

A CHANCE ENCOUNTER WITH A UNICORN? A POSSIBLE SIGHTING OF THE RENAISSANCE SLIDE TRUMPET

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In 1940, Curt Sachs suggested that the *tromba da tirarsi* of Bach's time had its ancestry in a 15th-century trumpet that played with shawms, creating the idea of the Renaissance slide trumpet or *Zugtrompete*.¹ While musicologists warmed to the idea of a proto-trombone, its reception among performers was more guarded.

Early attempts to revive the instrument resulted in reconstructions that were to become the nightmare of many a sackbutist, giving rise to apocryphal tales of careers cut short by a too-hasty return to first position. The sound of a *bassedanse* drum introduction can still make some trombonists' heart miss a beat. Imagine the relief among the trombone-playing fraternity when an article appeared setting out the thesis that the 15th-century slide trumpet was a modern myth. There certainly was a case to answer, for though we had for years chosen to see telescopic slides being worked on the trumpets that play with the shawms of the period, these trumpets could be interpreted as fanfare or natural trumpets. And besides, could anyone find an unequivocal description of a 15th-century trombone with a single slide? It seemed that, in our enthusiasm for reviving the 15th-century ceremonial wind ensemble, we may have created a chimera.

That was twelve years ago. Ironically, the state of the slide trumpet is today stronger than ever. In response to the attempt to exclude the slide trumpet from the history of the trombone, a number of writers have produced vindications of the instrument. While a leap of faith is still required to overcome the lack of positive proof, the circumstantial evidence becomes ever more persuasive, tracing a supposed presence on such tertiary sources as lists of payments, and on a more complete understanding of the 15th-century ceremonial wind ensemble or *alta* and the role the brass instrument may have played in that band. Perhaps the most persuasive "new proof," however, is in the hearing of a new generation of slide trumpeters who are capable of astonishing feats of agility in accompanying the shawms in the new, more historically accurate reconstruction of the *alta*, the principle difference of which lies in its very high pitch. These devoted players come not only from a classical trombone background, but also from salsa bands and from the clarino trumpet, both of which styles may be nearer to the working atmosphere of the *trombonistas* of the quattrocento than any modern orchestral instrument.

My own contribution to the subject so far has been a study of the sixteenth-century double sackbut that attempted to find the roots of its *Gestalt* in the slide trumpet, bringing the two instruments closer together.² What I would like to suggest here is that the slide trumpet and sackbut were, at times, physically closer one to another than we might ever have suspected. As a result, it may transpire that we have even had a handful of unidentified

slide trumpets in major European collections for a number of years.

Among the first unequivocal depictions of the a double-slide trombone are a late 15th-century Roman fresco *The Assumption of the Virgin* by Filippino Lippi, Gentile Bellini's *Procession in Piazza S. Marco* (1496),³ and a depiction of the *alta* playing for the coronation of the Pope Pius III, a painting completed in 1508.⁴ All three of these early Italian representations of double trombones seem rather small, perhaps suggesting that the first examples of this design were rather more like what we would call alto trombones, a form that may have resulted from putting a double slide on a similar length of tubing as that of the common, folded slide trumpet. The representation of the instrument played by Hans Neuschel the Younger of Nuremberg and his Hapsburg colleagues in *The Triumph of Maximilian* (1512-19) is bigger in relation to the body than the early Italian depictions of double trombones, and it is this instrument, roughly corresponding to what we call a tenor trombone, that was adopted as the "standard" double trombone of the 16th century (Praetorius called it the *rechte gemeine posaun*). Praetorius acknowledges the primacy of *posaunen* made in Nuremberg,⁵ and it is possible that the "invention, in 1498, of an improvement to the trombone," credited to Hans Neuschel the Elder refers to the development of this form of large double trombone which is familiar to us as the ancestor of the orchestral trombone.⁶

The design of the double trombone became standardized, so that by the second half of the 16th century the slide mechanism seems commonly to have been held in alignment by two detachable slide braces or flat stays secured by clasps. The instrument was held from underneath the slide (unlike the modern, overhand grip), and the trombone could be entirely dismantled to a collection of tubes. This flat-stay design was gradually replaced by instruments using fixed, round stays from around the second quarter of the 17th century, a development probably concomitant with the change of hand position from underhand to overhand, by which stage the instrument very closely resembled the modern design for trombones.

