Trumpets, Shawms, and the Early Slide Instruments, ca. 1350–1470

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Between 1300 and 1500 the contexts, quality, and musical demands concerning brass instruments were vastly transformed. At the beginning of the fourteenth century, players of brasses (almost entirely various types of trumpets and horns) were confined to sounding fanfares at ceremonies and providing signal functions in a variety of contexts—all considered important, but resulting in only minimal real music. In contrast, at the end of the fifteenth century, players of lip-blown instruments were beginning to perform at the most refined occasions; by about 1500, for example, the trombonist/cornettist Augustine Schubinger performed in musical settings of the Mass that involved a choir that included Alexander Agricola and Pierre de la Rue, two of the most outstanding composers of the era. Several pivotal developments fueled this transformation, the most significant of which was the development of the slide mechanism, permitting a trumpet-like instrument, earlier limited to performance only on the notes of the harmonic series, to be able to play diatonically and thus take part in performances of complex polyphony. The importance of this development is such that it has long attracted the attention of scholars of stature such as Heinrich Besseler, Daniel Heartz, and William Prizer. In fact, the broad outlines of the evolution of a slide instrument from its inception, thought to be somewhere between 1410 and 1420, are now well established. What has remained unexplained—rather a mystery, in fact—can be phrased as a question: what was the impulse that generated the invention of the slide? The bulk of what follows will explore possible answers to that query. In addition, a recent contribution to the history of brass instruments has thrown in question yet again the issue of the nature of the first slide mechanism. In response to that, this study will include a brief postlude on the subject of the Renaissance slide trumpet.

Any answers to the question of the impulse behind the development of the slide mechanism lie far back in the fourteenth century—which may explain why this matter has been little explored. We know a great deal about the fifteenth century in this regard because we have ample sources to draw upon; archival documents, iconographic examples, and theoretical writings (especially those of Tinctoris) in great number have allowed us to answer many of the questions concerning the instruments and the performances practices of the time. The sources for the fourteenth century present a stark contrast. Archival information on instrumental music in most areas provides a meager harvest, inconography offers only little support, and no theorist of Tinctoris's stature is available.

Essential to an approach to our subject is an awareness of the general context of the fourteenth century. Europe at this time presented a rather bipolar image—grim from

DOI: 10.2153/0120180011001

one perspective, more positive from another. Of course the darker side has attracted a good deal of attention. There were wars and conflicts; on the large scale we have the beginning of the Hundred Years' War, on the smaller, such intense internal conflicts as the Ciompi Revolt in Florence. Certainly war and conflict were constant threats. More devastating in terms of loss of life was the Black Plague, which first arrived in Europe in 1348, but kept returning from time to time, traumatizing entire populations. And of course, in times of deep troubles, one might turn to the church—which was itself in profound turmoil, with multiple popes vying for control of the machinery of the papacy. But on the positive side—and more relevant to our study—this was an era of remarkable invention. In this regard, if one considers the innovations of the fourteenth and fifteenth centuries, we see the striking fact that in terms of invention this span easily equaled our own. The printing press appeared, which altered the way we learn. Clock mechanisms were invented and improved, changing the very concepts of time. Navigational aids that allowed Europeans to penetrate to the far corners of the globe were developed, and new military weaponry resulted in a complete change in the ways war was waged. Music was carried along with these waves of innovation, and indeed the late fourteenth century was a kind of hot spot in the development of new instruments. These included the earliest versions of stringed keyboard instruments that quickly led to the clavichord and harpsichord, and of course ultimately the piano. In one brilliant innovation, a clever instrument maker came up with the notion of a key mechanism to cover the lowest hole of the shawm, permitting a more manageable tenor size of the instrument; without this device the lowest hole was beyond the reach of the human hand for many players.[1] Makers of brass instruments developed new shapes of the trumpet, which until then had been a straight instrument. Most critically the "folded" form appeared by about 1400, i.e., the form that was the standard one in the Baroque era. It was this shape to which would be attached a slide mechanism.

One aspect of this spirit of the time, especially clear in paintings and with instrumental music, was the speed of change. Every decade or so new concepts would arrive, replacing previous approaches. One striking witness to this was the town chronicler of the small German city of Limburg, Tilemann Elhen von Wolfhagen, who frequently referred to new musical items and events that he witnessed. One observation, most likely applicable to the situation about 1380: "And the manner of playing the shawm has changed and been raised in esteem—to the extent that one who was considered a good player just five or six years ago isn't worth a hoot now."[2] In what follows we shall see frequent reference to new instruments, repertories, and performance practice.

