

SPLIT THE DIFFERENCE

Mike Diprose

Welcome back to the adventures of those of us doing derr on the holeless natural trumpet.

Of course, the aria in BWV 20 without holes! I am very fanatic in that aspect, and convinced that in spite of what has been said and believed for years, it MUST be possible, for the simple evidence that it WAS done! I don't believe that intelligent composers wrote things that were unplayable in a convincing way – even if there is a long way to go now, to find back and to get accustomed to the technique of bending the intonation on some harmonics... The audience, of course, does not realize the problems, and only listens to the result, which makes the whole adventure even more demanding. But the evolution has started, it can't be stopped anymore, I am sure and happy about that. Thanks for helping!

(Quoted with permission from an email by Sigiswald Kuijken)

Follow that!

Well, Sigiswald and others might be interested to learn about some recent research papers published by German scholars, such as:

Wolfgang Auhagen 'Zur Entstehung ser Tonartencharakteristik im 18. Jahrhundert', UNI Köln from 24th. November 2003.
www.uni-koeln.de/~phil-fak/muwi/pahl/fb_fricke/auhagen.html

zur Nedden, 'Musikalische Temperatur: Stimmungslehre' Humboldt Universität zu Berlin, Berlin Sommersemester 2003, Seminar Physik der musikinstrumente: Stimmungslehre

Reinhard Kopiez 'Intonation of Harmonic Intervals: Adaptability of Expert Musicians to Equal Temperament and Just Intonation', Hannover University of Music and Drama, Music Perception Summer 2003, Vol. 20, No 4, 383-410
www.musicweb.html-hannover.de/intonation/

The upshot of these seems to be that, unsurprisingly, for their music to sound good with natural trumpets, musicians used temperaments which complemented them. Not impossible on infinitely adjustable string instruments and winds using fingering patterns from the time. This even extended in some cases to wider octave spacing...

Enter Nagel, Droschler and Hainlein trumpets. These 17th-century instruments differ from the more standard Ebe and Haas 18th-century models with a very slightly larger bore but mainly in bell profile, which has a less dramatic flare. We have had copies of these instruments for some time and were wondering why, until we recently started to use more historically informed and very short mouthpieces. The trade-off for a darker, richer sound is the freedom to place notes almost at will (particularly those 11th & 13th harmonics, which become quite credible to modern-tempered ears), making sense of the written B

naturals, G sharps and E flats (for trumpet in C) encountered in works by Pezel, Vejvanovsky, Stradella and their peers.

So, we have, in effect, C17 natural trumpets that can be almost equally tempered. What's to stop us conforming to Valotti, or simply equal temperament itself? In a word: resonance.

The harmonic series exists in all sound. It is all around us, from the buzz of a bee to the squeal of a train's brakes. It is part of the universe, of existence, of us. Overtones are what gives different sounds their ... sound. The richness of a tonic major chord sounded with notes tuned to the harmonic series has beauty beyond belief. The notes within it, which are already present as overtones of the bass note, resonate with each other to produce resultant notes (see 'Partial Success', *EMR* Dec 2005). These resultants then resonate further, with themselves and the original chord, creating what could be described as truth or, dare I say it: love – something that we recognise from deep within us – taking wings.

With our ears shackled to temperaments from the classical era and later (which are designed for intellectual pursuits like clever modulation to remote keys at the expense of pure intervals), we are being denied an essence of Baroque music. Composers wrote sparingly for trumpets (whose timbres abound in overtones) to accentuate the triumphant return to a resounding home key. Cynics might suggest that trumpets and tympani were used at climactic moments to wake the audience enough to clap and leave. As the Italians say: 'Bed is the poor man's opera'.

So, conversely, why do we even bother with the heart-breaking practice of learning to bend (or 'place') notes?

It was mentioned earlier that composers often wrote some notes from outside the harmonic series. However, the notes we most commonly adjust are the 11th and 13th harmonics i.e. G/G# and B (on a trumpet pitched in D), because by doing this, it is possible to play a pure 4th between D and G, a pure major 3rd between G and B. This enables the subdominant chord of G to ring true. The minor 3rd between E and G is an interesting case: if the harmony is the dominant chord of A7, a resultant A can be made; lower the G slightly more, and a resultant C appears. Another aspect of playing with 'just' intonation is to release characteristics of the different modal triads – there were reasons why modes such as Dorian, Lydian etc were selected and used carefully in pre-baroque music, which may also have been influenced by the modes used in eastern music – characteristics which are lost in our blinkered, twelve-tone world. For instance, E minor, as

chord II in D major has a darker, more sombre resonance than its role as a wider-spaced chord III in C major. Both triads, however different in colour, have a resultant E.

