A New Look at *Ars Subtilior* Notation and Style in the Codex Chantilly, Ms. 564

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This thesis titled
A New Look at *Ars Subtilior* Notation and Style in the Codex Chantilly, Ms. 564

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ABSTRACT

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A New Look At Ars Subtilior Notation and Style in the Codex Chantilly, Ms. 564

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The *ars subtilior* is a medieval style period marked with a high amount of experimentation and complexity, lying in between the apex of the *ars nova* and the newer styles of music practiced by the English and the Burgundians in the early fifteenth century. In scholarly accounts summarizing the period, however, musicologists and scholars differ, often greatly, on the precise details that comprise the style. In this thesis, I will take a closer look at the music of the period, with special relevance to the Codex Chantilly (F-CH-564), the main source of music in the *ars subtilior* style. In doing so, I will create a more exact definition of the style and its characteristics, using more precise language. In addition, I will provide more accurate transcriptions of musical examples, which build and improve on existing scholarship while representing, as close as possible, the original stylistic feel of the music in modern notation.

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CHAPTER 1: THESIS AND CONTEXT

The *ars subtilior* is a medieval style period marked with a high amount of experimentation and complexity, lying in between the apex of the *ars nova* and the newer styles of music practiced by the English and the Burgundians in the early fifteenth century. In scholarly accounts summarizing the period, however, musicologists and scholars differ, often greatly, on the precise details that comprise the style. In this thesis, I will take a closer look at the music of the period, with special relevance to the Codex Chantilly (F-CH-564), the main source of music in the *ars subtilior* style. In doing so, I will create a more exact definition of the style and its characteristics, using more precise language. In addition, I will provide more accurate transcriptions of musical examples, which build and improve on existing scholarship while representing, as close as possible, the original stylistic feel of the music in modern notation.

The *ars subtilior* flourished from the late fourteenth century to the early fifteenth century, practiced largely in southern France and northern Italy. The composers of the style were also performers, mostly in southern European courts. Many were also singers at the papal court in Avignon during the Great Western Schism (1378-1417). This period also saw a rise in intellectualism, education, and science. Building on the ideas of William of Ockham (c.1288 – c.1348), logicians brought Aristotelian philosophy into their own time, applying it to every branch of learning, and even critiquing it. The medieval attraction to mathematics, and intellectualism in general, led to the musical style now known as the *ars subtilior*. This style exhibited new rhythmic combinations and subdivisions conceived by composers and theorists, especially Johannes de Muris
Prior to the eleventh century, the use of mathematics in Europe was fairly rudimentary. Though “higher” mathematics had been present for centuries, as the writings of Pythagoras, Euclid, and Ptolemy (to name a few) had been in existence for at least a millennium, few people in Western Europe had access to them, and fewer could understand them. Such learning was confined to monasteries and spread little to the rest of the population. The music of this time, then as now, reflected the needs and desires (and, indeed, the mathematics) of its society. In the learned monasteries, chant was sung. With no system of fixed pitch, only relative intervals were notated. A chant melody could be sung wherever it felt comfortable for the singer(s). Durational values were determined by the text. By contrast, most people heard some form of secular song, while many also

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had the good fortune to understand the words being sung. Since peasant musicians were mostly illiterate, they could not notate such secular music.³

This mindset of practicality, as exemplified in chant notation, came partly from the Greeks, especially Aristotle. Aristotle, known as “The Philosopher” to medieval scholars, did not see the purpose of measuring an imperfect reality with ideal, perfect formulas. A boulder is not a perfect sphere, he argued, so why treat it as such?⁴ Measurements such as weight and heat were viewed as conditions and qualities, not quantitative data that could be specifically measured. Medieval European science and music developed from this point to a high level of intellectualism in the fourteenth century, eventually making Europe the most advanced civilization in these areas.

By the fourteenth century, the scientific and intellectual world was vastly different from what it had been in centuries past. Ways of thinking were moving in a modern direction. For example, William of Ockham rejected some of Aristotle’s categories.⁵ In rejecting his category of “quality,” for example, he concluded that its entities were not “real.” He instead called for ontological parsimony, as well as specification of the world and the scientific language used to describe it.⁶ This principle, better known as

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⁴ Crosby, *The Measure of Reality*, 16.

⁵ For Aristotle’s explanation of his categories, see J.L. Ackrill, ed. *Aristotle’s Categories and De Interpretatione* (Oxford: Oxford University Press, 1963).

⁶ Ockham would not have placed Aristotle’s boulder into a vague universal category as Aristotle did; rather, he would have opted for a specific measurement and/or description, one which avoided the vague terms Aristotle would have used. See Dorit Tanay, *Noting Music, Marking Culture: The Intellectual Context of Rhythmic Notation, 1250-1400* (Hänssler-Verlag: American Institute of Musicology, 1999), 150.
“Ockham’s razor,” turned the medieval *intellegensia* on their head. By rejecting scientific universals, scientists and thinkers had to create more specified sciences, as well as completely rethink their approach and methodology to science. This was done by exploring the language used to describe science – logic. Ockham was particularly interested in the coherence and consistency of propositions used to describe motion, and scores of logicians followed in his footsteps.

Medieval thinkers, influenced by Ockham, as well as works such as Aristotle’s *De sophisticis elenchis*, became obsessed with logic puzzles, which were a way of testing aptitude and advanced thinking. They began to explore logical fallacies in descriptions of, for example, beginning and end points of processes, later relating them to their physical counterparts. In essence, they began to explore the intricacies of time and motion, asking questions such as: “How can the precise moment that an object is set into motion be measured?” “How many ways can a period of time be divided?” These kinds of questions were fueled by the desire of thinkers to explore the *potentia Dei absolutia*; that is, the limit of God’s power and creativity. Taking Ockham’s approach one step further, thinkers, who agreed that the creative power of God was indeed infinite and

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7 Ibid., 151. Tanay draws a connection between Ockham’s goal of the revision of scientific language and Jacobus de Liège’s attempts to simplify and clarify musical notation, his own scientific language. See Ibid., 155-181.


limited only by logical necessity, became interested in hypotheticals, limiting themselves only by logic, and not by existence.\textsuperscript{10}

Logicians applied this mindset to their logic puzzles, especially those which dealt with the description of motion. In doing so, however, logicians began to use \textit{sophisms}, statements whose logical status is different than what it appears to be. It became necessary to clarify these statements by use of another proposition, which more sharply defined them. For example, a description of the temporal event “Socrates begins to move locally” (a sophism) can be better clarified by the proposition “Socrates is not moving now, and immediately after this he will move locally.”\textsuperscript{11}

This process became a favorite of logicians in the fourteenth century, who treated them like games. Soon, instead of creating propositions to clarify sophisms, logicians purposely created more difficult, complex propositions that they could still prove equipollent to the original sophism. These more difficult propositions thrived on the original paradoxical and ambiguous nature of the sophism, but were still logical consequences of it.

Musicians in the fourteenth century, thinking along similar paths as their logician counterparts, attempted to do similar things with their music. By taking simple musical ideas and purposely making them complex through a large amount of embellishment, they mirrored their logician counterparts in mindset and purpose. Fourteenth-century musicians wanted to push the limits of what was possible in music, just as logicians

\textsuperscript{10} Ibid., 187.

\textsuperscript{11} Ibid., 215.
wanted to explore the limits of science and logic. We can thus draw a connection between these sophisms (and their complex, embellished propositions) and the style of the *ars subtilior*.

The complexities that set the *ars subtilior* apart as a distinct style have to do with its rhythmic and notational practices, which evolved and developed over a period of time, much as did science. A review of the evolution of these practices is useful here. Plainchant was passed down orally, from generation to generation, as there was no written tradition from which to learn. (Extant music of the Ancient Greeks, which had several notational systems that are still being deciphered to this day, was not known in the Medieval West.) However, it soon became necessary to develop a written system of musical notation, especially when the repertory of music that had to be learned by monks in monasteries became too large to be entrusted to memory.

Musicians began utilizing neumes (symbols above the text to be sung), which showed in a general manner the contour of the music to be sung\(^\text{12}\). The purpose of the neumes was as a memory aid, not as a written “language” that could be universally understood. Thus, the shapes of the neumes varied from region to region and monastery to monastery.\(^\text{13}\) In his book, *The Notation of Medieval Music*, Carl Parrish gives the neumes for seven regional systems: Sangallian, French, Aquitanian, Beneventan,

\(^{12}\) The general consensus is that these neumes derived from accents in language, notably the *acutus*, *gravis*, and *circumflexus* of the French language (now the *aigu*, *grave*, and *circumflex*); many of the earliest extant examples of chant notation are French, thus supporting this theory. See Willi Apel, *Gregorian Chant* (Bloomington: Indiana University Press, 1958), 109.