Instrumentalists in the late fourteenth century were part of a vibrant, energetic musical culture. One significant component contributing to this was a high degree of international interconnection, due in part to extensive contacts between courts, often through marriage. The wife of the Duke of Burgundy was German, as was Charles VI of France's queen. The Count of Holland, an important patron of instrumental music, was in fact also the Duke of Bavaria/Straubing; he assumed control of Holland ultimately as a rather tortured consequence of a marriage. When he moved to Holland he brought

with him two German shawm players, both of whom remained at the court there for many years.[3] Another contributing factor was the great vogue of the minstrel schools, which reached a peak in the last two or three decades of the century. These schools were held annually during Lent, usually in the Low Countries or in nearby cities, and attracted very large numbers of performers, especially those from prominent courtly and civic ensembles. Spanish accounts underline how important the schools were for the transmission of repertories and the dissemination of innovations in instrumental construction.[4]

The early fourteenth century

Italian cities were leaders in the urban renewal of Europe in the late Middle Ages. By the early thirteenth century these cities were well on the way in establishing frameworks of municipal organization, including systematic record-keeping, which preserved evidence of important decisions of city councils, texts of official statutes, and detailed financial accounts, all of which have provided a wealth of information relating to the establishment of consistent patronage of civic musicians. This information is invaluable in that it is almost unique. We have almost no court records until well into the fourteenth century, and those from northern cities are much more rudimentary, again until after about 1350. But we must also bear in mind that the uniqueness of the Italian sources also presents a potential flaw, especially in the lack of evidence of court patronage, in that in general it was the nobility that established the patronage models. Still, Italian city records, especially those of Bologna, Florence, and Siena, provide copious information.[5]

Florence provides an apt example. By about 1300 the city supported a distinct stable of players that normally included between six and eight trumpeters, one player of shawm, and, usually, one percussionist. Also on the payroll in a separate category were six *bannitori,* town criers who would sound trumpets to call attention to their official activities.[6] The assembly of trumpeters, shawm, and percussionist probably did on occasion perform as a group, and thus constituted an ensemble. This ensemble was a later version of the Islamic ensembles that the Crusaders had encountered in their ventures into the Near East a century or more earlier. These highly effective military units comprised of combinations of trumpets, shawms, and drums had so impressed the Europeans that they subsequently imitated and imported them into their home territories, a phenomenon clearly evident by the early thirteenth century. Once the concept of these units was rooted, Europeans began to alter the groupings to suit their own tastes and demands, and, in any case, the structure seen in Florence in 1300 represents a culmination of many decades of development.

The information from Italian civic records leads to several observations. First, the combinations of trumpets, a shawm, and percussion were all generally considered to be within what became termed "loud instruments" (*hauts instruments* in French-speaking areas). As such they were active in a musical sphere of their own. They did not interact

with instruments in the soft category (*bas instruments* in French), and certainly not with singers. This isolation continued almost to the end of the Renaissance for trumpets and percussion, but began to break down sooner for the shawms (more on this presently). Second, the configuration of the instrumental ensembles with multiple trumpets and a single shawm was a consistent feature—in Bologna and Siena as well as in Florence. The configuration of the wind component changed soon after 1300, first with increasing numbers of shawms relative to trumpets, and then to a distinct separation between shawms and trumpets, as I will shortly discuss more fully. Third, the instrumental stables did on occasion perform together, but smaller units were often detached for separate duty. Pairs of trumpets, for example, would accompany an important embassy to a rival city. Finally, the numerical predominance of the trumpets underlines the highly important role of the trumpet in civic life at the time. Trumpet fanfares underlined the solemnity of civic ceremonies. One example would be at the visit of a prominent noble when the city's trumpeters would sound fanfares at the noble's arrival—fanfares that would normally be answered by the trumpeters in the noble's employ. The sound of the trumpet was simply a marker of all important ceremony. Trumpet signals were also a vital component of civic military campaigns, as the trumpet was the primary means of coordination between individual components of large military units. A main fighting body had to know when to advance and to retreat. Essential flanking units needed signals in order to coordinate their movements relative to the main body. Reserve units would also need to know when and where to move in support at critical moments of combat, and again, it was the indispensable role of the trumpet to convey this crucial information. In cities, before the days of newspapers or electronic devices, trumpets formed a central element of a city's communication system. Within a city, official decrees and notice of significant events had to be communicated to all residents. In Florence the city was divided into six administrative districts (*sesti*), and thus six town criers (the *bannitori*, mentioned above) were engaged. When town officials determined that a piece of information should be broadcast, each town crier, in uniform and on horseback, would circulate throughout his assigned district. He would stop at specific points (in prominent squares or in front of certain churches, for example), sound his trumpet, then read the relevant proclamation. This trumpeter/crier functionary was part of the patronage pattern also in Bologna and Siena, and in other Italian cities as well. Finally, trumpeters would be stationed on the prominent towers of the cities to act as an alarm system. They would sound their calls in case of fire (a constant danger in the densely crowded medieval cities) or at the approach of hostile forces. In the present study, I will emphasize innovations in brass instruments in relation to changes in the makeup of ensembles and in ensemble performance practices. But I must also emphasize that any such innovations did not alter the fact that the indispensable functions of the trumpet continued throughout the Middle Ages, the Renaissance, and beyond. For city residents, the sound of the trumpet was part of daily life almost into modern times.

