The Written Notation of Medieval Music

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Introduction

When visiting a collection of old music such as those held at the British Museum in London, I am often struck by the beauty and painstaking effort that went into producing these music manuscripts from what we loosely call the Middle Ages. I then realise that I cannot read the notation that was used; indeed, one often views these as works of art and pictorial beauty rather than as representations of the music being performed at the time.

I chose this project with the aim of teaching myself (and anyone reading it) how to read the notation of Western Music that was common in use before the notation of the Renaissance, Baroque, Classical and Romantic periods and in most "modern" music. There are plenty of books available that cover early music, but often these books either use modern notation or assume prior knowledge of older notation. This project is a collection of notes made from these books and presents a layman's guide to reading Medieval Music.

Music notation evolved through the ages and different notations came and went in different places and at different times. I have selected the notation proposed by Franco of Cologne in his *Ars Cantus Mensurabilis (The Art of Mensurable Music)* written between 1250 and 1280. This notation became popular during the late 13th and 14th centuries, and is now more colloquially referred to as "square notation". This notation is still in use today as plainsong notation in so-called Gregorian Chants; and was used in the *Ars Nova* technique of 14th century France, though *Ars Nova* notation included time signatures which the Franco notation did not. Consequently, this essay will also serve as a guide to reading modern plainsong.

Clefs and Staves

The most popular stave used had four lines; though three, five or six were also in use. Two types of clef existed, the F clef and the C clef, indicating the location of the appropriate note on the stave. Specifically this meant that a stylised letter F or C was placed around the line of the stave used to denote where the F or C is located. The clefs could appear against any line, but when one remembers that the notation was used for male (monks') voices we can see that the clefs will usually be placed higher on the stave so that more notes appear on the stave without the need to resort to ledger lines. Furthermore, we can assume that the exact line chosen would depend upon the tessitura of the music. The C clef was used more often than the F clef.

Both of these examples denote the notes F, G, A.

Figures 1a and 1b

Rhythm

The pulse of the music was usually based on the breve (Latin for *short)*, denoted by a square on the stave at the appropriate pitch, the symbols used above in figures 1a and 1b are all breves. There were three other lengths of note in addition to the breve: the double-long, or maxima, the long and the semi-breve. Collectively these shapes are known as neumes.

Figure 2: G double-long, long, breve and, semi-breve neumes

In practice, most of the neumes one will come across will be either longs or breves. The ratio between the lengths of the long and breve neumes was either 2:1 or 3:1 depending on the context of the notes and on the *mode* of the piece of music, the mode of a piece of music being its underlying rhythm.

Once established, a piece would not change mode. There were six rhythmic modes following the metre of the music (see also Gallo page 5).

1. long breve
2. breve long
3. long breve breve
4. breve breve long
5. long long long long long
6. breve breve breve breve breve

The use of different rhythmic modes leads to two types of long known as the perfect long and the imperfect long. These form the 2:1 and 3:1 ratios between longs and breves. Both forms of the long neume shared the symbol shown above in figure 2, hence the modern reader will need to be aware which mode a piece is in before transcribing the music, otherwise the rhythm may be misread.

There were, furthermore, two types of breve known as the breve and the *brevis altera* or altered breve. The perfect long had a ratio of 3:1 compared with a breve, the imperfect long had a ratio of 2:1. The altered breve was double the length of a breve and therefore was the same length as an imperfect long. The ratio between a maxima and a long, and a breve and a semi-breve is always 2:1 (also see table 1).

This soon becomes complex to the novice reader of Medieval Music and sometimes leads to controversy amongst modern scholars on how to interpret the rhythm, since the mode utilised in a given piece of music is not always clear. Indeed some transcriptions are written with no specific rhythm. The complexity arises because the basic pulse of the pieces of music was often divisible by three, though from time to time the pulse or feel of the words led to a more duple feel.

We can see that the key to determining the intended rhythm depends on whether the long is perfect or imperfect, which in turn depends on the mode of the piece and context of the notes. By *context*, I mean, "Is the long followed by another long or by a breve?" These differences of rhythms are to ensure that the music is always performed using a series of perfect groups of three breves to maintain the divisible by three requirement mentioned above.

