁵³ BRAGARD, *op.cit.*, vol. 7, ch. XXXIII, sent. 25.

⁵⁴ Rome, Biblioteca Apostolica Vaticana Rossiano 215 & Ostiglia, Fondazione Opera Pia don Giuseppe Greggiati, fragmenti. Published in colour facsimile as N. PIRROTTA (ed.), *Il Codice Rossi 215*. = *Ars Nova* 2 (Lucca 1992).

⁵⁵ This is demonstrated by Nino Pirrotta's change of opinion where he revised his earlier dating of 1328-1337, in his *Marchettus de Padua and the Italian Ars Nova*, in: MD IX (1955), p. 67, to *circa* 1370 in his *Chronologia e denominazione dell'Ars nova italiana*, in: *Les Colloque de Wegimont* 2 (Paris 1959), p. 98. cf. PIRROTTA, *Il Codice Rossi* 215, p. 71.

⁵⁶ C. SWEENEY, *Anonymus de Musica Mensurabili*. = CSM 13 (s.l., 1971), pp. 17-20.

semiminima was an experimental stage and not universally adopted throughout most of the fourteenth century.

The Berkeley Anonymous 2 treatise (1375) gives the *semiminima* in the form shown as the first form in Figure 1 in Table 1 (s. p. 149) or, as an alternative, the second form shown in the same table cell.⁵⁷ The same treatise also gives the form shown as Figure 2 (first form) in Table 1, which is termed the *addita* and is equal to three-quarters of a *minima*, therefore representing a *sesquiertia* or 4:3 proportional relationship.⁵⁸ The *Tractatus Figurarum* represents the *semiminima* as a void black form (see Figure 3, Table 1),⁵⁹ whilst the value of the full black form is equivalent to the *addita* already described.⁶⁰ The *Tractatus de figuris et temporibus* agrees with the *Tractatus figurarum*, although it does not name the void form, and calls the *addita* the *semiminima*.⁶¹

The ambiguity of the *semiminima* form is also reflected in the Codex Chantilly, whose compositions are by mainly French composers. Table 2 represents a summary of special figures found in *Ch*. Note especially figures 2, 8, 10, 11, 14 and 15. The multiplicity of these various figures representing the same value of half a *minima* again suggests through the sources that the *semiminima* was by no means an established form in the late fourteenth century. It also suggests that the form encountered in *En attendant* and those found elsewhere in the repertoire were felt to be more discrete than the *semiminima*. The variation of form is indicative of notational styles which at this time were by no means uniform with various pieces in *Ch*, for example, representing divergent traditions.

The case is reversed when we approach a source consisting of the works of mainly Italian composers. Table 3 (s. p. 151) represents a summary of various special figures found in *Mod*. As can be seen, there are fewer alternative figures used to represent the value of the *semiminima*. This may be due solely to the Italians preferring the actual full black *semiminima* form with the meaning first advocated pseudo-de Vitry and Berkeley treatises. While the great number of works by de Perusio in this manuscript skews this result, the works of Anthonellus de Caserta, Bartholomeus de Bononia, Magister Zaccharias and other Italian composers demonstrate the use of the simple *semiminima*. However, the role of the scribe in this manuscript is an active one, and the modification and adaptation of notation is not only possible but also in evidence.⁶²

⁵⁷ ELLSWORTH, *op.cit.*, p. 126.12-15.

⁵⁸ ELLSWORTH, *op.cit.*, p. 124.3-12.

⁵⁹ ELLSWORTH, *op.cit.*, p. 82.4.

⁶⁰ ELLSWORTH, *op.cit.*, p. 84.11-14.

⁶¹ Anonymus, *Tractatulus*, 3b.21, in: GALLO, *Mensurabilis Musicae Tractatuli*.

⁶² Philipoctus de Caserta's *En remirant* (*Mod* 67) provides a clear example of the notational preferences of the *Mod* scribes. A pair of *semiminime* is found in the third system of this work. However, concordances *PR* 172 and *Ch* 57 respectively use a pair of void red *minime* and void red *dragme*. cf. GÜNTHER, *Die Anwendung*, p. 17.