In comparing the earliest surviving trombones with those in present-day use one is struck by the similarities between them. This close similarity is due almost entirely to the clearly ergonomic design of the instrument, the trombone being a logical and practical response to the human form. The similarity ought not to be a surprise. Denis Wick gives a maximum slide extension of 57 cm for seventh position on an orchestral tenor trombone, a distance that says as much about the extension of an average modern arm as it does about trombones. Early trombones have a slightly smaller maximum extension, with inner slides averaging 62-65 cm in length (suggesting a slide extension of about 52-55 cm), which is probably proportional to the difference in size between Denis Wick and Nuremberg man. This similarity has greatly enhanced our chances of recreating the slide-trumpet. Using instruments with slide extensions similar to those of a 16th-century sackbut, modern-day reconstructed slide-trumpeters can play in perfect partnership with shawms built to historical proportions.

The slide trumpet and the "sackbut" must have been considered very closely related, more so than they appear currently to us. Not only did they share a fundamental design

principal (based on the extension of the arm in front of the face), but in designing the double-slide instrument it appears that makers and players expected to hold the instrument in a similar way, and find positions according to principles established on the mother instrument, the slide trumpet. Whereas today we need two encyclopaedia entries for “slide-trumpet” and “sackbut,” the words “sackbut,” *posaune*, and “trombone” appear to have been used to denote any brass instrument used in the *alta*, with all its ensuing confusion for the modern player trying to untangle what sort of instrument might be intended.

Slide trumpet madness: in search of the unicorn

In 1985 I first made the acquaintance of Paul Smit and his amazing copy of the 1579 sackbut by Anton Schnitzer in the collection of the Verona Accademia Filarmonica. It is a stunning piece of workmanship by Max and Heinrich Thein of Bremen that attempts to recreate its highly elaborate model in every detail, even down to the metal composition and collapsible construction. As if making a slide work well were not difficult enough, this instrument shuns modern extruded tubing in favour of hand-rolled and seamed tubing, in the style of Schnitzer, a device incorporated with creditable mechanical efficiency. Paul showed a group of us, who had never seen such an accurate historical reconstruction of an early trombone, how the instrument could be entirely dismantled and reduced to a collection of tubes and U-bends, to be reassembled as a fanfare trumpet.

Could he have used the same pieces to make a slide-trumpet? Given that the slide mechanism was a relatively new, complex and expensive piece of musical equipment, for which the manufacturing expertise probably lay in the hands of a very small group of makers, it would make sense if the makers/players of the time looked to maximize the use of the components of a trombone. One aspect of this flexibility attracted the attention of most late 16th-century music-commentators, who observe how a player could add extra coils of tubing, to drop the pitch of a sackbut to create new pitch levels, even to change its function in the ensemble from an alto/tenor instrument to a bass. This fascination with the trombone’s functional flexibility is perfectly demonstrated by the Verona Schnitzer 1579 (and also by the Thein’s copy of this instrument), for its slide comprises six pieces of tubing, four that function as a traditional double slide, but with an additional pair that fit closely over the outer slides which can be extended either to fine-tune the instrument or, if fully extended, to produce an outer slide almost twice as long as normal. Using this device in co-operation with the tuning coils that have survived for this instrument, the Verona Schnitzer could easily be turned in to a *sekund-* or even *terz-posaun*, and so function as a bass instrument as well as a *rechte gemeine posaun*. Our notion of what a “sackbut” is and how it was used has been confused by the understandable modern expedient of producing more rigidly constructed instruments in the image of the modern orchestral trombone, produced mostly using modern extruded tubing. Were there more historical, unsoldered copies of early flat-stay trombones in circulation, perhaps players would be more inclined to see their instrument as a set of interchangeable components and keen to reap the benefits afforded by hinged, removeable slide stays, rather than merely suffering from sackbut

player's dead finger to no practical advantage.