By 1300 the pattern of trumpet-dominated instrumental patronage was embedded in all major Italian cities and continued through most of the century. After two or three decades into the century, however, a new concept concerning instrumental ensembles began to emerge. This development becomes clear from the extant sources relating to the courts and cities of northern Europe. Unfortunately, such sources are extremely scanty until about 1340 and as a result the earliest stages of change remain murky. But from 1340 onwards documentation appears more frequently and is on occasion more detailed, providing ample evidence of a landmark division of wind instrumental groupings into two tracks, one of shawms, and the other of trumpets. Once established, this two-track format would govern wind instrument combinations for the two subsequent centuries.

ca. 1340–60: shawms and trumpets

The shawm duo: the core unit

A first piece in the puzzle mentioned at the opening of this study (concerning the source of the invention of the slide) was the separation of the shawms from trumpets and the subsequent emergence of a shawm ensemble with its own distinct musical functions and performance practices. Early stages of this transition are revealed in documents from the 1340s. An example comes from the records of the court of Holland for 1346–47, in which payment was provided for "2 pijpers die pijpten, daer mijn here danste metten magheden" ("Two shawm players who performed when our lord [the count] danced with the young women").[7] I have translated *pijpers* as shawmists, and indeed this is an early example of what was a convention in Dutch-speaking areas from ca.1350 into the early sixteenth century. In this period *pijper,* when referring to an ensemble (or in this case, a duo), most often indicated the shawm band. It was well understood then that the term, though useful, was flexible. The civic ensembles of the fifteenth century, usually mentioned as *stad pijpers*, regularly included one or two trombonists in addition to two or three shawms. Moreover, the general sense of the term (*pijper* indicating "wind player") was apt in that civic musicians also played on other instruments when desired. One such double that was especially common in the fourteenth century was the bagpipe, but command of several instruments was required of professional wind players throughout the late Middle Ages and Renaissance.

The payment further establishes two points; first, the duo of shawms was considered suitable to meet the normal minimal ensemble demands of the time. The court of Holland, as well as at those of Aragon, Brabant, and Savoy—and ultimately cities such as Cologne and Nuremberg—often found the duo to be satisfactory for their needs over the next few decades.[8] Other configurations were possible, but often the core duo could suffice. Second, the context was one in which the shawms were called upon to provide a musical service. This in contrast to the functions provided by the Italian ensembles noted above, none of which were musical in nature. A highly significant innovation resulted from the desire to meet musical demands. Two shawms would be

most effective musically if they provided contrasting registers, a higher instrument carrying the melody, with a lower instrument providing support. The problem facing players and makers in the fourteenth century was that the discant shawm fit nicely under the fingers, but with the length of the contemporary tenor size, for many players the furthest hole was beyond the reach of the human hand. This was an era of innovation, though, and at some point an imaginative maker came up with the groundbreaking solution mentioned above—a key to cover that troublesome hole, which made possible a new kind of tenor instrument (usually called a bombard). When this key appeared is not clear. A city regulation in Strasbourg from 1322 mentions a *bumhart*, but then the sources are silent about the bombard until a cluster of references in the 1370s and 1380s.[9] Significantly, some of these later sources refer specifically to instruments made "in the new fashion," suggesting, though hardly proving, that a date closer to 1360 was the most likely.[10] In any case, by about 1360 the shawm duo was well in place, and this combination of discant and tenor instruments remained the core unit of the shawm ensemble until the early sixteenth century.

Trumpets: courtly duos

Given the dramatically ample trumpet forces in Italian cities in the early fourteenth century, the modest numbers of trumpeters in courts throughout Europe at mid-century are unexpected. Still, two trumpets seemed to have provided all the routine functions needed for courtly ceremony, as trumpet duos were the characteristic unit across a wide selection of courts; those of Aragon, Burgundy, England, Guelders, Holland, and Savoy provide examples. Also unexpected, as the shawm band expanded its numbers after 1360, the trumpet contingent remained at two until about 1410, when trumpet bands did then begin a significant expansion, first to five or six, and then, of course, expanding to up to a dozen by the end of the fifteenth century.[11]

Innovation nonetheless acted on trumpets in the later fourteenth century. Until about 1360 the European trumpet was primarily a straight instrument, between about six and eight feet in length. Then makers developed considerable sophistication in the bending of metal tubing, and began to explore new shapes for the instrument. First, apparently, was one made in an S-shape, which appears to have had a short-lived vogue, from about 1370 to perhaps 1390, though this profile did continue to appear from time to time in the fifteenth century. Of far more import was the next innovation, which was the folded form, i.e., the shape that was carried over into the Baroque trumpet. This shape provided yet another critical piece to our puzzle, in that this shape provided a stable structure to which could be added a slide mechanism. This folded shape was apparently developed around 1380, and had become generally accepted by about 1400. The trumpet in this form was much more portable than other types and it was this instrument that formed the basis of the quite large ensembles several decades later.

