

## *Trombone in sordino*: Muted Trombones in the Baroque Era

Howard Weiner

An aspect in the history of the early trombone that has hardly attracted attention is the use of mutes. The reasons for this are obvious: there are only a very few pieces that call for muted trombones, there is almost no written evidence about trombone mutes, and only one original trombone mute has come to light so far. Accordingly, there has also never been a discussion of whether muted trombones shared the funereal symbolism traditionally associated with muted trumpets and drums.<sup>1</sup>

Until now, the earliest use of trombone mutes was considered to have been by the Danish-German composer Dieterich Buxtehude (ca. 1637–1707), who was active as organist of the Marienkirche in Lübeck from 1668 to 1707, namely in his aria *Auf! stimmet die Saiten, Gott Phoebus tritt ein* from 1672. However, several years ago I came across an even earlier work with muted trombones and additional information in two sources authored by the South-German/Austrian priest and composer Abraham Megerle (1607–80), who, among other things, served as Kapellmeister to the Prince-Bishop of Salzburg from 1640 to 1651 and was ennobled by Emperor Ferdinand III in 1652.

### Abraham Megerle

Abraham Megerle published a large collection of sacred music in Salzburg in 1647 under the title of *Ara Musica*, of which the third and only surviving volume holds 108 works, many calling for trombones, cornetts, and trumpets.<sup>2</sup> The *Bassus Continuus* partbook of this collection contains an *Admonitio ad musicum* (admonition to the musician) in which Megerle provides information about various aspects of notation and performance practice, including the following short text about muted trombones (see Figure 1):

*(Ut nos vocamus) Trombettæ, aut Tromboni muti sæpius tibi erunt usui; præcipuè infixis Sordinis magis excavatis, quàm de more pro Trombettis habentur. Quia autem his applicatis tonus mutatur, corrigendus est tubulis, vel canaliculis æneis, qui pro Trombonis jam in paratu haberi solent, ut in pristinum, & verum tonum reducantur.*

**Figure 1:** Abraham Megerle, *Ara musica*, excerpt from the *Admonitio ad musicum*.  
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(As we call them) *Trombettae* [*muti*] or *Tromboni muti* will be useful to you rather frequently; especially with *sordini* inserted that are more hollowed-out than is considered usual for *Trombettis*. Since, moreover, the pitch is changed, it must be corrected by means of the little bronze tubes or pipes that are already customarily used in the equipment for *Trombonis*, so that they may be brought back to their original and true pitch.<sup>3</sup>

This is, as far as I have been able to determine, the only written source concerning the use of muted trombones before the nineteenth century. Even as late as 1813, Joseph Fröhlich mentions mutes only as devices employed with horns and trumpets, but not in connection with the trombone.<sup>4</sup>

In any case, four things are of particular interest here: First, Megerle advocates the frequent use of muted trombones. This is surprising in as much as there is otherwise very little evidence for this.

Second, Megerle apparently employs the terms “*Trombettae*” and “*Tromboni*” interchangeably here, although in three of the pieces of his collection he does make a distinction between them. Be that as it may, in the second volume of the *Syntagma musicum*, Michael Praetorius gives both of these terms (in the singular forms *Trombetta* and *Trombone*) as the Italian names for the “Posaun” in general, and for the “Tenor-Posaun” in particular.<sup>5</sup>

Third, since a mute causes the pitch to go up, Megerle recommends the insertion of extension bits or shanks (“tubes or pipes”) to bring the trombone back down to the “original and true pitch.”

Fourth, Megerle does not address the issue of how much the pitch rises when a mute is used—practical experience with surviving trumpet mutes (and copies thereof) has shown that they cause the pitch to go up by about a semitone. However, Megerle’s rather enigmatic statement—“with *sordini* inserted that are more hollowed-out than is considered usual for *Trombettis*”—raises an interesting question: Does he actually refer here to a hollowing out of the inside of the mute or rather to a removal of material from the exterior in order to be able to insert the mute further into the trombone bell to achieve a whole-tone transposition?<sup>6</sup>

### **Trumpet mutes: semitone or whole-tone transposition? —an excursus**

Seventeenth- and eighteenth-century sources concerning the use of trumpet mutes often specify a whole-tone transposition. The most well-known of these is undoubtedly Monteverdi’s *L’Orfeo* (1608), in which the performance instruction at the beginning of the opera states: “Toccatà che ... si fa un Tuono più alto volendo sonar le trombe con le sordine” (Toccatà ... performed a whole step higher if one wishes ... the trumpets to be played with mutes). Since the discrepancy between theory (whole tone) and practice (semitone) has been and will certainly continue to be much discussed in the historical trumpet community,<sup>7</sup> I would like to introduce into the discussion

two previously overlooked sources that, because of their obvious basis in practical experience, cannot be easily dismissed.

