

## Bruckner on Valve Trombone?— Low Brass Performance Practice in Anton Bruckner's Works

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When one considers the music of Anton Bruckner (1824–96) today, it is hard to imagine that the brass chorales of his symphonies were ever played on instruments other than on wide-bore German trombones that were developed ca. 1835 by C. F. Sattler in Leipzig<sup>1</sup> and the predominantly American instruments that evolved from them. Bruckner also employed trombones prominently in his early Masses—mostly doubling the voice parts *colla parte*, a technique well known from the great Viennese composers Haydn, Mozart, and Schubert. As evidenced by the instruments of this period, the bore size of Viennese trombones remained nearly unchanged from the sixteenth century into the third decade of the nineteenth century. This is clearly documented by the set of trombones by Joseph Huschauer from 1813 and by a tenor trombone, dated 1823, by Joseph Riedl (Figures 1 and 2).<sup>2</sup> A step toward a wider bore in Viennese trombones probably was made by Riedl around 1830, as can be seen from an undated instrument preserved in the Kunsthistorisches Museum in Vienna.<sup>3</sup> It therefore at first seems logical that Bruckner's early works were played with slide trombones of the kind made in Vienna in the period of Schubert and Beethoven. However, with his first larger works, Bruckner not only took up the tradition of the Viennese Classic, but also found himself in an environment that was very strongly informed by contemporary secular and sacred music with wind instruments, an environment that had a substantial influence on his first compositions. In this context, one can even speak of Bruckner's "wind-music socialization."<sup>4</sup> At that time, however, this environment found itself in a major process of transformation with regard to brass instruments. The newly invented valve instruments found entry into light, military, and art music, and thus it was at a very early stage that the valve trombone found use in the orchestras and ensembles that are known to have performed Bruckner's music.

Although Bruckner, unlike other famous nineteenth-century composers, such as Giuseppe Verdi, obviously never composed trombone parts specifically for valve trombones, it will be shown here when and in which works Bruckner heard his own music performed on such instruments, and which works were played on slide trombones. Moreover, the performance practice with respect to early tubas will be examined.<sup>5</sup>

Bruckner's *oeuvre* is clearly divided into three main creative periods. His ten-year sojourn in St. Florian (1845–55) was followed by his employment as cathedral organist in Linz (1855–68), with the subsequent years, up to his death, spent in Vienna (1868–96). Local performance situations and opportunities naturally have ramifications for the works of a composer. The fact that Bruckner prominently featured brass



**Figure 1:** Tenor trombone in B $\flat$  by Joseph Riedl (Vienna, 1823).  
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der Musikfreunde in Wien.



**Figure 2:** Detail of tenor trombone by Joseph Riedl.

instruments, and in particular trombones (and later also the tuba) in his works, and that this was due to his musical environment, has already been mentioned. If one wants to investigate the performance practice of low brasswind instruments in his works, it is necessary to take a closer look at his three main places of activity and the respective environments. While trombone performance practice in nineteenth-century Vienna has been well researched by Gerhard Zechmeister and Howard Weiner, there are still many open questions concerning the use of low brass instruments in St. Florian and Linz during Bruckner's time in these places, even though recent Bruckner research has increasingly concentrated on the subjects of organology and performance practice.<sup>6</sup>

Before we turn to Bruckner's works with low brass instruments in detail, let us take a look at the manufacture of low brass instruments in Vienna and Linz as well as at the introduction of valve instruments in the wind bands and orchestras of the time.

### **Trombone makers in Linz and Vienna during Bruckner's time**

#### **Vienna**

Viennese brass instrument making had attained a high standard in the eighteenth century, as documented by preserved trumpets, horns, and trombones by the Leicham-schneider,<sup>7</sup> Huschauer,<sup>8</sup> and Kerner<sup>9</sup> families. From the beginning of the nineteenth century, brass instrument making increasingly took on an industrial character, whereby the larger factories engaged in worldwide export.

Joseph Felix Riedl (b. ca. 1788, Graslitz, Bohemia; d. 1837, Vienna) can be considered a major innovator, especially in the area of valve instruments. He was active from ca. 1811 in Floridsdorf (today the twenty-first district of Vienna) and took over Joseph Huschauer's trade license in 1815. In 1820 he made a bass trombone in F with a double slide. In 1823, a year before Bruckner's birth, he received a ten-year patent, jointly with Joseph Kail, a horn player at the Imperial-Royal Court Opera, for a double sliding-tube valve (*Doppelschubventile*), the so-called Vienna valve. The advantages of the new invention were described on 29 November 1823 in the *Amtsblatt* (official journal) of the *Kaiserlich priv. Wiener Zeitung*: "the many dull, muffled sounds of the horns are transformed into bright-sounding natural notes, the buzzing tone of the keyed trumpet is refined, and the trombone spared the long drawing of the slide."<sup>10</sup> Although the valve trumpet was first described in 1827 in the *Trompetenschule* of Andreas Nemetz (1799–1846),<sup>11</sup> who was a trombonist at the Imperial-Royal Court Opera and therefore a colleague of Joseph Kail's, there is no mention of the valve trombone in his *Neueste Posaun-Schule*, which was published at the same time. Nemetz made up for this omission in the second edition, which appeared sometime after 1831.<sup>12</sup> In the expanded edition, he reported that Joseph Riedl was the first to employ the valves of the trumpet and the horn on the trombone, and that Johann Tobias Uhlmann (recte: Leopold Uhlmann) decisively improved the mechanism of

the valve trombone in 1830. The reason Nemetz did not mention the valve trombone in the first edition of his trombone method may be that he had only adopted the improved instruments by Uhlmann, or because the trombone method had been written sometime before the trumpet method (although they appeared simultaneously, the trombone method was his “16th work,” the trumpet method his “17th work”). In any case, the valve trombone existed already in 1827/29. In an article about the valve horn in the *Wiener Allgemeine Theaterzeitung*,<sup>13</sup> it was reported in early 1828 that Joseph Kail also applied the mechanism of the “chromatic horn” to the trumpet and trombone; strangely, Riedl is not mentioned. It can therefore not be determined with certainty when Joseph Riedl made his first valve trombone, but the mid-1820s can be assumed as the date of origin. However, the first valve trombones obviously still had technical deficiencies. We can read about problems concerning the functionality of the valves, the air leaks in the tubing, the squirting of condensation out of the valves, right angles and sharp edges disrupting the air column, etc., in letters, dated between 1823 and 1835, written by Riedl/Kail, Riedl, and L. Uhlmann.<sup>14</sup>

The second important trombone maker to contribute to the development of the valve trombone in Vienna, Leopold Tobias Uhlmann (1806–78), has already been mentioned. Leopold joined his father’s workshop ca. 1830 and ran it with great success after his father’s death. In 1837 the Vienna Court Opera obtained a valve trombone from Uhlmann.<sup>15</sup> On 26 March 1858 the Imperial-Royal Hofkapelle bought a *Bass-Tenor Posaun* from Uhlmann for 40 Gulden,<sup>16</sup> and in August of the same year a further “bass-tenor trombone in B $\flat$  with four valves and two bell joints” (“Bass-Tenor Posaune in B mit vier Maschinen und zwei Corpus”). In 1882 yet another tenor valve trombone in B $\flat$ , designated “Solo B $\flat$  alto trombone [with] 4 valves” (“Solo B. Altposaune 4 Cilind.”) was purchased from Uhlmann.<sup>17</sup> The bell of a valve trombone from the Vienna court chapel has been preserved. It cannot be determined with certainty whether it belonged to one of the Uhlmann instruments mentioned in the 1856 inventory of the court chapel. In any case, the engraving “Leopold Uhlmann K:K: priv[ileg]. Instrumentenfabrik in Wien” and “K:K: Hofkapelle” points to a date of manufacture around 1860 and usage in the court chapel. The imperial privilege was granted to Uhlmann between 1845<sup>18</sup> and 1863;<sup>19</sup> from 1874 he was “k k. Hof-Blasinstrumentenmacher” (“imperial-royal court wind-instrument maker”).<sup>20</sup>

Another instrument maker who built valve trombones was Daniel Meinel (?–ca. 1876). Little is known about him, although in 1862 he and Leopold Uhlmann produced a number of instruments for the Court Opera, namely one three-valve and three four-valve tenor trombones in B $\flat$  and two three-valve bass trombones in F, as well as another two three-valve bass trombones in F for the stage music band.<sup>21</sup>

The Gesellschaft der Musikfreunde owns a valve trombone by Anton Kleps (?–1857), a pupil of Joseph Riedl’s, and the bell of a valve trombone by August Beyde (b. Leipzig, 1789–d. Vienna, 1869) can be found in the Music Instrument Collection of Leipzig University.<sup>22</sup>

With the invention of the bombardon in Vienna in the late 1820s, Wenzel Riedl (fl. 1818–44) made a new low valve instrument available to brass players. In an advertisement in the *Wiener Zeitung* in 1829, Riedl touted, in addition to other brasswind instruments, a “newly invented bass *bombardone* with twelve keys, or with a valve mechanism.”<sup>23</sup> From an article in the *Allgemeine Theaterzeitung* in 1833,<sup>24</sup> it becomes clear that Riedl’s bombardon had three valves at this time and was tuned in B $\flat$  like a valve trombone. In his article, Riedl announced an expansion of this instrument to four valves in order to be able to play all the notes down to *EE*. From the mid-1830s, Leopold Uhlmann apparently built low valve instruments based on an ophicleide purchased by the Gesellschaft der Musikfreunde in 1833, which was called a bombardon or “ophicleide with valve mechanism.”<sup>25</sup>

### **Linz**

Brass-instrument making is documented in Linz as early as the beginning of the nineteenth century.<sup>26</sup> Karl Doke (ca. 1778–1826) was active in Linz from 1809 as maker of wood- and brasswind instruments. After his death the workshop was run by his widow, Josepha (?–1851), and his son, Alois (?–1843). It is not known whether the Doke workshop produced trombones and valve instruments.

