

PART II: INTONATION AND FINGERINGS

*The author has surveyed early clarinet specialists from around the world while writing the D.M.A. dissertation "Early Clarinet Performance as Described by Modern Specialists, with a Performance Edition of Mathieu Frédéric Blasius's *Ile Concerto de clarinette*," under the supervision of Kelly Burke at the University of North Carolina at Greensboro. This is the first attempt in compiling and codifying the modern performance practice of the early clarinet. Second in a series, this article will examine the intonation parameters on the early clarinet. Subsequent articles will discuss articulation, reeds, instrument selection (originals, modern replicas), and selected repertoire with reference to performance practice of the early 19th century.*

Performers interested in historical instruments such as the chalumeau or classical clarinet are usually advanced players on the modern clarinet wishing to acquire performance practice information and historical perspective. With respect to intonation and tonal response, some believe that early instruments are difficult and inaccurate. Early pedagogues such as Lefèvre, Blasius, and Backofen would agree that their instruments were less than perfect:

Pure intonation, the most important feature of every wind instrument, cannot be found in the commonplace clarinet. At least I have not had any success in finding it. Whether these faults arise unavoidably from the inherent design of the instrument, or are due to the carelessness of the instrument maker, I do not want to say.¹

The Boehm system, resulting in part from efforts to improve the clarinet's intonation and tonal response, requires customized fingerings, manipulation of the embouchure, and subtle adjustments of the tongue position in order to play in tune. Instrument design comprise acoustical compromises that have negative effects on intonation, thus assigning the performer with a responsibility to compensate by means of embouchure, airflow, and fingers. Notes are not designed to play in tune automatically. The accomplished player

Early Clarinet Pedagogy for Modern Performers

by Luc Jackman

will select fingerings suited to the equipment, musical context, and playing conditions. One might even choose slightly different fingerings for the A and B^b instruments of the same make and model. Each note or fingering has a distinct resistance, tone color, and intonation idiosyncrasies. Furthermore, adjustments must constantly be made with respect to the note's role within the musical context. This was no different 200 years ago.

As mentioned in Part I (December 2005 issue), approaching the early clarinet with modern bias is counterproductive: The main difficulties of intonation on early clarinet are created when playing reeds that are too hard and trying to make the instrument sound like its modern counterpart. Aspiring to a perfectly even scale takes away some of the early clarinet's expressive qualities: Composers used the covered notes to their musical advantage. We must ignore our modern predilection for evenness of projection and response, and cherish the covered notes. As advocated by Charles Neidich: "Have the instruments lead you in the direction which makes them [the notes] speak most easily and best in tune." The resulting tone will not necessarily match a modern player's conception of sound, especially if he/she has not heard early clarinet performances by accomplished players. Keep an open mind, experiment, and discover!

Hard reeds offer a familiar sense of resistance, but encourage too much jaw pressure, reducing flexibility of embouchure (especially when playing double-lip), and making intonation difficult. The key is to select reeds that counterbalance the resistance created by the narrow bore, small tone holes and use of cross fingerings, allowing control of the clarinet's full range with relative ease and good intonation. With soft reeds, most of the intonation issues can be corrected by means of fingers (fingerings, shading, buttress fingers, and resonating fingers), or embouchure (voicing, and tightening or loosening of the lips).

Early clarinet design differed considerably between countries and makers, making it impossible to compile a standard fingering chart. In his examination of 42 fingering charts from 1732–1816, Albert Rice remarks: "Throughout the eighteenth and nineteenth centuries, clarinets were standardized neither in their construction nor in their fingerings."³ Rice's article permits access to an exhaustive number of fingering charts in one source. Another useful compilation of fingering charts for the five-key clarinet can be found in Eugène Rousseau's dissertation.⁴ Basic fingerings are common to all fingering charts, but each instrument has its idiosyncrasies depending on the year, model, and country of manufacturing. Therefore, there are no generally applicable rules of fingering. Each player must become thoroughly acquainted with the peculiarities of his or her instrument, and develop fingerings accordingly.