The first source, contemporaneous with Megerle's *Ara Musica* and published by his teacher, Johann Stadlmayr, is the collection *Apparatus Musicus* (Innsbruck, 1645), which contains the following *Admonitio ad Tubicines*:

Admonition to the Trumpeters

The trumpeters will notice here that their trumpets are tuned in *Cornett-Ton*; so that they do not overpower the other instruments too greatly, they have to be dampened with inserted mutes: because of this, however, the trumpets become a tone higher, and the proper *Cornett-Ton* has to be sought and attained again by means of an inserted ring or crook, or by a piece of tube inserted at the top.<sup>8</sup>

The second source is a performance instruction found in the extensive preface ("Ordinanz") of Michael Praetorius's *Polyhymnia Caduceatrix & Panegyrica* (1619):

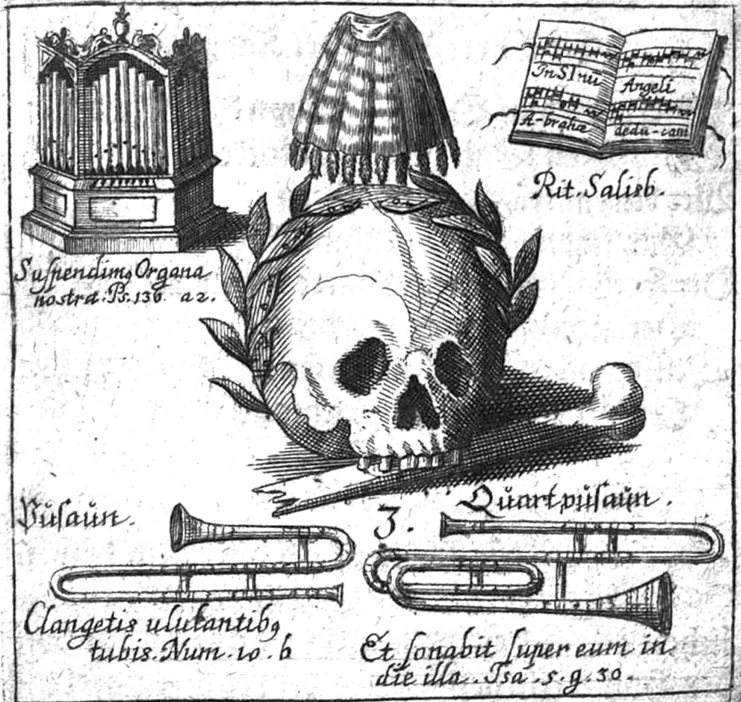
16. Sixteenth: it should also be remembered that no. XXXIV (In dulci Jubilo) and other church hymns arranged for trumpets, which are to follow soon, so God will, can be performed a second lower in B-flat if they are too high for some of the choirboys: the trumpeters [should] insert a whole-tone crook from a trombone on their trumpets and join in a second lower. This also can be done when one wants to use trumpets in soft music in a chamber and inserts the mutes, as a result of which the trumpets sound a whole tone higher; they can be brought [down] to the correct pitch again by means of such inserted crooks.<sup>9</sup>

Whether the semitone/whole-tone discussion will spread now to the historical trombone community remains to be seen. But in this context, it should also be remembered what Johann Ernst Altenburg said about the trumpet mute: "when it is inserted into the bottom of the trumpet, it not only gives it a completely different, almost oboe-like sound, *it also raises it [the pitch], if it is properly turned, by a whole tone*" (emphasis by the author).<sup>10</sup> That is to say, in order to attain the desired pitch change of a whole tone, a historical mute, whether for trumpet or trombone, has to be made and adjusted to the instrument for which it is intended.

**Abraham Megerle continued ...**

A somewhat later publication by Abraham Megerle establishes connections between trombones and sadness as well as between muted trombones and funeral music. The *Speculum Musico-Mortuale* (ca. 1670), essentially a combined autobiography and *memento mori*, includes thirteen engravings, each depicting a skull surrounded by

28  
 Wir haben unsere Orgeln auffgehengt.  
 Chor-Völs / oder Rappent.  
 Die Engelt sollen dich mit Abrahams schoß begleitet.



Lasset euch mit trawrigen Posaunen hören.  
 An jenem Tag/wird er über ihn ein trawrige Stim geben.

Pia Decas,

Vel Rosarium in Solatium Animarum locò Pater noster, &c. die sequentem Orationem.

**R**espice pijissime IESV super Animas omnium fidelium Defunctorum, pro quibus Sanguinem pretiosum fundere & mori dignatus es, & Crucis subire tormentum, Amen.