Norman, Messine, and Gothic, as well as showing their equivalents in square notation as used in the modern *Graduale Romanum* and *Liber Usualis*.\(^{14}\)

Over the course of many generations, the symbols inscribed by previous musicians became unclear, and more precision became necessary. Thus, a reference line was drawn, so as to show the relation of the symbols to a fixed pitch (usually C or F). Gradually more reference lines were added until the tetragram was born. This was Europe’s first graph, and it became an essential part of medieval formal education.\(^{15}\) The codification of this staff is attributed to Guido of Arezzo (c.990 – c.1033), who was also one of the first musicians to describe note-against-note performance, called *organum*.\(^{16}\)

As the voices of organum (the *vox principalis* and the *vox organalis*) were doubled and became more independent, it was necessary to show visually their temporal relation. Multiple systems of rhythmic notation were thus developed. The creation of such a system of notating time, of being able to measure and control it, is one of the greatest achievements of the medieval West.\(^{17}\) However, each notational system that was developed had multiple ambiguities, was based entirely on musical context (instead of symbols having fixed, permanent meanings), and at least in the medieval period, was never codified into a permanent, usable method. In fact, while the notation of fixed pitches became somewhat standardized across Europe by the twelfth and thirteenth

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\(^{15}\) Crosby, *The Measure of Reality*, p. 144. Crosby also argues that Oresme’s geometrical diagrams of motion may have been influenced by the musical staff; see also p. 144.


century, rhythmic notation would not become fully standardized until well into the Renaissance. It is the ambiguity of these rhythmic notational systems, much like the sophisms of medieval logicians, that form the underlying basis for the stylistic growth of the *ars subtilior*.

The first attempted system, the rhythmic modes of the Notre Dame School in Paris, were a set of six short, repeated patterns that used three proportionally related note lengths (1:2:3), which were derived (and named after) poetic meters. These include:

1. Trochaic \( \downarrow \uparrow \)
2. Iambic \( \uparrow \downarrow \)
3. Dactylic \( \downarrow \uparrow \downarrow \)
4. Anapestic \( \uparrow \uparrow \downarrow \)
5. Spondaic \( \downarrow \downarrow \)
6. Tribrachic \( \downarrow \downarrow \downarrow \)

Ideally, one of these six patterns would be established at the beginning of the music, thus letting the performer know what rhythmic pattern should be used to read the rest of the notes.

However, the notated neumes did not always conform to the pattern in which the music started. This was caused partly by the ambiguity of the note symbols themselves (which could symbolize different note lengths in different circumstances), but also due to the composer’s interest in rhythmic variety (*fractio modi* – the breaking up of the modal
pattern into repeated breves, and *extensio modi* – the elongation of the modal pattern into perfect longs), as well as the occurrence of unavoidable repeated notes.  \(^{18}\)

The rise of the motet as a popular genre of medieval music led to another notational advancement. \(^{19}\) The motet, a composition consisting of several independent parts with several independent *texts* (often with different languages and subject matter), was ideally suited to (and certainly inspired by) the university setting. The *intelligentsia* were able to comprehend multiple lines of text (and music) occurring at the same time, and could understand how they related together. Due to the use of a much wider variety of texts and a greater need for independence of line, the rhythmic modes were not useful due to their hindrance of rhythmic freedom. (_modes in their unaltered form were necessary in order to be interpreted correctly by the performer._)

In c.1260, Franco of Cologne attempted to resolve this problem with his treatise, *Ars cantus mensurabilis*, in which he established a new system of notation where individual note shapes have fixed proportional relationships, making them much less ambiguous. Franco codified the use of signs which were exact multiples or divisions of each other:


\(^{19}\) Hoppin gives a detailed account of the birth of this genre in *Medieval Music*, 252-3.
The long and breve could be perfect or imperfect. Semibreves could be grouped in two, which implied iambic rhythm, or in three, which implied tribrachic rhythm. Franco also codified symbols for rests, proportional to his note symbols.20

These symbols, however, were still subject to the rules of perfection, imperfection, and alteration which had been the norm for modal notation. (Rests were fixed values and were unaffected by these rules.) Ligatures were still used, but they were mostly binaria, which created four different rhythmic combinations, depending on alteration.21 In addition, Franco added the punctus perfectionis, a dot which perfected a long that would normally be made imperfect when followed by a breve.22 Though the independence of note symbols was a great improvement over modal ligatures, their exact meaning was often still determined by their placement in relation to each other.23

The semibreve, the shortest of the Franconian note values, was the most ambiguous. Its initial use was infrequent, but grew considerably towards the end of the

20 According to Franco, “Time is the measure of actual sound as well as of the opposite, its omission.” See Crosby, The Measure of Reality, 152.

21 For an illustration of these binaria, see Parrish, The Notation of Medieval Music, 112; and Hoppin, Medieval Music, 338.

22 Parrish, The Notation of Medieval Music, 110.

23 Hoppin, Medieval Music, 334.
thirteenth and the beginning of the fourteenth century. Prior to this time, the usual division of the breve into semibreves was bipartite; Franco argued that this division should be tripartite, though it is unclear as to whether this was reflected in common practice, or an invention of Franco himself. At the beginning of the fourteenth century, when groups of four or five semibreves were introduced, they were divided equally (in binary fashion), instead of the Franconian ternary division. At the same time, theorists noted that singers would often lengthen the first of two unaltered semibreves, seemingly at will. This led to the placing of a tail (semibreves caudatae) on the first of a group of semibreves, to show this temporal emphasis. In addition, groups of semibreves in a piece of music with imperfect time could be interpreted either in the ‘French’ manner (where the semibreves were divided in ternary fashion), or in the ‘Italian’ manner (where the semibreves were divided in binary fashion). They are referred to as such due to the Italian preference for a simpler, straightforward rhythm compared to that of the French. This sophism of notation, where what is seen is not what is heard (nor perhaps intended by the composer), on one hand begged for further clarification, but also opened the door for further rhythmic possibilities which were exploited by performers and composers alike.

The shift to the semibreve as the main unit of time, as well as a need to clear up its many ambiguities, brought about the ars nova system of notation. Two treatises written around 1320, one by Johannes de Muris (Ars Novae Musicae) and another by Philippe de Vitry (Ars nova), announce a new approach to music and its notation. This

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24 Hoppin, Medieval Music, 334; and Parrish, The Notation of Medieval Music, 111.

was one of the first times in music history where musicians heralded and proclaimed a moving forward, a purposeful change in their art.\textsuperscript{26} This style, and its subsequent notational characteristics, is exemplified mainly in the works of Guillaume de Machaut (c. 1300-1377), though by no means was he the only composer to use it.

The \textit{ars nova} notational system had several innovations. First was the introduction of the minim, a smaller note value that was the subdivision of the semibreve, which in turn became the new beat unit. Next was a resolution of the semibreve ambiguity that had been one of the problems with Franconian notation. \textit{Ars nova} theorists recognized imperfect divisions of the beat (at any level) as equal to perfect ones. Rules about perfection, imperfection, and alteration would still exist in music with perfect mensuration, but not in imperfect mensuration. To codify this equalization of mensurations, theorists established a fixed set of temporal relations in which the perfect/imperfect time relations were applied to four different sets of time values. In addition, mensuration signs were introduced by the \textit{ars nova} theorists:

\begin{itemize}
  \item perfect \textit{tempus perfect prolatio}
  \item imperfect \textit{tempus perfect prolatio}
  \item perfect \textit{tempus imperfect prolatio}
  \item imperfect \textit{tempus imperfect prolatio}
\end{itemize}

\textsuperscript{26} Crosby, \textit{The Measure of Reality}, 154; and Hoppin, \textit{Medieval Music}, 353.
These mensuration signs were used more frequently in Italian music during the fourteenth century, while their widespread use did not occur until the mid-fifteenth century.27

*Ars nova* theorists also increased the use of syncopation, originally viewed as the splitting of a perfection into two parts by means of an insertion of yet another perfection in between, without rendering the inserted perfection into an imperfection. They also introduced *coloration* – the use of red notes in addition to black ones. Initially, coloration was used only in music of perfect mensuration to create a temporary hemiola effect; in other words, notes that were red were to be read as being in an imperfect mensuration, thus creating a simple change of accent. Essentially, this means that red notes had 2/3 the value of their black counterparts. Later in the fourteenth century, coloration was applied to music of imperfect mensuration as well, where it had the same effect. Red notes still had 2/3 the value of their black counterparts; thus, three red notes filled the same temporal space as two black ones – a triplet subdivision of a duple space.28 Although the *ars nova* theorists opened the door for many rhythmic possibilities, they simultaneously clarified many ambiguities of previous notational systems.

At the same time that theorists and composers in France were developing the *ars nova* style, Italy slowly became an independent musical force to be reckoned with. After being artistically dormant for centuries, Italy finally acquired its own unique, artistic culture, greatly due to artists and writers like Dante, Giotto, and Petrarch. Musicians were


not to be left behind, of course, with fourteenth century Trecento composers creating their own unique musical style which had a tremendous impact on Renaissance musical language. The notation of the Trecento style was in itself short lived. It was born from Franconian notation, adapted its own nationalistic characteristics (favoring more straightforward rhythms, for example), then combined again with French ars nova notation at the end of the fourteenth century, and did not survive as its own entity much longer. Although the mixing of styles led ultimately to the end of a unique Italian notational style, such mixing played a large role in the many notational complexities of the ars subtilior.