With Ignaz Lorenz (b. Schwaderbach, 1804; d. Linz, 1875), the production of brass instruments in Linz undeniably reached a high point. After training with Joseph Riedl in Vienna during the decisive years in the development of valve instruments, he founded his own workshop in Linz in 1827, but maintained business connections with Riedl over a long period. Lorenz undoubtedly began making trombones in the early years of his career in Linz. A slide trombone (Figures 3 and 4) by him is preserved in St. Florian Abbey—an instrument very similar to the trombone by Joseph Riedl in Vienna’s Kunsthistorisches Museum—as are a valve trombone in Kremsmünster Abbey (Figure 5), and an early bombardon with Viennese valves in a private collection (Figure 6). After Lorenz’s death, the workshop was run by his former employees until well into the twentieth century.

Another interesting instrument maker in this context is Joseph Wenzel Lausmann (b. Gottesgabe, 1824; d. Vienna, 1883). Active in Linz from 1848 to ca. 1880, he was personally acquainted with Bruckner, as documented by a letter from the composer dated 1864. Lausmann and Bruckner were also both members of the “Frohsinn” Liedertafel (men’s choir). Wood- and brasswind instruments bearing Lausmann’s signature are known, but it is not certain that they were made in Linz; it is possible that he traded in instruments made by other makers.

### **The introduction of valve instruments in the wind bands and orchestras of Bruckner’s time**

It is generally known that after their invention, valve instruments did not immediately supplant the older valveless instruments. Natural, keyed, and valve instruments were



**Figure 3:** Tenor trombone in B $\flat$  by Ignaz Lorenz (Linz).  
Reproduced by the kind permission of the Stiftsbibliothek St. Florian.



**Figure 4:** Detail of tenor trombone by Ignaz Lorenz.



**Figure 5:** Valve trombone in B♭ by Ignaz Lorenz (Linz).  
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**Figure 6:** Bombardon in F by Ignaz Lorenz (Linz).  
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used alongside one another for a period of several decades. However, it is remarkable that the introduction of valve instruments took place very quickly, especially in orchestras that played light music as well as in military and civic wind bands throughout Austria. As I will show presently, these were the musicians who were involved in premieres of Bruckner's works during his Upper-Austrian period. It may at first be surprising that valve instruments very quickly found their way into court chapels and opera orchestras. In addition to the relative ease with which they could play chromatic melodies, the valve instruments had another decisive advantage: they significantly facilitated the switching between different brass instruments, something that was required of musicians even in the *Stadtpfeifer* tradition of the seventeenth and eighteenth centuries. Whereas natural trumpet (clarino playing), natural horn (stopping technique), and trombone (slide technique) had entirely different technical solutions for chromatic playing, the technical characteristics were equalized with the valve versions of these instruments, and the technical differences between these three

instruments essentially consisted of different mouthpieces. It should also be noted that the mouthpiece standards of this time were entirely different than those of today, and that different instruments were played with very similar mouthpieces. Thus in his trombone method of 1827, Andreas Nemetz stated that the mouthpiece for the alto trombone was often the same as that for the second trumpet, but with a deeper cup.<sup>27</sup> It is also noteworthy that the valve-instrument pioneer Joseph Kail (1795–1871) initially came on the scene as a horn player (1819 in the Pest Theater, 1823–26 in the Vienna Court Theater), but was appointed Professor of Valve Trumpet and Trombone in Prague in 1826.<sup>28</sup> Instrumentalists who played several wind instruments were common at this time, especially in military bands and light-music ensembles.

### Vienna

The first orchestra in Vienna to use valve instruments was probably that of Joseph Lanner (1801–43). From 1825 Lanner employed three brass players, two of whom alternated on trumpet and horn and one who played only trumpet, as the ensemble's performance material shows.<sup>29</sup> In the trio of the waltz *Aufforderung zum Tanz* (published in 1827), solos passages for two (valve) trumpets are found in contemporary orchestral parts (Example 1).<sup>30</sup>

In addition to the three horn/trumpet players (who were later joined by a fourth musician), Lanner regularly employed a trombonist starting in 1828. A first bombardon part stems from 1835. All these brasses were very likely valve instruments. Their unusually early appearance in Lanner's orchestra, just three years after the first documented construction of a valve instrument in Vienna, would seem to correspond to the show elements of his light-music ensemble. Instrument maker Joseph Riedl obviously collaborated with the brass players of both the Lanner and Strauss orchestras.

219  
Trumpet 1 (in D) *p*

Trumpet 2 (in A basso)

Trumpet 3 (in D) *p*

227  
*cresc.*



**Example 1:** Joseph Lanner, *Aufforderung zum Tanz* (1827), Trumpets 1–3, mm. 219–34 and 289–303.

In a promotional letter to the Weimar court chapel in 1836, Riedl offered bombardons, horns, and trumpets, referring to these as “Strauss-Lanner valve instruments.”<sup>31</sup> However, idiomatic passages for valve instruments are infrequent in the brass parts of the early Viennese waltz orchestras. The valves primarily made the extra crooks of the invention-horns and trumpets superfluous, which was a great advantage, as was already mentioned in Riedl and Kail’s 1823 patent: “that the scales of three horns or three trumpets, or also of two, are united in one and the same instrument.”<sup>32</sup> An example for a trombone part clearly written for a valve trombone is that from Joseph Lanner’s *Die Mozartisten* (1842). In this part, alongside virtuoso passages, are also found trills that make sense only if performed on a valve instrument (Example 2).

It cannot be precisely determined when the first valve instruments found their way into the Vienna Court Opera (Kärntnertheater), but here too the introduction of valves seems to have taken place very early. As mentioned above, Joseph Kail, a valve specialist, was engaged by the Court Opera in the mid-1820s. In 1834 the bombardon player Franz Fretzer was hired,<sup>33</sup> and in 1837 the above-mentioned purchase of a valve trombone was effected.

Interesting details concerning the introduction of the valve can also be found in two Court Music Chapel inventories from 1840 and 1856.<sup>34</sup> Although this institution was certainly Vienna’s most conservative orchestra, owing to its primary function of performing sacred music, as early as 1840 it possessed two valve trumpets, two valve horns, and two valve trombones (tenor and bass),<sup>35</sup> in addition to two natural horns, two slide trombones (of which one was unusable), six natural trumpets, and two keyed trumpets. In 1858, during the course of a larger reorganization, all the older instruments still present—namely two natural horns (“with all the crooks”), two slide trombones, and six “older trumpets” (apparently natural and keyed trumpets),

Trombone

66 Solo Larghetto  
p dolce

72 piacere ff

418 ff

423 p ff

Example 2: Joseph Lanner, *Die Mozartisten* (1842), Trombone,  
mm. 67–76 and 418–29.

as well as an old tenor valve trombone—were discarded, and two new tenor-bass valve trombones by Leopold Uhlmann were purchased. Therefore in 1858 the Court Music Chapel had at its disposal a then-standard set of trombones, consisting of two tenor valve trombones in B $\flat$  and a bass valve trombone in F. This set remained in use until 1882, when the bass valve trombone was replaced by a narrow-bore tenor valve trombone by Uhlmann. Only in 1907 was a set of slide trombones, consisting of an alto trombone in E $\flat$ , a tenor trombone in B $\flat$ , and a tenor-bass trombone in B $\flat$  with F attachment, all made by Anton Dehmal, bought for the Court Music Chapel.<sup>36</sup>