Figure 2: Abraham Megerle, *Speculum Musico-Mortuale*, p. 28. Staatliche Bibliothek, Regensburg.

36

Das Seelambe  
mit 5. Stim-  
men.

Das Messbuch  
zu dem Requite  
oder Todten-  
ambt.

Wie du es vorzeiten  
dem Abraham ver-  
sprochen hast / singe  
man bey dem andern  
Opffer.

5 Vocan Sec.

Intr-oitus  
Requite  
nam domus  
eis Domus  
lux perpetua  
fac am memento

Te decet  
hymnus  
Deus in  
Sion, & ti-  
bi red an-  
sal.

Requite Aeter nam  
dona eis Domi-

Saitten.

Liorba.

Continuit Dul-  
cedo Cytharæ.  
Isa. 24. b 8.

Psallam in glo-  
ria mea. Ps.  
107. a 2.

Ich würd dich loben  
auff Saitenspiel.

Ich will singen vnd Lobspre-  
chen in meiner Glory.

Locò Quarti Ave die.

IV. **P**lissime Iesv, per rubentes Saucij Capitis spinas misere-  
re Animæ Abrahæ Sacerdotis, vel N. vel miserere ani-  
mabus in Purgatorio existentibus, vel miserere animabus Pa-  
rentum, Fratrum, Sororum, propinquorum & aliorum, pro qui-  
bus teneor orare, Amen.

Die

Figure 3: Abraham Megerle, *Speculum Musico-Mortuale*, p. 36.  
Staatliche Bibliothek, Regensburg.

various objects, including musical instruments, accompanied by appropriate Latin and German quotations from the Bible.<sup>11</sup> Many trombonists are surely familiar with the third engraving, which displays a *Pusaun* and a *Quartpusaun* (Figure 2).

The text under the *Pusaun* is from Numbers 10:9: “Lasset euch trawrigen Posaunen hören” (literally: “let yourselves hear sorrowful trombones”),<sup>12</sup> and that under the *Quartpusaun* from Isaiah 5:30: “An jenem Tag, wird er über ihn ein Trawrige Stimm geben” (literally: “on that day, he shall give over him a sad voice”).<sup>13</sup>

In his explanation of the seventh engraving (Figure 3), which features a five-part Requiem setting in score in the upper left corner and a six-part setting of the Offertory from a Requiem in a choirbook in the upper right corner,<sup>14</sup> Megerle states, “there are also two more Requiems [i.e., other than the two shown in the engraving] with various instruments and muted trombones.”<sup>15</sup> Megerle’s Requiems with muted trombones have not been preserved. Nevertheless, as we shall see below, even for Megerle, the implied funereal symbolism of muted trombones did not preclude their use in music of another nature.

The earliest piece to specify muted trombones, preceding Buxtehude’s *Auf! Stimmet die Saiten* by a quarter of a century, is Megerle’s *Audi filia*, a setting of the tract for the Feast of Annunciation (25 March), which is based on Psalm 44:11–16 (Vulgate):

Audi filia, et vide, et inclina aurem tuam: quia concupivit Rex speciem tuam. Vultum tuum deprecabuntur omnes divites plebis: filiae regum in honore tuo. Adducentur Regi virgines post eam: proximae ejus afferentur tibi. Afferentur in laetitia, et exultatione: adducentur in templum Regis.

Hark, daughter, and behold, and incline your ear: for the king has greatly desired your beauty. All the rich shall entreat your favor: your maids of honor are daughters of kings. Virgins shall be brought to the king in her retinue; her companions shall be brought to you. They shall be brought with gladness and rejoicing: they shall enter into the palace of the king.

*Audi filia*, which is scored for two sopranos, two trombones, and basso continuo, was published in Megerle’s above-mentioned *Ara Musica*. Unfortunately, only fifteen of the original twenty-two partbooks have come down to us. Thus most of the pieces in the collection are preserved only incompletely, including *Audi filia*, which lacks the uppermost soprano part.

The surviving parts of *Audi filia* are all headed “Tractus à 4. C.C. è 2. Tromboni mutti ô 2. altri Instrom.” In addition, at the beginning of the piece, the trombone parts display the instruction “Tromb. mutto con la Sordina” above (trombone 1) or below (trombone 2) the staff (see Figures 4 and 5).

At about the midpoint of piece, at the words “Adducentur Regi virgines post eam” (Virgins shall be brought to the king), the instruction “Tromb. aperto” (trombone open) appears in both trombone parts as well as in the basso continuo and partitura.<sup>16</sup>

*Tractus à 4. C.C. è 2. Tromboni mutti ò 2. altri Instrum.*

The musical score consists of six staves. The first staff begins with a large 'A' time signature and the instruction 'Tromb. mutto con la Sordina'. The lyrics 'Vdi filia.' are written below the first staff. The second staff continues the melody. The third staff has the instruction 'Tromb. aperto' above it and the lyrics 'Vultum tuum.' and 'Adducentur.' below. The fourth staff has the lyrics 'Afferentur.' below it. The fifth and sixth staves continue the musical line.

