

Keith Bowen

THE RISE AND FALL OF THE BASS CLARINET IN A

The bass clarinet in A was introduced by Wagner in *Lohengrin* in 1848. Unlike the bass instruments in C and B \flat , it is not known to have a history in wind bands. Its appearance was not, so far as is known, accompanied by any negotiations with makers. Over the next century, it was called for by over twenty other composers in over sixty works. The last works to use the bass in A are, I believe, Strauss' *Sonatine für Bläser*, 1942, and Messiaen's *Turangalila-Symphonie* (1948, revised 1990) and Gunther Schuller's *Duo Sonata* (1949) for clarinet and bass clarinet. The instrument has all but disappeared from orchestral use and there are very few left in the world. It is now often called obsolete, despite the historically-informed performance movement over the last half century which emphasizes, *inter alia*, performance on the instruments originally specified by the composer. And the instrument has been largely neglected by scholars. Leeson¹ drew attention to the one-time popularity and current neglect of the instrument, in an article that inspired the current study, and Joppig² has discussed the use of the various tonalities of clarinet, including the bass in A, by Gustav Mahler. He pointed out that the use of both A and B \flat clarinets in both soprano and bass registers was absolutely normal in Mahler's time, citing Heinrich Schenker writing as Artur Niloff in 1908³. Otherwise it has been as neglected in the literature as it is in the orchestra.

So why is the bass clarinet in A now so little used? Was it ever used by composers because of the unique perceived quality of its sound? Should 'period' orchestras revive this instrument? We can seek the answers in clarinet organology, in documents written by composers, in the music that they wrote, and we can play and listen to the instrument.

¹ D.N. Leeson in *The Clarinet* (1993)

² G. Joppig (2005)

³ 'Artur Niloff' (Heinrich Schenker) 1908; cited in Joppig 2005 p154 note 22)

The development of the bass clarinet up to 1860 has been discussed comprehensively by Rice⁴. Two early forms, the 'plank' type and the visually striking 'serpent' form by Papalini did not lead to established production of instruments and were evolutionary dead-ends. The bass clarinet proper began in 1793 with Heinrich Grenser of Dresden who invented an instrument⁵ in bassoon form, with wider bore and hence more powerful tone, descending to low C. The instrument survives and is now in Stockholm (S-Stockholm M2653), and it inspired a large number of instruments by many makers over at least 60 years. It evolved into the half-bassoon type (with a straight upper joint, a butt joint and a bell coming directly off this) towards the end of its life, and also into a simple folded tube (the *Glicibarifono*), especially in Italy. An example by Ludwig and Martinka of Prague is shown in Figure 1. Without exception these instruments descended at least as low as written C.



Figure 1. A bass clarinet by Ludwig and Martinka of Prague. Czech Museum of Music, E.135. Originally labeled as a bass in A, acoustic calculations showed this instrument to be pitched in C (see text). With kind permission of the Czech Museum of Music.

This very compact bass instrument was undoubtedly used mainly in military bands,⁶ though it is known that the very first orchestral bass solo, in Saverio Mercadante's *Emma d'Antiocha* [1834] for bass in C was played by Catterini on his own bassoon-form instrument and used

⁴ A. Rice (2009)

⁵ Advertised in *K.K. Prager Oberpostamtszeitung* (1793- cited in Rice 2009, 258)

⁶ (Rice 2009, 268 for American and 378-384 for European bands)

the full bottom range to C. An excellent example of Catterini instrument survives in the Bate Collection in Oxford (No. 496).

It is not known why the bassoon form was eventually supplanted by the modern 'straight' form, which was invented by Desfontenelles of Lisieux in 1807. But very likely it was the innovations and superb craftsmanship of Buffet 'Jeune' in 1833 and notably Adolphe Sax in 1838, plus a preference in the French Conservatoire that a clarinet should look like a clarinet and not like a bassoon. The French musicologist Fétis remarks:⁷

In order that the new instruments conserve as much as possible of the analogy that exists with the soprano clarinet, it is necessary not to alter the form at all; I think therefore that Messrs. Dacosta and Buffet have better achieved this end than Mr. Streitwolf in not curving the tube of their bass clarinette, and in facilitating the playing of the instrument by means of an inclined bocal to which the mouthpiece is adapted.

