

THE DEVELOPMENT OF WESTERN MUSIC NOTATION

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Abstract

This paper will seek to trace the development of human music communication and processing through the medium of notated music. This paper will cover notion from its earliest inception in the cradle of man to the current notation of the modern era.

Notation in the history of western music has been the catalyst for the transference of ideas for over a millennium. It is also due to this catalyst that the rapid development of ever more complex music could occur with the onset of such a viable form of communication to transfer knowledge. What notation did to music's development is what the onset of the written word did for the evolution of human speech and communication.

Human speech was truly the primary means for the transmission of musical knowledge since the beginning of recorded history. Each culture across the globe would partake in their oral transmission of knowledge in some capacity. Some cultures would even revere members of their society for being the bearers of the history and knowledge of a people, carried on through their music. The music that would be carried in these oral traditions would be both sacred and secular in nature. In the west, there would be no exception to this rule. However, since notation would first propagate in the church, there would be many performing groups that would continue this tradition of oral transmission as their main way of continuing to perform pieces.

The first instances of notation would actually appear in the present-day Middle East, home to then the Babylonian Empire. It would be here, circa 1400-1250 BCE, that notation would first appear in its earliest form. It would be on clay tablets where the Babylonians would devise a system for naming their intervals, and then put it under their texts to create a form of music notation. One of the last remaining examples of this notation is the clay tablet from Ugarit, dedicated to Nikkal, a wife of the moon god. Though it cannot be understood today nor is its author known, it still remains as a recipe from the past that many interpretations can be interpolated upon.

Perhaps due to their geographical and historical proximity, the ancient Greeks would be the next civilization, and the first western one, to develop a system of music notation. Their system would rely, like the Babylonians, on a system of letters to indicate the pitched music. The main difference being the fact that the Greeks included an arrangement of dots and lines over the letters to indicate rhythm, something that the Babylonians had not done in their own time. It is because of this innovation by the Greeks that musicians today are able to accurately reconstruct music that has been left behind. The most famous from these pieces of antiquity is the *Epitaph of Seikilos*, dating from the first century CE and whose author is unknown, though assumed to be the spouse of Seikilos. Similar to the Babylonian notation, it is done on a stone where it was able to be preserved into the modern era. This is unlike the other ancient Greek work to survive, being an excerpt of *Orestes* by Euripides from circa 200 BCE, written on fine papyrus.

With the inception of notation that could now denote not only pitch, but rhythm, there seemed to have been the inception of a more fully realized system of music. However, much of the music from the ancient Greeks and Romans would be lost, or not recorded in a manner that is accessible today. This is mainly due to the fact that notation was still a niche portion of the transference of music, and thus, for nearly a millennium there would be a loss of notated music in the western world.

It would be in the Carolingian Era that music would start to come on a course back toward its notation through the medium of standardization. Pope Gregory would become famous for receiving his chants from the Holy Spirit, and it would be through the less famous efforts of Charlemagne that these chants would be disseminated throughout his empire. It was through Charlemagne's efforts to standardize chant in the hopes of unifying the church and his domain which would give rise to the first forms of music notation in the western world since the ancient

Greeks. Famously as well, when Gregory received these chants from the Holy Spirit, there was no form of music notation yet invented, so the dissemination of these songs would fall on the monks of Charlemagne's court who would devise a form of notation circa 850 CE.

The notation that would be developed for the transference of this unifying musical knowledge would be based on neumes, which are the earliest notational signs in the west outside of the ancient Greeks. Neumes are responsible for indicating gesture and act as reminders to melodic shapes. Following the development of unheightened neumes would come the heightened neumes, which are meant to help show the intervallic relationships between neumes. An example of neumes in all variations can be found in the *Gradual Viderunt omnes*, who's author is unknown, but the melody would be adjusted for these different forms of notation consistently.

The next issue with notation that was slowly beginning to develop once more in the west would be how to find pitches from the onset of a piece. The first to make a valid suggestion would be Guido of Arezzo, suggesting that there should be lines added to the neumes to add true intervallic relations. These lines could also be accompanied with note names in the left-hand margin of the work. However, the two most defining and distinct features that he proposed would be the adoption of two specific lines on F and C, marked in red and yellow respectively, to indicated these two pitch landmarks in early chant. Again, the best example of Guido's suggestions can be found in a version of the *Gradual Viderunt omnes*. At this point in western notational history, music would have four staves and be metrically free, containing two main clefs: the C clef and the F clef. These being positioned at different portions of the staff would create for music to be read intervallically with much more ease than prior.