### Austrian Military Bands

The regiments of the imperial and royal monarchy indeed had their regular garrisons, but were itinerant also in times of peace, and thus the regiment bands, too, were stationed in different places throughout the Habsburg monarchy. Until the regulations concerning the *Systematization of the Military Music Bands*—authored by Army Kapellmeister Andreas Leonhardt (1800–66), who had been appointed in 1850—were introduced in 1851, there was no standard instrumentation in the Austrian military bands.<sup>37</sup> During the years of the introduction of valve instruments, the individual ensembles were very strongly informed by the initiatives of their Kapellmeisters. One of the most important of these was the above-mentioned Andreas Nemetz, who directed the Infantry Regiment No. 19 from 1828 until his death in 1846. The trumpet corps of his band appeared together with the orchestra of Johann Strauss the Elder on 2 March 1828 in Vienna; only a week later Joseph Lanner also adopted this idea.<sup>38</sup> Nemetz's description of the valve trumpet in his method of 1827,

that of the valve trombone in the second edition of his trombone method, and the musical connections with the early waltz ensembles, make it clear that Nemetz was a pioneer in the area of valve instruments.<sup>39</sup> Thus, the *Wiener Theaterzeitung* reported in 1833 in an article about the bombardon: “under the direction of the meritorious Kapellmeister Nemetz, it [the bombardon] was introduced to the world, as was the valve trumpet earlier.”<sup>40</sup> The instrumentation of his band is shown by the compositions he published in 1844 in his *Allgemeine Musikschule für Militärmusik* (“General Method for Military Music”):

flute + piccolo in D $\flat$  (C)  
 1 clarinet in A $\flat$  (G), 4 clarinets in E $\flat$  (D)  
 2 horns in E $\flat$  (D), 2 horns in B $\flat$  (A $\flat$ /G) basso  
 2 flugelhorns in B $\flat$  (A), 1 bass flugelhorn in B $\flat$  (A) basso  
 6 trumpets in E $\flat$  (D), 1 bass trumpet in B $\flat$  (A) basso  
 2 bassoons, 1 contrabassoon  
 2 trombones in B $\flat$ , 1 bass trombone in F  
 1 bombardon in F  
 percussion

All the brasses were valve instruments.<sup>41</sup> In his military music method, Nemetz indeed mentioned an invention-trumpet in G, natural horn, and slide trombone in B $\flat$ , but did not mention any keyed-brass instruments. Moreover, the description of the bass slide trombone in F (A $\flat$ , G) “particularly in use in the military,” as found at the back of his 1827 trombone method,<sup>42</sup> is lacking in the 1844 military music method. In addition to a valve trumpet in G, a valve horn in D, and a valve trombone in B $\flat$ , the military music method also includes illustrations of a valve flugelhorn in C, a bass valve trombone in F, and a three-valve “Bombardon or Ophicleide” in F. In 1844/45 Nemetz was stationed with his band in Linz and performed there, together with the orchestra of the Linz Theater, his tone poem *Die Bestürmung von Saida* (“The Siege of Saida”).<sup>43</sup> Philipp Fahrbach (1815–85) described a very similar, somewhat enlarged instrumentation for Austrian military bands in an article in the *Allgemeine Wiener Musik-Zeitung* in 1844:<sup>44</sup>

2 flutes + piccolo  
 2 oboes  
 1 clarinet in A $\flat$ , 2 clarinets in E $\flat$ , 4 clarinets in B $\flat$   
 4 horns in F  
 1 cornet a pistons, 1 “Trompetin” or post horn in A $\flat$  or B $\flat$   
 2 flugelhorns in C or B $\flat$ , 1 bass flugelhorn, baritone or euphonium  
 4 trumpets in E $\flat$ , 2 trumpets in F basso, 2 bass trumpets in B $\flat$  or A $\flat$   
 2 bassoons  
 3 trombones

basses: contrabassoon, bombardon  
 percussion

### Upper Austria

It has already been mentioned that Bruckner grew up in a musical environment that was very strongly influenced by wind music. Prior to 1848 there were thirty-three wind bands in Upper-Austrian villages, with an additional 257 appearing by 1900.<sup>45</sup> Valve instruments can be documented relatively early in the activity of these village music ensembles. For example, in the holdings of the Micheldorf Music Society, which was founded in 1833, are found B♭ parts for two *Maschin-Flügelhörner* (valve flugelhorn) belonging to founding member Johann Michael Zeitlinger (1803–69).<sup>46</sup> Valve instruments apparently were introduced into rural Austria by itinerant Bohemian musicians. A Styrian musician later recalled, “The old homelike Styrian music was forced out through the invention of the flugelhorn and valve trumpets ... which were brought in by Bohemian musicians.”<sup>47</sup> In this connection, the pioneering activities of Bohemian musicians and instrument makers should be remembered: after all, Joseph and Wenzel Riedl, Ignaz Lorenz, Wenzel Lausmann, Joseph Kail, and Andreas Nemetz were all born in the territory of today’s Czech Republic. Through its geographic proximity to the Bohemian neighbors, Upper Austria had a distinct advantage, and thus the introduction of the valve certainly took place earlier here than in other regions.

Information concerning the early introduction of valve instruments is also found in preserved performance material in Upper-Austrian monasteries; for example, from the 1830s in Kremsmünster Abbey.<sup>48</sup> Preserved even today in this abbey are a very early valve horn by Leopold Uhlmann as well as three valve horns, a natural horn, a natural trumpet, and parts of a valve trombone by Ignaz Lorenz.<sup>49</sup> In St. Florian Abbey, where Bruckner was employed for ten years, the first reference to a valve instrument is found in a cantata by Johann Baptist Schiedermaier (1779–1840). In the composition *Schöner Festtag, Freund der Lieder* from 1836, two bassoons, two horns, two keyed trumpets, four natural trumpets, bombardon, and timpani were used to accompany the voices. The bombardon may very well have been a Viennese instrument with valves.<sup>50</sup> Early brasswind instruments that have survived in St. Florian Abbey are a natural trumpet by Michael Leichamschneider (dated 1744) as well as a valve trumpet, a valve horn, and the above-depicted slide trombone by Ignaz Lorenz.<sup>51</sup>

Particularly interesting in this context are inventories and invoices from St. Florian’s archives during the tenure of Regens Chori Ignaz Traumihler (1815–84). After four clarinets and a flute had been bought in 1843, a number of unspecified wind instruments were purchased for 75 Gulden in 1853. In 1854 a flugelhorn was bought for 9 Gulden, in 1855 a *Maschintrompete* for 12 Gulden and an oboe for 24 Gulden.<sup>52</sup> On the basis of two inventories from 1854 and 1858, it is possible to determine which instruments were involved in the 1853 purchase.

Inventories 1850s

2 oboes (1 bought in 1855)

flute (bought in 1843)

4 clarinets (1843)

4 horns (2 “old”)

5 trumpets (1–2 by Leichamschneider, 1 bass? trumpet 1855)

bass flugelhorn (1854)

4 trombones (1 by Lorenz)

Two horns repaired in 1843 were described as “old,” and the preserved Leichamschneider trumpet from the eighteenth century had probably been one of a pair. The still extant Lorenz slide trombone and the one oboe undoubtedly belonged to the stock of instruments from earlier times. Most likely acquired in the 1853 purchase, then, were two valve trumpets, two valve horns, and three valve trombones, which, at approximately 10 Gulden per instrument, would be consistent with the total price of 75 Gulden (see the prices for the *Maschinflügelhorn* and *Maschintrompete* above). Since the frequently mentioned *Maschinflügelhorn* is also referred to as a bass flugelhorn, the *Maschintrompete* from 1855 could have been a bass trumpet. The assumption that the unidentified instruments of the 1853 purchase were valve instruments is bolstered by the verified acquisition of two valve instruments in the following years. In addition, the purchase in 1854 of a valve bass flugelhorn as an “ancillary instrument” supports the presumption that a complete renewal of the brass instrument inventory with valve instruments took place in 1853: the abbey most likely first acquired an instrumentarium appropriate for the orchestral practice of the time, consisting of two valve trumpets, two valve horns, and three valve trombones, which was later expanded with the valve bass flugelhorn. The probable purchase of a valve bass trumpet in 1855 could then be seen as the next logical step for the completion of the instrumentarium. Besides the renewal of the instrumentarium with valve instruments, the reason for the expansion of the stock of instruments may have had to do with the appointment in 1850 of the Bohemian Josef Heybal as music teacher for wind instruments. The intention was probably to have musical performances by amateurs from the monastery.