**Figure 4:** Abraham Megerle, *Ara musica*, “Audi filia,” Trombone 1. Reproduced by permission, Bischöfliche Zentralbibliothek Regensburg, Proskesche Musikabteilung.

At first glance, this change from muted to open trombones seems random, yet a look at the text reveals a shift of perspective at this point: in the opening lines (through “filiae regum in honore tuo”), it is the “daughter” who is being addressed; but starting at “Adducentur Regi” there is another recipient, an addressee who is implied but not explicitly named. However, the beginning of the psalm on which the tract is based clarifies the context: “My heart is stirred by a noble theme; I address my verses to the king; my tongue is the pen of an expert scribe.” In the psalm, the subsequent text is then spoken to the king, up to the words “Audi filia” with which our piece commences. Thus the change to the open trombone timbre, at “Adducentur Regi,” takes place exactly where the poet/narrator turns from the “daughter” and once again speaks directly to the king. The use here of mutes, and their removal, therefore represents a well-considered timbral effect on the part of the composer. (For those who have never heard wooden trombone or trumpet mutes, it should be mentioned that they not only reduce the sound level, but also produce a distinctive “buzzy” timbre.)

PRO VIRGINE TANTUM.  
VOX 4.*Traetus à 4. C. C. è 2 Tromboni mutti ò 2 altri Instrum.*

Audi filia.  
Tromb. mutto con la Sordina  
Udi filia.  
Vultum tuum.  
Tromb. aperto  
Adducentur: Afferentur.

The image shows a musical score for Trombone 2 in C major, 4/4 time. It consists of seven staves. The first staff begins with a large 'A' and contains the lyrics 'Audi filia.' and 'Udi filia.' The second staff continues the melody. The third staff has the lyrics 'Vultum tuum.' The fourth staff has the lyrics 'Adducentur:' and 'Afferentur.' The fifth, sixth, and seventh staves continue the musical notation.

Figure 5: Abraham Megerle, *Ara musica*, "Audi filia," Trombone 2.  
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### Dieterich Buxtehude

Buxtehude's earliest piece with muted trombones is the aria *Auf! stimmt die Saiten, Gott Phoebus tritt ein* (BuxWV 116), composed in honor of the marriage, on 23 November 1672, of Lübeck's burgomaster Heinrich Kirchring [Kerkring] with Agneta von Stiten.<sup>17</sup> The strophic aria in four verses, for two altos, bass, and basso continuo, is preceded by a fanfare (*Aufzug*) for two muted trumpets; each verse is followed by a ritornello for two muted trumpets, two muted trombones, bassoon, and continuo. In the printed score the voices, bassoon, and continuo are in D major, while the trumpet



Ritornello,

Trombetta, 1. in Sordino.

Trombetta, 2. in Sordino

Trombone, 1. in Sordino.

Trombone, 2. in Sordino.

Fagotto.

Continuo;

adagio.

adagio.

adagio.

adagio.

adagio.

56 56 56 5 6 5 6 5 6 43 43

The image displays a page of musical notation for a Ritornello. It consists of ten staves. The first four staves are for Trombetta (1. and 2.) and Trombone (1. and 2.), all marked 'in Sordino'. The fifth staff is for Fagotto. The sixth staff is for Continuo, which includes figured bass notation (56, 56, 56, 5, 6, 5, 6, 5, 6, 43, 43) and a tempo marking of 'adagio'. The remaining five staves (7-11) are for other instruments, also marked 'adagio'. The notation includes various rhythmic values, accidentals, and dynamic markings.

Figure 6: Dieterich Buxtehude, *Auf! stimmt die Saiten*, p. 4.  
 Reproduced by permission, Uppsala University Library.

and trombone parts are transposed down a whole tone into C, to compensate for the upward transposition caused by the mutes (Figure 6).