Table 1: Special figures encountered in French and Italian Theoretical treatises of the Late fourteenth- and early fifteenth-centuries.⁶³

Figures	Value in $\downarrow$	Name	Sources	Comments
1.	$1/2$	semiminima	BA2, 126.13-15; TPML, 229a; Ars D, 76a & 80a; SC, p. 72; A. de Leno, 34.	Leno: proportio dupla (2:1) in [2,3]
2.	$3/4$	addita (BA2); minima imperfecta (TF); semiminima (Anon X)	BA2, 124.3-6; Anon X, 413b; Th. de Campo, 185a; TF, 84.11-14;	Anon X & Theo. de Campo: major prolation
3.	$1/2$	semiminima	ArsM, p. 248; TF 82.4f; tFT 3b.20;	tFT: [2,2];
4.	$1 1/2$	fusa, minima caudata sursum et deorsum (Anon X).	BA2, 126.16-18; ArsM, p. 224; A. de Leno, 31. Anon X, 414a.	BA2: major prolation; ArsM: [2, 3]; Leno: ex. major prolation; Anon X: [2,3]
5. a. or b.	$1 1/3$	(fusa)	BA2, 126.18-21; TF 84.6f(vacua); tFT 3b.19 (vacua)	TF: minor prolation; tFT: [2,2];
6.	2	dragma or (fusa); fuises (BN lat. 15128)	ArsM, p. 224; TF 84.4f; SC p. 76; ArsD, CS III, 107a; BN lat. 15128, p. 88.	ArsM: [2,3]; TF: major prolation; SC: [2,3];
7.	$3/4$	(fusa)	ArsM, p. 226 (cf. Anon V, CS III, 394a)	ArsM: "cum sit minoris valoris"
8.	$3/4, 1/2, 2/3, 4/3$	minima vacua, minima imperfecta	ArsM, p. 228; TF 88.6f; tFT 3a.6, 3a.3, 3a.4; SC p.73; A. de Leno, 35;	ArsM: $3/4$ major prolation, $4/3$ -[2,2] (augment.); TF: $2/3$ minor prolation; tFT $3/4$ -[2,3], $1/2$ -[3,3], $2/3$ -[3,2]; Leno: dupla super biciens (8:3).
9.	$1/2$ (Anon X) $1/3$ (Leno)	minima seminarum (Anon X)	Anon X, CS III, 414a; A. De Leno, 36;	Anon X: major prolation; Leno: major prolation, proportione tripla
10.	$2/3$	semiminima	TPMI, CS III, 229a;	
11.	$1/4$		A. de Leno, 37;	Leno: major prolation, proportio quadrupla;
12.	$3/4$		A. de Leno, 32;	Leno: major prolation, 4:3
13.	2, (3,5,6)		A. de Leno, 31; ArsD, 107a; (BN lat. 15128, pp. 89-91);	Leno, BN lat. 15128: major prolation;

⁶³ The key to abbreviations used in Table 1 are as follows: CS III: COUSSEMAKER, *op.cit.*; vol. 3; Anon V: Anonymous V in: CS III; Anon X: Anonymous X in: CS III; A. de Leno: A. SEAY (ed.), *Antonio de Leno: Regulae de Contrapunto*. =Colorado Press Critical Texts 1 (Colorado Springs, 1977); ArsD = Johannes de Muris, *Ars discantus* in: CS III; ArsM = C. M. BALENSUELA, *op.cit.*; BA2 = ELLSWORTH, *op.cit.*; SC = A. GILLES & C. SWEENEY (eds), *Anonymous: De Semibrevis Caudatis*. = CSM 13 (s.l., 1971), TPML: Prosdocius de Beldemandis, *Tractatus practice de musica mensurabili ad modum Ytalicorum*, in: CS III; Th. de Campo: (Pseudo-)Theodorius de Campo, *De musica mensurabili* in: CS III; TF = SCHREUR, *op.cit.*; tFT = GALLO, *Mensurabilis Musicae Tractatuli*.

Table 2: Special Figures found in The Secular Music of Codex Chantilly.