The Italian notational system grew, in a large part, from the ambiguity of the semibreve in Franconian notation. One way of handling groups of semibreves, used especially by composers like Pierre de la Croix (fl. 1290-1300), was to set off with a dot a group of four semibreves, which would take the space of one breve. This method, long since abandoned by French composers, was picked up by the Italians as the basic method of organizing their notation. 29

Most often, ‘measures’ (or, more appropriately, groups of divisions) in Italian notation will have fewer than the expected number of notes in the division; this alludes to another concept borrowed from Franconian notation – that of notation via naturae and via artis. When there are fewer than the expected number of semibreves in a group, a performer is expected to interpret their rhythm in a certain way – via naturae. However, if a composer wishes to use a rhythm different from those expected patterns, he must alter

a pattern of semibreves with the insertion of a minim (or a semibreve with a tail) – *via artis*.

This has the potential for an incredibly large amount of rhythmic combinations, and interpretation of the rhythm is again left to context. Italian notation, like French, also uses coloration (with black hollow notes instead of red), having the same effect as in French notation (colored notes are 2/3 the value of their black counterparts); it is also possible for four colored notes to equal three black ones as well.  

Italian notation also introduced many new note shapes that were never incorporated into the French system; they were used sparsely at best and their use diminished along with the purely Italian style of notation. However, these shapes show the Italian penchant for obscure rhythmic experimentation, in which they shared common ground with the French. The Italians also borrowed the dot of addition from the French. Examples where this technique is used in place of the dot of division have been referred to as *mixed notation*. It was this development that led to the end of the Italian style of notation.  

What can be seen here is a mixing of styles purely for rhythmic novelty and interest. For example, it was not a necessity for the Italians to create new note shapes or to borrow the dot of addition from the French. It is in this mindset that the notational style of the *ars subtilior* has its birth: one of pure rhythmic experimentation freed from the necessity of reinventing a notation system to accommodate it.

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30 Ibid., 172.

31 Ibid., 182.
CHAPTER 2: ANALYSIS

In this chapter, I will examine the specific rhythmic and notational characteristics that define the *ars subtilior* style. The transcriptions of the musical examples aim to be as accurate as possible, while still transmitting the original stylistic intention. Ticks are placed on the staff to indicate mensuration groupings, but no barlines or time signatures are included, so as to avoid any modern metrical implications. As composers in this style were often purposely inconsistent with these groupings in order to avoid a regular rhythmic pattern, I feel that using ticks to indicate mensural groupings better shows the linear freedom of the music, rather than using barlines to force it into rigid patterns. The original note shapes are reproduced above their modern counterparts, so as to more easily see the relation between them. Clefs have been added to the facsimiles where they are not already present. Common ligature markings are maintained; hollow-note ligatures are represented by double brackets. Note shapes are consistently transcribed as the same modern note values (semibreves are always transcribed as quarter notes, for example), no matter which note shape originally receives the *tactus*. The goal of my method of transcription is to improve upon existing transcriptions and to better show, through modern notation, the style and feel of the *ars subtilior*. For each example, I provide a facsimile of the original notation, followed by the note shapes themselves, and then the modern transcription. I have done this so that anyone can easily see the relationship between older note shapes and our modern notation. By removing the barlines from the transcriptions, the linear independence and lack of metrical patterns can be seen more
clearly. In transcribing the music this way, I hope to increase accuracy, consistency, and clarity, while still representing the feel of the original style in the transcription.

One of the main innovations of the *ars subtilior* was the proportion. The proportion sign probably first appeared in a work by Anthonello de Caserta and was first recognized by theorists in the late fourteenth and early fifteenth century. Proportions were created as a way of overriding the minim as a fixed common value between mensurations, thus opening the door for even more rhythmic possibilities. In a proportion, a given note value in a preceding section of music must fill a different amount of musical space in the succeeding section. For a basic example, say 2:1, the amount of musical space previously taken by one note value will now take two note values to fill; in other words, the temporal value of the note has diminished. Aside from basic proportions that had been used previously in other ways (the use of coloration to create a 2:3 proportion, for example), the *ars subtilior* was the first time in which composers experimented greatly with proportions. This would continue into the Renaissance, when they developed into the time signatures of modern usage.

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34 Parrish, *The Notation of Medieval Music*, 188. This method of changing temporal values is not dissimilar to Elliott Carter’s method of metric modulation (which is really a tempo modulation) in the 20th century.
Proportions could be notated in many different ways. An early method of notating them was through the use of mensuration signs. In most cases, a switch of mensuration through such a sign assumes a minim equivalence, which does not create a proportion. For example, a switch from imperfect major to imperfect minor (in modern terms, a switch from 3/4 to 2/4) does not create a proportion; it creates a diminution of a larger rhythmic grouping. However, there were cases when proportions were shown through mensuration signs which utilized breve equivalence, creating, for example, a *sesquialtera* proportion (3:2). Matheus de Sancto Johanne’s *Je chante ung chant* utilizes this technique (see example 1). What seems to be a superfluous use of coloration in this example will be accounted for separately below.

Example 1. F. 16, *Je chante ung chant*, *Matheus de Sancto Johanne, cantus*
The countertenor of the anonymous virelai *Je ne puis avoir plaisir* utilizes numerous mensuration changes, consistently switching between perfect minor (perfect tempus, minor prolation) and imperfect minor. Example 2 shows one such switch, which has been notated by mensuration signs and retains semibreve equivalence during the switch. In other words, the semibreve does not change value during the proportional switch, while the breve does.\(^3^5\)

![Example 2. F. 24, Je ne puis avoir plaisir, anonymous, contratenor.](image)

Gradually, composers created an elaborate system of mensuration signs which related to one another. Another look at the contratenor of *Je ne puis avoir plaisir* shows a constant flux between mensuration symbols \(\text{C}, \text{O}, \text{D}\). (See example 3.) This last

\(^3^5\) The dot after the semibreve rest at the end of the example is a dot of separation; the use of this device, as well as extensive use of dragmas in this piece (some of which are discussed below), point towards a composer heavily versed in Italian notational techniques, and possibly even of origin.
symbol, implied the *sesquitertia* (4:3) proportion, with breve equality, and was used thusly by *ars subtilior* composers.36


The use of coloration, already a key part of the notational arsenal of *ars nova* composers, also constitutes a simple kind of proportion, as it can render perfect notes imperfect, or (as became more common at the end of the fourteenth century) create *sesquialtera* from imperfect notes (triplets in modern simple meter). A good example is the cantus of *Sans vous ne puis* by Matheus de Sancto Johanne. The use of coloration, beginning on the word ‘plaisir,’ renders the succeeding notes imperfect, yet at the same time the composer creates a trochaic rhythm, giving the feel of a diminished perfect rhythm. (See example 4.)

Although the notational complexity of these proportions varied, they could be reduced to a set number of actual proportions that were used. The limited number of possibilities arises from the fact that these proportions were created from combining existing mensuration signs.\footnote{Busse Berger, \textit{Mensuration and Proportion Signs}, 178.} Thus, proportions only contained numbers that were multiples of two or three. \textit{Ars subtilior} composers, not satisfied with such a limited proportional palette, wanted to create new and more interesting rhythmic proportions. In his \textit{Notitia artis musicae} of 1321, Johannes de Muris called for a division of the breve
into anywhere from 2 to 9 semibreves of the same shape. However, prior to the end of the fourteenth century, there was not a way of notating other proportions (7:4, for example) outside of those that could be notated by mensuration signs and coloration. The anonymous *Tractatus Figurarum*, from the late fourteenth century, attempts to deal with this dilemma by creating a vast array of new note-shapes to represent a wider variety of proportional possibilities. Although the treatise was clearly written for performers and composers to use (rather than a stoic theoretical observation), the shapes advocated by the treatise were not widely used with any consistency. Example 5 shows a table of shapes described in the treatise.

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39 The *Tractatus Figurarum* is often attributed to Phillipoctus de Caserta. Philip E. Schreur, however, points out that Caserta does not use any of the note-shapes described in the treatise in any of his compositions, yet does advocate an Italian author who was well-acquainted with the French notational tradition, which could be Caserta himself. See *Tractatus Figurarum*, ed. Schreur, (Lincoln: University of Nebraska Press, 1989), 5-8.

