

THE METRONOME IN THE PERFORMANCE OF SEVENTEENTH- AND EIGHTEENTH-CENTURY MUSIC

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Music composed during the seventeenth and eighteenth century was seen as a communication system closely related to eloquent speech. The creative processes, both composing and performance, were grounded on the principles of classical rhetoric. However, when handling temporal issues in the performance of Baroque music, a common feature of twentieth-century handbooks is an attempt towards the objective or historical correctness of the tempi. My question as a performing harpsichordist was thus whether applying those correct tempi to a performance would actually help me to achieve my aspiration on stage to deliver a rhetorical performance that would enchant the audience. Moreover, is using a twentieth-century tool, a metronome, even justified when explaining seventeenth- and eighteenth-century music?

In 1752, Johann Joachim Quantz, court flutist to Frederick the Great in Berlin, published his *Versuch einer Anweisung die Flöte traversiere zu spielen (On Playing the Flute)*. This treatise has been quoted on several occasions in twentieth-century handbooks on Baroque music performance. In his book *The Rules of Musical Interpretation in the Baroque Era* Jean Veilhan (Veilhan 1979: 61) suggested metronomic values of different tempi, based on a pulse beat at 80 to the minute as an alleged standard by Quantz:

$\text{♩} = 40$	$\text{♩} = 40$	$\text{♩} = 80$	$\text{♩} = 120$	$\text{♩} = 160$
$\text{♪} = 40$	$\text{♩} = 40$	$\text{♩} = 80$		$\text{♩} = 160$
Adagio assai	Adagio cantabile	Allegretto	Allegro	Allegro assai
Adagio pesante	Adagio spiritoso	Allegro ma non tanto	Poco allegro	Allegro di molto
Lento	Arioso	Allegro ma non troppo	Vivace	Presto
Largo assai	Larghetto	Allegro ma non presto		etc.
Mesto	Soave	etc.		
Grave	Dolce			
etc.	Poco andante			
	Affettuoso			
	Pomposo			
	Maestoso			
	Alla siciliana			
	etc.			

TABLE 1. Classification of tempo indications with their metronomic values according to Veilhan.

Resting upon similar calculations, a decade later flutist Hans-Peter Schmitz (Schmitz 1987: 77) regretfully stated that for our time, the tempi of Quantz are extremely fast. According to Schmitz's calculations, a menuet, for instance, should be played at tempo 160 bpm. This viewpoint ultimately concluded in the twenty-first century as the Quantz's tempi were declared

almost non-applicable by Paul Heuser (Heuser 2004: 127). More precisely, Heuser stated that Quantz's *Pulsschlagtheorie* (pulse beat theory) is problematic for modern use and only applicable for slow music.

This line of thinking proves to be dubious when we go back to the primary source, to Quantz himself. His exact words when introducing the so-called *Pulsschlagtheorie* are:

Das Mittel welches ich zur Richtschnur des Zeitmaaß am dienstlichen befinde, ist um so viel bequemer, ie weniger Mühe es kostet, desselben habhaft zu werden; weil es ein jeder immer bey sich hat. Es ist der Pulsschlag an der Hand eines gesunden Menschen. [In my opinion, the best tool for establishing an appropriate tempo (*Zeitmaaß*) is the more convenient the less trouble it will cause, for the reason that everyone is in possession of that tool. It is the pulse in the hand of a healthy person.] (Quantz 1752 [2004]: 261).

As to the extremely fast, in performance non-applicable tempi, Quantz's answer is as follows:

Was in vorigen Zeiten recht geschwind gehen sollte, wurde fast noch einmal so langsam gespielt als heutiges Tages. Wo *Allegro assai*, *Presto*, *Furiosi*, d. v. m. haben stund, das war eben so geschrieben, und wurde fast nicht geschwinder gespielt, als man heutiges Tages das *Allegretto* schreibt und ausführet. Die vielen geschwinden Noten, in den Instrumentalstücken der vorigen deutschen Componisten, sahen also viel schwerer und gefährlicher aus, als sie klungen. [What should have been played fast at earlier times is played slow these days. Where *Allegro assai*, *Presto*, *Furiosi*, etc. was written, would not be played faster than the musician would write and perform *Allegretto* today. The many fast notes in the instrumental pieces of old German masters appeared much more complicated and dangerous than they sounded.] (Quantz 1752: 263).

It is estimated that the normal pulse of a healthy person can reach from 60-100 bpm, depending of the age, size, physical condition, and temper of that very person. Thus, choosing a correct tempo in a performance situation is a rather subjective and vague matter. Nevertheless, contemporary writings on Baroque music continue to operate with metronomic values with the highest level of exactness. I have come across a research paper published in 2014 where observation outcomes on Baroque dance tempi are given as 68,86 bpm and 68,47 bpm for courante and sarabande respectively. Admitting to having presented this example without its exact context, I maintain my disbelief in the necessity of using the terms *sarabande* and *bpm* in one sentence, that is, using twenty-first century tools to explain 250-year-old music.