Figures	Value (in $\downarrow$)	Comments
1.	67: $\frac{2}{3}$	67: [2,3](d.d);
2.	57: $\frac{1}{2}$; 25, 67: $\frac{1}{3}$; 77: $\frac{2}{3}$	25: [3,2], red form after 3x; 57: [3,3]; 67: [2,3]; 77: [2,3] .
3.	10, 19, 25, 45, 48, 50, 58, 60, 67, 77: $\frac{1}{2}$; 27, 28: 1; 41: 3; 57: $\frac{9}{4}$; 64, 77, 100: $\frac{3}{4}$; 50: $\frac{1}{3}$? 56: $\frac{2}{3}$; 42, 92: 2;	25: after 67: [2,3]; 10, 19, 42, 50, 58, 92, 100: [2,3]; 27: [2,3], only with form 11; 25, 41, 48, 50, 56, 64: [3,2]; 45, 50, 60, 57: [3,3]; 77: [2,3], [2,3] but red with black coloration; 41: [2,2];
4.	68: $\frac{1}{2}$	68: [2,3];
5.	68: $\frac{2}{3}$?	68: [2,3];
6.	25, 58: 3; 28: 4; 56: $\frac{4}{3}$, $\frac{1}{2}$; 57: $\frac{9}{4}$; 67: 2; 77: $\frac{4}{2}$; 100: $\frac{1}{2}$; 50: $\frac{1}{2}$ or 3;	25: after 56: [2,2]; 57: [3,3], [2,3], groups of 4; 67: [2,3]; 28, 100: [2,3]; 77: [2,3]. 50: [3,2]
7.	64: $\frac{1}{2}$;	64: [3,2]
8.	7, 60, 93: $\frac{1}{2}$; 65: $\frac{3}{4}$;	60: [3,3]; 7, 65, 93: [2,3];
9.	35: $\frac{1}{3}$; 65: $\frac{3}{8}$;	35: [2,2]; 65: [2,3];
10.	27, 28: $\frac{1}{2}$; 77: $\frac{3}{4}$	27, 28: [2,3], only ever paired with fusa, implying a three-fold division; 77: [2,3].
11.	27, 28: $\frac{1}{2}$;	27, 28: [2,3]; Always in pairs.
12.	77: $\frac{1}{3}$ (3:2) or $\frac{5}{16}$?(8:5)	77: [2,3].
13.	77: $\frac{2}{4}$ and $\frac{1}{2}$ respectively.	77: [2,3].
14.	42: $\frac{1}{2}$;	42: [2,3];
15.	54 (red), 55: $\frac{1}{2}$; 71: $\frac{3}{4}$;	54, 55: [2,3];
16.	60: $\frac{3}{4}$;	60: [3,3];

Table 3: Special Figures in French and Latin Texted Music of Modena, Biblioteca estense, ms alpha.5.24.

Figures	Value (in)	Comments
1.	13, 38, 45, 61, 64, 74, 84, 86, 89: $1\frac{1}{2}$;	13: [2,3], [3,2]; 64: [2,3]; minima + semiminima
2.	61: 1;	61: [2,2], red; imperfect minima + imperfect semiminima
3.	13, 18, 26, 33, 38, 62, 65, 74, 79, 81: $1\frac{1}{2}$; 59: $2\frac{2}{3}$; 81: $1\frac{1}{3}$	13, 18, 74: [2,3]; 26, 33 (dim), 62, 65 (dim), 79, 81 : [3,2]; 59, 81: [2,2]
4.	42: $\frac{4}{3}$; 47: $\frac{1}{2}$; 64: $\frac{3}{4}$	64, 47: [2,3], 4:3; 42: [2,2];
5.	42: $\frac{2}{3}$; 64: $1\frac{1}{2}$	64: [2,3]; 42: [2,2]
6.	25: $2\frac{1}{2}$; 64: $3\frac{1}{2}$	64:[2,3]; semibrevis + semiminima
7.	33, 67: $\frac{3}{4}$; 81: $1\frac{1}{3}$;	67: [3,3], 4:3; 81: [2,2]dim, 3:2; 33:[3,2]
8.	33: 2; 35, 65: 3; 67: $\frac{9}{4}$	33: [2,3]; 35, 65: [3,2] dim.; 67: [3,3];
9.	72: $1\frac{1}{2}$	72: [3,2];
10. or	72, 79: $1\frac{1}{3}$;	72, 79: [3,2];
11. &	96, 101: $1\frac{2}{3}$;	96: [3,2]; 101:[2,3]; (N.B. red ink in these figures is here represented by gray.)
12.	13: $\frac{1}{3}$	13: [2,3]; half imperfect semiminima
13.	101: $\frac{1}{6}$	101: [2,3]
14.	13: $\frac{1}{6}$	13: [2,3]
15.	13: $1\frac{1}{2}$	13: p.d. differentiated by form & context.
16.	78: $\frac{5}{6}$	78: [2,3];
17.	78: $\frac{1}{2}$;	78: [2,3];
18.	42: $1\frac{2}{3}$ (minima + figure 4)	42: [2,2];

Returning to the double tailed figures in *En attendant esperance*, it is necessary to explain the methods used during this period to create new note values. There are four apparent methods employed for creating new note values not found in the mainstream *ars nova* and *trecento* traditions.⁶⁴ This was an experimental and flexible stage in notation, with composers and scribes creating new forms by applying established principles. The process is comparable to the creation of new values in traditional modern notation by the addition of the dot, proportional brackets or ties. The mechanisms which the musicians and scribes of the *ars subtilior* used may not have been so universal as our systems, but an analysis of them may help to contribute to understanding the logic behind these special figures. Apart from coloration, the methods apparent in the period for altering note values are the use of a stem to reduce or augment a note, the use of composite figures and the use of stems and tails (*virgule*) to represent proportional relationships.

