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Author(s): T. Eric Hoeprich

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T. Eric Hoeprich

# Finding a clarinet for the three concertos by Vivaldi

Perhaps the greatest inspiration for playing 18th-century music on original instruments lies beyond the mere difference in timbre between typical Baroque instruments and their modern counterparts. The music is actually more successful and easier to interpret stylistically when one performs on period instruments or good copies. Clearly many composers wrote very carefully for the instruments they specified, avoiding in the case of woodwind the various limitations to which they were subject and choosing keys as much for their particular sound qualities on a certain instrument as out of harmonic necessity. In woodwind instruments homogeneity of tone and response was not desirable; works written for specific instruments show that a skilled composer could employ naturally dull and unresponsive sonorities as effectively as stronger, brighter ones. Baroque woodwind instruments then are seen to be ideally suited to the music written specifically for them, and a successful performance will produce a unique synthesis of music and instruments, making it seem undesirable to perform the same music on instruments lacking their qualities.

In the first half of the 18th century Antonio Vivaldi composed three concertos calling for a new instrument: the clarinet. All three are concerti grossi, employing pairs of clarinets and oboes (and in one case also recorders and violin) as solo instruments:

Con<sup>to</sup> con 2 Hautbois 2 Clarinet, e Istrom<sup>ti</sup> (RV560, FXII no.1)

Con<sup>to</sup> con due Clarinet 2 Hautbois e Istrom<sup>ti</sup> (RV559, FXII no.2)

Con<sup>to</sup> P la Solennità di S. Lor<sup>zo</sup> (RV556, FXII no.14)

Vivaldi seems to have been well aware of the unique qualities of the new instrument, as he clearly demonstrates in his writing for it. However, before the concertos could be given a modern performance, an adequate model had to be found for making the required 'Clarinetti in Do'. This turned out to be more difficult than one might think.

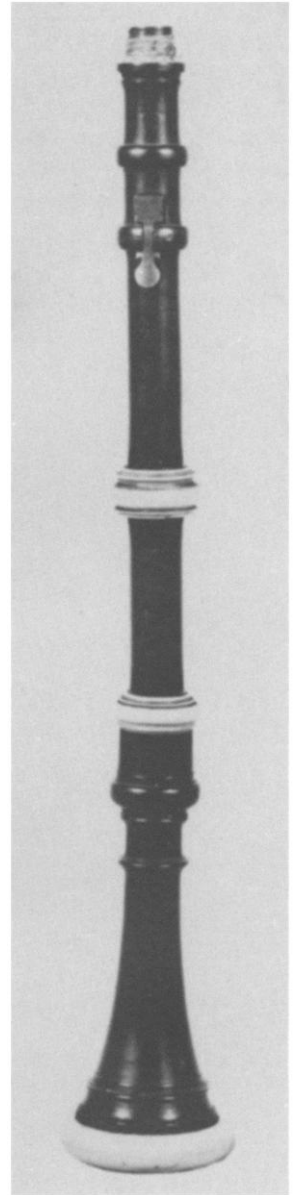
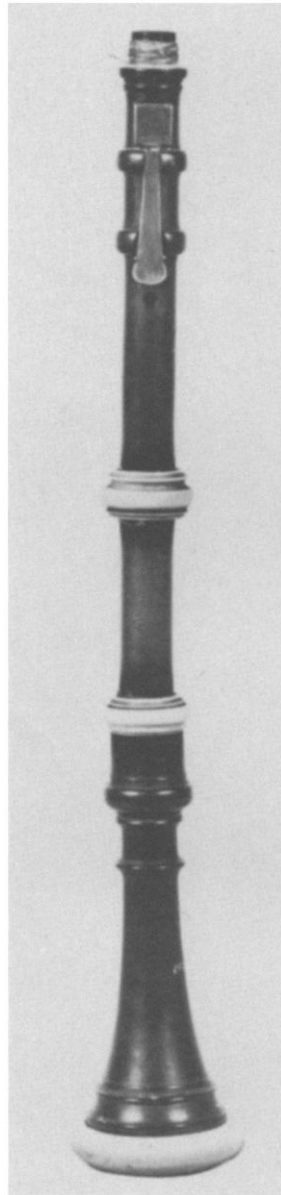
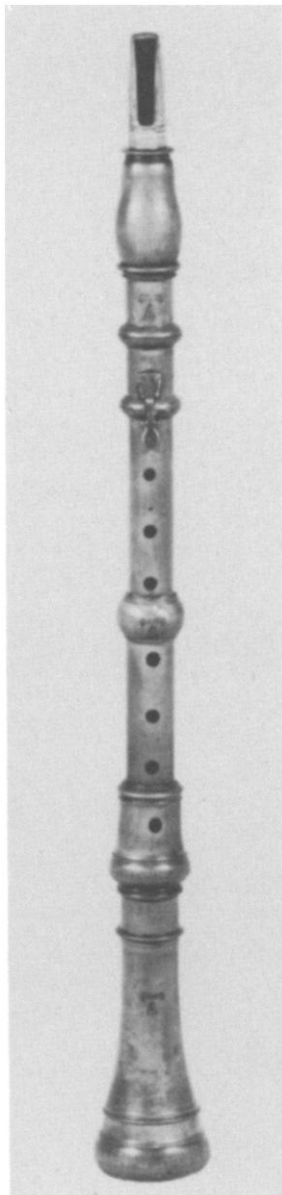
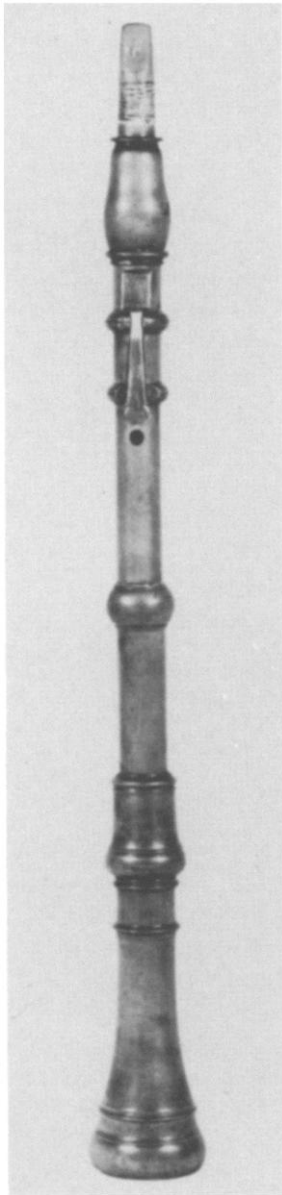
Among more than 30 Baroque clarinets in European and American collections, there seem to be only two clarinets in C of the type for which Vivaldi must have written these concertos. Both are in the collection of