To sum up, the exact tempo of a seventeenth- and eighteenth-century musical work in a performance situation can and should depend on a number of variables like:

- the pulse of a performing musician,
- local playing tradition,
- the shortest note values in the piece,

- the number of harmonic changes per bar, and
- verbal tempo indications.

Tempo is a subjective matter in performance practice. Therefore, several tempo options within a certain range can be regarded as correct as long as the piece maintains its characteristic movement, drive, and appeal to the players and, foremost, to listeners.

It is also worth mentioning that the metronome was not applied to practical music-making until a later era. Ludwig van Beethoven's letters to his publisher reveal that *Metronomisierung* (metronomization) had played a role in the successful premiere of his Ninth Symphony. This had been made possible by Johann Nepomuk Mälzel (1722-1838) who, among inventing several other technical devices, had started manufacturing metronomes suitable for everyday use. A rough hundred years earlier, Etienne Loulié reported to have invented a pendulum construction of almost two meters in height called the *chronomètre* (Loulié 1696: 81-88). Due to its inconvenient size, though, the *chronomètre* remained merely a technical experiment—in his treatise from 1752, Quantz writes that the invention by Loulié was never implemented and that the existence of the chronometer fell into oblivion (Quantz 1752: 261).

Even though metronomes were not yet in use in the eighteenth century, the idea of the continuous “click” was not entirely extrinsic towards the end of the century. In 1771, Johann Philipp Kirnberger suggested (Grant 2014: 6) that when thinking of musical time, the musician should imagine beats of equal weight separated from each other by an equal amount of time. This approach was very much grounded on the Newtonian idea of constantly flowing, absolute time. During the eighteenth century, this idea of absolute time had subsequently replaced the Aristotelian approach to time. For Aristotle, the motion of time was not a continuous and independent absolute but expressed through the motion of events changing from state A to state B, from state B to state C, for instance, from spring to summer, from summer to fall. Likewise, pre-Kirnbergerian musical treatises, when we speak of musical time, use the term *tactus*, which is in most cases described as the up-and-down motion of a conducting hand, a hand going from one state to another and back, motion with miniature intersections or turning points in between. The same Aristotelian idea, motion with intersections, is reflected in the *Pulsschlagtheorie* that Quantz described, whereas his colleague and contemporary Johann Mattheson even speaks of the diastole and systole of the *Tact* (Mattheson 1739 [2008]: 268).

It seems that Newtonian absolute time didn't manifest itself in music any earlier than the second half of the eighteenth century (Kirnberger). However, when we take an overall look at the compositions of the mid-eighteenth century (until the “end” of Baroque) and those of the seventeenth century, there appears to be one substantial difference in the style of composition.

It is my impression as a harpsichordist and *continuo*-player that time in seventeenth-century musical pieces tends to flow in an Aristotelian way, that is, it is a motion with intersections from A to B and so forth. I call this compositional style *fragmentary*, in the sense that a relatively short piece has been subdivided into smaller parts or sections, whereas excluding one or the other section from the performance doesn't affect the general flow and impression of the piece. It is very much the case in Italian harpsichord music of the seventeenth century and in the compositions of the English virginalists of the late Renaissance. It is not uncommon that the sections have been numbered by the composer *prima parte, seconda parte ... ultima parte*. Girolamo Frescobaldi, one of the most significant keyboard composers of the seventeenth century, even legitimates leaving out parts of his *toccate* upon the desire of performer—a practice unthinkable within the music written by Johann Sebastian Bach. Likewise, the fragmentary compositional style can be seen in the earliest violin sonatas of the 1620s and 1630s by Dario Castello or Biagio Marini. Constituting numerous parts of different *affetti* and techniques, they provide a completely different acoustic landscape than the violin sonatas by Arcangelo Corelli, where music within one movement of a sonata has an unbreakable flow. It is thus to be concluded that even though first implied by Kirnberger, the change from Aristotelian time to Newtonian occurred in music approximately at the same time as in philosophy, in the first half of the eighteenth century, if not earlier.

Despite the occurrence of Newtonian flow in eighteenth-century music, it is important to keep in mind that in the eighteenth century, music still aimed to speech-like, rhetorical. Thus, even continuousness in the flow of time does not equal metronomical monotony in music. Authors such as Judy Tarling, Bruce Haynes, or Andrew Lawrence-King provide further useful reading on various techniques of the speech-like delivery of both seventeenth- and eighteenth-century music.

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