In a B minor triad as chord 6 (Aolean) of D major, it is even possible to play the high B too sharp on a nat! The subtlety of such delicate harmonic inflection comes not through wilfully 'bending' notes, but by allowing them to settle in context.

So why play with holes? Well, because innocent audiences expect their trumpets to be loud and, to an extent, like them played like machine guns. When performing against a large choir of a hundred or so singers, one needs volume! Although the historical solution to this is to have a pyramid-shaped sound design, with the power coming from the tympani and principale – the clarini fluttering away above – how authentic do we really need to be anyway? We have a cure for syphilis and tupperware now.

The world has advanced in countless ways. Rather than working for years in the same court with the same people, musicians can fit around the globe playing in a different country with a different group every night. For this to work, there need to be certain standard practices, which, at the moment, include a few little 'cheats' or solutions. To fund my studies, I often have to play the holed nat – always with a slight pang of guilt as I walk on stage with an 'historical instrument' whose design concept is predated by the theramin, synthesizer and electric guitar... baroque and roll indeed!

No mention has yet been made, in these articles, of Edward Tarr, the granddaddy of the Baroque trumpet. Much has been written about Ed, including a recent, mainly biographical piece in the International Trumpet Guild magazine. Suffice it to say that his name is connected with a vast proportion of the Baroque trumpet repertoire as discoverer, editor, academic and/or performer. Ed kindly sat through an interview recently, which with his permission is paraphrased below.

Since coming from the US to Europe in 1999 armed with a home-made natural trumpet, Ed has made probably the greatest overall contribution to the emergence of this once-lost art and most other historic brass practices, such as the cornetto, keyed and 'long F' trumpets, historic cornets etc. His books and editions are essential to any serious trumpeter – modern players included – and his legacy of recordings and renowned pupils, such as Niklas Eklund, Guy Ferber, Gilles Rapin (also a no-holes and tromba di tirasi wizard) and Reinhold Friedrich continue to adorn CD racks and concert halls worldwide. Ed was based in Basel for many years; he founded the early brass department and taught at the Schola for 29 years from 1972 to 2001.

Most of Ed's playing on baroque trumpets was with holes, stylistically well informed and beautiful. He also, a few times, fulfilled his ambition (and our *raison d'être*) to play

trumpets straight from the walls of museums without the aid of a hand drill, including a recording of Handel's Fireworks music and Charamela Real – a collection of Portuguese fanfares and short pieces, which were recorded on twelve original instruments from the National Coach Museum in Lisbon.

As mentioned in a previous *EMR* article 'Partial Success', at the beginning of historically informed performance of baroque music, trumpeters were faced with a particularly grim challenge. At the same time came the emergence of the piccolo trumpet – a valved instrument pitched in high G, A or B flat that enabled clarino parts to be played with relative ease. The challenge, however, was not the range per se but the endurance and (relatively quiet) style required both for getting through a piece and making it sound like music.

Ed the musicologist researched and applied the learning to Ed the player to find elegant solutions for piccolo and vented natural trumpets at a time when modern brass playing was generally going in the opposite direction of pure volume (dragged by the development of larger-bore trombones). You will be able to read about these solutions at more length in Ed's forthcoming book *Articulation in Early Wind Music: A Source Book* (by EHT with Bruce Dickey, another renowned ex-pupil of Ed's).

It is inconceivable that, without the invaluable research and practice by Ed and his peers, we would even have attempted to play holeless nats now. Upon retirement from the Schola, Ed had no hesitation in passing his job over to Jean-Francois Madeuf and still shows a keen interest in the trumpet department. Regardless of the instrument on which one performs (and predicting a parallel situation with both types of baroque trumpets being performed on for a while to come) he maintains that the most important thing is 'communication with the audience'. 'I'm extremely thankful that we don't take authenticity as far as learning to play on horseback, go on diplomatic missions to the enemy with our eyes blindfolded, etc.' (EHT)

Coming next: the Lituus, an ingenious C19 clarinet and, after all this fuss about vent-holes in natural trumpets, why Bach and Telemann's trumpeters couldn't actually have played trumpets anyway. Confused? Try playing one.

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A simple demonstration of the difference between pure and equally tempered intervals can be found on the information page at <http://www.mathewparketrumpets.com/>