To achieve this group of three breves, we can construct table 1 (see also Parrish page 44). This table takes the breve as a pulse, the same as a crotchet usually acts as the underlying pulse in modern notation.

Neume	Rhythmic equivalent	Type of Long
long breve	minim crotchet	imperfect long
long long	dotted minim dotted mimin	perfect long
breve breve breve	crotchet crotchet crotchet	perfect long
long breve breve	dotted minim crotchet minim	perfect long, breve then altered breve = 2 perfect long

Table 1

Figure 3 gives an example of how sometimes in a piece of music a long is worth three breves and sometimes only two.

By using table 1 we can follow the following steps to show that the left and right hand sides of figure 3 are equivalent.

- Group the neumes into three groups, long-breve-breve, breve-long, long
- The first group follows line 4 of table 1, that is a dotted minim-crotchet-minim rhythm
- The other groups are not in table 1, so they follow the simple translation, breve⇒crotchet, long⇒minim.
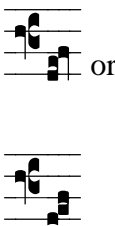

Figure 3: four groups of three perfect breves

No bar lines where used, save those indicating a breath mark (see below).

Note Groups

In modern notation, notes that are a quaver or less in value may be connected or "beamed" by a line known as a ligature. In Franco notation, note heads, or neumes, may be similarly joined, these groups of notes are then sung against one syllable to form what would now be called a slur. Table 2 lists how to write a series of notes to cover one syllable. For example, if a syllable is to be sung against two notes and the first note is the higher one uses a Podatus Neume; if the first note is the lower, one uses a Clivis Neume; is the notes are the same one uses a Distropha Neume.

With one exception the Podatus Neume the neumes are read from left to right (see Parrish page 6).

Name	Neume	Description	Example
Virga		single note (long)	D
Punctum		single note (breve)	D
Podatus		lower note then upper	B, D
Clivis		upper note then lower	D, C
Scandicus	or	three rising notes	B, C, D
Climacius		three descending notes	G, F, E
Torculus		up then down	E, F, E
Porrectus	(*fig. 4)*	down then up	G, E, F

Name	Neume	Description	Example
Podatus subbipunctis		lower note, up then down	F, A, F, E
Torculus resupinus		up down up	E, F, E, F
Porrectus flexus	*(fig. 5)*	porrectus then down	G, E, F, E
Distropha		two notes that are the same	E, E
Tristropha		three notes that are the same	E, E, E

Table 2

The positions of a neume on a stave gave the pitch of the note. The use of each of the above should be obvious with the exception of the Porrectus. The start of the long line of a Porrectus shows the first note, the end of the long diagonal line shows the middle note, see figures 6a and 6b.
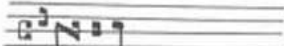
FIGURE 4:

FIGURE 5:

FIGURE 6A

Figure 6b:

Special Symbols

Finally, there are a few special symbols that are used to alter the tempo, length or pitch of a note or group of notes. A horizontal line above a group indicated a slowing down similar to a modern ritenuto. As with modern notation, a dot indicated that the previous note is held longer. Breath marks, or phrases, were indicated by a vertical line reminding us of a modern bar line.

Uniquely, the note B may be altered by means of an accidental. A more circular accidental indicated a flattened B where as a more square accidental indicated a B

natural. These were the only accidentals in use and we can see that they are the predecessors of the modern flat and natural symbols.

Conclusion

I set two tangible objectives before starting this project, and their results are attached as appendices. The first is to transcribe a piece of music from the Middle Ages and the second is to rewrite a suitable piece from modern notation into Franco notation. After performing these exercises I look forward to being able to use my newfound knowledge the next time I visit the British Museum. Appendix A contains my transcription of Figure 8 of Parrish, which dates from the 13th Century. I have used slurs to indicate note groups that would have been sung on one syllable. As expected, the main difficulty that I encountered was rhythm, though the words are helpful as a check. The modern doctrine that rhythm should be indicated precisely is difficult to ignore. I am confident however, that the transcription will suffice as a rough guide. Appendix B shows my transcription of the melody of Smaoinich into Square Notation.

Bibliography

Parrish, C (1957), The Notation of Medieval Music, Faber & Faber London

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Further Reading

These books provided the background research material for this project in addition to those books mentioned in the bibliography.

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