In addition to selecting an appropriate "basic" fingering, intonation can further be improved by means of the fingers using shading, half-holing, and buttress fingers/resonating fingerings. Shading is performed by reducing the finger-tone hole distance, thus flattening the pitch. It is most effective when a finger is lowered over the first open tone hole. In the clarion register, shading can also be performed with the register key: The subtle control of the height of the register key is critical for playing early clarinet, and will affect notes to different degrees, depending on their respective distance to the register vent.

The fewer number of tone holes — 13 as opposed to 23 on the Boehm — limits the five-key clarinet's chromatic possibilities. The player must therefore be imaginative if a needed note does not have an assigned tone hole. The chalumeau \sharp is one example. Some instrument makers remedied the situation by providing the left-hand ring finger with a double tone hole. If this is not the case on your instrument, you will need to perform a technique called *half holing*. An integral part of the

bassoonist's technique, half holing is the partial covering of a tone hole (30%–60%). This technique, creating further resistance in the instrument, must be combined with appropriate voicing of the airflow.

In addition to providing additional support, the *Stutzfinger* or "support finger" technique assists with intonation and resonance. The inclusion of right-hand fingers in open fingerings is a rudimentary form of our resonating fingerings for throat tones.

Given that acceptable fingerings are used, the most important control parameter remains the embouchure. Flexibility is crucial, since each note has its own embouchure. However, the adjustments should be subtle; if too much work is required from the embouchure, one should reconsider the reed/mouthpiece set-up. On my Lotz replica, it is possible to find a tonal center to each note by adjusting the tongue position and placement/pressure of the lips around the mouthpiece. Each note responds differently, and when voiced accordingly, sounds a resonant, focused tone with agreeable intonation. It was interesting to observe that the fingerings for b , b^1 , and b^3 found in early charts are quite sharp on my Lotz. Examining the extant repertoire written for the five-key clarinet, one finds that works are usually in the keys of F, C, and $B\flat$. Consequently the note b acts primarily as the leading tone in C, which is raised when playing with non-tempered instruments.

As per modern clarinet, conscious long tone exercises are the essence of getting acquainted with the instrument's idiosyncrasies, developing a focused sound, and an ideal means for experimenting with the above-mentioned finger techniques. Relax the embouchure, blow gently, and try to get the most sound with a minimum of air. Find a tonal center to each note by adjusting the airflow, tongue position, and placement/pressure of the lips around the mouthpiece. When playing long tones on notes requiring cross fingerings, one should be open minded to different sound colors. Practicing partials or bugle calls expands awareness of the embouchure and might help discover new fingerings.

Once a focused sound and overall awareness has been cultivated, the next step is to fine-tune the scale with respect to intonation. Playing intervals against a drone pitch will help the player develop a

flexible embouchure, select appropriate fingerings, and develop a critical ear. Make sure to acquire a tuner that will accommodate the pitch level of your instrument. Start with the natural scale (F-major), experimenting with *crescendos* and *decrescendos*, becoming aware of the needed adjustments, and taking note of the notes that are well in-tune for reference.

Finally, it is of utmost necessity to play with other musicians so that intonation can develop artistically. Find another lonely early clarinet player to sightread duets from the early methods, or a pianist that has access to a fortepiano. If this is not possible, the Smart Music software may be programmed to play at any pitch level, including $A = 430\text{hz}$ and $A = 415\text{hz}$.

Further intonation adjustments can be performed by inserting wax into the tone holes — thus modifying their sizes — using tuning rings, and experimenting with barrels of different sizes. The attentive player will discover the particularities of his/her instrument, choose fingerings accordingly, cultivate a flexible embouchure, and adjust to the musical context of each note. The process takes time: Approach the early clarinet as a new discovery. This is especially difficult for advanced players who "expect" to produce satisfying results after a short period of time. The flexibility cultivated through diligent practice will improve your overall playing on the early clarinet, and will transfer to your modern clarinet technique.

ABOUT THE WRITER...