The lack of notes below *E* was not perceived as a disadvantage for orchestral playing. This range remained standard for the rest of the nineteenth century.

Assessment of the pitch of an instrument

Before cataloguing the bass clarinets in A that have been found, we must enquire how we know that they were so pitched. It is certain that the instrument was built as a bass in A when there is a documentary record, when the instrument is so labeled by the maker and when a pair of instruments in B \flat and A is preserved. In other cases, this simple question does not have a simple answer, even if the instrument can be played, since absolute pitch has varied enormously in different localities even since 1850.⁸ In the mid 1860s, a B \flat clarinet in Paris or Dresden would have been a slightly flat A clarinet in Munich or Vienna. One must attempt to assess the pitch level in which the instrument was originally played.

Further problems arise when, as is normal in museum collections, the instrument may not be played even if it is in good enough condition. Critical examination is still necessary. An example is instrument E 135 in the Czech Museum of Music, a bassoon-type instrument which was labeled "Bass Clarinet in A by Ludwig and Martinka". The museum staff (all new

⁷ Fétis (1833, 122) Pur que ces nouveaux instrumens conservent autant d'analogie qu'il est possible avec la clarinette soprano, il est nécessaire de ne point en altérer la forme; je pense donc que MM. Dacosta et Buffet ont mieux atteint le but que M. Streitwolf en ne courbant pas le tube de leur clarinette basse, et en facilitant le jeu de l'instrument par un bocal incliné auquel s'adapte le bec.

⁸ Haynes, 2002

since 1990) had no information about the provenance of the label or the instrument except the donor's name, and kindly allowed the author to make detailed measurements.

In such cases, the only resort is measurement and mathematics.⁹ In its lower register, a clarinet approximates closely to a closed-end cylindrical pipe. The fundamental vibration frequency, f , of this pipe depends only on its length, L , and the speed of sound, v :

$$f = v/4L$$

v may be taken as 345 m/s. In principle we measure the length and apply the formula, but there are two complications. The mouthpiece needs special treatment since it varies in shape internally. The best way is to measure its internal volume, which generally be done with museum specimens, but an estimate which will not greatly affect the result is to take half the actual length of the mouthpiece. The second complication is that the bottom note is a poor one to choose for determining the pitch, because of the effect of the bell. There is no simple formula for estimating the acoustic length of a bell of arbitrary shape.

Therefore, it is best to measure the length to the centre of a low tone hole that is followed by an open tone hole (both within the cylindrical part of the bore) and apply a tone-hole correction c . The acoustic length is longer than the physical length to the last closed tone hole by the amount

$\Delta L = c$ have to be about $a' = 530$, which is much too far above even the very high Viennese pitch of the time.

The world catalogue of bass clarinets in A

A comprehensive search for bass clarinets in A was undertaken through online museum catalogues, clarinet and bass clarinet internet lists and correspondence. Three instruments with strong documentary evidence were identified as well as nine actual instruments in museums or collections worldwide. The oldest, a plank form, was probably not made specifically for the A tonality as it is dated a century before the earliest known music for this instrument. The resulting historical catalogue is shown in **Table 1**. This is probably reasonably accurate for museum collections of modern-type instruments given the sources

⁹ The methodology was developed from the theory given by Benade (1990, 450) and from discussions with the clarinet maker and acoustician Stephen Fox.

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used, though it may not include all private collections. Although no bassoon-type instruments pitched in A have been discovered, most such instruments have not been studied for pitch. The instrument is without doubt extremely rare.