1360–90: The expanded shawm band

Sources for ensemble instrumental music in the mid-fourteenth century are completely lacking. We may get some idea of how the shawm duo might have performed, though, from the repertory contained in the Faenza Codex, a source that while dating from the early fifteenth century includes two-part instrumental versions of pieces by Machaut, with the vocal originals then dating from about 1350.[12] The question of the instrument, or instruments, for which the Faenza Codex (Faenza, Biblioteca communale 117) was prepared has been the source of contentious debate. The general texture of the repertory, however, especially of the secular pieces (where a slower moving tenor underpins a highly decorated discant) probably reflects a general instrumental style in the late fourteenth century. It would appear quite reasonable that the shawm duo, while certainly not the intended medium for the Faenza collection, likely drew upon a similar approach, with the most elaborate demands made on the upper part, and the lower part providing contrapuntal support. Still, as appealing as this texture may have been, from about 1360 onward came the next step for the shawm band—the frequent addition of a third part. This was a logical move, as three parts provide a more satisfactory sonority.

"Sonority" in fact is the key to the next sequence of events. In the expansion to three parts, sometimes the additional instrument was a shawm. Varied configurations were possible, either two shawms and a bombard or one shawm and two bombards were common options, although a smaller discant shawm may have been tried from time to time. One quite common choice, however, was the addition of a bagpipe. At first glance this appears an odd preference. The range of the bagpipe is limited (usually just over an octave, and that in the discant register), and the instrument, whose wind source came from the bag and with the reeds not coming into direct contact with the player's lips, could not match the clear articulation of the shawms. Moreover, the shawms were capable of variety in dynamics from soft to loud, another feature that the bagpipe, with its more fixed dynamic, could not match. What the bagpipe could provide, however, was a drone, and it was most likely this feature that made it such a favorite, as it clearly was from about 1360 through almost to the end of the century. That is, it was the bagpipe's potential to add to sonority that made it a popular addition to the shawm band.[13]

A new shawm ensemble: 1390–1410

For the next step in tracing the background of the early slide instrument, we can turn to a series of documents from the Low Countries and Aragon that chronicle a new approach to combining instruments in the shawm ensemble. For the roughly five decades after 1340, shawms and trumpets had been channeled in two distinct categories. In the normal course of their duties, they did not perform together. Beginning ca. 1390, however, a new ensemble concept appears to have developed. The court of Holland

at this time supported two trumpeters and three shawmists, as had been the case for more than two decades, always as separate units. But in the court records of 1388–89 appears the following entry: "mijns heren 5 pipers die varen souden ter scolen pipen te leren"[14] An idiomatic translation of this would be "[paid to] my Lord's five wind players who will travel to the annual minstrel schools to learn new wind-playing techniques." A literal translation would be that these musicians were going to the schools "to learn to play shawms," which is highly unlikely, as the shawmists in the ensemble had been at the court for a number of years; they were experienced and highly capable musicians. What is more probable is that the combination of trumpets and shawms was a new concept, and the five players were going to the annual gathering to see how other ensembles were dealing with the novel performance practice demands they were facing. And there were other ensembles making the same transition at the same time. The Duke of Guelders, for example, had also maintained for some time a stable of musicians that included two trumpets and three shawms, again, until ca. 1390 in two distinct categories. But there too, after about 1390 things changed. In a court record of 1393, for example, we find a payment to "des hertoghen 5 pipers van Gulic" ("the 5 shawms of the Duke of Guelders").[15] The scribe obviously considered these five as a single ensemble.

The same phenomenon had its affect in cities as well. In Deventer, in 1390, a special payment was made to "master Claus with his trumpet and the two other shawms [*pijpers*] who came and played at the town council banquet." In 1394 in Deventer the linking of the trumpet and shawms was even more explicit, with a payment to "the shawms from Utrecht with Claus the trumpeter, who came and played together at the banquet" (*quamen tegader* = came together). In fact, in 1384, master Claus, who was unquestionably a trumpeter, was described as "Meyster Clawes onser stad piper" ("our civic *pijper*")—that is, as a trumpeter he was considered a member of Deventer's civic shawm band. Other Dutch and Flemish cities that supported ensembles combining trumpets and shawms during this span included Aalst, Bruges, Ypres, and Zwolle.[16]

With this development, we do have a few musical sources that provide at least an indirect suggestion as to a crucial element of the performance practice of this new ensemble alignment. Beginning around 1400 several composers began to imitate the sounds of the trumpet in vocal pieces. Perhaps the best known of these is Du Fay's *Gloria ad modum tubae*. More relevant to our study are the tenor and contratenor parts to *Tuba Henrici de Libero Castro* from the Strasbourg manuscript, a piece dating probably from just after 1400.[17] These two "trumpet parts" (and do keep in mind these are vocal imitations, not trumpet parts themselves) essentially repeat over and over what amounts to a root, a fifth, and an octave. Even with the occasional insertion of a third or tenth, the overall effect is rather like a drone. This suggests that what the trumpets in these ensembles were providing was a substitute for the bagpipe drone in the shawm band with bagpipe that had had such a vogue in the three decades preceding. And note that the trumpet drone-like effect would have been a distinctly more effective feature, as the trumpets could enhance the ensemble in several ways in which the bagpipe could

not; trumpets could match the articulations of the shawms, and were also capable of matching dynamic contrasts. But as they were capable of playing only the notes in the natural harmonic series, they still were unable to perform a complete diatonic scale. This leads us to the final piece in our puzzle.