Prosdocimus quite explicitly refers to a practice of creating new forms using the tail or stem to express new rhythmic durations when he writes:

*Possumus etiam per appositionem caudarum extraneas figuras fabricare, hoc est extraneorum valorum, et hoc bene et cum rationibus satis evidentibus...*⁶⁵

In a passage describing the logic behind the value of the Figures 4 and 5 of Table 1, which its author terms a *fusa*, the second Berkeley Anonymous treatise states that:

*Nam sicut cauda sursum alleviat aliquando pro medietate, sic cauda deorsum tendens debet pro medietate per oppositum aggravari, si sursum tollat per oppositum deorsum debet augere.*⁶⁶

Using this principle, the theorist then explains why the *fusa* or *dragma* should be worth one-and-a-half *minime*, adding that the downward tail can also add a third of the value to the figure.⁶⁷ Looking at theoretical values Figures 4 and 5a in Table 1 fit neatly into this category and Figures 2, 3 and 6 in Table 2 also corre-

⁶⁴ One further device that is used frequently is the previously mentioned *punctus additionis* or *punctus perfectionis*. Its application to a *semiminima* as in Figure 16 of Table 2 is very rare, and is influenced more so by Italian practice than French, as shown by Table 3, Figure 15 which occurs in a piece by Matheus de Perusio. This device, however, is not included in the present discussion since the form holds no implications for the examination of *figure caudate*.

⁶⁵ 'We are also able by the application of tails to make unusual note forms, that is of unusual durations, and this is good and satisfactory in its evident rationality...', GALLO, *Prosdocimi*, p. 145 (LXI.52).

⁶⁶ 'For just as a stem above (a note) sometimes lightens by a half, so too a stem hanging below (a note) ought to do the opposite and make it heavier by a half: if above it reduces, below, in the opposite manner, it ought to increase'; ELLSWORTH, *op. cit.*, pp. 126.21-128.2.

⁶⁷ Prosdocimus also writes: *Sed cum cauda superius tracta et cauda inferius tracta sint opposita et cauda superius tracta habeat diminueri, ut patere bene consideranti, sequitur quod cauda inferius tracta habeat suum oppositum operari, scilicet augmentare...* ('But since the tail drawn above [a note] and a tail drawn below are opposite and the tail drawn above has to diminish, it follows that the tail drawn below has to operate as its opposite, namely to augment...'), GALLO, *Prosdocimi*, p. 146 (LXI.55).

spond. It is important to note, however, that these values may be derived through other methods set out below.

Composite figures, which represent the second practice, occur in the music of Italian composers in both the late *trecento*, for example double tailed forms in Paolo Tenorista de Florentia's *Amor da po che tu ti maravigli* (Pit 109), and in the *ars subtilior* (although quite late), especially in the music of Matheus de Perusio. Examples occur in Matheus' pieces *Trover ne puis* (Mod 94), his *Helas merci* (Mod 76) and *Le graynour bien* (Mod 61). The forms in music with an obvious Italian origin include many smaller, *caudate* forms (s. Table 3).⁶⁸ The treatise which clearly outlines these principles is the previously mentioned *Tractatus figurarum*, although only one figure developed in this treatise is patently evident in any surviving MSS.⁶⁹ However, the logic *Tractatus figurarum* uses to determine the new figures can be applied to other figures in the repertoire. The result of this approach to notation in the *Tractatus* is that it tends to remove the dependence on context which governs the simple figures in French music through the use of figures composed of a *minima* and a smaller duration.⁷⁰ In practice, as apparent from the figures in Table 3, the stem for the smaller value is placed below the note, as in the *Tractatus*, but it is frequently drawn as if the note as a whole had been rotated 180 degrees.

The third practice involves especially the use of the downward stem to imply either a *subsesquialtera* (2:3),⁷¹ a *sesquialtera* (3:2),⁷² or *sesquitercia* (4:3) proportion depending on the mensuration of the piece.⁷³ Antonio de Leno, as shown in Table 1, figure 11, implies its usage by the addition of a downwards tail to a *semiminima* form to obtain a three-fold division of the *minima*, creating a major rather than the usual minor subprolation. Perhaps this was viewed as a logical extension of the property of an upwards tail which caused a two- or three-fold division of the *semibrevis*. The effect of the tail is dependent on the *tempus* and *prolatio* in use. Thus it is logical to find four *dragme* in the place of a *brevi*s in [2,3] or [3,2], three in the place of [2,2] or 4 or 8 in the place of [3,3], since the intention

⁶⁸ vid. APEL, *French Secular Music*, p. 8a.