Whereas Paul Smit's fanfare trumpet, made using components of the copy of the 1579 Schnitzer flat-stayed trombone, was basically made with three tubes in parallel, 15th-century illustrations of (presumed) slide trumpets often seem to show the tubes out of parallel alignment. This can be seen clearly in Memling's depiction of a slide trumpet, where the tubes leave the U-bends at an acute angle, so that the bell and slide project from the centre of the U-bends (Figure 1). This is a small detail, though in practice it transpires that a trumpet made in this way has better balance across its central axis (the axis in which the slide is operated), and so is a feature worth incorporating into a reconstruction.



Figure 1

Single trombone (slide trumpet) player and shawmist from Hans Memling, *Najera triptych* (ca.1480).

Turning to look at the photos and illustrations of sixteenth-century trombones, one is struck that, if the two U-bends of a sackbut were to be used as the front- and rear-bows of a slide trumpet, the rings or eyelets almost always fixed in the center of the semicircle could be used to fasten the tube running across it. These rings have been something of an enigma on the Renaissance trombone, rather like male nipples, in that almost all manifestations of the instrument seem to have them, though they seem to serve only a decorative function. Heinrich Thein proposed that they could be used to secure the bows in case the friction-fit of the tubes failed, although the Schnitzer copy produced by his workshop needs no such precautions. Even stranger is the piercing that all Renaissance trombones have in their flat bell-stay. Though some trombones have two piercings, symmetrically placed, many have only one, though it is not then placed in the middle, but about two-thirds of the way up the stay, towards the bell. Thein suggested that the piercings could be used to secure the string from the loop on the bell-bow, which makes sense if there are two piercings (as in the Jörg Neuschel 1557 instrument he discusses), but if, as is often the case, there were only one piercing the string would, rather eccentrically, pull to one side, to no apparent advantage. However, if the components of the sackbut were reorganized to the configuration of a slide trumpet, one might find that not only may the rings on the two U-bends provide points to secure the tubing, but the slide might cross the bell-stay near the point, two-thirds of the way up the stay, where the one piercing is to be found, giving a third possible point to secure the construction. The drawings looked quite convincing, but a number of questions remained unresolved. Would the standard components of a collapsible Renaissance sackbut allow this particular triangulation of its yards? And anyway, what selection of notes might this instrument play, and at what pitch?

In 1994 it was possible to put the theory to the test when, during a visit to Utrecht, Paul Smit allowed me to experiment with the Thein's Schnitzer 1579 trombone copy. The accompanying photos show the results (see Figure 2). Very little adjustment was necessary to move from trombone to slide trumpet. While the U-bends and the stays of the trombone help align the components strictly in parallel, I had expected the bows of a slide trumpet to send the yards at a gently acute angle. This proved, in fact, not to be a problem, for the angles required are very gentle, and the front U-bend seemed already to form a slightly acute angle when the flat slide-stays were removed, enabling the slide to traverse the center of the U-bend nearest the player. I could see no resolution to the problem of how to make the rear U-bend form an acute angle, to make the bell pass over the center of the front U-bend, as the bell-stay of the trombone, which is not easily removable, holds the tubes of the bell section completely parallel. In practice, however, the flared bell section of the Thein's Schnitzer copy could be rotated in its socket with the bell-bow, a motion allowed by the pin fixing of the bell-stay to the bell. Thus one could, if it were necessary, easily create an acute angle between the two tubes emerging from the bell-bow, allowing the bell to pass over the front-bow and balancing the weight of the instrument's components evenly on either side of the slide. (Unfortunately this insight came only after the photos were taken, and so a certain amount of imagination is required here).