40 “Quia esset multum inconveniens quod illus quod potest pronuntiari non posset scribe et clare ostendere tractatum hunc parvulum ordinare curavi… (Because it would be very incongruous for that which can be performed not to be able to be written, I took care to organize this little treatise to exhibit this clearly).” *Tractatus Figurarum*, ed. Schreur, 72.
Composers and theorists were looking for an unambiguous way of notating proportions. Mensuration signs, colorations, and note-shapes all had varying degrees of ambiguity, even when they were combined for extra reinforcement. Eventually,

Example 5. Table of shapes described in the Tractatus Figurarum.\textsuperscript{41}

<http://www.univnancy2.fr/MOYENAGE/UREEF/MUSICOLOGIE/pr1463a.htm>

\textsuperscript{42} Busse Berger, Mensurations and Proportion Signs, 180. Ways in (and reasons for) which composers combined these techniques will be discussed below.
fractional notation was adopted by composers. Though this was a relatively late phenomenon, coming to its true fruition in the Renaissance, its early uses can be found in many *ars subtilior* examples. One theory about the lateness of the adoption of these symbols concerns a great breakthrough in medieval mathematics: the adoption of Arabic numbers. Prior to this adoption, fractions were usually notated by a series of symbols. Only certain fractions (those containing denominators divisible by two or three) had symbols to represent them. All other fractions had to be either written out or shown as a product of two or more symbols.\(^{43}\) The use of Arabic numerals eliminated ambiguity and was much easier to use, although their use was not initially widespread.

Regardless, the composers of the *ars subtilior* recognized the use of these characters as a much easier and clearer way to notate proportions. The ballade *Se Genevre*, attributed to Johannes Cunelier, utilizes shorthand proportion signs (2 instead of 2/1) along with mensuration signs. Example 6 shows one of the simpler uses of proportional signs, compared to many more complex uses throughout the rest of the work.

\(^{43}\) Ibid., 181-2.
Goscalch’s *En nul estat* uses proportion signs in a completely different way, much more akin to our modern time signature. In this work, as well as Anthonello de Caserta’s *Dame d’onour en qui*, the two Arabic numbers refer to the tempus (the denominator) and prolation (the numerator). Thus, a sign of 2/3, placed at the beginning of *En nul estat*, refers to perfect tempus and minor prolation.44 The switch to 3/2, as shown in example 7 below, keeps breve equality while switching to imperfect tempus and major prolation, thus the symbol is not a proportion sign. However, by switching the tempus and perfection under the same breve, a proportion occurs.45

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44 Ibid., 174-6.

45 Later in this example, there is a switch from 2/3 to 2/2. This switch does not keep breve equality; rather, the breve is diminished by half, creating a *sesquitertia* proportion between the semibreves. See Busse Berger, *Mensuration and Proportion Signs*, 176; Gordon Greene, *Polyphonic Music of the Fourteenth Century* 18, 183; and Ursula Günther, “Der Gebrauch des tempus perfectum diminutum in der Handschrift Chantilly 1047,” *Archiv für Musikwissenschaft* 17 (1960): 277-97.
Many of Baude Cordier’s works utilize proportion signs, including *Tout par compas* (which will be discussed below), *Belle, bonne, sage* (both of which are graphically notated in the Chantilly Codex), and *Amans, ames secretement*.46

Other new innovations appeared, though they were usually confined to individual or small groups of works. The *dragma*, a semiminim with flags at both ends, was carried over from the Italian style of notation. There, it had the value of 2 minims and was used

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46 *Amans, ames* survives only in one source (Oxford: Bodleian Library, MS Canonici Miscellaneous 213), notated in white notation (typical of the early fifteenth century), alongside many other prominent examples of numerical proportional notation, including many other works by Cordier, as well as two works found in the Chantilly Codex: *Medee fu* and *Ma douce amour*. See Willi Apel, *The Notation of Polyphonic Music* (Cambridge: The Mediaeval Academy of America, 1942), 175; and Yolanda Plumley and Anne Stone, eds. *Codex Chantilly: Bibliothèque du château de Chantilly, Ms. 564, Introduction* (Turnhout, Belgium: Brepols Publishers, 2008), 154.
to create hemiola in *senaria imperfecta*. In the *ars subtilior*, dragmas could have different functions for different pieces. Guido uses two kinds of dragmas in his rondeau *Dieux gart*: a flagged dragma, which carries a semiminim function, and a regular (non-flagged) dragma, which is used only in proximity with flagged ones, and which carries a minim function (example 8).


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48 The theorist Antonio de Leno draws a distinction between a dragma with one flag on the top and a dragma with flags on the top and bottom, both of which are seen in *Dieux gart*. However, Guido uses them interchangeably, the doubly-flagged dragmas occurring only in pairs with each other, while the single-flagged dragmas alternate with non-flagged dragmas. See Albert Seay, ed. *Antonio de Leno: Regulae de Contrapunto* (Colorado Springs: Colorado Press Critical Texts 1, 1977); Jason Stoessel, “Symbolic Innovation: The Notation of Jacob de Senleches,” *Acta Musicologica* 71.2 (1999), 136-164; and Ursula Günther, “Das Ende der Ars Nova,” *Die Musikforschung* 16 (1963), 105-20.
Groups of dragmas could be used to represent 4:3 proportion with the minim, as utilized in Trebor’s *Helas, pitie* (example 9). This work also uses an upside-down minim with a flag to show a 2:3 proportion (example 10).

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49 The anonymous *Je ne vous avoir plaisir* similarly uses dragmas to show 4:3 proportion, and uses upside down minims without flags (but with ) to indicate a 2:3 proportion.
However, *Se Dedalus* by Taillandier uses strings of dotted minims to achieve the *sesquialtera* proportion;\(^{50}\) flagged minims, while having the appearance of semiminims, are used here to indicate a 4:3 proportion, while notes with reversed flags have half the temporal value of those with regular flags (see examples 11 and 12 below).\(^ {51}\)

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\(^{50}\) The following piece in *Ch*, Trebor’s *Se July Cesar*, also uses dotted minims to indicate *sesquialtera*. It is interesting to note that the same composer (Trebor) notated the same proportion two completely different ways in these examples (the use of dragmas in *Helas, pitie* compared with the dotted minim here). See Plumley and Stone, *Codex Chantilly: Introduction*, 153.

\(^{51}\) It should be noted that the second minim on the word ‘en’, as well as the final minim of ‘trouver’, are dotted in *Ch*, yet are transcribed in both Apel and Greene as regular minims. See Willi Apel, *French Secular Compositions of the Fourteenth Century* 1, 208; and Gordon Greene, *Polyphonic Music of the Fourteenth Century* 19, 51.

Two anonymous works, *En Albion* and *De tous les moys*, utilize hollowed coloration, which creates *sesquitertia* proportion with the minim. Example 13 shows the contratenor of *En Albion*.

![Example 13. F. 47v. En Albion, anonymous, contratenor.](image)

A notational technique unique to the aforementioned works is the use of the mensuration symbol combined with normal coloration, which reduces the note values by half. The beginning of the contratenor of *De tous les moys* (example 14) illustrates this technique.\(^{52}\)

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\(^{52}\) Plumley and Stone argue that, owing to the similar notational practices that make these two works unique from the rest of the repertory of the Chantilly Codex, it is probable that they were composed by the same person. See Plumley and Stone, *Codex Chantilly: Introduction*, 153-4.

Two works by Johannes Cunelier, *Se Galaas* and *En la saison*, also use hollowed coloration in the same manner. These works also utilize hollowed black notation, a remnant of the Italian notational style, which diminishes note values by half, as does the combination of pure coloration with \( \text{\textdagger} \) in the previously mentioned anonymous works.\(^{53}\) Example 15 shows the contratenor of *Se Galaas*, containing an example of hollowed black notation.\(^{54}\)

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\(^{53}\) Hollowed black notation was used at this time to avoid the writing of semiminims; hence the use of this coloration in a 2:1 proportion. See Richard Rastall, *The Notation of Western Music*, 81-82.

\(^{54}\) The symbols above the notes in the full black notation preceding the hollowed black notation are *coronae*, and are one of the earliest examples of notated fermatas in music. They are used for text painting, so as to set off the motto of Cunelier’s patron, Gaston Fèbus (‘Febus avant!’). See David Fuller, “Pause.” *The New Grove Dictionary of Music and Musicians* 19, Stanley Sadie, ed. (New York: MacMillan Publishers Limited, 2001), 248.
Another technique unique to the *ars subtilior* was the extreme use of displacement syncopation. Displacement syncopation involves the splitting of a perfection by another perfection. In modern notation, this could be achieved by splitting a dotted quarter note into an eighth note and quarter, and placing another dotted quarter note between them. While simpler examples exist in some works by Machaut, *ars subtilior* composers took this technique to its most extreme use.\(^{55}\) The metric pattern is temporarily displaced by this insertion, returning only after the end of the split perfection (the quarter note in this example). *Par les bons Gedeon* by Philipoctus de Caserta is a good example of this technique. The minim rest preceding the word ‘Gedeons’ in the cantus displaces a

rhythmic pattern in imperfect minor mensuration, creating a lengthy string of syncopation ending on the word ‘Sanson’ (see example 16).