Table 1. Chronological list of extant or documented historic bass clarinets in A

	Date	Form	Maker	City	Location reference	Lowest written note
1	Late 18 th C	Plank	Unknown	Unknown	B-MIM M939 (Brussels)	<i>E</i>
2	1850s	Unknown	Johann Adam Heckel	Biebrich	Wagner letter of 1861	<i>E?</i>
3	Pre-1866	Unknown	Unknown	Unknown, probably Germany	Lachner survey of 1867. Old high pitch.	<i>?</i>
4	c. 1866	Unknown	Georg Ottensteiner	Tübingen	Lachner survey 1867. New low pitch. Converted from B \flat high pitch	<i>?</i>
5	1840-1860	Straight	Stengel	Bayreuth	Thomas Reil collection. Very probably a pair with the B flat in Edinburgh EUCHMI 4932	<i>E</i>
6	1880s	Straight	C. Kruspe	Erfurt	D-MMUL 4478 (Leipzig)	<i>E</i>
7	1890s	Straight	Karl Stecher	Vienna	A-KMW N.E. 345 (Vienna)	<i>E?</i>
8	c.1900	Straight	C.W. Moritz	Berlin	D-SifM 4438 (Berlin)	<i>E</i>
9	c.1901	Straight	Carl Kruspe	Leipzig	D-München 90-43	<i>E</i>
10	1920	Straight	Buffet	Paris	EUCHMI 5122 Edinburgh	<i>E</i>
11	1919	Straight	Heckel, No. 3615	Biebrich	G. & I. Joppig collection	<i>E\flat</i>
12	1939 - 1959	Straight	Fritz Wurlitzer	Erlbach	D-SifM (Berlin) 5298	<i>E\flat</i>

Two of these instruments are illustrated in Figure 2 and Figure 3.



Figure 2: The Stengel bass (no. 5 in the above list), probably the earliest bass clarinet in A that is known. With kind permission from Thomas Reil.



Figure 3: The Kruspe A bass D-MMUL 4478 (Leipzig, left) compared with a slightly earlier B flat bass by the same maker, also in Leipzig. With kind permission from the Museum für Musikinstrumenten der Universität Leipzig

In addition, six current professional players in the UK, USA and Canada with basses in A have been found, five using Selmers from a batch made in the 1980s plus one Buffet probably from the 1920 or 1930s. One German system instrument has also been found, reportedly also dating from between the two world wars and made in the Voigtland region, which is in occasional use in the Dresden Opera. There is hearsay evidence for three or four others. The world list of basses in A thus stands currently at about twenty instruments.

Documentary evidence

Three of the instruments in the world catalogue are only known from documentary evidence. Liszt conducted the first performance of *Lohengrin* while Wagner was in political exile in Switzerland and their 1850s letters discuss the procurement of a bass clarinet several times, from which we may deduce that Kruspe of Erfurt was the supplier for the Leipzig performance in 1853. The tonality is not mentioned in these letter, but Wagner does make a telling comment in a letter dated June 15 1861 to Heinrich Esser of Vienna, who was to conduct a performance of *Tristan* in 1861 or 1862:¹⁰

Now, I should like to remind you that a bass clarinet in A must be obtained. We spoke about this once: I know that in many places, particularly in Dresden, this instrument was used in *Lohengrin* in addition to the bass clarinet in B-flat, and what the player there could accomplish must be possible in Vienna too. They wrote to me at the time from Dresden that they had obtained this A clarinet from an instrument-maker somewhere on the Rhine - I don't know whether it was in Darmstadt or where. Have the goodness to find out about this!

This is the first direct evidence that an important composer considered either the tone quality of the A, or perhaps the smoothness of fingering in an easy key, essential, not merely the range. For there would be no point in his statement if he would allow the concert D \flat to be played on a B \flat instrument, which was certainly possible at the time. It is also the first evidence that a bass in A was actually used in a *Tristan* performance. According to Holde, the instrument-maker referred to in the quotation was Johann Adam Heckel of Biebrich, founder of the famous company, who later met Wagner and *inter alia* constructed the wooden trumpet for *Tristan*.