Figure 2a

Tenor trombone by Max and Heinrich Thein, after Schnitzer 1579 in the collection of the Accademia Filarmonica, Verona.



Figure 2b

The same with outer slide removed. Note the single piercing in the bell stay, from which a piece of leather thong emerges to form the axle in the joint of the stay to the bell.

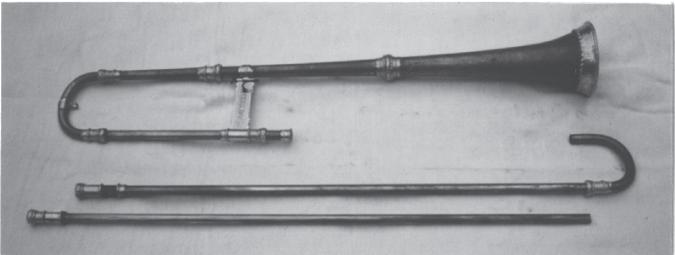


Figure 2c

The two slide braces have been removed, as have the inner and outer tubes of the second slide, leaving only the first slide (inner and outer), the slide-bow, and the bell section. The eyelet in the slide-bow has vanished as, for reasons demanded by the additional outer slides of this instrument (see text), it was necessary to replace the slide-bow at this stage with one of the semicircular tuning bits that accompany this trombone.

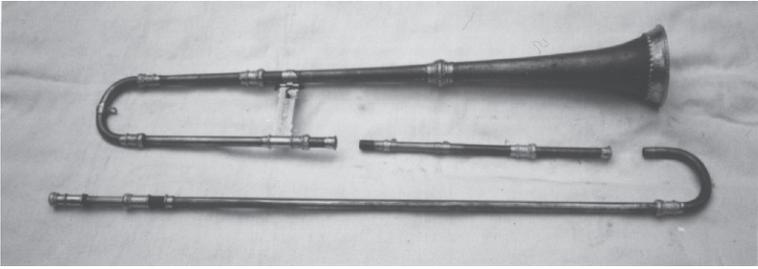


Figure 2d

The slide has been reassembled, and the length of straight tubing to complete the second yard of the trumpet has been prepared.

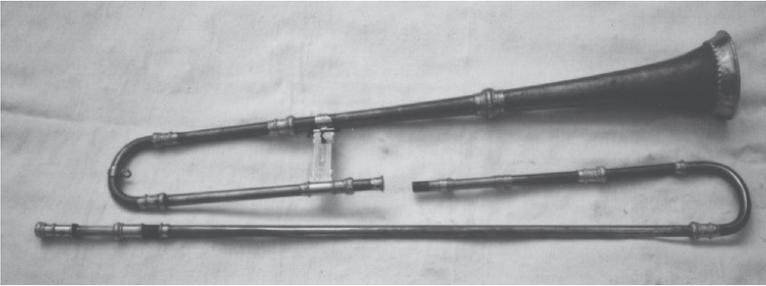


Figure 2e

The additional tubing is offered into the U-bend, which sends it at an acute angle to the slide.

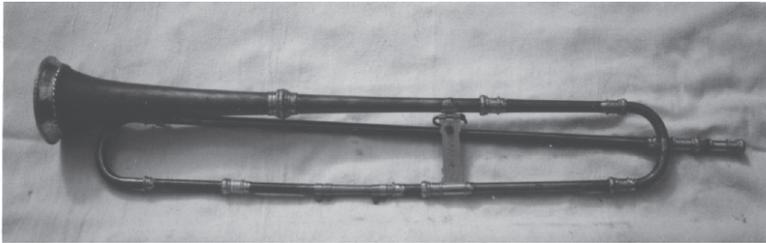


Figure 2f

The double trombone reassembled as a single trombone. Note that the slide passes through the middle of the U-bend nearest the player and coincides with the eyelet, and that the piercing in the bell-stay is in line with the path of the slide as well. The instrument has been flipped over in order to make this point more clearly. Although the line of the additional tubing is slightly distorted by the fixed, parallel conjunction of the tubes of the sackbut bell, if the bell section were rolled over and rotated in its the joint with the U-bend to form an acute angle with the second yard, the alignment of the second yard would be ameliorated.