The undated Advent cantata *Ihr lieben Christen, freut euch nun* (BuxWV 51) is on a larger scale, with five voice parts, six strings, two trumpets *in sordino*, three cornetts, three trombones, bassoon, and organ continuo. The three trombones play in the third and eighth sections of this eight-section piece, largely doubling the alto, tenor, and bass voices along with two violas and violone. The penultimate section, a sixteen-measure “Amen,” is scored for two sopranos, two trombones *in sordino*, and organ. According to Kerala J. Snyder, all the “parts are written in D in the Lübeck tablature (D-LÜh Mus. A 373, no. 2), but Buxtehude himself inserted a note that the *Clarini in Sordine* ‘must be copied in C’.”<sup>18</sup>

One of the traditions cultivated during Buxtehude’s tenure at the Marienkirche in Lübeck was a series of evening concerts, *Abendmusiken*, usually given on the five Sundays preceding Christmas. In 1705 “extraordinary” *Abendmusik* concerts were presented on 2 and 3 December, a Wednesday and Thursday. The first, entitled *Castrum doloris* (Castle of Sorrows), was in commemoration of the death of Emperor Leopold I; the second, *Templum honoris* (Temple of Honor), in celebration of the accession to the throne of his successor, Joseph I. The setting of the *Castrum doloris*, a kind of tableau, is described in the libretto:

In an illumination on the recently repaired and completely gilded large organ, now covered, and decorated with many lamps and lights, is presented the body of his highness the Kaiser in a coffin on the catafalque; at his head the imperial coat of arms, on both sides the royal Hungarian, Bohemian, and other royal coats of arms; above this, a beautifully decorated sky rests on four palm trees, hung with the imperial, royal and provincial coats of arms; many angels with lights keep watch around it. The two musical choruses by the organ are dressed in black; the trombones and trumpets are muted, and all the other instruments are also muted.<sup>19</sup>

Unfortunately, the music to the *Castrum doloris* is lost, and—except for the mentions of muted trombones and trumpets, organs, and “Instrom. & Campan.” (i.e., instruments & bells)—there is no indication of the instrumentations in the libretto, which merely provides the texts of the pieces and only very basic descriptions: for example, a very sad lament followed by a chorus, a recitative, a chorus, a lament for solo voice interspersed by a ritornello and choruses by *Klag-Weiber* (mourning women), another recitative, an aria, etc. Following the text of the strophic *Schluß-Aria* (concluding aria), the libretto ends with the words “After which, this *actus* is very sadly concluded with the hymn and chorale *Nun laßt uns den Leib begraben*, etc. by all organs and choruses joined by the whole Christian congregation and assembly.”<sup>20</sup> Thus, although we know that muted trombones were involved, we do not know what or how often they actually played at this event.

## Vienna

Buxtehude's *Castrum doloris* and *Templum honoris*, with their links to events at the Viennese court, lead us to a slightly later source that most likely documents the use of muted trombones: in his research in the eighteenth-century *Bahrleibbuch* (protocol of funeral fees) of St. Stephen's Cathedral in Vienna, Michael Lorenz has identified the employment of muted brass instruments in connection with the funeral rites there. Recorded in the *Bahrleibbuch* are the expenses incurred at funerals held at St. Stephan's. The amount of money spent on a funeral depended on how much the family of the deceased was able and/or willing to pay, and each of the separate elements available, including various peals of bells, the cost of the tomb, the participation of musicians, etc., had a set price. An item found with some frequency in the entries of the *Bahrleibbuch* specifies "Motteten mit Sart[in]," that is to say, motets played by muted brass instruments, which cost twenty-five florins. A performance of the song *Der grimmig Todt* ("The Grim Reaper") could be had for six florins; however "mit Sardin" (an alternate spelling of "Sartin"), the fee went up to ten florins.<sup>21</sup> It remains to be determined when the practice of using muted brass instruments at funerals began in Vienna, and whether it also existed elsewhere.

## Conclusion

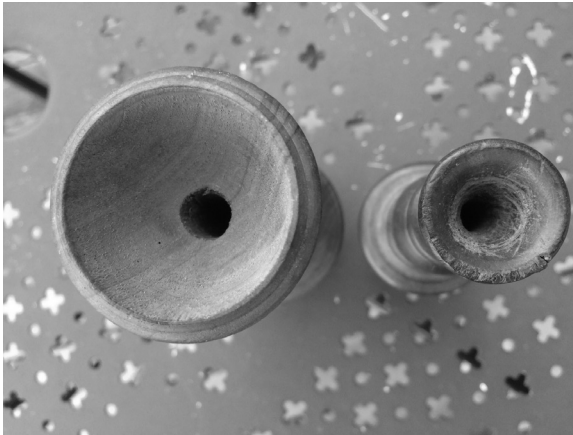
Owing to the small number of pieces that specify muted trombones and the dearth of source material, it is difficult to make any general statements about when and where trombone mutes were used. One thing, however, seems clear: the somewhat softer and buzzy sound of muted trombones did not inevitably evoke the thoughts of mourning or sorrow that during the Baroque period were often associated with muted trumpets. Indeed, both the Catholic South-German/Austrian priest and Kapellmeister Megerle and the Protestant North-German/Danish organist Buxtehude used muted trombones in solemn works, but also had no compunction against calling for them in more affirmative or even joyous situations. Perhaps some circumspect experimentation would be in order to find additional places for muted trombones in historically informed performance.<sup>22</sup>

## Epilogue

When I wrote the main text of this article, I was under the impression that no historical trombone mutes had survived. But, as fate would have it, I was able to locate an original wooden trombone mute after the article had been written, typeset, and proofread. Since the unexpected appearance of an original trombone mute did not affect the gist of my article, I decided to append this postscript in order to present the information and photos that were placed at my disposal.