Senleches’ Fuions de ci is an extreme example of this sort of displacement. The minim on the word ‘ci’ in the cantus displaces the normal metrical grouping, creating a long strand of syncopation with no regular tactus, encompassing most of the tenor of the piece. The opening is given in example 17.56

56 As much as possible, my transcription of the work maintains a steady tactus to simplify performance when placed in juxtaposition with the other voice parts. For a look at how a transcription of this work would look using multiple meter changes geared specifically for each voice part, and for further commentary on the work, see Lucy Cross, “Ars Subtilior,” The Performer’s Guide to Medieval Music, ed. Ross Duffin (Bloomington: Indiana University Press, 2000), 230-31.
In some instances, these new rhythmic and notational devices, as well as previously existing ones, were utilized in a superficial manner. In other words, they were used superfluously, and may or may not have been practically necessary. For example, the anonymous ballade *Se je cudoie* uses coloration with an accompanying trochaic semibreve + minim rhythmic pattern. It is not necessary for these patterns to be colored; rather, the color is merely an indicator that the rhythm has switched from a breve + semibreve pattern to a semibreve + minim pattern, all in trochaic rhythm.\(^{57}\) Example 18 shows this superfluous coloration.

\(^{57}\) Plumley and Stone, *Introduction*, 155. The composer also uses superfluous coloration on dotted semibreves, so as to visually set them apart.

In *Inclite flos* by Matheus de Sancto Johanne, the role of coloration is purposely reversed: red colored notes indicate a major prolation, while black ones indicate minor.\(^{58}\) Midway through each part of the song, the mensurations in each voice part change, accompanied not only by appropriate color changes, but with mensuration signs as well. Thus, the coloration is merely a visual cue, and not an essential part of the rhythmic formula. In fact, this song is transcribed in another codex without any use of coloration at all.\(^{59}\) (See example 19).


Coloration was also used for purely visual purposes when quotations of other songs were inserted into new ones. In Matheus’ *Je chant ung chant*, the different sections of the rondeau are set off by color and mensuration. The first section, containing the words ‘I sing a song…’, is followed by a quotation of another song, set off by coloration.
Again, mensuration signs are included, rendering the coloration purely visual. (See Example 1.)

Johannes Ciconia’s *Sus une fontayne*, one of the few compositions of his in the *ars subtilior* style, takes the quotation technique one step further by quoting *three* works by Phillipoctus de Caserta, including *En remirant* (a work in which Caserta quotes Machaut), set off by the use of mensuration signs.\(^6^0\)

In order to see these techniques at work, I have transcribed what I believe to be a representative example of the *ars subtilior*: the oft-cited *Tout par compas* of Baude Cordier. I have chosen this composition because I believe it exhibits many of the notational and rhythmic techniques that set the *ars subtilior* apart from its predecessors, as well as its successors. The composition is atypical for its use of graphic notation, its rondeau form, and its self-referential text. However, it is useful here as an extreme example of the style, since the techniques it does exhibit are used in a straightforward, typical, and not overly complex fashion.\(^6^1\)

The cantus begins slightly to the left of the top of the circle, with the initial ‘T’ and C clef. It is unclear as to whether the piece begins with the minim C directly above

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\(^{60}\) Richard Taruskin believes Ciconia to be the pupil of Phillipoctus, explaining the close connection between the two composers, yet there is no solid evidence to support this theory. See Taruskin, *The Oxford History of Western Music*, v.1 (Oxford: Oxford University Press, 1995), 338; Hoppin, *Medieval Music*, 489; and especially Anne Stone, “A Singer at the Fountain: Homage and Irony in Ciconia’s ‘Sus Une Fontayne’,” *Music and Letters* 82.3 (2001): 361-390.

\(^{61}\) Some references which deal specifically with the difficulties of this piece, and which were of great help for me in my own transcription and discussion, were Carl Parrish, *The Notation of Medieval Music*, 187-193; John Bergsagel, “Cordier’s Circular Canon,” *The Musical Times* 113.1558 (Dec. 1972), 1175-1177; and Gordon Greene, *Polyphonic Music of the Fourteenth Century* v. 18 (Monaco: Editions de L’Oiseau-Lyre, 1981), 145-6.
the ‘T’ of ‘Tout’, or if this minim is an anacrusis to the succeeding downbeat in subsequent repetitions of the tenor. As this question deals more with where the piece should end, I will postpone discussion of it until the end. In any case, the notes in both parts preceding the clefs can be viewed as a standard by which the succeeding proportion signs will be used.

The mensuration sign given after the clef, \( \odot \), indicates perfect tempus and perfect modus; a modern transcription of 9/8 would apply. However, immediately below the sign is a numerical proportion sign, 3/1. This indicates that it will now take 3 notes of a particular type to fill the same space it previously only took 1; in other words, it indicates diminution by one third. Thus, the first semibreve C in the cantus after the clef is given the same temporal value as the minim C preceding it.

The mensuration sign \( \odot \) has no extant explanation by contemporary theorists; however, Bergsagel and Parrish agree that it is related to the mensuration sign \( \odot \).\textsuperscript{62} This sign is created by placing a vertical line through the existing mensuration sign \( \odot \), placing the imperfection from the tempus to the prolatio. In the Cordier example, the mensuration sign \( \odot \) changes the previous prolatio from perfect to imperfect (in modern notation, 9/8 to 3/4). However, the horizontal line through the circle indicates that the imperfection is to remain on the same mensural level; the result being imperfect tempus and perfect prolatio (6/8 in modern notation), When used in the cantus of the Cordier example, the breve following the sign is perfected.

There is a brief use of coloration in two ligatures shortly following the new

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\textsuperscript{62} Bergsagel, “Cordier’s Circular Canon,” 1176; Parrish, The Notation of Medieval Music, 190.
mensuration sign, used normally. The next device to occur in the cantus is another proportion sign, 3/2, indicating that it will take three note values to fill the space it previously took two (sesquialtera). This proportion sign also, in effect, returns the tempus to being perfect. The following mensuration sign is used as an augmentation of all note values, cancelling the diminution and returning the tactus from the semibreve to the breve.

The next proportion sign, 3/2, indicates sesquitertia. Thus, it now takes four minims to fill the space it previously took three. The dot on the initial semibreve is one of the only dots in the piece to be used as a dot of addition; Cordier primarily uses dots of separation in this work. The proportion sign is then cancelled by its inverse, 3/2, and the cantus continues in the integer valor (unaffected by any proportion sign).

The tenor voice, while less complex as the cantus, does have its share of rhythmic and notational devices. The tenor voice begins with the mensuration sign , indicating perfect modus and imperfect tempus (6/8), yet it functions in the same way as in the cantus, the horizontal line indicating a diminution of the written note values while maintaining temporal relationships. Thus, the sign indicates perfect tempus and imperfect

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63 Parrish identifies this proportion sign as 8/3; Bergsagel points out Parrish’s error as a correct reading of an erroneous earlier transcription which did not account for the augmentation created by the previous mensuration sign . See Parrish, *The Notation of Medieval Music*, 190; and Bergsagel, “Cordier’s Circular Canon,” 1176.

prolatio, and the initial long (with a dot of addition) is transcribed as a dotted half note, instead of a dotted whole note as would be normal custom.65

There is a brief use of normal coloration on the long and breve near the bottom of the circle. Afterwards, the proportion sign 2/1 is encountered; this is a simple diminution by half. The breve following the sign is given half the temporal value as the one preceding it. Near the top of the inner circle, the mensuration sign is given, which functions in the same way as in the cantus, augmenting the previous diminution, and restoring the integer valor.

In returning to the question posed at the beginning of this section, where does the piece end? Musicologists still have no set answer as to the location of the end of the Cordier piece. The only clue given by the composer is found below the tenor line: “Tenor cuius finis est 2a nota.” Does this refer to the second note after the clef (the low F), as would be expected, or is the ambiguously placed initial ‘T’ indicating the breve C to be the first note, making the ending note the dotted longa C? While the placement of the initial letter causes great ambiguity, Parrish, Bergsagel, and Greene all agree through their transcriptions that the piece ends on the low F in the tenor.66 I conclude similarly, for the following reasons:

First, it is not uncommon to have large initialed letters placed to the left of musical and text incipits; that this piece is notated in a circle makes placing text all the more difficult, as can be seen by the rest of the text. There is no reason to believe that

65 Bergsagel, “Cordier’s Circular Canon,” 1176.
these initials would be placed below the initial notes, especially given the care that Cordier (or his scribe) took to line up the initials and C clefs in the different parts. In continuing with that point, it seems illogical that Cordier would place the beginning of the music before the clefs themselves. However ambiguous and complex the composer may have wanted to be in his notation, it is less likely that Cordier would have wanted the location of the beginning of the music to have been so ambiguous as to render the work not performable. If it is true that Cordier was really a sobriquet for the court musician Baude Fresnel, the composer would have very much wanted his work to be performed (as I believe is true of many *ars subtilior* composers), rather than regarded as an unsolvable puzzle.