Musical demands on the shawm ensemble, 1390–1410

A powerful stimulus which would act on the development of the early trombone began to appear about 1380, as shawm bands were increasingly expected to perform "songs." In one example from 1387–38, again from the accounts of the Count of Holland, is a payment to "miins heren pipers die voer miinen heer een nuwe liet speelde" ("The count's shawms who performed a new song before the count").[18] This expectation was not restricted to the Low Countries, for at the court of Aragon, in 1377, Johanni, a court minstrel returned from a sojourn in the north (to attend the minstrel school, as well as performing at the Brabant court), was paid for teaching new songs (*cançons novelles*) to the minstrels of the Marques de Villena (que … mostrets al ministers del Marques").[19] And in Germany, concerning a development from about 1380, Tileman von Wolfhagen observed that "In these times one sang a new song in German lands, that was very commonly played on shawms and trumpets."[20]

A central point concerning all these quite varied sources is that all refer to multiple players, that is, to ensemble performance. Some items in the wind repertory may well have been monophonic—dance tunes, for example—but in all these instances cited, the songs call for some manner of contrapuntal textures. Unfortunately, none of the items referred to by von Wolfhagen have survived in contrapuntal versions, and none of the fairly numerous references in Spanish sources to shawms performing a *chançon*, or in Dutch and Flemish sources to the performance of a *liet* reveal the names of compositions. What we do know is that there was avid interest among the nobility in the secular repertory, with even a few of the higher nobility actually engaged in writing songs themselves.[21] We have seen the example above by Albert, the Count of Holland, but Wenceslas, Duke of Brabant, also tried his hand, and from him we do have a ballade, *Fuiés de moi,* which survives in a three-part polyphonic setting, i.e., one calling for discant, tenor, and contratenor. Duke Wenceslas had at his court a shawm ensemble that included Middach, probably the premier wind player of the era.[22] If the count of Holland and the crown prince of Aragon were hearing chansons performed by their wind ensembles, it seems almost certain that Wenceslas would have had Middach and his colleagues perform *Fuiés de moi*. Documents from Aragon, Brabant, and Holland reveal that high nobles in these courts took a direct interest in "song" and in the performance thereof by wind players. These performers were directly connected to the top courtly patrons, that is, to the top of the food chain in the production of the contemporary art song. In sum, not only were such courtly pieces as *Fuiés de moi* part of the repertory of the wind bands, these ensembles were themselves a primary vehicle for the transmission, albeit ephemeral, of that repertory.[23]

As Rob Wegman pointed out, patrons and audiences in the late fourteenth century wanted to hear the very latest songs, the "hit" tunes of the time.[24] This in turn put pressure on the performers to keep up to date. A primary means to accomplish this was through the tradition of the minstrel schools. This is undoubtedly true, but we should also bear in mind the implications of the manner in which these pieces were learned. One was that when Johanni, having returned from the year's music school gathering, taught the new *cançons* he had learned to his colleagues, the term used to describe how that was done was *mostrets*; he showed, or demonstrated them, that is, he taught them by rote. He had almost certainly learned the pieces by ear, and in turn he passed them on orally, in all parts, without recourse to written notes. At first sight this may seem unlikely, but, after all, such modern scholars and musicians as Howard Mayer Brown and Joshua Rifkin have demonstrated ability to reproduce on demand all parts of fifteenth-century polyphonic chansons.

If modern musicians can do that, certainly one of the leading performers at the time would have been similarly capable. Songs learned in this way would not be easily discarded. A consequence of this is that the repertory of these wind players was undoubtedly a mixture of the new and the best of the old. A clear indication of this is the repertory contained in the Faenza Codex, mentioned above. The source was assembled probably for use by a chamber instrumentalist (or instrumentalists; the question of whether this was an ensemble or solo source need not be taken up here) early in the fifteenth century, but it contained some items that were written at least fifty years earlier.[25] In short, the shawm ensemble of the late fourteenth century needed to have command of the contemporary art song repertory, which consisted of some new items mixed with a selection of older songs as well.

A common texture of this repertory consisted of three contrapuntal parts, discant, tenor, and contratenor. In selecting instruments appropriate to perform these parts, wind players evidently would choose from two quite opposite approaches. One was for a homogenous sound, with various combinations of discant shawms and bombards, usually one or two shawms with one or two bombards, though a few contemporary illustrations suggest that sometimes players may have opted for a combination of three bombards. The other approach called for at least one instrument with a sharply contrasting timbre. As indicated above, from about 1360 to 1390 this was often a bagpipe, evidently functioning as a contratenor. But in the 1390s, the trumpet was the choice, and starting somewhere around 1410 came a new solution.[26]

A challenge had presented itself; a contratenor instrument providing a contrast in timbre and greater tonal capability was evidently a perceived need. This was, as emphasized above, a period in which innovation was the default attitude. The natural trumpet was already a possible member of the shawm band; an obvious solution would have been for some imaginative maker to find a way for this instrument to be able to play even a few diatonic notes. The result was an early version of an instrument equipped with a slide. The strength of the drive behind this innovation is emphatically revealed by the very rapid adaptation of the new instrument once conceived, signaled by new

terminology devised to describe it. In fact, we can propose a dating for the invention of the slide as somewhere between about 1400 and 1410, because after about 1410 we suddenly see the arrival of the *trompette des menestrels,* the minstrel trumpet, in various contexts.[27] This terminology was undoubtedly developed as an attempt to describe a new phenomenon, but what was the nature of this innovation?