the Brussels Conservatoire. One bears the stamp of Jacob Denner (Nuremberg, 1681–1735) and the other of Thomas Coenraet Boekhout (Amsterdam, c1665–1715) (illus.3). Both are in good condition, yet various problems make it impossible to perform the clarinet parts of Vivaldi's concertos on either of them.

The Denner instrument (illus.1) would be the more logical choice of the two, because of Nuremberg's relative proximity to Italy, the family's extensive ties with the clarinet and the high quality of Denner's woodwind instruments. This boxwood instrument is in nearly perfect condition (the mouthpiece is slightly damaged but it still plays quite easily), and of the four joints all but the mouthpiece–barrel combination (customarily found in Baroque clarinets) are stamped. That the mouthpiece is not stamped is not significant, since it matches the mouthpieces of Jacob Denner's other two extant clarinets, neither of which is stamped; it was, moreover, fairly common among Continental makers not to stamp mouthpieces.

Despite its apparent suitability the Denner clarinet cannot be used to perform the Vivaldi concertos for two reasons. The first, and more serious, is that the upper and lower registers have different tonal centres, the 12ths being about a semitone too small; since Vivaldi wrote for the entire range of the instrument this internal inconsistency makes the Denner clarinet unacceptable. The second difficulty is that the general pitch of the upper register hovers around a quarter-tone flat of  $a'=440$ , and therefore the approximate pitch of the lower register is slightly higher than  $a'=440$ ; this seems suspicious in the light of the fact that the majority of extant Denner instruments are pitched at  $a'=415$  or lower.