The only other major change was the addition of a short length of tubing to join up the front U-bend to the bell-section of the sackbut, thus completing the second yard of the trumpet. In this case we used a combination of tuning bits to reach the desired length. When blown, the instrument played harmonics on D at about $a=440\text{Hz}$, and a basic diatonic scale starting on g. Allowing for the very high pitch of the *alta*, (about a fifth above a nominal “normal,” or vocal pitch), this would correspond to a scale from (written) tenor c at around $a = 660\text{ Hz}$. While the tonality was exactly what one might have hoped for, in relation to its role in the shawm ensemble, the pitch was a little low. One would have expected an instrument pitched nearer that of most other wind instruments at $a = 700\text{ Hz}$ *alta* pitch, or $a = 466\text{ Hz}$ high vocal pitch. The tube length of the Verona Schnitzer seems, however, to be rather longer than the average 262 cm one expects from a Nuremberg *posaun*,⁷ and so the slide trumpet based on those proportions seems to be similarly “flat.” The experiment was conclusive enough, however, to be able to state that a collapsible flat-stayed sackbut (the standard trombone of the sixteenth and early seventeenth centuries) could quickly and conveniently be converted into a slide trumpet, at a pitch that would correspond to the tenor function in the wind ensemble.

A comparison of the completed transformation with the depictions of the trumpets played the *stadt Pfeifer* of Graz from the *Grazer Schutzenbuch* (1568) (Figure 3) and the trumpet of the *ministriles altos* from a mid-sixteenth century painting in the Museo Arqueologico, Tarragona (Figure 4), of an ecclesiastical procession demonstrates a striking resemblance, even down to the flat brace across the middle of the instrument, which the player holds to operate the slide. This feature is seldom shown in 15th-century representations of trumpets played with shawms, though such a brace seems to have become common on trumpets that played in a melodic or polyphonic context during the sixteenth century.



Figure 3
An *alta* ensemble comprising zink (?), two
bombards, and single trombone (slide
trumpet), from Lonhard Flexel, *Grazer
Schutzenbuch* (1568).



Figure 4
An early sixteenth-century *alta* ensemble comprising three shawms and single-slide trombone, Museo Arqueologico, Tarragona.

The use of the slide trumpet in the sixteenth century

The curtailment of a double trombone to a slide trumpet undeniably works in practice, but this inevitably arouses a number of questions. While the presumed applications of the rings, piercings, and so forth described above suggest that the designer of the Nuremberg double *posaun* understood that certain players, under certain circumstances, might still have need of a single *posaun*, it must be asked whether this correspondence is a pure coincidence arising from two instruments of similar design, or whether such conversion was an intentional design feature of the Nuremberg double *posaun*? The more pragmatically minded might simply inquire why competent trombonists should deny themselves the obvious practical advantages of a double slide in favour of the *zugtrompete*? To begin to answer these questions, one might ask why the large German double trombone appeared where and when it did, and how the circumstances for performance on the double-slide trombone might have differed from a suggested role for the *zugtrompete* in the sixteenth century.