Postlude: The Renaissance slide trumpet: fifteenth-century reality or modern fantasy?

The subject of the earliest slide instrument has engaged the interest of modern scholars for more than a century, but it was articles by Curt Sachs and Heinrich Besseler, both published in 1950, that brought the possible existence of the Renaissance slide trumpet to a wider public. Following those articles, and subsequent studies by other scholars that appeared to add support, for several decades the existence of the slide trumpet was generally accepted. In 1984, however, Peter Downey disrupted that consensus with an article which strongly questioned whether an instrument with only a single slide had existed in the fifteenth century. That article engendered a spirited response, and thereafter opinions of the subject settled again generally, though perhaps uneasily, on the more positive side. As Sabine Klaus noted recently:

> One of the most hotly discussed topics in the history of high brass instruments is the earliest occurrence of the *slide* trumpet.… Most scholars now agree that the slide trumpet *must* have existed in the Renaissance, while others never tire of pointing out that its existence is purely hypothetical.[28]

In the same volume Klaus then provided a well-illustrated chronological summary of the various contributions on the topic. Through most of that summary she dealt with quite relevant material relating to fifteenth-century developments. In her concluding section, however, she moved on to a discussion of a series of sixteenth-century Middle Eastern illuminations, and in her closing paragraph stated that:

> These sources neither prove nor disprove the existence of the Renaissance slide trumpet. The described Middle Eastern illuminations, although depicting events contemporary with the proposed earliest occurrence of the slide trumpet in the late fourteenth and fifteenth centuries, were painted later, around 1580. Nevertheless, the comparison of these sources shows that caution is in order when using iconography to describe slide-trumpet designs. Until further evidence comes to light, we cannot be sure that the slide trumpet existed in the fourteenth and fifteenth centuries.[29]

This section, and its conclusion, are problematic on several grounds. In working with artistic sources for information relating to musical matters, it is essential to be aware

of artistic conventions of the times and places concerned. For example, we do know that fifteenth-century European art works, especially manuscript illuminations, are particularly useful for musicologists and performers interested in details relating to musical practices because the artists in this specific chorological window depicted scenes based on the practices and customs of their own time. When they illustrated a banquet within a text relating to Charlemagne, for example, the figures shown would be dressed in fifteenth-century clothing, with a table set in the fifteenth century manner, and musicians, when shown, would be those that we find in fifteenth-century pay records. If wind instruments were shown in a manuscript of such a scene illuminated in 1450, they would be of a mid-fifteenth century ensemble, very often a wind band of shawm, bombard, and slide instrument—a grouping of course, completely unknown in Charlemagne's time. For a variety of reasons, European artistic conventions at the end of the century changed, and art works became less reliable in this regard. Two observations, then, concerning Klaus's comments: first, she drew upon Middle-Eastern art works, which are based on a different set of conventions than those of European artists, and second (and more crucial) she appears to suggest that those Middle Eastern artists, working at the end of the sixteenth century, would have had a familiarity with European conventions in instrumental music of almost two centuries earlier. We certainly would not draw upon late sixteenth-century European artistic works for information on early fifteenth-century practices. For her to draw upon Middle Eastern artists in this context strains credulity to a breaking point. Still, Klaus is a premier younger scholar in our field, with impressive command of the details of organology of early brass instruments. Her view will have wide influence and calls for more detailed appraisal.

Archival sources, primarily the very numerous payroll records, provide overwhelming documentation that a brass instrument of some kind (usually termed "trumpet" in the local language) was consistently combined with two or three shawms. Such records occur with particular clarity in Italian, German, French, and Netherlandish courts and cities. We also have well over a hundred contemporary illustrations of ensembles which include two or three shawms and an instrument which appears to be some form of trumpet. These appear with enough frequency that it is certain that this was a standard combination of the time. We have a handful of musical sources, most strikingly the so-called Zorzi Trombetta manuscript, which suggest that a trumpet-like instrument was capable of notes beyond those available in the open notes of the harmonic series, i.e., beyond the capability of the natural trumpet. Finally, there is the theoretical description of Tinctoris, which describes practice of about 1460, indicating that the brass instrument in the wind ensemble was performing the contratenor role. There is no indication that the brass instrument was musically limited, again suggesting that the instrument was capable of more than just the notes in the harmonic series.[30]