It is interesting now to look at the Boekhout instrument. To start with, it is surprising that Boekhout of Amsterdam should have made a clarinet at such an early date. Written historical evidence and an instrument in the collection of the University of California at Berkeley indicate that Johann Christoph Denner (1655–1707) probably made the first clarinet.<sup>1</sup> Since it is likely that Denner invented the instrument quite late in life, it is striking that in the first few years of the 18th century Boekhout not only came into contact with a



1 (left) The Denner clarinet (Brussels, Musée Instrumental du Conservatoire Royal de Musique, 912)

2 (right) The Boekhout clarinet (Brussels, Musée Instrumental du Conservatoire Royal de Musique, 2561)



3 The makers' stamp on (left) the Jacob Denner clarinet and (right) the Thomas Coenraet Boekhout clarinet

clarinet but made one—and a very nice one at that. (This makes it less surprising, perhaps, that the Amsterdam publisher Estienne Roger was responsible for publishing the earliest known works (1716) that specifically suggest the clarinet as possible instrumentation.)<sup>2</sup>

Like the Denner instrument, the Boekhout clarinet (illus.2) is made of boxwood and has two brass keys, though unlike the Denner instrument it is stained black and has thick ivory mounts. Unhappily it has no mouthpiece; this is especially unfortunate as the remaining three pieces are in good condition. A comparison of the two instruments will be found instructive. It is interesting to note that the Boekhout clarinet closely resembles Denner's. The lengths and tone-hole positions differ only by a centimetre or less. The shapes of the keys are nearly identical, and furthermore it seems that keys of this design appear on no other instrument by Boekhout, whereas they are common on Denner instruments. The outside turning of Boekhout's clarinet is in the style of the Amsterdam school of around 1700, as one might expect. One wonders whether a Denner clarinet served as a model for Boekhout, and if so whether the instrument he copied was made by Jacob Denner or his father.

Although the Boekhout instrument has no mouthpiece it can be played using the mouthpiece of the Denner instrument. Unfortunately this fails to solve the problem of finding a suitable instrument for the Vivaldi concertos because of the poor intonation that results. In addition to various inconsistencies in intonation and a general pitch of around  $a'=425$ , the Boekhout clarinet lacks the note  $b'$ , which oddly

§. 16.

Clarinetto, ist ein zu Anfang dieses Seculi von einem Nürnberger erfundenes/ und einer langen Hautbois nicht ungleiches hölzernes Blas-Instrument. außer daß ein breites Mundstück daran befestiget ist; es klingt dieses Instrument von ferne einer Trompete jünlich ähnlich/ und gehet von dem Tenor f. bis zum 2. gestrichenen a. auch zuweilen ins 3. gestrichene c.

Das Denner-Clarinett.  
Denner-Clarinett.  
Boekhout-Clarinett.  
Amstelr. Clarinet.  
Holl. Clarinet.  
Amstelr. Clarinet.  
Holl. Clarinet.  
Amstelr. Clarinet.  
Holl. Clarinet.  
Amstelr. Clarinet.  
Holl. Clarinet.

Systema Musicum sive Notarum.  
f g gis a b h c cisa dis e f f# g a b h c cisa dis e f f# g a

4 Fingering chart from J. F. B. C. Majer, *Museum musicum theoretico practicum, das ist, Neu-eröffneter theoretisch- und practischer Music-Saal* (Schwäbisch Hall, 1732), p.39

Sign. C.

Die Figur des Clarinetts ist p. 78. anzuhessen. Die zugemachten oder schwarzen Nullen zeigen die Bedeckung der Löcher an, die leeren oder offenen Nullen hergegen weisen, welche Löcher nicht gedeckter sondern offen bleiben müssen. Und so verhält sich bey allen nachfolgenden Schematibus.

f f f  
fis fis fis  
g g g  
a a a  
b b b  
c c c  
dis dis dis  
e e e

5 Fingering chart from J. T. Eisel, *Musicus autodidactos* (Erfurt, 1738)

enough the Denner instrument has, and which is called for by Vivaldi. This is definitely not the result of incompatibility between the mouthpiece and clarinet since the obvious symptoms of such a problem are otherwise lacking. Some encouragement can be taken, however, from the fact that the Boekhout clarinet offers solutions to a few of the problems of the Denner clarinet and vice versa.

Contemporary references to the range of two-key clarinets like these can be found in the works of J. T. Eisel, J. F. B. C. Majer and J. G. Walther, all of which clearly indicate use of the complete lower and upper registers from  $f$  to  $c'''$ . This is exactly the range called for by Vivaldi. Moreover, contrary to recently written accounts of the capabilities of the Baroque clarinet, based on the far from accurate fingering charts that are available (illus.4 and 5), Vivaldi's instrument was evidently able to play  $e'$  flat,  $f'$  sharp and  $b$  since all these pitches are used in his scoring for it.<sup>3</sup> In fact the limitations of Baroque clarinets were no greater than those of other Baroque woodwind instruments. Some cross-fingerings and half-holes produce a less clear sound than others, and in this respect the Classical clarinet may have constituted an improvement. Yet, as I have already pointed out, composers and players seem to have made a virtue of the shortcomings of their instruments and to have turned the variable quality of the sound to good effect.

