Baroque Practice

A Brief History of the Tuning Pitch A

...From the Baroque Era to the Present

by Mary Sorlie

Since the beginning of the pandemic, many of us have found ourselves tuning and teaching students how to tune their instruments via Zoom and FaceTime. Sometimes this has worked, sometimes it has not. In the first few weeks of the pandemic, I had a student whose violin was in tune with itself, but all of the strings were ¼ step flat. Instead of spending 30 minutes trying to tune an instrument and/or break a string or two, we left the pitch where it was, which was about A430. The student was able to play their lesson material, and we were both reminded of how tuning pitches have changed and continue to change. Step back about 350 years, and a changing pitch center would have been the norm in the life of a musician.

Britannica defines pitch as "the position of a single sound in the complete range of sounds." Groves describes it as "the particular quality of a sound (e.g. an individual musical note) that fixed its position in the scale". This is different from temperament, which is "a way of tuning the notes of the scale using intervals that have been modified (tempered) from their pure forms."[1] Pitch deals with a single note or sound, while temperament deals with the pitches within a scale. Both pitch and tuning systems have varied greatly in the past, as well as today. Today, a modern European orchestra might tune to A443-445, while a HIP (historically informed performance) orchestra, might tune to A415. This article will deal primarily with pitch, or the placement of a note in the scale.

Prior to the 19th century, there was no universally recognized pitch center or standard. In the baroque era, pitch was based on the pitch of the local organ. Leopold Mozart stated that, "When one plays with an organ or piano, then the tuning must adjust to them…"[2] These tuning pitches could range anywhere from A380-480. One could travel from city to city and be met with various pitch centers. The pitch variance from one church to another church in the same city could also vary by several half-steps. The pitch used for an English cathedral organ in the 17th century, could be several semitones lower than that used for a keyboard in the same city. This changing pitch center may have been easier for a string player to deal with, but this was not true for brass players. String players and harpsichordists had greater ability to vary the pitch, depending on the strength and thickness of their strings. John Playford (1623-1686/7) directed his viol players to tune the top string as high as it "conveniently will bear without breaking, and then tune the others to it."[3] Brass players owned different instruments, or adapted with crooks that allowed them to play at different pitches.

Most of what we know about tuning comes from the pitch levels of surviving instruments or from early music documents. The tuning fork is also another tool in helping us learn about pitch in the baroque. The development of the tuning fork is credited to John Shore (1662-1752). He was a trumpeter and lutist that both Handel and Purcell wrote specific trumpet parts for. The tuning fork that Shore gave to Handel was tuned at about A423. The tuning fork has allowed musicologists to place the pitch at where early music was played. Here is just a small sample of tuning standards that have been used the past 350 years:

1640	A457, Vienna.
1699	A404, Paris
1751	A422.5, London.
1759	A309, Cambridge.
1783	A409, Paris.
1830	A435, Dresden
1834	A441, Berlin
1857	A446, Naples.
1885	A435, Vienna

One of the first musicians to advocate for a standard pitch was composer Michael Praetorius. In 1619, Praetorius proposed the pitch of A425 as the standard. He pointed out that higher pitches led to broken strings. Joachim Quantz stated that, "the pitch regularly used for tuning in an orchestra has always varied considerably according to time and place. At the present time (1752) the Venetian pitch is the highest; it is almost the same as our old choir pitch. The Roman pitch of about twenty years ago was low, and was equal to that of Paris. At present, however, the Parisian pitch is beginning almost to equal that of Venice. The diversity of pitches used for tuning is most detrimental to music in general…it is much to be hoped that a single pitch for tuning may be introduced at all places."[4]

Almost 100 years after Quantz' desire for a uniform tuning pitch, the French government set up a commission for a standard pitch and passed a law in February of 1859 that established the tuning pitch to be A435. This is known as the diapason normal. Other countries followed this pitch standard, and in an 1885 conference in Vienna, A435 became the pitch standard for much of Europe. In 1939, an international conference recommended that A440 become the new pitch standard. In 1955, the International Organization for Standardization established concert pitch at A440. The next time you tune to an A, remember that many committee meetings helped to establish that pitch!

The tuning pitch standard that we use today continues to evolve. Tone and brightness are just some of the things that can be affected by tuning. Modern orchestras continue to raise their tuning pitch to an average of A442-443. But sometimes in a modern musical world, one needs to use a pitch standard that was used in our musical past. That lesson with my student early on in the pandemic was not a lesson played on an out of tune instrument, but rather played on an instrument with a different pitch center.

1 Ross Duffin, *How Equal Temperament Ruined Harmony, (and Why You Should Care)*, New York, NY: W.W. Norton and Company, 2007.

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2 Leopold Mozart, *A Treatise on the Fundamental Principles of Violin Playing*, translated by Editha Knocker, Oxford, England: Oxford University Press, 1985.
3 Mary Cyr, *Performing Baroque Music*, Portland, OR: Amadeus Press, 1992.
4 Edward R. Reilly, *On Playing the Flute by Johann Joachim Quantz*, 2nd Edition, New York, NY: Schirmer Books, 1985.

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