⁶⁹ The figure shown in Table 3, Figure 9 occurs in the CT of Bartholomeus de Bononia's *Que pena maior agitanda* (Mod #72). This figure and its value is explicitly given by the author of the *Tractatus Figurarum*, SCHREUR, *op.cit.*, p. 88.3; The figure is incorrectly printed in the diplomatic facsimile by Wolf as a hollow form, J. WOLF, *Geschichte der Mensural-Notation von 1250-1460*, 2 vol. (Leipzig 1904; repr. Hildesheim 1965), II, p. 124; APEL, *Notation*, p. 430 gives the correct form but Greene perpetuates this error in his critical notes to this piece in *French Secular Music: Virelais*. = Polyphonic Music of the Fourteenth Century XXI (Monaco 1987), p. 167.

⁷⁰ W. ARLT, *Der Tractatus Figurarum - ein Beitrag zur Musiklehre der "ars subtilior"*, in: *Schweizer Beiträge zur Musikwissenschaft* I (1972), p. 53.

⁷¹ e.g. *superius* in Anthonellus de Caserta's *Du val prilleus* (PR 92) in [2,3]. The passage is notated proportionally with the value of the *dragma* being relative only to its own line; *q.v. tenor* in the same composer's *Dame d'onour en qui* (Mod 81) (Facsimile in F. FANO, *op.cit.*, Table 18.): the passage is actually the mensuration [3,2] in *proportio dupla*, each *dragma* equal to one-and-a-half imperfect *semibreves*, i.e. 1:3 at the *minima* level; *q.v. Anon.*, *Je ne puis avoir plaisir* (Ch 25, Mod 35).

⁷² Anthonellus de Caserta, *Dame d'onour en qui* (Mod 81) in [2,2] but uses red coloration in S in direct horizontal apposition to black *dragme* in [3,2] in Ct.

⁷³ e.g. Anon, *Je la remire sans mesure* (Mod 65, Pit 186, PR 171) at *semibrevis* level, [3,2]; cf. Philipoctus de Caserta's *Par les bons gedons* (Mod 59) (Diplomatic copy in WOLF, *op. cit.*, n.LXVI), at the *semibrevis* level in [3,3]; for 4:3 proportion at the *minima* level, *q.v.* Philipoctus de Caserta's *En remirant* (Mod 59). Red ink is used to clarify the relationship.

in the music is to create an apparent inverse proportionality thereby effectively shifting the music to another mensuration. Coloration of these figures appears to be a device for indicating diminution (that is, in terms of ratios, where the left side is greater than the right) or for reinforcing the tripartite division. The resultant ratios always consist of one side divisible by three and the other by two, which may be construed to be a logical extension of *ars nova* theory.⁷⁴

De Leno's Italian vernacular treatise raises certain issues for the historian of notation. Antonio's examples are clearly in the late *trecento* style of notation which has adopted all principles of French notation, but also includes a mixture of essentially Italian forms. However, whilst principles might be observed in his extraneous note forms, none are replicated in the music of Senleches apart from the similarities of *sesquitertia* division of the perfection by void *minime* and the *subsesquialtera* division by *dragme*. The problem we are faced with when encountering this mixed notation,⁷⁵ is determining its origin of forms.

Having explained these devices, the problem of their application to the figures found in Senleches' works remains to be addressed. The *note caudate* in *En attendant esperance*, *La harpe de melodie* and *Tel me voit* must be interpreted using an extension of the principles of the third practice of adding stems to indicate proportional relationships. Indeed, as close inspection of Tables 2 and 3 shows, the majority of *dragme* and *semibreves caudate* in pieces from the repertoire can be explained using this principle. By extension, the *virgula*, a small tail curving to the left or right also indicates proportional relationships. The *virgula* curved to the right indicates a ternary division of the next mensural value, which may be seen as an analogy to the use of triplet figures.⁷⁶ In the *Ch* version of *En attendant*, the form as shown as Figure 4 in Table 2 represents a ternary division of the void red *semibrevis*. Essentially it indicates a shift in prolation from minor to major but in a proportional manner. While it is arguable that this figure's value could be obtained through the use of a *semiminima*, the subtle distinction lies in the grouping of these figures not in pairs but in groups of three, with the binary division of the prolation by hollow red *semibreves* never being obscured.

Likewise in *Ch*, *La harpe de melodie* employs Figure 1 in Table 2 in the same manner to give the value of two-thirds of a *minima*. The prolation in that piece is major, but the void black notes represent the imperfection of the full-black *semibrevis* and the shift to a minor prolation with *minima* equivalence. The ternary division of an imperfect *semibrevis*, worth two *minime*, gives the previously mentioned value. Looking again at Rodericus' *Angelorum psallat* and the authoritative transcription by Nors Josephson,⁷⁷ we find only notes with *virgule* turned to the left, as illustrated by figures 12⁷⁸ and 13 in Table 2. By analogy with

⁷⁴ cf. HIRSHBERG, *op.cit.*, p. 319.