Vivaldi wrote for the clarinet in two ways, and there is little variation of style among the three concertos. The first type of writing, perhaps obvious given the derivation of the name 'clarinet', stays in the upper register and is characterized by simple diatonic

Ex.1 Vivaldi, Concerto rv559, second movement, bars 4–7

[Allegro]

Ex.2 Vivaldi, Concerto rv559, second movement, bars 30–33

melodies and occasional arpeggiated fanfares. The theme of the first Allegro of the Concerto rv559 (ex. 1) shows this manner, though the fanfare figuration is better illustrated by a later excerpt from the same movement (ex.2). The second type of writing shows Vivaldi's desire to demonstrate the remarkable range and versatility of this marvellous new instrument by contrasting passages in the upper register with abrupt changes to the chalumeau register, that is the low register from  $f$  to  $b'$ . No wind instrument up to that time could boast such agility in changing registers nor so marked a difference in timbre between its upper and lower ranges. This variety of tonal possibilities was the most interesting quality of the clarinet (and to many still is) and Vivaldi exploited it to its fullest extent. So enamoured was he of the chalumeau range that he suggested the clarinet play the basso continuo line in the third concerto. After only six bars of 'fanfare' in the opening Largetto of rv559, Vivaldi is already anxious to use the contrasting quality of the chalumeau

Ex.3 Vivaldi, Concerto rv559, first movement, bars 1–11

Largetto

register, exaggerating the effect by a change from C major in the upper register to C minor in the chalumeau, which adds darkness to the already veiled sound (ex.3).

At this point we have accumulated sufficient documentation to show that the clarinets in the Brussels collection might be expected to play much better than they do. While it is usual to proceed from the proven capabilities of an instrument and written evidence of performance practice to an interpretation of early music, we must in this case use the music and contemporary organological accounts to sketch out the properties of the Baroque clarinet. Neither of the C clarinets in the Brussels collection meets the requirements of Vivaldi's music. But the faults of the Denner clarinet are such as to imply that it has been tampered with; and this indeed turns out to be so. It was undoubtedly the victim of a late 18th-century attempt to raise its pitch in accordance with a move to higher pitch all over Europe.

The vast majority of early Classical clarinets play at a pitch between  $a'=430$  and  $a'=440$ , which was the new level to which pitch was raised at that period. In order to be able to accommodate both the old and new pitches, flutes and oboes of the mid- to late 18th century were often made with *corps de rechange*. But the clarinet, a new instrument with only a small part in the earlier repertoire, was simply built to play at the new pitch and had no need of adaptations. Makers of woodwind instruments in this transitional period, such as Carl August Grenser (Dresden, 1720–1807) and Godefroid-Adrien Rottenburgh (Brussels, 1709–1790), made a number of flutes and oboes with extra joints, yet not one of their surviving clarinets has this feature. It was not necessary. It seems that if one wants to know the probable pitch of early Classical orchestras one should look not at older or transitional instruments but at exemplary 'new' instruments like Classical clarinets.

The Denner instrument must have been built to play at the old pitch, and it is clear from an examination of

its dimensions that its bore has been enlarged in an effort to raise its pitch to the level required in the later 18th century. At a diameter of 15mm, the bore is much too large for an instrument of these proportions, and indeed the operation, as we have seen, completely destroyed the instrument's internal intonation. When a copy was built with a bore of the size Denner used in his original instrument its registers were found to be in tune with each other and the pitch of the instrument was the expected  $a'=415$ . This instrument is fully capable of playing the Vivaldi concertos and of producing the complete range of pitch and timbre that the composer would have expected to hear.<sup>4</sup>

*The author wishes to thank Rene de Meyer and Ignace de Keyser for their cooperation in connection with examining the clarinets and for kindly arranging the photographing of them.*

<sup>1</sup>T. E. Hoepfich, 'A 3-key Clarinet by J. C. Denner', *GSJ* 34 (1981), pp.21-32

<sup>2</sup>T. Dart, 'The Earliest Collections of Clarinet Music', *GSJ* 4 (1951), pp.39-41

<sup>3</sup>G. Rendall, *The Clarinet* (London, 1978), and O. Kroll, *Die Klarinet* (Kassel, 1965)

<sup>4</sup>A pair of clarinets made as a result of the investigation described in this article were used for a performance of Vivaldi's Concerto RV559 by the Schola Cantorum Basiliensis in Basle in December 1980, with considerable success.

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