**Figure 7:** Trombone mute (left) and trumpet mute (right). Reproduced by permission.



**Figure 8:** Trombone mute (left) and trumpet mute (right), view of the top end and bore. Reproduced by permission.

I owe a debt of gratitude to Friedemann Immer, who at lunch several months ago recalled having held a trombone mute in his hands in the home of Nikolaus Harnoncourt “over thirty years ago,” and who kindly offered to contact the Harnoncourt family to obtain photos of it for me. I would also like to thank Elisabeth von Magnus for taking the photos and Alice Harnoncourt for permission to reproduce them here.

Figure 7 shows the trombone mute (left) and a trumpet mute (right). The trombone mute is probably made of walnut. It is not signed, and there is no way of determining when and where it was produced. Figure 8 shows the inside of the top end and the bore of the two mutes. Friedemann Immer, who owns an exact copy of the trumpet mute, provided its measurements:

Height: 116 mm  
 Outside diameter at the bottom of the cone: 33 mm  
 Outside diameter at the widest part of the cone: 38 mm  
 Outside diameter at the top of the mute: 23 mm  
 Bore: 6.2 mm

Based on these, Annegret Schaub derived the following measurements for the trombone mute:<sup>23</sup>

Height: 126 mm  
 Outside diameter at the bottom of the cone: 37 mm  
 Outside diameter at the widest part of the cone: 46 mm  
 Length of the cone (from the bottom to the widest part): 43 mm  
 Outside diameter at the top of the mute: 40 mm  
 Bore: 7 mm

A prototype made to these measurements raised the pitch by a semitone on a Renaissance trombone by Nathaniel Wood.

*Howard Weiner, a native of Chicago, studied trombone with Frank Crisafulli at Northwestern University. In 1978 he moved to Europe where he studied early music at the Schola Cantorum Basiliensis in Basel, Switzerland, and established himself as a freelance musician performing with numerous ensembles and orchestras, including the Edward Tarr Brass Ensemble, the Freiburger Barockorchester, the Cappella Coloniensis, the Basel Symphony and Radio Symphony Orchestras, and Ensemble Aventure Freiburg. Weiner has authored several important articles on the history of the trombone and published editions of early trombone music. From 1997 he was assistant editor and since 2004 co-editor of the Historic Brass Society Journal. Moreover, he is a contributor and editorial advisor to the forthcoming Cambridge Encyclopedia of Brass Instruments.*

## Notes

<sup>1</sup> For example, among the works of the Viennese *regens chori* and composer Ferdinand Schmidt (1694–1756) are six funeral pieces with two muted trumpets—two *Dies irae* settings (A-Ws G 5/35 and H 5/13), *Miserere* (A-KR F 24/37), *Parce mihi* (A-Ws G 5/34), *Requiem* (A-Ws G 5/36), and, also with muted timpani, a *Requiem Solemna* (A-Wn Mus.Hs.22318)—which however simply call for trombones without mutes. See also Alexander McGrattan, “The Trumpet in Funeral Ceremonies in Scotland and England during the 17th Century,” *Historic Brass Society Journal* 7 (1995): 168–84.

<sup>2</sup> The title page of *Ara musica* bears the indication *Tomus Tertius*; the first two volumes have been lost. See Peter Tenhaef, “Abraham Megerles *Beylag zu meinem Testament* sowie *Obsignation und Inventarium* seines Erbes,” *Musik in Bayern* 53 (1997): 9–75, here 45, n. 9.

<sup>3</sup> Translation by Robert W. Ulery.

<sup>4</sup> See Howard Weiner, “Trombone Slide Lubrication and other Practical Information for Brass Players in Joseph Fröhlich’s *Musikschule* (1813),” *Historic Brass Society Journal* 21 (2009): 51–67.

It is perhaps also interesting to note that Joseph Haydn originally intended for the trumpets and horns, but not the trombones, to be muted in the introductory section of *The Creation*; however, the corresponding indications in the engraver’s score were obviously canceled before it was sent to the engraver.

<sup>5</sup> Michael Praetorius, *Syntagma musicum II, De Organographia* (Wolfenbüttel: Holwein, 1619; facs. edn. Kassel:Bärenreiter, 1958), 31. Although Praetorius uses the rather unwieldy term *Gemeine rechte Posaun* in the text of the *Syntagma musicum II*, the more common designation *Tenor-Posaun* is found in the index at the back of the volume on p. 222.