⁷⁵ This is the term used by APEL, *Notation*, p. 385.

⁷⁶ cf. HIRSHBERG, *op.cit.*, p. 314.

⁷⁷ N. JOSEPHSON, *Rodericus, Angelorum psallat*, in: *Mus. Disc.* XXV (1971), pp. 113-126.

⁷⁸ At present, Figure 12 in Table 2 remains enigmatic, since its value remains ambiguous in Josephson's transcription of *Angelorum psallat*.

the devices already present in the notational system such as coloration, this *virgula* appears to represent the opposite proportional relationship of 2:3. The forms shown in Figure 13 of Table 2 adhere to this system if we evaluate the black form as a four-fold division of a perfect brevis, the red form as an imperfect black form or as a fourfold division of the imperfect *brevis*.

While this *virgula* notation is not found outside these particular pieces from

Ch, the parallel forms or and encountered in the manuscripts *Mod* and *Chic* employ a flagged stem which achieves the same effect. The device is specific to only a small number of composers and evidently not just the practice of particular scribes as shown by the parallels between *Mod* and *Chic*. This use of the flagged stem corresponds to the logic of the aforementioned system described by Antonius de Leno. Apart from the forms in *En attendant esperance* and *dragme* occurring elsewhere the manuscript, many *note caudate* in the Modena manuscript can be explained as composite forms. While pieces by Matheus de Perusio account for most of these compound forms, the works of Zacharias (#42), Bartholomeus de Bononia (#72), Matheus de Sancto Johannes (#25) and an anonymous author (#45) also employ them.

The *semibrevis caudata a parte inferior* in *La harpe de melodie* is equivalent to two *minime*. While this is the value which at least two theorists attribute to this form (s. Figure 13, Table 1) inspection of its occurrences in *Ch* in Figure 6 of Table 2 reveals that in practice, its value greatly varies. However, in the music of Senleches, the figure operates consistently through the proportional properties of tails and represents a three-fold division of the imperfect, black *brevis*. Likewise, Senleches' *Tel me voit* uses a red form of this figure to divide the red (imperfect) *brevis* into three parts. In these examples, the downward tail divides the *tempus* contrary to its natural division, which implies that an imperfect *tempus* is divided perfectly, and vice versa. Bartholomeus de Bononia's *Que maior pena agitando* (*Mod* 72) uses a hollow black *caudata a parte inferior* in a manner equivalent to the red *caudata* in *Tel me voit*. Therefore, with respect to the statement in the previous paragraph, it appears that at least two notational principles with regards to special figures are in operation throughout *Mod* 72. The *semibrevis caudata* and *dragme* in *Tel me voit* are used in a manner consistent to those values in *La harpe de melodie* and provides a connection between the two notational styles in these works.

The *caudata a parte inferior* appears to have an interesting history in the fourteenth century. Whilst it remained an essential part of *trecento* notation before circa 1390,⁷⁹ it disappears from French notation early in the century.⁸⁰ Its subse-

⁷⁹ Machettus de Padua thoroughly explores the early *trecento* notation in his *Pomerium*, G. VECCHI (ed.), *Marcheti de Padua Pomerium* (s.l., 1961); The earliest examples of this system occur in Codex Rossi, *vid.* NINO PIRROTTA, *Il Codice Rossi* 215. In short, the value of this form in the Italian system depends on the *divisiones* and their context.

⁸⁰ *In nova fert/Garrit gallus/(Neuma)* in the *Roman de Fauvel* is an example of its early French use. The practice appears to have persisted in England as evident in the following examples: Cambridge, Conville and Gaius College 727/334, f.202r; Oxford, Bodley Library, Rawlinson liturg. d.3, No. 1; Oxford, New College 362, ff. 90v-91r. *q.v.* F. LL. HARRISON, *English Church Music in the Fourteenth Century*, in: *New Oxford History of Music* 3, ed. by DOM ANSELM HUGHES & GERARD ABRAHAM (London 1960), p. 82-106.

quent “revival” in the French tradition of the *ars subtilior* possibly occurred through the influence of Italian composers, although in many cases its use in this repertoire is in fact not connected to the earlier practice since, in the *ars subtilior* it is often used to indicate proportional relationships, while in *trecento* notation it denotes relative length.⁸¹

The void black forms of *En attendant esperance conforte*, and , found respectively in *Mod* and *Ch*, are extremely rare, with the only comparable but clearly unrelated void black forms occurring in the keyboard music of Codex Faenza.⁸² It seems unlikely that the figure in *En attendant* has the value of half a *minima* as Willi Apel proposed since his solution requires that an inconsistent value be given to the previously mentioned void red *minima* with a downwards tail throughout the piece.⁸³ Its nature also suggests that it is not a composite form as it has the tail for the smaller value above the note rather than in the usual position below.