¹⁰ quoted in Holde, Mendel and Wagner, 1941

Court and orchestra records provide the other two instruments. While most players owned their own soprano clarinets, the bass instruments were often owned by the court or theatre, especially in the early days of their use. There was an inspection of the instruments of the Bavarian Court by the General Music Director Franz Lachner on 30 August 1867,¹¹ shortly after the 1865 edict of King Ludwig II lowering the pitch throughout Bavaria to *Diapason normale* by the end of the year; this was approximately a semitone lower than the previous pitch. Lachner wrote:

Von Georg Ottensteiner stammten die Instrumente für seinen Freund Baermann, "eine B Clarinette (System Bärmann) von braungebeiztem Buchs), Klappen und Garnitur von Silber" (160 fl.), dazu je "eine A und C clarinette von braungebeiztem Buchs, Klappen und Garnitur von Neusilber" zu je 100 fl, ein "Mundstück zu den obigen drei Clarinetten mit Mechanik und Auflage von Silber" zu 22 fl, "eine A Baßklarinette, Klappen und Garnitur von Neusilber" des weiteren arbeitete er für 30 fl die alte A-Baßklarinette in eine B-Baßklarinette um und lieferte für 7 fl "eine Mundstück zu der A und B Baßklarinette mit Silberauflage" und "ein Bassethorn ..."

Conversion of a bass in A to one in B \flat at the same pitch is not practical. The length to any tone hole is about 5% difference, i.e. 50 mm towards the bottom of the instrument. All the tone holes and post holes would need filling and redrilling, most of the keywork would need shortening or remounting, and a new neck would be needed. However, the passage makes sense if the 'old' bass clarinet was made at the pre-1866 pitch, approximately a semitone higher¹² It would then be close to a B \flat clarinet in the new pitch, and require only minor tuning adjustments. This is strong evidence for the earliest bass clarinet in A being constructed before 1866, though we cannot assume that it was Ottensteiner. We do know directly of (Carl) Baermann's virtuosity, from contemporary sources and from his famous tutor, which is still in print.¹³ Without doubt he could have played any of the Wagner parts on any bass clarinet having the range, yet he found it worthwhile to repeat his experience of playing a bass in A, as well as in B \flat , after the pitch change in Bavaria.

We may speculate on further bass clarinets in A from the enormous patent literature on the clarinet, but this is unsupported by other evidence. Patents tell one what was invented, in

¹¹ (Tremmel 1993, 214)

¹² Tremmel, 1993, 214

¹³ (Weston 1971, 150)

the form of a concept and design, and hence what could have been made. They do not tell one what was actually available. For example, the 22 July 1853 Austrian patent of Anton Nechwalsky claiming the invention of a bass with an extension to C is proven by the surviving B \flat instrument in the Smithsonian Institute, No. 67269. However, his addendum of 3 October 1853 stating that he could supply these instruments standing in C, B \flat or A is unsupported, since the Smithsonian example is his only known extant instrument.

The decline in the popularity and availability of the bass clarinet in A can best be traced through manufacturers' documents and records. Some forty catalogues or advertisements dating from the 1890s to the 1960s were examined, and a number of existing manufacturers responded to requests for information. This is summarized in Figure 4.