<sup>6</sup> Trumpet and trombone mutes that fit far enough into the bell to effect a whole-tone transposition are made today by Annegret Schaub, Reigoldswil, Switzerland.

<sup>7</sup> See Gerhard Stradner, “Transposing Mutes for Trumpets,” which includes lists of articles and books in which this issue is discussed; and Sabine Klaus and Robert Pyle, “The On-going Quest for Trumpet Mute Pitch-Alteration: An Acoustical Analysis of Three Historic Trumpet Mutes at the National Music Museum.” The contributions by both Stradner and Klaus/Pyle were papers read at the Third Vienna Talk on Music Acoustics, 16–19 September 2015, the proceedings of which can be accessed at [http://viennatalk2015.mdw.ac.at/?page\\_id=13000](http://viennatalk2015.mdw.ac.at/?page_id=13000). See also Don Smithers, “Antique Trumpet Mutes: A Retrospective Commentary,” *Historic Brass Society Journal* 2 (1990): 104–11.

<sup>8</sup> In the source, the “Admonitio ad Tubicines” appears in both Latin and German: “Heus animose tubicen, antequam canas, mihi aures primùm: Cura vt tuba tibi sit, quæ cornibus (vulgo Cornetti) adamussim consonet; ne verò clara nimium clangore suo temperatam reliquorum instrumentorum musicorum mediocritatem obtundat, ligneum, quà se infernè repandit, hypostomium immitte; sed quia hac ratione sono exaltabitur tuba, vel arcu, vel circulo, vel recto denique tubulo iustæ longitudinis supernè inserto in pristinum sonum conuum (seu Cornetti) reductio....

Hie merken die Herrn Trombeter, das ihre Trombette in den Cornet Thon wol eingestimmt seyen; damit sie nicht zu starck andere Instrument überschreyen, müssen sie mit dem eingestöckten Sardin gedämpft werden: weilen aber dardurch die Trombette umb ein Thon höher kommen, muß mit auffgestöcktem ring, oder Bogen, oder aber ober eingestoßnem Rohrstücklein der rechte Cornett Thon wider gesuecht und gebracht werden.” See Johann Stadlmayr, *Apparatus*

*Musicus* (Innsbruck: Wagner, 1645).

The “Admonitio” is found only in the Bassus Continuus and Violon partbooks before the seventh piece: “Canzon à 6 varijs Instrumentis, Cornetino, Violino, Flauto, Trombone, Trombeta, & Fagottino.” The trumpet part of the Canzon is designated “Trombet. tacita,” i.e., “muted trumpet.”

<sup>9</sup> Michael Praetorius’s *Polyhymnia Caduceatrix & Panegyrica* (Wolfenbüttel: Holwein, 1619). 16. Zum Sechßzehnden: Ist in specie auch noch zuerinnern / daß das XXXIV. (In dulci Iubilo:) und auch andere Auf die Trommeten gerichtete Kirchen-Gesänge / so hiernechst geliebts Gott folgen / weil sie vor etliche Knaben gar zu hoch / in Secunda inferiore auß dem b. können musiciret werden: Wenn die Trommeter einen ganzen Thon-haltended Krumbügel von einer Posaunen auff ihre Trommeten stecken / und also in der Secunda mit einstimmen. Welches dann auch darzu dienet / daß wenn man in die Trommeten bey einer stillen Music im Gemach zu gebrauchen / die Sordunen hienein stecken wil / und dadurch die Trommeten umb einen ganzen Thon höher resonieren, so könne sie durch solche darauff gesteckte Krumbügel wiederumb zum rechten Thon gebracht werden.”

<sup>10</sup> Johann Ernst Altenburg, *Versuch einer Anleitung zur heroisch-musikalischen Trompeter- und Pauker-Kunst* (Halle: Hendel, 1795), 86; “wenn es aber unten in die Trompette gesteckt wird, so giebt es ihr nicht nur einen ganz andern, fast einer Oboe ähnlichen Klang, sondern erhöht ihn, wenn er gut gedrechselt ist, auch um einen ganzen Ton.”

<sup>11</sup> Abraham Megerle, *Speculum Musico-Mortuale, Das ist: Musicalischer Todtenspiegel* (n.p., n.d.).

<sup>12</sup> The Latin text of Numbers 10:9 in the Vulgate reads “Clangetis ululantibus tubis.” The Vulgate and Megerle’s German translation, which attributes a “sorrowful” (“trawrig” or in the modern German form “traurig”) sound to the “trombones” (which in the Hebrew Bible are *hazozerot*, i.e., trumpets), correspond in meaning neither to the Tanakh (“you shall sound short blasts on the trumpets”) nor to the translations in the Luther Bible (“so solt jr drometen mit den Drometen”) and King James version (“Ye shall blow an alarm with the trumpets”).