Second, the use of the partial key signature in the tenor part cannot be ignored. What is interesting of its use is that, in the tenor part where it is notated, there are no B’s present to be flatted. Although there are plenty of B’s in the cantus, they remain natural with the absence of a signature. The reason for the inclusion of the partial signature, then, must be the visual reinforcement of a modal center, in this case F. The pitch center throughout the piece trades back and forth between C and F, both reinforced by their respective dominants. The inclusion of the partial signature is another clue by Cordier pointing to the true modal center of the piece; thus, it is logical that the second note of the tenor, upon which the piece should end according to Cordier’s instructions, should be the

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68 Parrish’s partial transcription of the end of the Cordier piece, given on p. 194 of his book, is incorrect in that it places the signature of one flat in all staves of the second stanza, where it should only be in the bottom staff. See Parrish, *The Notation of Medieval Music*, 194.
final. When this is followed through, the cantus dux finishes on the breve F following the mensuration sign 📜, the cantus comes ends on the initial breve of the piece, C.69

The placement of the text of this piece has been another problem for musicologists. While it is not relevant to discuss at length in this thesis, I do believe the placement of the text and music in the original manuscript Chantilly (the only extant version of the piece) is more intentional than originally thought. Gordon Greene argues that the copyist “could not maintain strict note-syllable correlation in the canonic and circular form of this piece.”70 While this may be true in several isolated locations, I believe that there was genuine effort made to maintain text-music alignment. I refer to example 20, on the left side of the circle, between the fractional proportions 2/3 and 3/2. Only four notes fill the space between these proportions, yet they are placed with large amounts of space between each other. On the other side of the circle, after the 3/2 fractional proportion, the notes are much closer together. The reason for the vast differences in note spacing has to do with the text below it; the notes are spaced out on the left side to accommodate the numerous words (proprement pour moy chanter) squeezed below it, while on the other side of the circle, many notes are squeezed over the syllable ‘po’ of composés. The copyist (or perhaps the composer) could not have placed the text arbitrarily below the music; there is visual proof that both the text and music were accommodated to align together. Although the rest of the text remains in the upper

69 Bergsagel uses this reasoning to push his hypothesis that the initial music (the first measure of my transcription below), between the mensuration signs 📜 and 📜, is an instrumental prelude. He supports this by noting the placement of the text, which does not begin until after the latter mensuration sign. See Bergsagel, “Cordier’s Circular Canon,” 1177.

70 Greene, Polyphonic Music of the Fourteenth Century 18, 146.
left-hand corner for the performer to fit to the music themselves (as was common practice in the period)\textsuperscript{71}, the existing text-music alignment may give the performer some guidance with which to do it. There is also a great amount of uncertainty about how to use the remaining text in the other corners of the manuscript (or whether to use them at all); such discussion is beyond the scope of this thesis.\textsuperscript{72}


\textsuperscript{71} Ibid., 146.

\textsuperscript{72} For further discussion on this topic, see Parrish, \textit{The Notation of Medieval Music}, 191-93; Bergsagel, “Cordier’s Circular Canon,” 1176-77; and Gordon Greene, \textit{Polyphonic Music of the Fourteenth Century} 18, 145-46.
CHAPTER 3: CONCLUSIONS

In this chapter I will summarize stylistic characteristics of the *ars subtilior*, and compare them to other stylistic descriptions. Composers of the *ars subtilior* pondered and searched for the absolute limits of music: the complexity of its rhythm, the multitude of ways to notate it, and to lesser extents, its harmonic aspects, visual presentation, and lyrical content. As their logician peers took simple logic puzzles and purposely complicated them, pushing the limits of complexity as far as they could go, so the *ars subtilior* composers took simple melodic lines and embellished them in a multitude of ways, one outdoing the next in the name of complex experimentation. Following the examples of their predecessors, the composers of the *ars subtilior* focused on pushing the limits of rhythm and notation further than other aspects of music (harmony and melody, for example). Unlike their predecessors, however, they did so for their own interest, rather than trying to improve and clarify rhythmic and notational practices.

The use of the term *ars subtilior* in scholarly use, essays, monographs, textbooks, and other reference materials often varies greatly. In discussing the music of the time, particularly its rampant experimentation, eccentric style, and transitional nature, scholars and writers often incorrectly attribute many characteristics to the style. I conclude this study with a more precise definition of the style and its characteristics. The following description, for example, addresses the extremes of the style more than the general characteristics, and makes some incorrect assumptions about the stylistic aesthetic:

“The extremes of rhythmic notation required new note shapes, and colours, and methods of presentation. In fact, the music itself is avant-garde not only in its
rhythms, but in its texts, its presentation, its chromaticism, and its devices. Many of these mannerisms, such as unnecessary proportions, are quite inaudible and are concerned with stimulating the mind rather than the hearing … Almost as well-known are some pieces whose layout is striking; Baude Cordier’s continuous canon Tout par compas is written on circular staves, and his love song Belle bonne in the form of a heart; Senleche’s canonic rondeau La harpe de melodie uses the strings of the harp as the lines of the musical staves. Solage’s famous Fumeux, fume uses extreme chromaticism including “B flat minor” chords, and a descent to low E flat…”

This description of the ars subtilior is inaccurate for several reasons. First, it uses descriptive terms that contain their own “cultural baggage”; in other words, they are misnomers. These include “avant-garde” and “mannerisms”, both of which have origins in other historical periods (the 19th and 16th centuries, respectively), and both of which bring incorrect and unnecessary cultural connotations to the description of fourteenth century music. Second, the examples provided are all extremes of the style. The examples of graphic notation given, made to seem as though they are typical examples of the style, are in fact the only examples of that kind of notation. The example of chromaticism has the same problem (never mind the misleading use of tonal

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75 It was the dislike of Apel’s use of the adjective “manneristic” in describing music of this period that initially led Ursula Günther to promote the term ars subtilior. See Ursula Günther, “Das Ende der Ars Nova,” *Die Musikforschung* 16 (1963): 105-120.
terminology). Last, while some *ars subtilior* rhythmic devices (a change in mensuration, for example) are unnoticeable to the ear (especially the modern listener), most are at least somewhat perceivable to the modern listener and would have been even more so to the medieval listener. In fact, modern recordings of *ars subtilior* music accentuate these rhythmic devices in order to delineate such rhythmic devices even further.\(^{76}\)

In conclusion, the stylistic techniques that set the *ars subtilior* apart from the *ars nova*, and the later more lyrical style of composers like Guillaume Dufay, deal purely with rhythm and notation. I will discuss these stylistic characteristics below. I have reached this conclusion based on the following points:

First, the experimentation and advancement of rhythm parallel the mindset of thinkers in the other medieval sciences. As discussed in the first chapter of this thesis, logicians in the fourteenth century sought not only a greater specificity in their description of the world, but also its extreme limits. In formulating logical puzzles, logicians began to make them more elaborate and complex, requiring deeper thought processes to reduce them to their simple skeletons. Likewise, medieval musicians did the same with their music. As the need for specificity grew in the notation of medieval music, so too did the curiosity in the number of ways to do it. The *ars subtilior* contains numerous examples where the same rhythm is notated several different ways, very often by the same composers, and in the same piece of music.\(^{77}\)

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\(^{77}\) Trebor’s *Helas, pitie* and *Se July Cesar*, as well as *Inclite flos* by Matheus de Sancto Johanne, are a few examples discussed in the previous chapter that exhibit these characteristics.
In contrast, pitch and harmony seemed not to be a particular focal point of *ars subtilior* composers. Though there had been advancements in the handling of pitch throughout the medieval period (mostly in how composers handled sonorities throughout the development of organum and motet styles), a harmonic rethinking did not occur until the early 15th century. This was due to the preference of a simpler rhythmic style, which drew more attention to individual sonorities, and the fashionable *Contenance angloise*, which preferred fuller-sounding sonorities based on 3rds and 6ths. Thus, a composition such as Solage’s *Fumeux fume*, which contains a large amount of chromaticism and low tessitura, is one of the few of its kind in the *ars subtilior* oeuvre.

Second, the mixing of French and Italian notational styles triggered a great amount of experimentation with notation, which ultimately led to the fusion of the two styles at the beginning of the Renaissance. This could not have happened until two distinct, separate styles of music reached fruition, which happened in both France and Italy in the early 14th century. The main differences between these musical styles, apart from the Italian preference for more fluid, melodic lines (a characteristic which has changed little through the present day), was their handling of rhythm and notation. These differences are discussed in detail in the first chapter of this thesis. As composers of both styles began to travel and spread their styles, they borrowed from each other, incorporating elements of both styles in their new compositions. Ultimately, during the

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79 Avignon was a prominent location in this process, as it was the seat of the pope during the fourteenth century, and the seat of the antipopes Clement VII (1378-1394) and Benedict XIII (1394-1417) during the Great Western Schism. This period saw a great spread of Italian culture to France and vice versa. It should
second half of the 14th century and into the beginning of the 15th, the French style became dominant, taking with it the few unique elements of the now-extinct Italian notational style. The *ars subtilior* is the apex of the mixing of these two styles.

