

Slashes, Dashes, Points, and Squares: The Development of Musical Notation

Music has been around for a long time; in almost every culture around the world we find evidence of music. Music throughout history started as mostly vocal music, it was transmitted orally with no written notation. During the early ninth and tenth century the written tradition started to be seen and developed. This marked the beginnings of music notation. Music notation has gone through many stages of development from neumes, square notes, and four-line staff, to modern notation. Although modern notation works very well, it is not necessarily superior to methods used in the Renaissance and Medieval periods.

In Western music neumes are the name given to the first type of notation used. While other cultures such as the Greeks had an older method of notation that outdates neumes, neumes were considered the beginnings of the western tradition of notation. “The word ‘neumes’ is derived from the Greek word *neuma* which means ‘a sign.’”¹ The neumes were simply a sign or series of signs that represented how a piece of music was to be performed. While the origin of neumes has been a popular topic for centuries, a clear answer as to the exact origins cannot be found. There are several theories that attempt to point to a certain spot where neumes originated,

¹ Hope R Strayer, "From Neumes to Notes: The Evolution of Music Notation." *Musical Offerings* 4, no 1. (2013): 2. <http://dx.doi.org/10.15385/jmo.2013.4.1.1>

transmission of music, confirmation that writing was for a long time in support of, rather than in competition with, the oral performance tradition.”³

Until the tenth century music still had to be learned by rote with the neumes as an aid to faster learning. Heightened neumes appeared during this time. The heightened neumes gave a better idea of where the melody was to go by giving a general contour of the notes. The early neumes just gave the number of notes that were to be sung. Heightened neumes allowed for an even better idea of what the music was to sound like without hearing it, by placing the neumes at different distances above the words. Sometimes a line was scratched or drawn to represent the pitch “A”, giving a sense of what the pitches were. Exact pitches were still relative at this point as the heights of the neumes were not exact representations of the pitches. Although there was still no complete way of notating everything that was sung, there didn’t need to be; the heightened neumes worked very well for what was needed. This made the notation of this time sufficient and not inferior to what we have today. They did not have notation like we have today because they did not need it. In the church the most important part of the chant was the text; therefore, the melody needed to be something that made the text more memorable. The neumes simply made it easier to remember the contour of the melody while the words governed the rhythms. This picture illustrates this and shows the heightened neumatic notation with the line to represent a single pitch.

³ Leo Treitler, “The Early History of Music Writing in the West.” *Journal of the American Musicological Society* 35, no. 2 (1982): 237. <http://www.jstor.org/stable/831146>.

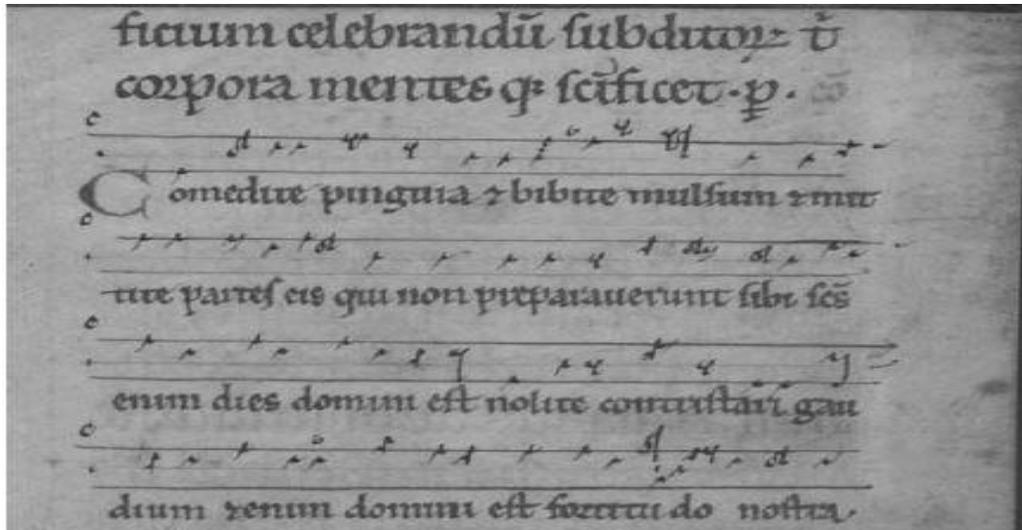


Figure 3: chant *Comedite pinguia* heightened neumes⁴

Heightened neumes were used by those in the church; those who did the actual chanting had to have all the tunes memorized. Memorization for some may have been easy, but for others it may have taken a long time with many repetitions. There were countless chants during this time, making learning all the words and tunes a daunting task. This was an incredible feat; the hours of music that would have been memorized is incomprehensible to us today. Neumes and heightened neumes were developed as a way to aid in the memorization of the chants.

The next major event in music notation was the development of the four-line staff in the early eleventh century by Guido d'Arezzo. The staff solidified the pitches, giving whoever had the music an almost complete knowledge of the piece without ever having to hear it. The lines of the staff were most often drawn with red and black ink, making the staff very visible. The line for f was in red, and c, though sometimes in red, was often put in yellow, or sometimes green. The lines on the staff fluctuated on what each line stood for which note. At this point the notes

⁴Kathleen E. Nelson, "Fragments of Medieval Chant Manuscripts at the University of Sydney." *Fontes Artis Musicae* 55, no. 1 (2008): 227.

became more important on the page than the words. This was simply because more room was required for a person to be able to read and decipher the notes on the staff than the contour of neumatic notation. The neumes were not overly prominent; the words were of more importance. But in the early staff notation the musical notation began to become more important than the words. The staff notation required more room because it was much more intricate, and contained a lot of information that needed to be passed to the reader. The four line staff needed more space than did the heightened neumes because the size of the staff stayed constant throughout the piece.