### **Bruckner’s Works with Low Brass Instruments**

In the following section, Bruckner’s works with low brass instruments—i.e., trombones, bombardon, and tuba—are listed in chronological order according to the date of their first performance, whereas less attention is paid to the genesis and possible reworkings of the pieces. The numbering of the works follows the *Werkverzeichnis Anton Bruckner* (WAB).<sup>53</sup> Information about first performances is primarily taken from the publications (editions and critical reports) of the complete editions of Bruckner’s works.<sup>54</sup>

Although the date and place of the first performances are known for most of the works, information about the ensembles and orchestras that performed them in the early and middle creative periods is completely lacking. This naturally makes it difficult to answer the question of which of his works Bruckner heard at their premieres with valve or slide trombones, as well as that concerning the kind of tuba instrument involved. Even in the cases in which an inventory of musical instruments of an institution (St. Florian Abbey, the Vienna Hofkapelle) might provide information about the instrumentarium of Bruckner performances, it is not certain that these instruments were also actually employed at the premieres.

These questions are even more difficult to answer when there is no information at all about the musicians or about the instruments that they used. However, for all of Bruckner's works with low brass instruments there is at least one piece of information available concerning the respective first performances, namely the cities or towns where they took place. Therefore, in the foregoing discussion I have attempted to provide a detailed view of the development, usage of, and change in the instrumentarium in the localities where Bruckner was active. With this knowledge, it is now possible to venture an answer to the central question of this article: namely, whether or not valve trombones were used in premieres of Bruckner's compositions. However, it is obvious that in many cases this answer can be little more than an educated guess, and this is the reason, particularly at the beginning of the following list, for the frustratingly frequent use of the terms "probably," "could have been," etc. Nevertheless, I am of the opinion that a presentation of the performance-practice situation of the low brass instruments in Bruckner's works, corresponding to the current state of knowledge, is useful and of interest.

### **The St. Florian Decade (1845–55)**

The first of Bruckner's works with trombones are the fragments of a Kyrie for chorus, three trombones, and organ (*Missa pro Quadragesima*, WAB 140 [ca. 1845], composed while the composer was still in Kronsdorf) and of a Kyrie for chorus, two oboes, three trombones, and organ (*Missa in E<sub>b</sub>*, WAB 139). Since these two fragments were not performed in public during Bruckner's lifetime, it should simply be noted that trombones were integrated into the instrumentation even in Bruckner's early creative period.

### ***Aequale* (WAB 149), for three trombones**

Three trombone parts (alto, tenor, and bass) have been preserved for the first *Aequal*, and only two (alto and tenor) for the second. The bass trombone part of the second *Aequal* was reconstructed for the Bruckner *Bruckner Gesamtausgabe* by Hans Bauernfeind.<sup>55</sup> Since authoritative sources have yet to be found concerning the genesis and the performance of these pieces, one can only speculate as to the musicians involved in and the instrumentarium employed at their first performances. In view of the fact that a wind music ensemble is not documented at St. Florian until 1874<sup>56</sup> and a full

set of trombones was available only from 1853 (see above), the trombonists for performances at St. Florian probably were recruited from military or civilian bands in Linz. During the second half of the nineteenth century, there is documentary evidence for numerous substitutes from the military and the Linz Theater for musical performances in the monastery. Musicians from the band of the Linz civil guard were probably employed as extras until the middle of the century. This band was founded by Franz Xaver Glöggel (1764–1839), who conducted Mozart's Requiem in St. Florian in 1823 on the occasion of the funeral ceremonies in honor of Abbot Johann Michael Ziegler. Glöggel additionally served as master of the town waits, theater music director, and cathedral music director in Linz, and incidentally prompted Beethoven to compose his three *Equale* (WoO 30) for four trombones. Moreover, by way of the St. Florian Regens Chori Ignaz Traumihler, there were close connections to Bruckner's teacher, Johann Baptist Schiedermayr, who was director of the Friends of Music, theater music director in Linz, and functionary of the band of the Linz civil guard.<sup>57</sup>

Since the ranges of the five surviving parts to the *Aequale* correspond to those specified in Nemetz's methods, a first performance with three tenor valve trombones in B♭, or two tenor valve trombones in B♭ and a bass valve trombone in F, is most likely. The valve trombone had already become the standard instrument around 1850, at least among professionals, as was reported by the Viennese Court Kapellmeister in a submission dated 4 January 1851.<sup>58</sup> A rendition with three slide trombones in B♭ or even with a mixed group of slide and valve trombones is within the realm of possibility; the slide bass trombone in F was no longer in use in Linz even in Glöggel's time.<sup>59</sup>

**Requiem in D Minor** (WAB 39), for soloists, chorus, strings, horn, three trombones, organ

Premiere: 15 September 1849, St. Florian Abbey

The demanding trombone parts point to a performance by at least semi-professional players. As in the case of the *Aequale*, it can only be speculated as to where they came from. The instruments used were most likely two tenor valve trombones in B♭ and a bass valve trombone in F (the low *D*, which is called for several times, cannot be played on a three-valve trombone in B♭ or on a slide trombone in B♭.<sup>60</sup> The bass trombonist apparently switched to horn in the Benedictus. The practice of changing instruments within a piece was quite common at the time.

**Psalm 114** (WAB 36), for chorus and three trombones

Premiere: 1852

**Vor Arneths Grab** (WAB 53), for chorus and three trombones

Premiere: March 1853

The same assumptions as for the Requiem apply to these two works.

**Libera me** (WAB 22), for chorus, cello, double bass, three trombones, organ

Premiere: 24 March 1854, St. Florian Abbey

Since, as we have seen, St. Florian Abbey most likely bought three valve trombones in the summer of 1853, it can be assumed that from this point onward the execution of trombone parts in St. Florian took place on these instruments, even if amateur musicians from the Abbey were involved in the performances. Although a single slide trombone, which has survived to the present day, was still in the Abbey's stock of instruments, the use of the newly acquired set of valve trombones as a whole seems obvious. The different versions of the following works also evidently point to this remaining slide trombone being decommissioned in 1853.

**Heil, Vater! Dir zum hohen Feste** (WAB 61), for chorus, three horns, two trumpets, one bass trombone

Premiere: 28 or 29 September 1852, St. Florian Abbey

This cantata was first performed in 1852 in honor of the name day of Provost Arneth, and again in 1857 with an altered text. The bass trombone part is relatively simple and could very well have been played by an amateur musician from the monastery, which would also be consistent with the occasion and the instrumentation of the work. According to the *Bruckner-Gesamtausgabe*, there is an *ossia* passage offering the choice of *d* or *D*. An explanation for this might be the execution in 1852 on tenor slide trombone in B $\flat$  (still preserved in the monastery) as opposed to the use of a bass valve trombone in F, purchased in 1853, in the 1857 performance.

**Missa solennis** (WAB 29), for soloists, chorus, and orchestra (0,2,0,2; 2,2,3,0, timp, strings, organ)

Premiere: 14 September 1854, St. Florian Abbey

The demanding trombone parts of this Mass, which was performed in honor of the new abbot, were probably played by outside musicians on two valve trombones in B $\flat$  and a bass valve trombone in F.

**Laßt Jubeltöne laut erklingen** (WAB 76), for men's chorus, two horns, two trumpets, four trombones

This piece was composed by Bruckner for the reception of the imperial bride, Princess Elisabeth of Bavaria, in Linz on 21 April 1854. The "Frohsinn" Liedertafel also rehearsed the piece, and it was to be performed with brass players probably from the ranks of the band of the Linz civil guard. At the last moment, however, it was replaced by an *a cappella* piece and thus did not experience a performance.<sup>61</sup> The trombone parts were probably intended for three tenor valve trombones in B $\flat$  and a bass valve trombone in F.

**Auf, Brüder! Auf, und die Saiten zur Hand!** (WAB 60), for men's chorus, two oboes, two bassoons, three horns, one trumpet, three trombones



Like *Heil, Vater! Dir zum hohen Feste* (WAB 61), this cantata in honor of Provost Mayer could have been performed by an ensemble from St. Florian Abbey. The bass trombone part descends to *D*, therefore an execution with two valve tenor trombones in B $\flat$  and one valve bass trombone in F can be assumed. It is worthy of mention here that one of the three horn players switched to trumpet in the concluding chorus.

**Cathedral Organist in Linz (1855–68)**

**Psalm 146** (WAB 37), for soloists, chorus, and orchestra (1,2,2,2; 4,2,4,0, timp, strings)  
A performance during Bruckner's lifetime is not documented.

**Afferentur** (WAB 1), for chorus and three trombones

No performances known.

**Festkantate** (WAB 16), for men's chorus, two flutes, two oboes, four clarinets, two bassoons, four horns, three trumpets, three trombones, bombardon, timpani

Premiere: 1 May 1862, Linz

This cantata was premiered at the laying of the foundation stone of the new cathedral by the Frohsinn Liedertafel under the direction of Engelbert Lanz (1820–1904) and the military band of the 13th Infantry Regiment, which was stationed in Linz at that time. The low-brass section therefore probably consisted of two tenor valve trombones in B $\flat$ , one bass valve trombone in F, and a bombardon in F.