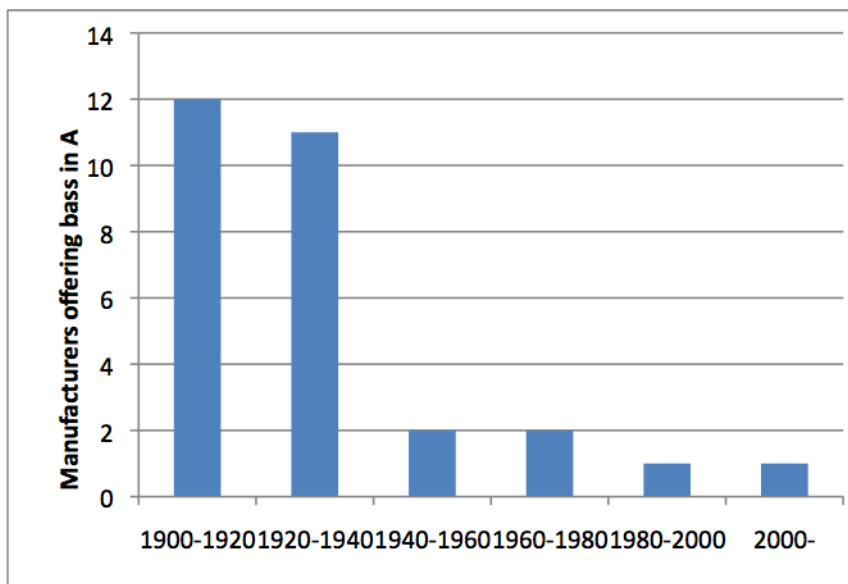


Figure 4: the numbers of manufacturers offering bass clarinets in A, since 1900.

Bass clarinets in A were routinely offered by a dozen manufacturers, large and small up to WWII. However, all these makers have either disappeared or no longer offer the instrument. There is currently a single custom maker (Stephen Fox) who offers the bass in A as routine. The situation was summarized by Jérôme Selmer who wrote:¹⁴

We never had a bass clarinet in A in our catalogue. We just made a few a long time ago, around 20 years.

¹⁴ email of 14 September 2009

We never decide to go [into] production in series because the investment is not valuable compared to the quantities required by our customers. ... For your information we produce approximately 350 Bass clarinets per year.

The bass clarinet has enjoyed greater popularity since the mid-twentieth century than at any time, thanks largely to the rise of school and college music and its emphasis on wind bands. This has driven the emphasis of manufacture towards mass production methods – of B \flat instruments only.

There is thus a compelling argument that market, not musical forces have been decisive in the decline of the bass clarinet in A. Now let us see what we have been missing.

The bass clarinet in A in music

We approach this from two directions: what were composers taught, and what did they write? Many orchestration manuals are available from the nineteenth and twentieth centuries: Logier (1825), Berlioz (1843 & 1856), Gassner (1849), Porteous (1854), Lobe (1858), Gevaert (1863), Prout (1899), Rimsky-Korsakov (1891), Kling (1883 and 1905), Corder (1896), Widor (1904), Berlioz & Strauss (1904), Jadasson (1907), Forsyth (1914) and Evans (1926). Virtually all of these emphasized two features of writing for clarinets. One is that it is difficult to play them fluently in ‘extreme’ keys (more than two, or possibly three, sharps or flats) so that a composer should choose the clarinet largely according to the main key of the work (and sometimes the instrument in A was required mainly for its lowest note). The other is that the C, A and B \flat clarinets have a very different sound character, and this must be taken into account in the composition. Thus, even though composers might not have originally chosen the clarinet for its tone quality, they had to bear in mind the tone implications of their choice. None of the orchestration manuals makes the same distinction when discussing bass clarinets, but nor is it contradicted. They say, in effect: “write as you do for the soprano clarinet but an octave lower, and bear in mind that the bass instrument is not so nimble”. It would be difficult for a student to read these manuals without coming to the conclusion that there is a similar difference between A and B \flat bass instruments as there is between the corresponding soprano clarinets. There are grounds for believing that composers would have been aware of the sound when composing. Berlioz remarks:

Generally, performers should only use the instruments indicated by the composer. Since each of these instruments has its own particular character, it may be assumed

that the composer has preferred one or the other instrument for the sake of a definite timbre and not out of mere whim.

Turning now to the works that they wrote, Table 2 shows a list of over sixty works found that use the bass clarinet in A.

Table 2. List of works known using the bass clarinet in A.