Third, many characteristics attributed to the *ars subtilior* that do not deal with rhythm and/or notation were not prevalent enough, or were continuations of previous techniques, and thus cannot be considered typical. A few are discussed below:

- **Chromaticism.** As mentioned above, few examples during this period contain rampant examples of chromaticism. Solage’s *Fumeux, fume* is a rare example of a work that contains a high amount of chromaticism, achieved usually by descending sequences. Furthermore, a reduction of the rhythmic complexity in complex *ars subtilior* works like *Fumeux, fume* reveals a very simple harmonic layout which has merely been embellished.

- **Graphic notation.** In the latter half of the fourteenth century, and in sources that contain other pieces in the *ars subtilior* style, there are only three extant examples of pieces notated graphically: two are by Baude Cordier and are found uniquely in the front of *Ch (Belle, bonne, sage)*, which is in the shape of a heart, and *Tout par...* 

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80 As stated in the first chapter, the Italian notational system took many of its characteristics from the French Franconian notational style; thus, there were many similarities between the Italian and French Ars Nova notational styles, which led to the domination of the French style when they began to mix at the end of the fourteenth century.

81 For a more in-depth look at this piece, see Peter M. Lefferts, “*Subtilitas* in the Tonal Language of *Fumeux Fume*,” *Early Music* 16.2 (1988): 176-183.
compas, utilizing circular notation), and the other is Senleches’ *La harpe de melodie*, notated in the shape of its namesake harp.\(^{82}\) Although this device is publicized extensively by musicologists and historians in describing the *ars subtilior*, it occurs so infrequently (more than half of the extant examples are by the same composer, from the same source) compared to other devices that it is incredibly difficult to give this device the status of a stylistic trait.\(^{83}\) Although it may superficially seem to fit the style, the lack of further examples and the notion that only two composers provide examples using this device render it a novelty.\(^{84}\)

* Textual references to contemporary figures/events. Many *ars subtilior* works contain references to contemporary figures, usually the patron of the composer, the papacy, or a political event occurring at the time. This is easily explained: it has always been common practice for a composer employed by aristocracy to dedicate to them a piece of music in order to gain favor. Composers as late as Beethoven continued to do this with great frequency.\(^{85}\) Composers would have

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\(^{82}\) The version of this piece notated in the shape of a harp, a reproduction of which is found on the cover of Hoppin’s *Medieval Music*, is found in Chicago, Newberry Library, MS 54.1. A normal transcription of the piece without graphic notation is found in the Codex Chantilly (f. 43v). See also Jason Stoessel, “Symbolic Innovation: The Notation of Jacob de Senleches,” *Acta Musicologica* 71.2 (1999): 136-164.

\(^{83}\) Visual presentation of artistic material was, at the time, more prevalent in poetry than in music. See Hoppin, *Medieval Music*, 485-6.

\(^{84}\) The acquisition of a theoretical manuscript by the library of the University of California at Berkeley in 1965 provided another example of circular notation; it appears to predate the Cordier example, and its musical style is similar to that of Machaut, lacking any rhythmic complexity whatsoever. There are also a few examples of graphic notation in the fifteenth century, [cite]. The device probably died out with the invention of the printing press, rendering such an elaborate notational scheme impractical. See Richard L. Crocker, “A New Source for Mediaeval Music Theory,” *Acta Musicologica* vol. 39, 3/4 (1967), 161-171.

\(^{85}\) The Piano Sonata in C Major, Op. 53 (‘Waldstein’), the Razumovsky string quartets (Op. 59), and the original dedication to Napoleon of the 3rd symphony (Op. 55) are some prominent examples.
thought of the pope in a similar fashion; whether or not they were members of the Avignon papal choir, a mention of the pope in a composer’s work would grant them high favor.\textsuperscript{86} Music that references contemporary political and/or social events is also nothing new: the \textit{Roman de Fauvel}, composed in the early 14\textsuperscript{th} century, is a complete political satire, replete with some of the latest music in the \textit{ars nova} style. As the \textit{ars subtilior} style lies mostly (if not entirely) in the secular realm, and because composers would travel and perform their works in many different courts, patrons could use music as propaganda. At the same time, composers could curry the favor of those with higher social status through their music. However, because this technique existed well before the \textit{ars subtilior}, and lasted for centuries after, it is not unique to the \textit{ars subtilior}, however prominent.

The end of the \textit{ars subtilior} style coincides, somewhat appropriately, with the end of the medieval period in music. While there is never an exact line between the end of one stylistic period and the beginning of another, it can be seen from the attitudes of musicians in their writings that music from the beginning of the fifteenth century, especially that of Dunstaple and the \textit{Contenance angloise}, was regarded as superior for decades after\textsuperscript{87}, while music written only a few decades prior in the French style of the

\textsuperscript{86} Inclite flos by Matheus de Sancto Johanne and \textit{Par les bons Gedeon} by Philipoctus de Caserta both praise the Avignon antipope Clement VII; Matheus, along with Hasprois and Johannes Harcourt, were singers in the courts of both Clement VII and Benedict XIII. See Plumley and Stone, \textit{Codex Chantilly: Introduction}, 134.

\textsuperscript{87} The famous remark of Tinctoris, the Renaissance theorist, that “there appears to be a new art, if I may so call it, whose fount and origin is held to be among the English, of whom Dunstable stood forth as chief,” reinforces this idea. See Leo Treitler, ed. \textit{Strunk’s Source Readings in Music History} (New York: W.W. Norton and Co., 1998), 292-3.
*ars nova* and *ars subtilior* was no longer enjoyed. In addition, many composers from this time period were “transitional,” in that they composed somewhat in the style of the *ars nova* (or *ars subtilior*), and somewhat in the newer, simpler style, comparable to that of Dunstaple (and which was a precursor to Dufay). Among these composers is not only Matteo da Perugia (who is well-represented in the Modena manuscript), but also Johannes Ciconia, who equally dabbles in the *ars subtilior* style (‘*Sus une fontayne*’). The writing of both composers covers a wide span, encompassing both the French-based *ars nova* and *ars subtilior* styles, but also the more lyrical style of the early Renaissance. Extant music of this time period shows the shift of musical taste from the rhythmically eccentric style of the *ars subtilior* to the simpler, lyrical, more harmonic-based style of the early Renaissance.  

The shift from a more complex style of music to that of a simpler style, marking the end of the former’s style period, recurs heavily throughout music history. For example, the end of the Renaissance coincides with the advent of a simpler, monodic style of writing that accompanies the birth of opera, standing in stark contrast to the complex polyphonic style of composers such as Palestrina. Similarly, the *galant* style arose out of the rejection of the complex counterpoint and thick musical textures of the Baroque. Thus, it should come as no surprise that the complex rhythmic experimentation

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of the *ars subtilior* died out, in favor of a style utilizing more sonorities based on 3rds and 6ths in the early Renaissance.\(^8^9\)

Below is a summation of stylistic characteristics that, I have concluded, will more accurately describe the style known as the *ars subtilior*. I have chosen these characteristics because they a) most accurately match the ideas and thought processes of the composers and their contemporaries, b) accurately reflect the evolution of the music of the late fourteenth century, c) are prominent enough in the music of the time so as to be considered pertinent stylistic traits instead of novelties, and d) are unique to the period in some way. It is with this summation that I conclude my thesis.

The *ars subtilior* is a style of music prevalent from the mid-fourteenth century through the beginning of the fifteenth century. The style was practiced largely in southern France and northern Italy, although it is seen as far away as Paris and the island of Cyprus. The style does not represent the complete output of music composed in this time period in Western Europe, as many older styles continued to be practiced by composers, including the French and Italian *ars nova*; the *ars subtilior* coexisted with these styles.

The style seems to be practiced in specific geographic centers and survives in a set number of extant sources coming from those geographic centers. These include mainly the Codex Chantilly\(^9^0\) and the Manuscript Modena,\(^9^1\) as well as the manuscript

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\(^{8^9}\) A standard text on this transitional time period is Manfred Bukofzer, *Studies in Medieval and Renaissance Music* (New York: W.W. Norton and Co., 1950).

\(^{9^0}\) Yolanda Plumley and Anne Stone, *Codex Chantilly: Bibliothèque du château de Chantilly, Ms. 564, Fac-similé* (Turnhout, Belgium: Brepols, 2008).
Torino J.II.9 (containing the extant *ars subtilior* examples from the French-Cypriot repertory),\(^9\) and the Oxford Bodleian Library MS Canonici Miscellaneous 213,\(^{93}\) part of which contains further examples of works by Baude Cordier.