**March in D Minor** (WAB 96) / **Three Orchestral Pieces** (WAB 97) / **Overture in G Minor** (WAB 98)

These pieces for orchestra with trombones (WAB 97 with only one trombone) were probably not performed during Bruckner's lifetime.

**Psalm 112** (WAB 35), for chorus and orchestra (three trombones)

A performance during Bruckner's lifetime is likewise not documented.

**Mass in D Minor** (WAB 26), for soloists, chorus, and orchestra (2,2,2,2; 2,2,3,0, timp, strings, organ)

Premiere: 20 November 1864, Linz

The Mass in D Minor was performed for the first time on 20 November 1864 in the Old Cathedral in Linz. It was repeated a short time later as a "Concert Spirituel" in Linz's Redoutensaal. No details are known about the orchestra involved in the performances, but since the bass trombone part goes down to *D*, it is obvious that the trombone section consisted of two tenor valve trombones in B $\flat$  and a bass valve trombone in F. For a performance of the Mass on 10 February 1867 by the Vienna Hofmusikkapelle under Johann Herbeck, it is very probable that the set of trombones by Leopold Uhlmann, described in the inventory of the Hofkapelle and consisting of two tenor valve trombones in B $\flat$  and a bass valve trombone in F, were employed.<sup>62</sup>

**March in E $\flat$**  (WAB 116) / **Apollo March** (WAB 115), for military band (two flutes, five clarinets, three horns, two flugelhorns, three euphoniums, seven trumpets, three trombones, bombardon)

The *Apollo March*, composed in 1857, is actually by Bela Keler (1820–82), and not by Bruckner, but its instrumentation is almost identical to that of Bruckner's *March in E $\flat$*  (ca. 1864). Both composers were pupils of Simon Sechter (1788–1867). The parts of the bass trombone and the bombardon, which are largely in unison with each other, descend to low E $\flat$  in the *March in E $\flat$*  and even to C in the *Apollo March*. Accordingly, both marches were written for the low brass section of an Austrian military band—with two tenor valve trombones in B $\flat$ , one bass valve trombone in F, and a bombardon in F—which by this time had been standardized.

**Germanenzug** (WAB 70), for men's chorus, three cornets, tenor horn, four horns, four trumpets, three trombones, bombardon

Premiere: 5 June 1865, Linz

The Frohsinn Liedertafel performed this cantata for the first time in 1865 on the occasion of the *Oberösterreichisch-Salzburgisches Sängerbundesfestes* (Festival of the Upper-Austrian–Salzburgian Choral Association). There is no verified information about the wind players, but they were probably assembled from local wind bands (civil guard, military bands, etc.) Because the bass trombone part descends to D, a low brass section of two tenor valve trombones in B $\flat$ , a bass valve trombone in F, and a bombardon in F can be assumed.

**Inveni David** (WAB 19), for men's chorus and four trombones

Premiere: 10 May 1868, Linz

This motet was premiered by the Frohsinn Liedertafel as the Offertory in a Mass service. The trombonists presumably came from the milieu of the known local ensembles (theater orchestra, civil guard, military bands, etc.) Three valve tenor trombones in B $\flat$  and a valve bass trombone in F were probably used.

**Symphony No. 1** (WAB 101), for orchestra (2,2,2,2; 4,2,3,0, timp, strings)

Premiere: 9 May 1868, Linz

The *Symphony No. 1* was premiered under Bruckner's direction in Linz's Redoutensaal, but no information survives concerning the orchestra involved. The trombone section was probably made up of the then standard instrumentation of two tenor valve trombones in B $\flat$  and a bass valve trombone in F.

**Mass in E Minor** (WAB 27), for chorus and winds (0,2,2,2; 4,2,3,0)

Premiere: 29 September 1869, Linz

This Mass was premiered at the inauguration ceremony of the New Cathedral in Linz by the wind players of a military band. The trombone section therefore consisted of two tenor valve trombones in B $\flat$  and a bass valve trombone in F.

**The Viennese Years (1868–96)**

**Mass in F Minor** (WAB 28), for chorus and orchestra (2,2,2,2; 2,2,3,0, timp, strings, organ)

Premiere: 16 July 1872, Vienna

The premiere of the Mass in F Minor took place in Vienna's Augustinerkirche under Bruckner's direction on 16 June 1872 with musicians of the Court Opera Orchestra and was repeated in the chapel of the Hofburg on 8 December of the same year. The trombone section of the Court Opera (and the Vienna Philharmonic) consisted at this time of two tenor valve trombones in B $\flat$  and a bass valve trombone in F.

**Symphony No. 2** (WAB 102), for orchestra (2,2,2,2; 4,2,3,0, timp, strings)

Premiere: 26 October 1873, Vienna

The premiere was given by the Vienna Philharmonic, that is to say, by the musicians of the Court Opera Orchestra. The trombone section was therefore made up of two tenor valve trombones in B $\flat$  and a bass valve trombone in F.

**Symphony No. 3** (WAB 103), for orchestra (2,2,2,2; 4,2,3,0, timp, strings)

Premiere: 16 December 1877, Vienna

The premiere took place in Vienna under Bruckner's direction. The trombone section consisted of the usual two tenor valve trombones in B $\flat$  and a bass valve trombone in F.

**Symphony No. 4** (WAB 104), for orchestra (2,2,2,2; 4,3,3,1, timp, strings)

Premiere: 20 February 1881, Vienna

The premiere of the Fourth Symphony by the Vienna Philharmonic took place under the direction of Hans Richter. As at the premieres of the previous symphonies, the trombone section consisted of two tenor valve trombones in B $\flat$  and a bass valve trombone in F. In the Fourth Symphony Bruckner called for a tuba for the first time. A Berlin tuba in F was introduced into the Court Opera Orchestra, and thus into the Vienna Philharmonic, in 1875 by Otto Waldemar Brucks after the retirement of Franz Fretzner in that year. (From 1834 to 1862 Fretzner had used a bombardon, and from 1862 to 1875, a helicon in C).<sup>63</sup>

**Symphony No. 6** (WAB 106), for orchestra (2,2,2,2; 4,3,3,1, timp, strings)

Premiere: 11 February 1883, Vienna

Bruckner heard his Sixth Symphony complete only once in an orchestral rehearsal. At the premiere with the Vienna Philharmonic under Wilhelm Jahn on 11 February 1883, only the two middle movements were given. The low brass instrumentation was two tenor valve trombones in B $\flat$ , a bass valve trombone in F, and a bass tuba in F.

**Symphony No. 7** (WAB 107), for orchestra (2,2,2,2; 8,3,3,1, timp, strings)

Premiere: 30 December 1884, Leipzig

The Seventh Symphony was premiered in the Leipzig Municipal Theater by the Gewandhaus Orchestra under the direction of Arthur Nikisch. The trombone section most likely consisted of two tenor slide trombones and a tenor-bass slide trombone with F attachment made by the famous Leipzig maker Johann Christian Penzel (1817–79) or another Leipzig workshop. The contrabass-tuba part was probably performed on an instrument in BB $\flat$  or CC. In a roughly contemporary catalogue of the Erfurt firm of Carl and Eduard Kruspe (ca. 1870) are found, for example, a “Contre Baß in B mit 4 Pump Ventil” (contrabass in B $\flat$  with four piston valves) and a “Contre Baß in C m. Cylinder Ventil” (contrabass in C with rotary valves).<sup>64</sup>

**Te Deum** (WAB 45), for chorus, orchestra, and organ

Premiere: 10 January 1886, Vienna

The *Te Deum* was premiered by the Vienna Singverein under Hans Richter. If the low brass of the Vienna Court Opera/Philharmonic played in the orchestra, then slide trombones were used for the first time in a Bruckner premiere in Vienna. On 1 March 1883 the Court Opera hired three trombonists from Germany because music director Wilhelm Jahn desired slide trombones, which were “not at all cultivated” in Vienna. Two of the five trombonists of the opera orchestra declared themselves willing to learn slide trombone, so an alto slide trombone in E $\flat$ , a tenor slide trombone in B $\flat$ , and a tenor-bass slide trombone in B $\flat$  with F attachment were purchased in Leipzig, and a further tenor-bass slide trombone from a private source.<sup>65</sup> The tuba part was probably played on a Berlin or Vienna tuba in F.