	Surname	Title of work	Opus # (etc)	Date of composition.
1	Bartók	Dance Suite No. 1	Opus 3	1905 rev. c. 1920
2	Bartók	Dance Suite No. 2	Opus 4	1907 rev. 1920, 1943
3	Bartók	Miraculous Mandarin	Op. 19	1924
4	Bax	Spring Fire		1913
5	Bax	Symphony No. 1		1922
6	Bax	Symphony No. 2		1926
7	Bax	Symphony No. 4		1931
8	Bax	Symphony No. 5		1932
9	Bax	Symphony No. 6		1934
10	Berg	Sieben Früher Lieder		1907 orch. 1928
11	Bülow, von	Nirwana	Op. 20	1870
12	Copland	Dance symphony for large orchestra		1925
13	Delius	Paris: a Nocturne (The Song of a Great City)		1899
14	Dvořák	Scherzo Capriccioso	Op. 66	1883
15	Dvořák	The Water Sprite	Op. 107	1896
16	Dvořák	The Noon Witch	Op. 108	1896
17	Dvořák	The Wild (or Wood) Dove	Op. 110	1896
18	Elgar	Pomp & Circumstance March No. 2	Op. 39 no. 2	1901
19	Elgar	Pomp & Circumstance March No. 1	Op. 39 no. 1	1901
20	Ireland	Symphonic Rhapsody Mai-Dun		1933

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21	Liszt	Dante Symphony	Raabe 426	1855-6
22	Mahler	Symphony No. 4		1892, 1900 + revs. To 1910
23	Mahler	Symphony No. 5		1902 + revs.
24	Mahler	Symphony No. 6		1904, 1906+revs.
25	Mahler	Symphony No. 7		1905 + revs.
26	Mahler	Symphony No. 8		1907
27	Mahler	Das Lied von der Erde		1909
28	Messiaen	Turangalîla-Symphony		1948 rev. 1990
29	Puccini	Manon Lescaut		1893
30	Puccini	La Bohème		1896
31	Puccini	Tosca		1900
32	Rachmaninoff	Symphony No. 2	Opus 27	1907
33	Rachmaninoff	Symphony No. 3	Opus 44	1936 rev. 1938
34	Rachmaninoff	Symphonic Dances		1940
35	Ravel	La Valse		1920
36	Ravel	Concerto for the Left Hand		1930
37	Ravel	L'Enfant et les Sortilèges		1925
38	Ravel-Mussorgsky	Pictures at an Exhibition		1922
39	Respighi	Fountains of Rome	Op. 106	1916
40	Rimsky-Korsakov	The Maid of Pskov		1872
41	Rimsky-Korsakov	Mlada		1872
42	Rimsky-Korsakov	The Legend of Tsar Saltan		1901
43	Rimsky-Korsakov	The Legend of the Invisible City of Kitesh and the Maiden Fevroniya		1903
44	Rimsky-Korsakov	The Golden Cockerel		1907
45	Schoenberg	Pelleas und Melisande	Op. 5	1911
46	Schoenberg	Kammersymphonie	Op. 9	1912

47	Schoenberg	Gurre-Lieder		1901 orch 1911
48	Schuller	Duo Sonata		1949
49	Strauss	Sonatine No. 1 für Bläser (Aus dem Werkstatt des Invalide)		1943
50	Strauss	Rosenkavalier		1910
51	Sullivan	The Golden Legend		1886
52	Tchaikovsky	Nutcracker Ballet	Opus 71	1892
53	Verdi	Otello		1887
54	Vianna da Motta	A' Patria	Opus 13	1895
55	Wagner	Lohengrin		1848
56	Wagner	Die Walküre		1852 -1856
57	Wagner	Tristan und Isolde		1857-1859
58	Wagner	Das Rheingold		1853 - 1862
59	Wagner	Siegfried		1856-1869
60	Wagner	Gotterdammerung		1869-1874
61	Wagner	Parsifal		1877 - 1881

The scores were all examined with four questions in mind:

1. Is the usage *standard* (as taught by orchestration manuals: sopranos and bass clarinets in the same tonality, chosen to avoid extreme key signatures, with lowest notes written *E*)?
2. Is there evidence that the bass clarinet in A was employed for its lower bottom note?
3. Was the tonality of the bass clarinet ever chosen *contrary* to standard usage?