In the Modena version of *En attendant esperance*, three-fold groups of the void black figure appear thrice in the S. These are shown in Figure 1. As can be seen, the first occurrence is followed by a single void red *caudata*, and the subsequent two occurrences are both followed by void red notes of one *caudata*, two *minime* and three *caudate*. In the actual MS, especially the last two instances, it is apparent that the first void red *caudata* has been written closer to the void black notes than the subsequent void red notes. Willi Apel had already noticed this apparent positioning of figures in the *Mod* version of *En attendant esperance*, and this fact is reflected in his transcription of this version where he groups the void black figures and single void red *caudata* in one perfection.⁸⁴ However, Apel did not transcribe the void red *caudate* with a consistent value throughout the piece, and his mind was possibly swayed by the form shown in Figure 9 of Table 1 or Figure 10 in Table 2 when transcribing the void black form. By assuming that the void red *caudata* has a consistent value throughout this piece and that values of the three void black figures and one void red *caudata* equal one perfection, the value of the void black figure can be calculated to be five-sixths of a *minima* and represents a proportion of 3:5.⁸⁵ As shown by Figure 1, this interpretation requires no amendments to the notation, which is one of the central objectives of this new interpretation, and satisfies the requirement that all forms have a consistent value throughout the composition.

⁸¹ Marchettus gives the analogy of the tail on a *semibrevis* to a tail on a *brevis* (actually a *longa*). This is a denotation of length. VECCHI, *op. cit.*, pp. 110 f.

⁸² *vid.* D. PLAMENAC (ed.), *Keyboard Music of the late Middle Ages in Codex Faenza 117* (s.l., 1972), p. ix. The form can be found on f. 63 v (=42v) and is equivalent to two ninth's of a *minima*. The notational system in the codex as a whole is close to the Italian system expressed by Antonio de Leno.

⁸³ APEL, *Notation*, p. 422.

⁸⁴ APEL, *Notation*, p. 422; IDEM, *French Secular Music*, pp. 167-169.

⁸⁵ *cf.* STONE, *op. cit.*, pp. 157-163.

Figure 1 : Use of figure caudate in the Mod version of *En attendant esperance*.

At first glance, such a value might be considered outside the perceived logic of the system, and contradicts values actually derived by theoretical methods. However, such proportions do result from the use of the previously mentioned particoloured forms encountered in this repertoire and some link to this device may be suggested.⁸⁶ The odd nature of this void form in the context of other forms used in Senleches' works does hint at its unusual value. Whether any logic might be discovered to explain the nature of this form is debatable, and indeed the peculiarity of the form suggests it served as a trigger for the specialised memory of musicians experienced in this repertoire.⁸⁷

In the case of *Ch*, the value of five-sixths of a *minima* for this figure provides an unsatisfactory result for two out of three occurrences. Assuming that the value of the void black figure is two-thirds of a *minima* as Greene has in his edition⁸⁸ does satisfy the second and third occurrences. However, if this work is by Senleches, we might conclude that the scribe would use a figure consistent with other figures in the composition and with those in *La harpe de melodie*. This value

is unambiguously expressed in *La harpe de melodie* by the form . As revealed by comparing Figures 1 and 2, the crux of the problem lies in variance between sources of the void red figures subsequent to threefold groups of these void black figures.

⁸⁶ A value may be determined by calculating the value of a half-black and half-white *dragma* and dividing it in half using the property of the tail on the upper stem as observable in the formation of *semiminima*.

⁸⁷ Mary Carruthers' discussion on the mechanisms used to aid memory in the Middle Ages includes many references to authors who recommend the use of outstanding images as an aid to memory, in *The Book of Memory: A Study of Memory in Medieval Culture* (Cambridge 1990), p. 133 *et passim*. Although this refers chiefly to illumination, a parallel can be drawn between grotesque figures and unusual note forms employed in the *ars subtilior*.

⁸⁸ GREENE, *French Secular Music: Manuscript Chantilly Musée Condé*, Second Part, pp. 56 f.

Figure 2: Use of *figure caudate* in the *Mod* version of *En attendant esperance*.