To sum up, Klaus is absolutely correct in her skepticism that iconography alone can establish the presence of a slide mechanism in the ensembles of the early and mid-fifteenth century. But the various categories of evidence in combination are

another matter. Given that archival and iconographical sources give ample verification that ensembles from the early and mid-fifteenth century combined two or three shawms with a brass instrument that had the appearance of a trumpet, we have then two possibilities: that brass instrument was either a natural trumpet, or was one that was capable of more notes than those of the harmonic series. Musical and theoretical sources suggest that the latter possibility was by far the more likely. The playing position pictured in contemporary illustration rules out any use of finger holes. Absolute certainty is beyond our reach, but the weight of the combined evidence leads to only one conclusion: the only possible instrument would have been some form of trumpet equipped with a slide and, given the playing position shown in illustrations, it could only have been a single slide. Until someone can produce further proof to the contrary, all the available evidence leads inexorably to one conclusion: the brass instrument in the wind ensemble from about 1420 to at least 1470 was the slide trumpet.

The question that initially set this study in motion ("what was the impulse that generated the invention of the slide?") turns out to need some adjustment, for while the early slide instrument appeared suddenly, it derived not from a single impulse, but rather from a series of step-by-step developments. The final phase, the drive to provide a contrasting instrument capable of contrapuntal contratenor parts, was particularly crucial, but still depended on a sequence of prior innovations. A telling analogy is the construction of cathedrals of the late Middle Ages, which were often completed only after several generations of labor. One distinct difference, however, was that with the building of a cathedral there was at least a general concept of what the final result might be. With the early, but critical changes in wind instruments, however, this was hardly the case. When the shawm duo developed, ca. 1340, there was not the slightest notion that somewhere down the line there lurked the trombone. Still, from the moment it arrived on the scene, the slide instrument was at the center of a powerful current of change in instrumental music. In 1420 wind players were still "minstrels," generally considered as a rather under-class of performers. But innovation did not stop. By 1500 performers on trombones and cornetts had wedged their way into the highest circles of music-making. They were no longer minstrels; they were now musicians.

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Notes

[1] Note that the sizes of shawms shifted in the sixteenth century. The earlier tenor instrument was closer in size to the sixteenth-century alto shawm.

[2] *Deutsche Chroniken und andere Geschichtsbücher des Mittelalters*, Gesellschaft für ältere deutsche Geschichtskunde, vol. 4, part 1 [The Limburg Chronicle] (Hanover: Hahnsche Buchhandlung, 1883), 49. The idiomatic translation is mine. The original text reads, "Auch hat ez sich also verwandelt mit den pifen unde pifenspiel unde hat ufgestegen in der museken, unde ni also gut waren bit her, als nu in ist anegegangen. Dan wer vur funf oder ses jaren ein gut pifer was geheissen in dem ganzen lande, der endauc itzunt nit ein flige." In general, Wolfhagen was chronicling events that had occurred sometime earlier, but his comments concerning instruments and instrumental performance, such as this one, most likely reflected those more contemporary with the time in which he was actually writing, which would have been ca.1380. For more on the Chronicle, see Rob C. Wegman, "The Minstrel School in the Late Middle Ages," *Historic Brass Society Journal* 14 (2002): 14–24 and 27–30. It should be noted that Wegman believes the extract dates to ca. 1360.

[3] For information on the wind players at the Holland court, see Antheunis Janse, "Het Muziekleven aan het Hof van Albrecht van Beieren (1358–1404)," *Tijdschrift van de Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis* 36 (1986): 136–57. Albert of Bavaria could officially claim the title of Count of Holland in 1389 only on the death of his brother, William V. Due to the mental illness of William, however, Albert had acted as count from 1358, and for convenience all references here to the count from 1358 onward are to Albert (who ruled until his death in 1404.)

[4] On the accounts of the court of Aragon, see María del Carmen Gómez Muntané, *La Música en la casa catalano-aragonesa durante los años 1336–1432* (Barcelona: Bosch, 1979).

[5] For documents from Bologna, see Osvaldo Gambassi, *Il Concerto Palatino della Signoria di Bologna* (Florence: Olschki, 1989); for discussions of Florence, see Timothy J. McGee, *The Ceremonial Musicians of Late Medieval Florence* (Bloomington & Indianapolis: Indiana University Press, 2009); on Siena, see Frank A. D'Accone, *The Civic Muse, Music and Musicians in Siena during the Middle Ages and the Renaissance* (Chicago & London: University of Chicago Press, 1997).

[6] See McGee, *Ceremonial Musicians*, 53–55.

[7] C. Lingbeek-Schalekamp, *Overheid en muziek in Holland tot 1672* (n.p.: C. Lingbeek-Schalekamp, 1984), 156.