The four line staff had two different clefs to represent what notes the staves represented. The first clef was the C-clef, which would have been placed on one of the top three lines of the staff. It looked like a C in shape and represented where middle C on the keyboard would be in the staff. The next clef was the F clef; the F clef would have been placed on one of the top two lines of the staff. The middle of the F shaped sign showed where the F below middle C.

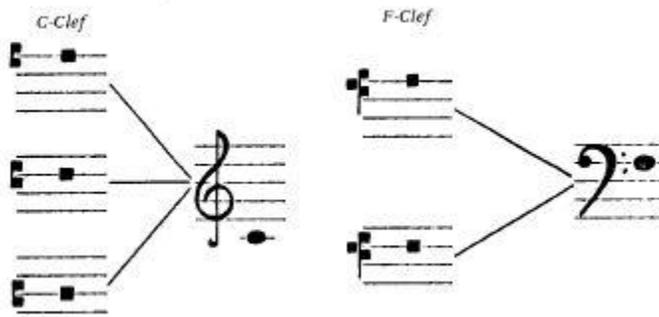


Figure 4: Interpretation of the C and F clefs⁵

⁵ Lloyd Ultan, *Music Theory Problems and Practices in the Middle Ages and Renaissance*. (New York: W. W. Norton and Company, Inc., 1957), 4.

The four-line staff is still standard for use in notating plainchant today. Mensural notation developed out of the plainchant neumatic notation. In plainchant notation the squares and diamonds were placed on the four-line staff to represent pitches but not to represent the durations of notes. This is because in plainchant the rhythm was not the primary focus or concern, the notes were. In the thirteenth century there was an increasing focus on polyphony. This led to the need for music to have measured time to keep all the parts straight. It would have been very hard to keep two parts together, and keeping together the four or more parts that polyphony required would have been difficult. “Hence, the time-values of the individual notes were indicated in the various shapes of their symbols-as rectangles, squares, and diamonds, either by leaving them bare, or else by adding distinctive stems and later even flags.”⁶ Curt Sachs. With this beginning of notating rhythms as well as the notes the oral tradition was slowly fading into the past. It was becoming less and less important for a person to hear the music to be able to perform it. If a person was able to read the notation, then hearing the song sung first was almost unnecessary. This gave music a new advantage; it did not have to be transmitted by a person who knew the chant. The chant could be carried from one place to another by any messenger.

In mensural notation the standard note, the breve, could be divided both into three notes and into two notes depending on the mensuration symbol. This development came out of the Ars Nova period which simply means “new art”. A couple of the developments of the Ars Nova are the binary and ternary division of notes. This allowed music to have several of what would in our modern terminology be different key signatures. The perfect time signature was considered the 9/8 time signature because it had three sets of three. Three symbolized the perfection of the

⁶ Sachs, 365.

trinity. The imperfect time signature would have been the 2/4 time signature which is two sets of two. The sign for these time markings looked like circles or half circles with dots inside them or slashes through them.

<i>Sign</i>	<i>Mensuration</i>
⊙	■ ◆ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
○	◆ ■ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
⊙	◆ ◆ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
○	■ ◆ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓

Figure 5: Mensural notation symbols interpreted⁷

Heading into the Baroque period in the seventeenth century we see a rise in instrumental music. Per Dahl says, “With the rise of instrumental music in the Baroque era, musical notation became more accurate and the specifications from the composer on how to perform his musical work became more detailed.”⁸ In the early Baroque era we see a shift from the square notation to an early version of our modern notation. The five line staff and the rounded notes were first seen in this period.

⁷ Jason Stoessel, “Revisiting ‘Aÿ, mare, amice mi care’: insights into late medieval music notation” *Early Music*, 40, no. 3 (2012): 456. <http://0-www.jstor.org.library.cedarville.edu/stable/23327766>

⁸ Per Dahl, “The Rise and Fall of Literacy in Classical Music: An Essay On Musical Notation.” *Fontes Artis Musicae* 56, no. 1 (2009): 69.

In the early tenth and eleventh centuries when early neumatic notations were first being used the tradition was predominantly oral and thus focused on the ear and memory. Now the focus is on reading the notes and doing exactly what they say. Does this make one method better than the other? No, they are different methods coming from different traditions and needs. Both the oral tradition and the written tradition are useful and serve their purpose. Maybe a combination of both of them is what we need in our music classes today, learning to use the ear while learning to read notes. There are benefits to both methods. Learning by ear has the benefit of being able to memorize large amounts of music; learning by note ensures that one can play in a group and doesn't have to hear a piece to be able to perform it.

Neumatic notation was developed and used as a guide to show how many notes were to be sung; heightened neumes were to give both the number of notes and a general contour. The oral tradition was still there and was used in the learning process; chants would be sung and the words and neumes would be used as a guide. Square four-line staff notation and mensural notation were to give exact pitches and timings; this made the oral tradition almost not needed. The only reason it would be used was to get the dynamics and any inflection that would not have been notated. The last is modern notation which gives every possible musical expression, from notes and rhythms to dynamics and tempos. Thus throughout the development of western notation the oral tradition and the written tradition have been used. The oral, through no longer necessary for music to continue, should not be forgotten. It is still important to the development of a competent musician.

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