On account of this variance and the scribal errors in *Ch*, one is encouraged to view this source of *En attendant esperance conforte* as extremely corrupted. In the case of the second and third occurrences, transcribing the void black figures as two-thirds of a *minima* does provide a partially satisfactory solution in conjunction with the void red figures. However, Greene's solution for the first occurrence is questionable for two reasons: the first void red *minima caudata* is given a value of one-third of a *minima*, which is inconsistent with its transcribed duration elsewhere in the composition, and the second *semibrevis* of the first ligature *cum opposita proprietate* is transcribed as perfect, whereas it must be imperfected by the subsequent *minima*.⁸⁹

Table 4 (s. p. 159) summarises the *semibreves caudate* found in the music of Senleches. Whilst figures 1 and 6 in this table represent the same duration, they do not represent a conundrum when attempting to represent Senleches' notational style as a whole. The context of the forms is significantly different with one occurring in perfect *tempus* and the other in imperfect *tempus*. However, the observed parallel usage in *Tel me voit* and *Que maior pena* and the observable lack of ambiguity apparent in this manner of notation may suggest that the scribe of *Mod* altered the note form.

⁸⁹ cf. STONE, *op. cit.*, pp. 139 f.

Table 4: *Semibreves caudate* found in the Music of Jacob de Senleches.

Form	Value	Mensuration	Location	Comments
1.	$1\frac{1}{3}$	[3,2]	<i>Tel me voit</i>	Perfect division of imperfect <i>tempus</i> , (imperfected through coloration) contrary to normal imperfect division (3:2).
2.	2	[2,3]	<i>La harpe de melodie</i>	Perfect division of imperfect <i>tempus</i> contrary to normal imperfect division (3:2).
3.	$\frac{1}{2}$	[2,3]	<i>En attendant esperance conforte</i>	Perfect division of void red prolation contrary to normal imperfect division (3:2).
4.	$\frac{2}{3}$	[2,3]	<i>La harpe de melodie</i>	Perfect division of void black prolation contrary to normal imperfect division (3:2).
5.	$1\frac{1}{2}$	[2,3] , [3,2]	<i>Tel me voit</i> and <i>La harpe de melodie</i>	Four-fold division of <i>tempus</i> (4:3) or imperfect division of prolation contrary to normal perfect division.
6.	$1\frac{1}{3}$	[2,3]	<i>La harpe de melodie</i>	Perfect division of imperfect <i>tempus</i> contrary to normal imperfect division (3:4).
7.	$\frac{5}{6}?$	[2,3]	<i>En attendant esperance conforte</i>	Perfect division of the remainder of a perfection imperfected by figure 3?

3. Conclusion

Aside from establishing the relative durations of figures in Senleches' music, it has been the aim of this paper to demonstrate that the mechanisms used to determine the form of special figures were based on principles which stem from French notation, and not Italian. The most glaring fact which confronts us is that apart from the use of partcolored *breves* and *semibreves*, composite note forms modelled on the principles of the *Tractatus Figurarum* are not found in Senleches' music. During the late fourteenth century, these forms appear to be favoured of music by Italian composers in the *ars subtilior* style which would seem to contradict the assertion made by the author of the *Tractatulus de figuris et temporibus* that these figures are French. However, the primary concern of the *Tractatus* author is to rationalise an existing system of notation. This quite possibly was the notation employed in the sources of Senleches' music.

The notation of Senleches differs appreciably from the system of the *Tractatus Figurarum* in that the latter does not rely chiefly on context to determine the value of the figure. In Senleches' music, each figure is tied closely to the mensuration and the properties of figures within those mensurations. However, several observations have been made in the course of this discussion pointing to historical influences present in the notation. With regards to coloration including the use of void red figures, we can discern purely French devices. However, it is conceded that void red figures are mimicking Italian notation. The nature of the *figure caudate* is less certain. Based upon the dependency of these figure upon mensural context and the established behaviour of coloration, it is likely that these figures were conceived within the French tradition as an alternative to those figures in the *Tractatus Figurarum*. The fact that Senleches' notation, which relies chiefly on proportional relationships, shares traits with the work of another composer of this period, namely Rodericus, does suggest that there was a connection between these composers who utilised this now extremely rare set of conventions and note forms.

En attendant, esperance conforte

I-MOe5.24 79, f. 39v-40r

Jacopinus Senlesses

1. En
2. En

a
a

ten
ten

Contre^{te}neur En attendant

Teneur En attendant.

dant
dant

e - spe - ran - ce con - for - te
se de - duit et de - por - te,

l'hou
en

me
a -

qui
ten -

veut
dant

a
il

voir
pro

per
met

fec
guer

21

ci
re on.

26

don.

30

3.En a ten dant

En attendant

En attendant

34

pas se temps et sai son. En a

38

ten dant met

42

en li sa fi

46

an - ce: de tous ces me:

50

est ser - vis a fay son

54

4.cilz qui ne sceit vi - vre sans

Cilz ne sciet

Cilz qui ne sceit vivre

59

E - spe - ran

65

71

ce.