**Symphony No. 8** (WAB 108), for orchestra (3,3,3,3; 8,3,3,1, timp, perc, three harps, strings)

Premiere: 18 December 1892, Vienna

After the International Pitch Conference in Vienna in 1885, the French standard pitch of A=435 Hz was re-established at the Viennese Court Opera,<sup>66</sup> and in 1886 eight trombones were purchased at this pitch from the firm of F. Schlott, Leipzig.<sup>67</sup> Thus the Leipzig trombones bought in 1883 remained in use for only three years. For the premiere of the Eighth Symphony with the Vienna Philharmonic (made up of musicians from the Court Opera Orchestra) under Hans Richter, the trombone section was most likely made up of two tenor slide trombones in B $\flat$  and a tenor-bass slide trombone in B $\flat$  by Schlott. The tuba part was probably played on a tuba in F.

**Helgoland** (WAB 71), for men’s chorus and orchestra (2,2,2,2; 4,3,3,1, timp, strings)

Premiere: 8 October 1893, Vienna

The cantata was a commission for the fiftieth anniversary celebration of the Vienna Männergesangsverein (Men’s Singing Society). The instruments used by the low brass were probably similar to those at the two preceding Viennese premieres.

**Symphony No. 5** (WAB 105), for orchestra (2,2,2,2; 4,3,3,1, timp, cymbals, triangle, offstage brass and percussion, strings)<sup>68</sup>

Premiere: 9 April 1894, Graz

The premiere of the Fifth Symphony was given by the Graz Municipal Orchestra under the direction of Franz Schalk. It is no longer possible to determine whether valve or slide trombones were employed at the premiere, since it is not known when other orchestras in Austria followed the example of the Court Opera and switched back to slide trombones. The tuba part was probably performed on a tuba in F.



**Figure 7:** Josef Alexander Fink, *Das Orchester des Wiener Concertvereins unter Ferdinand Löwe*.  
Reproduced by the kind permission of the Sammlungen  
der Gesellschaft der Musikfreunde in Wien.

**Symphony No. 9** (WAB 109), for orchestra (3,3,3,3; 8,3,3,1, timp, strings)

Premiere: 11 February 1903, Vienna

The premiere was given by the Vienna Concertverein Orchestra (later the Vienna Symphony Orchestra) under Ferdinand Löwe. In a photo of Löwe and this orchestra from 1901, the trombonists are shown with a tenor slide trombone without F attachment and two tenor-bass slide trombones with F attachment (Figure 7).<sup>69</sup> In the photo the tubist is holding a Viennese F tuba. It is therefore very probable that this tuba was also used in the premiere of the Ninth Symphony, although the part specifies “Contrabass Tuba.”

### Conclusion

Although Bruckner, in contrast to other nineteenth-century composers such as Giuseppe Verdi and Joseph Lanner, apparently never composed specifically for valve trombones, most of his works were premiered with these instruments. The fact that Bruckner integrated the trombone into his works from the beginning appears above all to be due to the traditions of his native region and with the particular context of the trombone in Catholic church music. However, in the phase leading up to his mature style, the organist Bruckner was thinking more about the registration possibilities of an organ while writing the low-brass chorales in his symphonies. Yet Wagner's influence on Bruckner's instrumentation becomes increasingly clear over the course of time. And with that it appears that the "covered" sound of the Austrian low brass, with valve trombones and bombardon, in contrast to the more direct sound of the German slide trombones and tuba, was no longer able to do justice to Bruckner's tonal ideals. Nevertheless, it is interesting from the viewpoint of historical performance practice to approach Bruckner's works from the sonority in which he himself heard his music performed.

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### Notes

<sup>1</sup> Herbert Heyde, *Trompeten, Posaunen, Tuben*, Musikinstrumenten-Museum der Karl-Marx-Universität Leipzig, Katalog, vol. 3 (Wiesbaden: Breitkopf & Härtel, 1985), 177.

<sup>2</sup> Joseph Huschauer Jr. (1748–1805, Vienna) was employed from ca. 1770 by C. A. Starzer, whose workshop he took over in 1791. Huschauer's widow continued to run the business from 1805 to 1815, so that the set of trombones from 1813 were probably made by one of Huschauer's employees.

The tenor trombone by Riedl is incorrectly described as a valve trombone in the *New Langwill Index*. The instrument belongs to the Gesellschaft der Musikfreunde in Vienna (I.N. 800), where it is currently located, but until recently was on loan to Vienna's Technisches Museum, where it had resided for nearly 100 years. See William Waterhouse, *New Langwill Index: A Dictionary of Musical Instrument Makers and Inventors* (London: Tony Bingham, 1993), 327.

<sup>3</sup> Slide trombone by Joseph Riedl, Kunsthistorischen Museum Vienna, SAM 656.

<sup>4</sup> See Klaus Petermayr, "Dörfliche Blasmusik in der ersten Hälfte des 19. Jahrhunderts—Möglichkeiten einer blasmusikalischen Sozialisation Bruckners," in *Bruckner-Symposium 2012: Bericht*, ed. Theophil Antonicek, Andreas Lindner, and Klaus Petermayr (Linz: Anton Bruckner

Institut, 2014), 9–20; and in the same proceedings volume, Andreas Lindner, “Bläsermusik in St. Florian im Umfeld Bruckners,” 41–64; and Franz Gratl, “Messen mit Bläserbegleitung vor und um Bruckner: zu den Gattungstraditionen,” 179–209.

<sup>5</sup> This article builds on a number of musicological studies. In recent years, general publications dealing with the valve trombone have been written by Ken Shifrin, “The valve trombone in the nineteenth century orchestras of France, Germany, Austria and Bohemia, with special focus on the trombone works of Dvorák [*sic!*],” *Brass Bulletin* 111 (2000): 126–44; 112 (2000): 119–26; and Trevor Herbert, *The Trombone* (New Haven and London: Yale University Press, 2006), 182–203. A dissertation by Micah Paul Everett, “The Return to the Slide from the Valve Trombone by Late Nineteenth and Early Twentieth Century Trombonists including Arthur Pryor (1870–1942),” DMA Diss., University of North Carolina at Greensboro, 2005) focused on the return from the valve to the slide trombone at the end of the nineteenth century. Howard Weiner has published articles on the trombone in nineteenth-century Vienna, “Andreas Nemetz’s *Neueste Posaun-Schule*: An Early Viennese Trombone Method,” *Historic Brass Society Journal* 7 (1995): 12–35; idem, “Andreas Nemetz’s *Neueste Posaun-Schule* Revisited,” *Historic Brass Society Journal* 23 (2011): 103–18, Gerhard Zechmeister’s studies on the valve trombone and tuba in particular are also to be noted: “Die Stellung der (Contra)Bassposaune im Wiener Klangstil,” *Brass Bulletin* 102 (1998): 19–28. A chapter devoted to Bruckner can be found in Ken Shifrin’s dissertation on the alto trombone in the orchestra, “The Alto Trombone in the Orchestra: 1800–2000” (PhD diss., Oxford University, 2000), ch. 3, available at <http://www.britishtrombonesociety.org/index.php/the-alto-trombone-in-the-orchestra-1800-2000/chapter-3-bruckner.html> (accessed on 10 May 2015).

<sup>6</sup> See, for example, Andreas Lindner, “Die Instrumentensammlung des Stiftes St. Florian,” in *Figaro La, Figaro qua: Gedenkschrift Leopold M. Kantner (1932–2004)*, ed. Michael Jahn and Angela Pachovsky (Vienna: Verlag Der Apfel, 2006), 81–110; and Michael Söllner, “Blasinstrumentenmacher in Linz im 19. Jahrhundert,” in *Bruckner-Symposion 2012: Bericht*, 77–97.

<sup>7</sup> Michael Leichamschneider (b. Osterberg near Memmingen, 1676; d. Leipzig, 1748), active from 1700 in Vienna, resident from 1739 in Leipzig; Johannes Leichamschneider, Michael’s brother (Vienna, 1679–1725), active before 1710 in Vienna; Franz Leichamschneider (Vienna, ca. 1716–67), Michael’s son, probably employed by his father. See Günther Dullat, *Verzeichnis der Holz- und Metal-Blasinstrumentenmacher auf deutschsprachigem Gebiet* (Tutzing: Schnieder, 2010), s.v. “Leichamschneider, Hannß Michael,” “Leichamscheider, Johannes,” and “Leichamscheider, Franz.”

<sup>8</sup> Joseph Huschauer Sr. (?), mentioned ca. 1723; Joseph Huschauer Jr. (1748–1805), see n. 2.

<sup>9</sup> Anton Kerner Sr. (ca. 1726–1806); Ignaz Kerner (ca. 1768–1813); Anton Kerner Jr. (ca. 1770–1848).

<sup>10</sup> *Österreichisch-Kaiserliche privilegierte Wiener Zeitung, Amtsblatt*, Vienna, 29 November 1823. “[D]ie vielen dumpfen Töne des Hornes in hellklingende Naturtöne verwandelt seyen, der schnarrende Ton der Klappentrompete veredelt, bey der Posaune aber das lange Aussehen des Zuges erspart werde.”