Hans Neuschel the Elder's reported "improvement" to the *posaun* came during a crucial period of musical synthesis, when individual players of *alta* instruments in Germany and the Low Countries first began to achieve some personal notoriety for playing with voices, even in church at High Mass.⁸ The large German double *posaun* in A probably represented something of a musical revolution, for it created a new design for ceremonial brass instruments that could access pitches as low as a bass voice, at a time when the ceremonial reed

instruments lower than the conventional bombard needed to aim the bell towards the players feet with a curved bocal to create even an instrument at tenor vocal pitch. The expertise of the wind players working in the Hapsburg sphere that made such a synthesis a convenient possibility was celebrated in the section of the *Triumphzug* of Emperor Maximilian depicting the *Canterey* accompanied by the *zink* and double *posaun* of Augustein Schubinger and Hans Stewdlin:

Pusaun und Zincken haben wir gestellt
Zu dem gesang wie denn gefellt
der Kaiserlichen Maiestatt

Trombone and Zincken have we attuned
To the choir, to the pleasure
Of His Imperial Majesty

The *alta* of shawm, bombard, and slide trumpet, however, always functioned as a closed unit and seldom if ever had any involvement with other musical institutions, observing the rigid distinction between *alta* and *bassa musica*. While the improvisatory style and musical practices developed by wind players might borrow or mimic elements employed in the music of more socially elevated, literate musicians, their largely non-literate performances did not necessarily relate in any precise way to the details of more educated musical practice. This was particularly true in relation to the pitch of early wind music for, while the combined tessitura of the *alta* encompassed the range of most notated vocal music of the early 15th century, from about c-d'', its sounding pitch was equivalent to something in the region of a = 700 Hz, about a minor sixth higher than modern orchestral pitch, and perhaps even higher in relation to the pitch of 15th-century vocal music.

The modern slide trumpet can satisfy the role of the tenor or contratenor in the 15th-century *alta* with great success.⁹ With an almost fully chromatic range from c upwards, it is the perfect partner to the bombard and shawm, combining to create a wind ensemble which, following the fingering suggestions given by Agricola,¹⁰ can play most of the secular music of Dufay, for instance, and forms a useful resource for improvised dance arrangements in the style and manner of the period. In this context, the slide trumpet fully justifies its modern recreation. However, while the *alta's* high tessitura is an advantage in ceremonial use for projecting the sound, such a high pitch has also great potential for creating confusion when the shawm ensemble attempts to double vocal lines, leaving either the *alta* well out of their natural range, or the choir uncomfortably above their customary pitch.

Late Renaissance music theory became interested in loud wind instruments only when they could be used with voices: how a ceremonial wind ensemble extemporized when performing alone was of very little consequence, and required no comment. It was even considered bad taste, in polite society, to show a keen personal interest in ceremonial music.¹¹ While a relatively few highly skilled court and ecclesiastical instrumentalists were engaged, from about 1490 onwards, in the process of adapting their style, literacy, and

instruments to become more compatible with vocal ensembles, a development which aroused the interest of commentators to the high aristocracy, many wind players among European court, civic, and urban ensembles continued to fulfil largely segregated duties playing for dances and ceremonies, more like the traditional role of a 15th-century *alta*.

Our views of previous ages are inevitably determined by the nature of the available evidence: are we perhaps misleading ourselves in expecting to find any substantial amount of detail concerning the instruments, music and technique of the early wind ensemble in the writings of 15th- and 16th- century musicologists? Almost all the primary source information concerning music performance practice and the secondary sources of notated music of the Middle Ages and Renaissance derive from writers working within the milieu of the *litterati*, principally those connected with the court, the church or high civic office, and the dominant classes of the age. In founding our reconstruction of earlier music principally on the testimony of the ruling classes (what else are we to do?), we experience music of the Middle Ages and Renaissance mostly through the eyes and ears of a privileged few who happen to have been able, and inclined to leave a record of their activities. As a result, the revival of Renaissance and medieval music has, for the most part, been able only to represent and exaggerate the observation and blindness, the preference and prejudice of a historical élite. While our present-day enthusiasm chiefly for the double trombone has been fired in part by the official 16th-century approbation of the instrument (it was a boon to choirmasters), but also by a misplaced modern mistrust of the single slide (and the supposed threat it poses to dentition), the evidence of such “tertiary” sources as contemporary iconography strongly suggests that the double-slide trombone did not entirely and immediately replace the single trombone.