Most of the usage is indeed standard. Only one work (by Berg) has been found requiring a bass in A with a lower note than written *E* (*E^b*). In the nineteenth and early twentieth centuries, it was absolutely normal to select the bass in A when indicated by the tonality, and this practice was continued by many composers in the twentieth century. It was often used for its lowest note. Curiously, the use of the bass in A persisted longer in France (Ravel,

Messiaen), Russia (Rachmaninoff) and even England (Bax, Ireland) than in Germany, where it originated.

There are a number of critical works that show that the composer was making a specific choice of the bass in A.

In the solo in *Tristan* accompanying King Mark in Act II Scene 3, Wagner chose the bass in A in the key of A \flat , rather than the B \flat instrument in the simpler G. The A instrument could here have been selected for its sound, but also for the 'flat' key. Remarkably, he had not heard the bass in A in *Lohengrin* before composing *Tristan* and *Walküre*.

Franz Liszt used the bass in A in *Eine Symphonie zu Dante's Divina Commedia* (1859) is the next work after *Lohengrin* and *Die Walküre* to use bass clarinet in A. In *Inferno*, he uses two soprano clarinets in B \flat and a bass clarinet in A. There is a prominent solo recitative on the bass in A, descending to written E. But use of written E \flat in the line for the B \flat bass in *Purgatorio* shows that he did not select purely for the lowest note.

Antonin DVOŘÁK used the bass in A in three of his late orchestral tone poems. In *The Water Sprite* (1896), the instrument is tacet until very near the end. Then, the bass clarinet in A enters in a solo passage doubled by cor anglais, in a mournful coda, after the murder of the child by the evil sprite. The lowest note is only written A so the B \flat bass could have been used. The passage is just 17 bars, with the instrument playing in F major; it is exactly the right choice for the key and for the sound required, and the required smoothness would have been very difficult to achieve on a B \flat instrument playing in the key of E.

Gustav Mahler makes complex choices in his clarinet orchestration, as noted by Joppig.² In *Symphony No. 4* (1892), bass clarinets in both B \flat and A are called. At times, Mahler uses simultaneously clarinets in C, E \flat and B \flat , indicating that he chose the tone colour of the clarinets carefully. Until the last movement, the usage is standard. However, the solo passage for the B \flat bass at the end of the work is a significant anomaly. The key signature for the A bass would have been G, much simpler than the actual F# for the B \flat bass. There was plenty of time to change instruments. This choice survived Mahler's many revisions and corrections, and it must be concluded that he did not want the A bass for this particular solo. Most of the rest of his symphonies use just the bass in B \flat but in *Symphony No. 9* he writes

down to written $E\flat$ for the bass in $B\flat$ mi. However, in his last major work, *Das Lied von der Erde* (1909), there is a short passage for A bass at RN41 in the last movement, at which the soprano clarinets remain in $B\flat$. The bass is now in $G\flat$; the low written E is used for a solo group together with the bassoons and contrabassoon, but in light of his knowledge of the extended $B\flat$ instrument, this may be a desire for the instrument to be playing in a flatter key. There are many cases where Mahler appears to have made the choice of tonalities either because of the sound quality that he wanted, or because of the key that he preferred for the instrument; for example in the sixth symphony he shows a preference for the bass instrument to be in a very 'flat' key such as $G\flat$ and in the fourth, for the sharp key of $F\sharp$ (or their relative minors). I do not see another rationale for some of Mahler's choices.

Richard Strauss was fastidious in his choice of clarinets; e.g. in *Rosenkavalier* (1910), three clarinetists manage instruments in $E\flat$, D, C, $B\flat$, A, basset horn in F and bass clarinets in A and $B\flat$. On the 'instrumentation' page he wrote that it is absolutely inadmissible to substitute the A or $B\flat$ clarinet for the instrument in C.¹⁵ Towards the end of his life, Strauss wrote *Sonatine für Bläser (From the Workshop of an Invalid)* (1942). Both A and $B\flat$ basses are used. In the second and third movements, the tonality of the bass follows that of the soprano clarinets, A and $B\flat$ respectively. But in the first movement, which like the last is in the key of F, the sopranos are again in $B\flat$ (playing in G) whereas the bass is in A (playing in $A\flat$). Strauss was notoriously unconcerned about the difficulty for players. It therefore appears that the use of different bass instruments for the two outer movements, both in F, with the same soprano clarinets, was deliberate.