<sup>13</sup> The Latin text of Isaiah 5:30 reads “Et sonabit super eum in die illa.” Here, too, Megerle’s translation does not correspond to the Tanakh (“But in that day, a roaring shall resound over him”) or to the Luther (“Vnd wird vber sie brausen zu der zeit”) and King James (“And in that day they shall roar against them”) translations.

<sup>14</sup> The text shown in the choirbook is “olim Abrahæ” from the last line of “Domine Jesu Christe”: “quam olim Abrahæ promisisti” (which you once promised to Abraham), certainly a wink-of-the-eye reference to the composer’s own name.

<sup>15</sup> Megerle, *Speculum Musico-Mortuale*, 21. “Es seynd auch noch 2. andere Requiem mit unterschiedlichen Instrumenten unnd Trombonis muttis.”

<sup>16</sup> Megerle’s *Ara Musica* was supplied with both a *Bassus Continuus* part and a *Partitura*. The latter is not a score in the modern sense, but rather a “score” of bass parts: in pieces with more than one choir, the bass parts of all the choirs are printed one above the other. Thus, for example, a six-choir piece will have a *partitura* made up of six bass parts. *Audi filia* offers two performance possibilities: as a double-choir piece with two sopranos in the first choir, two trombones in the second, and a continuo instrument for each choir (as in the *Partitura*), or as a single choir piece using the single-line basso continuo part.

<sup>17</sup> The title page reads: *Auff das Hochansehnliche Hochzeit-Fest des HochEdelgebohrnen, Gestrengen, Vesten, und Hochweisen Herrn, Herrn Henricus Kirchring ... und der HochEdelgebohrnen, GroßEhr- und Tugendreichen Frauen Angeta Kirchrings, gebohrnen von Siten, gehalten den 23. Tag des Herbstmonats 3.*

<sup>18</sup> Kerala J. Snyder, *Dieterich Buxtehude: Organist in Lübeck* (New York: Schirmer, 1987), 379.

<sup>19</sup> Translation by Kerala J. Snyder, *Dieterich Buxtehude*, 67; Dietrich [sic] Buxtehude, *Castrum Doloris – Templum Honoris*, facsimile edn. (Lübeck: Bibliothek der Hansestadt Lübeck, 2009). “In einer Illumination, Auff der Jüngst repariert- und ganz verguldeten Grossen Orgel, So itzund bedeckt, Und mit vielen Lampen und Lichtern geziert, præsentieret sich Die Hohe Käys. Leiche im Sarge auff dem Parade-Bette, Zum Haupt die Käyserliche, An beyden Seiten aber, Die Königlichen Hungarische, Böhmische und übrige Krohnen habende; Worüber auff Vier Palmen-Bäumen Ein Schön-gezierter Himmel ruhet, Umbher, Mit dem Käyserl. Königl. und übriger Provincien Wapen behangen, Dabey Viele Englen mit Lichter die Wache halten; Die beyden Music-Chöre seynd neben der Orgel schwartz bezogen: Die Posaunen und Trompeten mit Sourdinen, auch übrige Instrumenta allesamt gedämpffet.”

<sup>20</sup> Ibid. “Worauß dieser Actus, mit dem Gesang und Choral: Nun laßt unds den Leib begraben, ec. von allen Orgeln und Chören; Darin die gantze Christliche Gemeine und Versamblunf mit einstimmiget, ganz kläglich beschlossen wird.”

It is interesting to note that the performances of the *Castrum doloris* and *Templum honoris* took place during Johann Sebastian Bach’s sojourn in Lübeck, making it very likely that Bach heard or even participated in them.

<sup>21</sup> See Michael Lorenz, Fux Documents, <http://michaelorenz.blogspot.de/2016/09/fux-documents.html> (accessed 19 October 2016), and idem, Haydn Singing at Vivaldi’s Exequies: An Ineradicable Myth, <http://michaelorenz.blogspot.de/2014/06/haydn-singing-at-vivaldis-exequies.html> (accessed 19 October 2016).

<sup>22</sup> Taking a cue from Megerle’s *Audi filia* and Buxtehude’s *Ihr lieben Christen*, perhaps this could be attempted in other pieces for two trombones and vocal soloists, for example, the fifth Intermedium of Schütz’s *Christmas Story (Weihnachtshistorie)*, SWV 435.

<sup>23</sup> It should be noted that these measurements are only approximate; a certain amount of inexactitude has to be assumed due to the angle at which the photos were taken. I would like to thank Annegret Schaub for her help and expertise.