In assessing the consequence of the selective preservation represented by the sources of notated music on our view of medieval musical life as a whole, Reinhard Strohm has commented that “the music historian deals not only with the loss of evidence, but also with phenomena which were never ‘evident’.”¹² Returning to the theme elsewhere, he asks, “Did illiterate minstrels conspire to deprive posterity of their art? Or have we simply been looking for the wrong thing?”¹³

NOTES

¹ Curt Sachs, *The History of Musical Instruments* (New York, 1940).

² Peter Downey, “The Renaissance Slide Trumpet: Fact or Fiction?” *Early Music* 13/1 (1984): 26 ff.

³ In particular, three articles in *Early Music* 17/3 (1989): 383-402: Herbert Myers, “Slide Trumpet Madness: Fact or Fiction”, pp. 383 ff.; Keith Polk, “The Trombone, the Slide Trumpet and the Ensemble Tradition of the Early Renaissance,” pp. 389 ff.; and Ross Duffin, “The *trompette des menestrels* in the 15th-Century *alta capella*,” pp. 397 ff.

⁴ Keith McGowan, “The World of the Early Sackbut Player,” *Early Music* 22/3 (1994): 441 ff.

⁵ Reproduced in *New Grove*, s.v. “Trombone,” by Anthony Baines.

⁶ Reproduced in *Early Music* 3/3 (1975): 230.

- ⁷ Reproduced in Marion Johnson, *The Borgias* (London, 1981), p. 178.
- ⁸ *Syntagma musicum* II, p. 232.
- ⁹ Christoph Gottlieb von Murr, *Beschreibung der vornehmsten sehenswürdigkeiten in der freien Reichsstadt* (Nuremberg, 1778).
- ¹⁰ See McGowan, "World."
- ¹¹ *Ibid.*, pp. 453 ff.
- ¹² Heinrich Thein, "Zur Geschichte der Renaissance-Posaune von Jörg Neuschel (1557) und ihrer Nachschöpfung," *Basler Jahrbuch für historische Musikpraxis* 5 (1981): 377ff.
- ¹³ See Henry Fischer, "The Tenor Sackbut of Anton Schnitzer the Elder at Nice," *Historic Brass Journal* 1 (1989): 65-74; here, 70.
- ¹⁴ See Keith Polk, "Augustein Schubinger and the Zinck: Innovation in Performance Practice," *Historical Brass Society Journal* 1 (1989): 88 ff.
- ¹⁵ See Keith Polk, *German Instrumental Music of the Late Middle Ages* (Cambridge, 1992), p. 71; Hans Burgkmair, *The Triumph of Maximilian I*, ed. S. Appelbaum (New York, 1964), p. 5.
- ¹⁶ It has been common in the past to speak of the ceremonial wind ensemble "transposing" their music up a fifth, although this might now appear misleading, as if to suggest that there was a single lower pitch standard from which the shawm ensemble deviated in a conscious and convenient way.
- ¹⁷ The reconstructed slide trumpet most commonly used by modern *alta* ensembles is described in Polk, *German Instrumental Music*, p. 57; McGowan, "World," pp. 453 ff.
- ¹⁸ *Musica instrumentalis deudsch* (Wittenberg, 1528), fol. 9v-10r.
- ¹⁹ See Baldassare Castiglione, *Il cortegiano* (Venice, 1528), trans. C. Singleton (New York, 1959), book II, paragraph 13; and the songbook of Clara Hätzerlin, cited in Polk, *German Instrumental Music*, p. 87.
- ²⁰ *Man and Music: Antiquity and the Middle Ages* (Basingstoke, 1990), p. 276.
- ²¹ Reinhard Strohm, *The Rise of European Music, 1380 to 1500* (Cambridge, 1993), p. 358.