<sup>11</sup> Andreas Nemetz, *Allgemeine Trompetenschule*, Op. 17 (Vienna: Anton Diabelli, 1827).

<sup>12</sup> See Herbert, *The Trombone*, 184–85, and Weiner, “Andreas Nemetz’s *Neueste Posaun-Schule* Revisited,” 103–18.

<sup>13</sup> *Allgemeine Theaterzeitung und Unterhaltungsblatt, für Freunde der Kunst, Literatur und des geselligen Lebens*, Vienna, 9 February 1828.

<sup>14</sup> Archiv der Technischen Universität Wien, Privilegium Register Nr. 648, 2053, 3695, and 3734. I am grateful to Howard Weiner for the information about the problems of the first

valve trombones and the existence of these letters. Weiner's complete translation of the correspondence dealing with Riedl's, Kail's, and Uhlmann's patent applications appears in Sabine K. Klaus, *Trumpets and Other High Brass*, vol. 3: *Valves Evolve* (Vermillion SD: National Music Museum, forthcoming).

<sup>15</sup> Zechmeister, "Die Stellung der (Contra)Bassposaune," 20.

<sup>16</sup> *Katalog Sämtlicher in dem K. K. Hof-Musik-Archiv vorhandenen Bücher u. Musikalien, 1856*, Österreichische Nationalbibliothek, Mus.Hs.2469 Inv.I/Hofmusik-Archiv 3 Mus, 177.

<sup>17</sup> *Ibid.*, and Zechmeister, "Die Stellung der (Contra)Bassposaune," 22.

<sup>18</sup> Uhlmann's request for the title of imperial court instrument maker was rejected by the Office of the Court Chamberlain in 1845. See Thomas Kiefer, "Tiefstimmige Doppelrohrblatt-Instrumente von der Harmoniemusik bis in das Blasorchester des 19. Jahrhunderts," in *Wissenschaftliches Jahrbuch der Tiroler Landesmuseen* 3 (2010): 71–72.

<sup>19</sup> See the entry "Uhlmann Leopold, k. k. a. pr. Instru=menten=Fabrik" in *Handels- und Gewerbe-Adressenbuch für die k.k. Reichshaupt- und Residenzstadt Wien—zwanzigster Jahrgang* (Vienna: Förster & Bartelmus, 1863), 42.

<sup>20</sup> Concerning the granting of this title, see Rudolf Hopfner, *Wiener Musikinstrumentenmacher 1766–1900* (Tutzing: Schneider, 1999), 521.

<sup>21</sup> Zechmeister, "Die Stellung der (Contra)Bassposaune," 22–23.

<sup>22</sup> Herbert Heyde, *Trompeten, Posaunen, Tuben*, 193.

<sup>23</sup> *Österreichisch-Kaiserliche privilegierte Wiener Zeitung*, Vienna, 7 May 1829. "Neu erfundene Baßbombardone mit 12 Klappen, oder auch mit der Maschine."

<sup>24</sup> *Allgemeine Theaterzeitung und Originalblatt für Kunst, Literatur, Musik, Mode und geselliges Leben*, Vienna, 27 August 1833.

<sup>25</sup> An ophicleide by an anonymous, probably French instrument maker was bought in this year from the president of the Gesellschaft der Musikfreunde des österreichischen Kaiserstaates, Prince Ferdinand von Lobkowitz, and Leopold Uhlmann was commissioned to copy the instrument: "Schlüsslich muß noch bemerkt werden, daß die Gesellschaft bereits mit dem hiesigen, rümlichst bekannten, bürgl. Blas=Instrumentenmacher, Leopold Ullmann, ein Übereinkommen getroffen hat, in Folge dessen derselbe in kurzer Frist im Stande seyn wird, genau nach dem Modelle verfertigte Exemplare dieses Instrumentes [Ophicleide] in beliebiger Anzahl und zu billigen Preisen zu liefern" (Finally, it should be mentioned that the Society has already made an agreement with the local, praiseworthy, citizen instrument maker Leopold Uhlmann, as a result of which [Uhlmann] will in a short time be in a position to deliver copies, made on the model of this instrument [Ophicleide], in any number and at reasonable prices). *Ibid.*, 27 June 1833.

Uhlmann not only copied this ophicleide, but apparently also developed from it a new valve instrument that he called a *Bombardon* or *Ophicleide mit Maschin*.

<sup>26</sup> The information about brass-instrument makers in Linz is taken from Söllner, "Blasinstrumentenmacher."

<sup>27</sup> Weiner, "Andreas Nemetz's Neueste Posaun-Schule," 14. In the context of Nemetz's method, it is clear that an "alto" trombone was an instrument in B $\flat$ , like the tenor and bass trombones, the only difference being the size of the mouthpiece.

<sup>28</sup> Edward H. Tarr, "The Romantic Trumpet 2," *Historic Brass Society Journal* 6 (1994): 110–215.

<sup>29</sup> Concerning the instrumentation and orchestral material of Lanner's works, see Wolfgang Dörner, *Joseph Lanner: Chronologisch-thematisches Werkverzeichnis* (Vienna: Böhlau, 2012).

<sup>30</sup> Theoretically, the performance of these parts on keyed trumpet is indeed possible, however the low range of the second trumpet part (which is difficult to render on a keyed trumpet)



and the collaboration of Lanner's orchestra with the valve pioneer Joseph Riedl clearly point to valve trumpets.

<sup>31</sup> "Strauss-Lannersche Maschinen Instrumente," in Herbert Heyde, *Hörner und Zinken, Musikinstrumenten-Museum der Karl-Marx-Universität Leipzig. Katalog*, vol. 5 (Leipzig: VEB Deutscher Verlag für Musik, 1982), 216.

<sup>32</sup> *Österreichisch-Kaiserliche privilegierte Wiener Zeitung, Amtsblatt*, Vienna, 29 November 1823. "Daß die Skalen von drey Horner oder drey Trompeten, oder auch von zweyen, in einem und demselben Instrumente vereinigt worden."

<sup>33</sup> Zechmeister, "Die Stellung der (Contra)Bassposaune," 20.

<sup>34</sup> *Katalog Sämtlicher in dem kaiserlichen königlichen Hof-Musik-Archiv vorhandenen Bücher und Musikalien 1840*, A-Wn Mus.Hs.2468 Inv.I/Hofmusik-Archiv 2 Mus, p. 111 and *Katalog Sämtlicher in dem K: K: Hof-Musik-Archiv vorhandenen Bücher u. Musikalien, 1856*, A-Wn, Mus.Hs.2469 Inv.I/Hofmusik-Archiv 3 Mus, pp. 177/78.

Entries continued to be added in the 1856 inventory well into the twentieth century, as a result of which it is possible to reconstruct the whole stock of the Hofmusikkapelle's musical instruments from 1840 up to the First World War.

<sup>35</sup> At this time, the two trombonists of the Court Music Chapel were Franz Segner (active 1830 to after 1867) and Franz Hörbeder (b. 1799, active 1834–51). See Ludwig Ritter von Köchel, *Die Kaiserliche Hof-Musikkapelle in Wien von 1543–1867* (Vienna: Beck, 1869), 98.

<sup>36</sup> The Dehmal tenor-bass trombone with F attachment is still to be found today, along with its wooden case, in the Hofmusikkapelle.

<sup>37</sup> Herbert Heyde, *Das Ventilblasinstrument. Seine Entwicklung im deutschsprachigen Raum von den Anfängen bis zur Gegenwart* (Wiesbaden: Breitkopf & Härtel, 1987), 79.

<sup>38</sup> *Andreas Nemetz. Allgemeine Musikschule für MilitärMusik. Wien 1844*, ed. and annotated by Friedrich Anzenberger (Vienna, Johann Kliment, 2004), Introduction, VII.

<sup>39</sup> Although Nemetz was the director of an infantry band, it can be assumed that the rapid introduction of valve instruments in military bands was also due to their particular usefulness for the cavalry. Riedl and Kail's 1823 patent application for the Vienna valve already points out the advantage of a valve trumpet as compared with an *Inventions*-trumpet: "that with this simple mechanism, only two keys are necessary, whereby especially the cavalry trumpeter gains, since he only needs one hand for his instrument, while the other is completely free to guide his horse, and [he] can use [the instrument] without interruption. That the [trumpeter] hereafter for his service in processions and trumpet pieces in the future never again needs to carry more than one trumpet with him, with which he can at any moment, without taking the instrument from his mouth, play his musical pieces as well as common service marches" ("dass bey dieser einfachen Maschine, nur zwey Klappen nöthig werden, wodurch besonders der Kavallerie Trompeter gewinnt, weil er nur eine Hand für sein Instrument nöthig hat, und die Andere zur Dirigierung seines Pferdes ganz frey, und ohne Unterbrechung gebrauchen kann. Daß derselbe hernach zu seinem Dienste als zu Aufzügen, und Trompeten Harmonien, in Zukunft nie mehr, als Eine Trompete bey sich zu führen nöthig hat, mit welcher er, in jedem Augenblick, ohne das Instrument vom Munde zu nehmen, seine Harmoniestücke sowohl, als gemeine Dienstmärsche blasen kann"). Archiv der Technischen Universität Wien, Privilegium Register Nr. 684. (See also n. 14.)