The *ars subtilior* concerns secular music; examples of sacred music in the sources above lack the rhythmic complexity characteristic of the secular music contained therein, and the sacred music written by prominent *ars subtilior* composers lacks the characteristic rhythmic complexity of their secular works.\(^{94}\) It can thus be concluded that the audience for this style was smaller and more specific than that of other, more encompassing compositional styles (the French *ars nova*, for example). Although the rhythmic and notational tendencies of the style make performance much more difficult than the styles which bookend it, composers did intend for their music to be performed. This is due not only to the numerous ways which they promoted themselves and their patrons in their music, but also because most *ars subtilior* composers were also

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\(^{94}\) The motets of this time period lack the rhythmic complexity characteristic of the *ars subtilior*. They do, however, show a very learned style of Latin writing, which can be difficult to understand if one is not familiar with the religious ideas and classical education of the time. See Ursula Günther, *The Motets of the Manuscripts Chantilly, Musée Condé, 564, and Modena, Biblioteca Estense, a.M.5.24* (American Institute of Musicology: 1965), ii.
performers themselves; they would certainly have wanted the music they had composed to be shared with others, even if in small circles of close, intellectual friends.95

The development of polyphonic music in the fourteenth century mostly concerns rhythm and notation. The *ars subtilior* style is a logical step in this progression; however, the motives for its progression differ greatly from the earlier *ars nova* style. The *ars nova* system of notation was a great improvement upon the Franconian system, utilizing a larger, more specific system of note values and allowing for multiple mensurations, in an effort to improve the clarity of the notational system and allow for a greater number of rhythmic possibilities to be notated. Composers of the *ars subtilior* similarly wished to increase the number of rhythmic possibilities in their music, yet clarity and universality of notational methods was not an aesthetic and stylistic goal. These composers preferred high complexity, rhythmic interest and experimentation over consistency and improvement of notational methods.

*Ars subtilior* composers achieved high rhythmic complexity and interest through a number of methods. These include the introduction of new rhythmic techniques, such as the proportion and extended displacement syncopations, as well as a multitude of different ways to notate them; these include a refinement and reusing of older devices, such as mensuration signs, coloration, and note shapes (the *dragma* in particular), but also new devices, such as hollowed coloration, hollowed black notation, fractional proportions, new mensuration signs ( ), for example), and new note shapes, most of

95 Much in the same way logicians increased the complexity of their logic puzzles in similarly small circles, this was not music for everyone to enjoy. It had a certain sophistication and subtlety (*subtilitas*) to it; in music, this is (and was) usually not a universal characteristic.
which were not used again after the end of the *ars subtilior*. In addition, many of these devices were purposely used in a different way to highlight more superficial characteristics of the music; for example, using coloration to draw attention to the text or simply for its visual contrast, as opposed to its normal rhythmic function.

The composers of the *ars subtilior* also experimented with other musical devices, such as chromaticism and the use of graphic notation. In most cases, these were done to accentuate the text of a particular work. While their implications parallel the stylistic aesthetic of the *ars subtilior*, their use is limited and exceptional, and should not be considered typical.

The *ars subtilior* style fell out of fashion at the beginning of the fifteenth century, due not only to the preference for the *Contenance angloise*, which preferred simpler rhythms and sonorities based on 3rds and 6ths, but also a need for a more unified system of notation. While the *ars subtilior* gave birth to many devices and techniques that would continue to be used in the following century (mostly in the areas of proportion and mensuration signs), composers soon began to unify their notational methods, moving away from the *ars subtilior* style.


Plumley, Yolanda. “Citation and Allusion in the Late Ars Nova: The Case of Esperance and the En Attendant songs,” *Early Music History* 18 (1999), 287-363.


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*The Manuscript Modena, Biblioteca Estense, α.M.5.24; Commentary.*

-------------. “Writing Rhythm in late medieval Italy: Notation and musical style in the manuscript Modena, Biblioteca Estense, Alpha.M.5.24.” Ph.D. Diss., Harvard University, 1994.


APPENDIX 1

List of *ars subtilior* composers mentioned

**Philipoctus de Caserta (fl. 1370s)** - composer and theorist. The possible attribution of the *Tractatus Figurarum* to him is discussed in Chapter 2. Although *Par les bons Gedeon* pays homage to antipope Clement VII, there is no documentation that places Caserta at the Avignon papal court. However, *Par le grant senz* praises Louis d’Anjou, who led a campaign to reinstate Clement VII in Rome. There is shared textual material between *En remirant* and Matheus de Sancto Johanne’s *Sans vous ne puis*, possibly linking the two composers. The possible link between Caserta and Ciconia is also discussed in Chapter 2. Extensive displacement syncopation is a hallmark of his style, as is the use of various noteshapes.96

**Baude Cordier (c. 1380- c. 1440)** – What we know for sure about Cordier’s life is given to us by the composer himself in his rondeau *Tout par compas*; he was born in Rheims, and he was a master of arts (he refers to himself as *Maistre*). Due to the stylistic characteristics of the two works given in *Ch*, as well as the extensive catalog found in the Berkeley Manuscript (misc. 213), it is believed that Cordier was a late practitioner of the *ars subtilior*, and even a transitory composer, as his melodic lines and Italianate compositional techniques look forward to the next century. Craig Wright’s claim that Cordier is a sobriquet for Baude Fresnel, as discussed in Chapter 2, is still debated.97

**Jo(hannes) Cunelier (fl. 1372-87)** - It is believed that Cunelier is Jean le Cavelier, the chronicler to the Constable of France, which places him in northern French circles. He also has strong ties to southern courts, as his *Se Galaas* contains the motto of Gaston Febus (as does Trebor’s *Se July Cesar*). Günther gives his name as Cuvelier, referring to a citation in the anonymous treatise *Règles de la seconde rhétorique* of his name as Jacquemart de Cuvelier, the king’s *faiseur* from

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Tournai. 98 He is represented in Ch by three ballades, all of which exhibit a great degree of rhythmic complexity.99

Goscalch (fl. 1380’s) – French composer, whose one extant work, En nul estat, is given in Ch and in the Reina Manuscript under the name Car nul estat. This work is one of the more complex examples of the *ars subtilior*, due to its differing use of numerical proportion signs, as well as extensive use of dragmas. He is believed to have worked in the papal choir at Avignon, along with Matheus de Sancto Johanne. It has also been suggested that he authored the Berkeley Manuscript of 1375 in Paris, but Günther rejects this claim.100

Guido (fl. 1370’s) – French composer, who was active in Avignon during the 1370’s. He is represented in Ch by one ballade, one rondeau, and the tenor of another rondeau; these works contain much irony in their text about the complications of the new style. Due to this and his use of new note shapes, it is believed that Guido was an early composer of the *ars subtilior* style. He is also believed to be the teacher of Senleches.101

Matheus de Sancto Johanne (fl. 1365-89) – French composer who worked extensively in England in the 1360’s before returning to France, eventually working as a papal court musician at Avignon during the reign of Clement VII (1378-1394). Of his six extant works, three survive in Ch. There is a great deal of textual references in his work (*Inclite flos*), and a moderate level of rhythmic complexity.102

Senleches, Jacob de (c. 1350 – c. 1410) – Composer and harpist. His *Fuions de ci* places him in the court of Eleanor of Castile in 1382; later he was identified with the court of Aragon. His works are among the most complex of the *ars subtilior* repertoire; *La harpe de melodie* is given in an anonymous theoretical treatise in

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graphic notation. The piece contains an irregular canon that is described textually in the poem. He is also believed to have been the student of Guido, another *ars subtilior* composer (*Dieux gart*).\(^{103}\)

**Solage (c. 1360 – c. 1410)** – Little is known about the composer. With ten works, he is the most-represented composer in *Ch*. Many of his songs reference Jean, Duc de Berry, yet this does not necessarily imply his employment by the Duke (his name does not appear in the Duke’s records). All but two of his extant works are given uniquely in *Ch*. It is likely he was active in French royal circles; for example, *Fumeux fume* recalls a series of poems by Eustache Deschamps, poet to Louis, Duke of Orléans, and *Joieux de cuer* connects the composer to Louis’ wife, Valentina Visconti. Rhythmic complexity is not prevalent in his works; rather, there is extensive use of melodic sequence, chromaticism, and low tessitura.\(^{104}\)

**Taillander (fl. 1390’s)** – There is one ballade in *Ch* attributed to Taillander, the ballade *Se Dedalus*. Scholars have been unable to attribute this work to a particular person; the leading candidate is Petrus Tailenderoti, a priest from Nantes who was studying law in Avignon in 1393. Other sacred pieces survive under his name, including a three-voice Credo.\(^{105}\)

**Trebor (fl. 1390-1410)** – As with Solage, little is known about the composer. Six works by Trebor survive in *Ch*; many of them reference the nobility of southern European courts, including *Se July Cesar*’s advocacy of Gaston Febus, count of Foix. There is speculation as to the origin of the composer’s name; it is believed to be an anagram of ‘Robert’, yet it also survives in alternate spellings (‘Trebol’ ‘Borlet’, etc.). Trebor, like Solage, was also active in French royal circles, as text from his chansons appears in poems by Deschamps and other chansons from various *ars subtilior* composers. In addition to the variety of note shapes discussed previously, displacement syncopation is also a compositional characteristic.\(^{106}\)

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