The Notre Dame school of the twelfth and thirteenth centuries would be the first since the ancient Greeks to formulate a system of notation that would encompass rhythm. This development meant the onset of something that had not yet been possible in formalized notated music: complex and intricate polyphony. Score notation would become a somewhat common practice as it allowed for a separation of voices with heightened neumes. Score notation would be accomplished with the creation of a red line that would separate multiple voices which were already overlaid on top of text. Notes would also begin to be grouped into ligatures consisting of combinations of longs and breves, either in groups of two or three. The compositions of the Notre Dame school would be termed organum and the two greatest composers driving the acceleration of music notation would be Leonin and Perotin. Each would have their own organum setting of the *Gradual Viderunt omnes* in the style of their school.

However, it would be Franconian notation that would then add the element of duration to notes. Developed in Cologne circa 1280 CE, the notational system would build upon that of the Notre Dame school and allow again for the further development of polyphony in western music. The largest proponent of Franconian notation would be Adam de la Halle and his pieces such as *De ma dame vient*. In conjunction to the new Franconian notation would be its triggering of three movements, Italian trecento, the Ars Nova, and the Ars Subtilier.

The Italian trecento would be the direct response to Franconian notation, taking place circa 1300 CE. Its main contribution to the history of western notation would be the grouping of breves in pairs of two or three, much like the rhythmic modes that were created by the Notre Dame School. These pairings most likely became the solidification for the later creation of Solesmes chant. With this, there was also the creation of new polyphonic forms, the foremost composer of which being Francesco Landini with works like *Non avrà ma' pietà*.

Meanwhile, the Ars Nova would create a new notational system of denoting rhythm in relation to the Franconian system by the means of the minim. The minim is meant to denote the smallest value achievable at the time, that being the modern half note. Another addition of the Ars Nova would be the introduction of time signatures in the form of mensuration signs, denoting the meter that a piece was meant to be sung in. The Ars Nova would occur from circa 1291-1361 CE, meaning that these changes would take place over approximately a century of time. In that century, the contrapuntal compositional techniques of Philippe de Vitry would drive the Ars Nova through his compositions such as *Cum statua*. Yet even greater than Vitry would be Guillaume de Machaut and his works such as *La Messe de Nostre Dame*.

As nearly an answer to the rigid conjectures of the Ars Nova came the movement of the Ars Subtilier. This movement focused much more on the artistic quality that notation could have beyond its functional purpose. This would begin circa 1370 CE and reign in a time period of ornately decorated music, elaborate designs in the music itself, and the implementation of both red and black notation. Foremost composer of the era being Philipoctus de Caserta with compositions like *En remirant vo douce pourtraiture*.

Entering into the renaissance, the largest shift in music notation was about to occur with the onset of music printing. Ottaviano Petrucci would print the first music manuscript completely in 1501 CE and change how music was able to be disseminated across Europe and the globe. No longer relying on the work of scribes, music entered into a larger coloristic change than ever before. Though there had been a shifting from black notation to white notation due to changes in materials that scribes were printing on, the advent of printed music solidified white notation for the era of the renaissance.

Consumability of music increased with the advent of part books, otherwise known as table books, which could be put into the homes of many Europeans who had not had access to notated music prior. With this, printed tablature for instruments became ever more popular too, and led to the codifying of different systems of tablature from across the European continent.

It is clear that throughout the history of western musical notation, the ambitions of generations of composers would advance the ways that music would be notated over the centuries. What can also be said to hold true is the fact that technological advancements have helped with the dissemination of those composers' ideas throughout the European continent and globally.

In modernity, the usage of notation is becoming ever less frequent by musicians at the amateur level. Many applications that are made for the production of popular music today rely on the ability of the user to understand a complex interface to lay pitches or sounds down on a sort of timeline and manipulate them from this point. Also in existence are applications for engraving music as we know it today, coming in the forms of MuseScore, Finale, or Sibelius among others.

After diving chronologically into the development of western music notation, I find myself able to appreciate more the fact that the ideas of composers would be the catalyst for such change in notational practices, in some instances being created in a short duration of time. I have personally, through a compositional lens, felt the need to amend what some hold as common practice in overtone singing notation in favor of a system that I believe makes it much easier for modern vocalist to approach contemporary classical vocal literature dealing with vocal harmonics production. Outside of this, I do deal with the rules of notation each day as a composer, and I never truly think about composing something that would need to use notation in

a way that is considered unconventional. Especially when today there exists music based off of graphic scores, indeterminacy, and chance procedures. Perhaps this is due to the fact that I enjoy creating music that is easily accessible to any audience; that I find music not close to standard notational convention troublesome. All this to say that I do hope someday to make music that will push notational conventions and still be accessible music to all persons.