<sup>40</sup> Heyde, *Österreichisch-Kaiserliche privilegierte Wiener Zeitung*, 7 May 1829. "[U]nter der Leitung des verdienstvollen Capellmeisters Nemetz wird es [das Bombardon], so wie früher die Maschin=Trumpete, in die Welt eingeführt."

<sup>41</sup> The trumpet parts in his musical examples cannot be played on natural instruments; the

bass trombone part descends below *E* (the lowest note that can be played on a slide trombone in B $\flat$ ).

<sup>42</sup> Weiner, "Andreas Nemetz's *Neueste Posaun-Schule*," 34.

<sup>43</sup> Nemetz. *Allgemeine Musikschule für MilitärMusik. Wien 1844*, Introduction, VIII.

<sup>44</sup> Philipp Fahrbach, "Vom Instrumentale der Militärmusik," *Allgemeine Wiener Musik-Zeitung*, Vienna, 17 December 1844.

<sup>45</sup> Petermayr, "Dörfliche Blasmusik in der ersten Hälfte des 19. Jahrhunderts," 9.

<sup>46</sup> *Ibid.*, 13.

<sup>47</sup> Eva Maria Hois, "Böhmische Musikanten in den cisleithanischen Kronländern Österreichs im 19. und 20. Jahrhundert," in *Bruckner-Symposion 2012: Bericht*, 36. "Die alte gemütliche steirische Musik wurde durch Erfindung von Flügelhorn und Maschintrompeten verdrängt,... die von reisenden böhmischen Musikanten eingebürgert wurden."

<sup>48</sup> Ernst Schlader, "Zur Tradition der Blasinstrumente im Stift Kremsmünster im 19. Jahrhundert," in *Bruckner-Symposion 2012: Bericht*, 71.

<sup>49</sup> *Ibid.*, 73.

<sup>50</sup> Lindner, "Bläsermusik in St. Florian im Umfeld Bruckners," 43: "The bombardon as bass instrument comes from the military bands; here, however, it is an ophicleide with keys, and not the tuba with valves commonly used later." Lindner obviously did not know the Viennese valve bombardon invented in the late 1820s and introduced into the military bands in 1833.

<sup>51</sup> Lindner, "Die Instrumentensammlung des Stiftes St. Florian," 107–08.

<sup>52</sup> *Ibid.*, 89–91.

<sup>53</sup> Renate Grasberger, *Werkverzeichnis Anton Bruckner* (Tutzing: Schneider, 1977).

<sup>54</sup> *Anton Bruckner Gesamtausgabe*, ed. Robert Haas (1934–44), *Neue Anton Bruckner Gesamtausgabe*, ed. Leopold Nowak (1951–2007).

<sup>55</sup> *Neue Anton Bruckner Gesamtausgabe*, vol. 21, *Kleine Kirchenmusikwerke*, ed. Hans Bauernfeind/Leopold Nowak (1984).

<sup>56</sup> Petermayr, "Dörfliche Blasmusik in der ersten Hälfte des 19. Jahrhunderts," 15.

<sup>57</sup> Lindner, "Bläsermusik in St. Florian im Umfeld Bruckners," 61–64.

<sup>58</sup> According to Hofkapellmeister Ignaz Assmayer, the valve trombone was "an instrument that was currently found in all orchestras." Haus-, Hof- und Staatsarchiv, HMK/K23/1851/Nr.6074, quoted in Zechmeister, "Die Stellung der (Contra)Bassposaune," p. 21.

<sup>59</sup> In later years, Glöggel's son, Franz, reported that his father originally asked Beethoven for an *equale* for six trombones, "as in his collection of old instruments he had a soprano and *quart* trombone, whereas only alto, tenor and bass trombones were commonly used." See Klaus Martin Kopitz and Rainer Cadenbach, eds., *Beethoven aus der Sicht seiner Zeitgenossen in Tagebüchern, Briefen, Gedichten und Erinnerungen* (Munich: Henle, 2009), p. 350; and Howard Weiner, "Beethoven's Equali (WoO 30): A New Perspective," *Historic Brass Society Journal* 14 (2002): 215–77, here 215 and 271, n. 2.

According to Nemetz, alto, tenor, and bass trombones were all B $\flat$  instruments, but with different mouthpieces. It was exactly for these instruments that the preserved four-part *Equali* by Beethoven were written. Besides four tenor trombones in B $\flat$ , Glöggel obviously also had an alto trombone and a bass trombone (both in D), which were no longer in use. Michael Praetorius designated the small trombone in D as *Alt oder Discant Posaun* (alto or discant trombone) and bass trombones in various pitches as *Quart-Posaun* (quart trombones). See Michael Praetorius, *Syntagma Musicum 2: De Organographia* (Wolfenbüttel, 1619), p. 31.

<sup>60</sup> Shifrin ("The Alto Trombone in the Orchestra") is of the opinion that the first trombone part in the Requiem, as also in other works by Bruckner, was played on alto trombone. However,

in the nineteenth century, the alto trombone was no longer in use in Austria, as is shown, for example, by a price list of the Metal Brass-Instrument Manufactory Leopold Uhlmann from ca. 1850 (Österreichische Nationalbibliothek, Musiksammlung, Misc. 42 Mus). Apart from all the usual brass instruments of the time, including bass trombones in various pitches, only a single “Tenor oder Alt Posaune in b” (tenor or alto trombone in B $\flat$ ) is listed (see also the previous note and Weiner, “Andreas Nemetz’s *Neueste Posaun-Schule*”). An entry from 1882 in the inventory of the I. R. Hofmusikkapelle confirms the use of narrow-bore tenor trombones for the alto range with the description of a valve trombone in B $\flat$  by Leopold Uhlmann as “Solo B. Altposaune 4 Cilind.” (solo B $\flat$  alto trombone [with] four valves). See *Katalog Sämtlicher in dem K: K: Hof-Musik-Archiv vorhandenen Bücher u. Musikalien, 1856*, Österreichische Nationalbibliothek, Mus.Hs.2469 Inv.1/Hofmusik-Archiv 3 Mus.

<sup>61</sup> See Elisabeth Hilscher, “Als Bruckner 1854 die kaiserliche Braut—doch nicht—begrüßen durfte. Oder: Über einen Männerchor mit merkwürdiger Bläserbegleitung (‘Laßt Jubeltöne laut erklingen,’ WAB 76),” in *Bruckner-Symposion 2012: Bericht*, 115–33.

<sup>62</sup> *Katalog Sämtlicher in dem K: K: Hof-Musik-Archiv vorhandenen Bücher u. Musikalien, 1856*, 177.

<sup>63</sup> Zechmeister, “Die Stellung der (Contra)Bassposaune,” 20–23.

<sup>64</sup> Heyde, *Das Ventilblasinstrument*, 278.

<sup>65</sup> Zechmeister, “Die Stellung der (Contra)Bassposaune,” 23–24. Zechmeister’s statement that three instruments were purchased from Penzel in Leipzig cannot be correct, since Johann Christoph Penzel died four years before the decision to revive the slide trombone in Vienna. Penzel’s son and probable successor died a year after his father, making it very unlikely that the Penzel workshop was even still in existence in 1883. See Günter Dullat, *Verzeichnis der Holz- und Metallblasinstrumentenmacher auf deutschsprachigem Gebiet von 1500 bis Mitte des 20. Jahrhunderts* (Tutzing: Schneider, 2010), s.v. “Penzel, Johann Christoph Gottlieb.” Thanks to Howard Weiner for calling this to my attention.

<sup>66</sup> See Bruce Haynes, *A History of Performing Pitch* (Lanham: The Scarecrow Press, 2002), 359.

<sup>67</sup> See *Zeitschrift für Instrumentenbau*, 11 March 1886, 216. Thanks to Jürgen Sklenar for calling this source to my attention.

<sup>68</sup> The original version of the Fifth Symphony did not call for cymbals, triangle, or offstage brass and percussion. These were added for the premiere by conductor Franz Schalk.

<sup>69</sup> Josef Alexander Fink, *Das Orchester des Wiener Concertvereins unter Ferdinand Löwe*, photograph (1901), Collection of the Gesellschaft der Musikfreunde in Wien, Bi 2339.