In the *Suite, Opus 4* (1921) by Bela Bartók, the second clarinet doubles on bass in A for the very prominent unaccompanied *Andante* solo in the third movement. The solo is in C major, and is very difficult to play smoothly on the bass in $B\flat$. It is clear that given the key for this movement, the bass in A was a deliberate choice.

There is just one living composer who wrote for the bass clarinet in A, Gunther Schuller in his *Duo Sonata* (1949). He kindly agreed to a telephone interview in which he said that at the

¹⁵ Wo "C" clarinetten vorgeschrieben, ist es absolute unzulässig dieselben durch A oder B Clarinetten zu ersetzen.

time of composition, he considered the bass in A to be a perfectly reasonable choice since he frequently heard it in the clarinet section of the Metropolitan Opera, in which he was playing horn at the time. He did think there was some difference in sound but in his work, the key relationship between movements was the critical idea. If a bass in A was not available it was perfectly acceptable to transpose it onto a B \flat instrument. He agreed that it was possible that composers such as Wagner and Mahler could have considered that the key in which the instrument was playing might be important for reasons other than technical ease.

The forgotten sound of the bass clarinet in A

It is important to attempt at least some evaluation of the sound quality of the bass in A, even though this will inevitably be subjective. The instrument in the Grove Collection (EUCHMI No. 5122) was kindly made available for a playing test by the Director, Prof. Arnold Myers. It is a Buffet Crampon dating from 1929, once used in the Los Angeles Philharmonic Orchestra. It is in good playing condition though pitched slightly high, at about $a' = 442$, and has two manual register keys. My perception was indeed that there is a similar, but less marked, difference between the bass in A and that in B \flat as there is between the corresponding soprano instruments.

Some of the small number of performers who regularly use the bass in A were interviewed: Dennis Smylie (New York), Peter Stoll (Toronto) and Alan Andrews (London). They agreed that it was much more satisfactory to perform works written for the bass in A on that instrument. And in July 2010 the Orchestra of the Age of Enlightenment, who endeavour to play on contemporary instruments, were able to use the EUCHMI instrument (the earliest bass in A that could be obtained for performance) in a performance of Tristan at a BBC Promenade Concert. The bass clarinetist Katherine Spencer commented to the author:

...there was certainly I thought an enormous difference in sound especially in the low register. Also a general graininess that particularly lent itself to emotion of this solo. When played on the correct instrument I felt that the music played itself, whereas on the B \flat I felt that I had to work hard on phrasing and the right kind of sound.

Should, then, 'period' – or even modern – orchestras revive this instrument when playing the great works by composers such as Wagner, Mahler, Liszt, and Strauss? It is hard to make the case (apart from ease of playing) in instances where the A instrument was apparently

chosen for its lowest note within a thickly-scored ensemble passage, but the case for solo passages is strong. The primary approach to historically-informed performance was well outlined by Lawson (1983), and there seems no reason to depart from it:

In tackling the complex problem of clarinet sonorities, I believe we should follow the composer's instructions as closely as possible, even where they appear conservative or eccentric; any attempt to interpret the motives for the choice of a particular clarinet must be undertaken with caution. A knowledge of subsequent developments in instrumental manufacture can pose a continuous threat to an authentic approach.

The sound of the bass in A is moderately but significantly different from that in B \flat . It is closer to the sound that the composer imagined. It presents no obstacles to the player; in fact, parts written for a bass in A can usually be played more easily and more smoothly than on a bass in B \flat , because they are normally in a more natural key for the clarinet.

I believe that they should.