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(Part III: Articulation: Technique and Performance Practice)

END NOTES

¹Backofen, Johann Georg Heinrich. *Answeig zur Klarinette, nebst einer Kurzen Abhandlung über das Basset-Hörner*. Leipzig: Breitkopf und Härtel. [ca. 1803]. Reprint, Celle: Moeck Verlag, 1986. Translated by Susan Carol Kohler in "J. G. H. Backofen's Answeisung zur Klarinette nebst einer kurzen Abhandlung über das Basset-Horn, Translation and Commentary," D.M.A. diss., University of Washington, 1997, 8.

²Charles Neidich, dissertation survey response.

³Rice, Albert. "Clarinet Fingering Charts, 1732–1816." *The Galpin Society Journal* 37 (March 1984): 16–41. "Forty-two fingering charts dating from 1732 to 1816 were examined for this study. Many of them, as may be imagined, merely duplicate fingerings which had already appeared in earlier charts. The following is a table limited to charts at least some of whose fingerings appear there for the first time." The twenty-eight fingering charts selected and compiled include (in chronological order): J. F. B. C. Majer *Museum musicum* (Schwäbisch Hall, 1732), J. P. Eisel Musicus (Erfurt, 1738), V. Roesser *Gamme de la clarinette, avec Six Duo pour cet instrument* (Paris, 1769), M. Corrette *Méthode de la Flute Traversière: Nouvelle édition, revue, corrigée et augmentée de la Gamme du Haut-bois et de la Clarinette* (Lyon and Rouen, 1773), *Principes de Clarinette Avec Tablature des Meilleurs Maîtres pour cet Instrument et plusieurs Duos pour cet instrument* (Paris, ca. 1775), F. D. Castillon fils (Amsterdam, 1776), *The Clarinet Instructor* (London, ca. 1780), L. N. Berg *Den første Prøve for Begynderne udi Instrumental-Kunsten* (Christiansand, 1782), A. Vanderhagen *Méthode Nouvelle et Raisonnée pour la Clarinette and Nouvelle Méthode de Clarinette divisée en deux parties* (Paris, ca. 1785 and ca. 1799), J. V. Reynvaan *Muzikaal Kunst-Woordenboek* (two published charts, Amsterdam, 1795), F. Blasius *Nouvelle Méthode de Clarinette* (Paris, ca. 1796), J. W. Callcott (London, 1797–1802), V. Michel *Méthode de clarinette* (Paris, ca. 1801), *The Clarinet Preceptor* (London, ca. 1801), J. G. H. Backofen *Anweisung zur Klarinette, nebst kurzen Abhandlung über das Basset-Horn* (Leipzig, ca. 1802), J. X. Lefèvre *Méthode de Clarinette* (Paris, 1802), *The Clarinet Preceptor* (London, 1803), O. Shaw *For the Gentlemen* (Dedham, 1807), S. Demar *Nouvelle Méthode pour la clarinette* (Paris, ca. 1808), C. Bocha Père *Méthode Instructive pour la Clarinette* (Paris, ca. 1809), 'Gamut for the Clarinet' (Dublin, ca. 1810), J. Fröhlich *Vollständige Theoretisch-practische Musikschule* (Bonn, 1810–1811), J. Mahon *A new and Complete Preceptor for the Clarinet* (London, ca. 1811–1816), F. Antolini *La retta maniera di scrivere per il clarinetto ed altri istromenti da fiato* (Milano, 1813), W. Whitely *The Instrumental Preceptor* (Utica, 1816), J. F. Simiot *Tableau explicatif des innovations et changements faits à la Clarinette* (Lyon, 1808).

⁴Rousseau, Eugène E. "Clarinet Instructional Materials From 1732 to ca. 1825." Ph.D. diss., State University of Iowa, 1962. Rousseau compiled and compared the charts by Antolini, Backofen, Blasius, Bland & Weller, Démar, Fröhlich, Gehot, Holyoke, Lane, Lefèvre, Leroy, Longman & Broderip, Michel, Reynvaan, S. A. & P. Thompson, Vanderhagen (1785, 1797, and 1803), and Wheatstone.