[8] The court of Holland supported three shawms through most of this period, but two of them, Jackel and Crael, had come with Albrecht when he had arrived from Bavaria to take up residence in Holland; these two seem to have formed the core duo; see Janse, "Het Muziekleven," 137–38. For an example of a duo at the Aragon court, see Gómez Muntané, *La Música*, 134; for Savoy, see Craig Wright, *Music at the Court of Burgundy* (Henryville, Ottowa, and Binningen: Institute of Mediaeval Music, 1979), 26; for Brabant musicians, see Remco Sleiderink, "De international uitstraling van de Brabantse hofmuziek," *Een muziek geschiedenis der Nederlanden*, ed. Louis Peter Grijp (Amsterdam: Amsterdam University Press-Salomé, 2001), 50–54; for German cities,

see Keith Polk, *German Instrumental Music of the Late Middle Ages* (Cambridge: Cambridge University Press, 1992), 108–12; for further examples of shawm duos, see Lingbeek, *Overheid en muziek*, 158–59, 166–67, 180, and 189.

[9] "No one should after the third watch bell ... [play] *trompeten* or *bosunen* without *pfiffer*; they should play with *schalmgen* and *bumhart* as is customary." See Stewart Carter, *The Trombone in the Renaissance: A History in Pictures and Documents* (Hillsdale, NY: Pendragon, 2012), 76. Barbara Neumeier, *Der Pommer; Bauweise, Kontext, Repertoire* (Sinzig: Studio Verlag, 2015), 9, notes the inclusion of a mention of *bombarde* in the Flemish manuscript "livre des mestiers," which she dates 1342. This manuscript, however, is much later, evidently not earlier than about 1360; see Philip Grierson, "The Dates of the 'Livre des mestiers' and its Derivatives," *Revue belge de philologie et d'histoire* 35 (1957), 780.

[10] For reference to new instruments, see Gómez Muntané, *La Música*, 141 and 146–47. Modern players of early instruments should note that the concept of sizes changed over time; in the sixteenth century, the "tenor" shawm was longer, with the tenor of ca. 1400 being closer to the sixteenth-century alto instrument.

[11] For sources of trumpet duos at the court of Aragon, see Gómez Muntané, *La Música*, 130; for Burgundy and Savoy, Wright, *Music at the Court of Burgundy*, 25 (concerning Burgundy) and 26 (concerning Savoy); for the English court, Richard Rastall, "The Minstrels of the English Royal Households, 25 Edward I–1 Henry VIII: An Inventory," *R.M.A. Research Chronicle* 4 (1964), 23; for Guelders, Gerard Nijsten, *Het Hof van Gelre*, 2nd. edn. (Kampen: Kok Agora, 1993), 394–45; for Holland, Janse, *Het Muziekleven*, 38–39. On the background of the trumpet ensemble in the fifteenth century, see Polk, *German Instrumental Music*, 46–48.

[12] For a brief overview of the codex, see Victor Coelho and Keith Polk, *Instrumentalists and Renaissance Culture, 1420–1600* (Cambridge: Cambridge University Press), 2016, 64–66; see also Pedro Memelsdorff, *The Codex Faenza 117: Instrumental Polyphony in Late Medieval Italy* (Lucca: Libreria Musicale Italiana), 2013. Richard Robinson, "The Faenza Codex: The Case for Solo Organ Revisited," *Journal of Musicology* 34, no. 4 (Fall, 2017): 610–46, while not answering all the questions concerning the collection, updates and strengthens the case for organ as the intended medium. It is not relevant here to evaluate Robinson's article in detail, but his observation that Italian organists would incorporate secular music into sacred contexts is particularly intriguing.

[13] The focus here is on the configurations of shawms, but the bagpipe, performing both by itself (either as a solo instrument or in duos) and with shawms was hardly unusual at mid-century. The marked vogue for the bagpipe with two shawms, however, came between about 1360 and 1390. On this see, Patrick Tröster, *Das Alta-Ensemble und seine Instrumente von der Spätgotik bis zur Hochrenaissance (1300–1550)* (Tübingen: MVK Medien Verlag Köhler, 2001), 150–63; see particularly the graph on p. 151. Tröster provides illustrations of iconographical examples of three-part shawm ensembles from the late fourteenth century that include a bagpipe on pp. 504, 511–12, and 552. For a discussion of the characteristics of the bagpipe, see Adam Gilbert, "Bagpipe," in Ross W. Duffin, ed., *A Performer's Guide to Medieval Music* (Bloomington, IN: Indiana University Press, 2000), 150–63.

[14] Lingbeek, *Overheid en Muziek*, 173; the school that year was held in Mons [Bergen in Flemish]; see Wegman, "The Minstrel School," 21.
[15] Lingbeek, *Overheid en Muziek*, 180.
[16] Polk, *German Instrumental Music*, 61–63.
[17] Strasbourg, Bibliothèque de la Ville, MS C22, No. 15. An excerpt is conveniently available in Anthony Baines, *Brass Instruments: Their History and Development* (New York: Norton, 1981), 84.
[18] Lingbeek, *Overheid en Muziek*, 172. For another similar payment in 1400, see Frits Pieter van Oostrom, *Court and Culture: Dutch Literature 1350–1450* (Berkeley: University of California Press, 1992), 22.
[19] Gómez Muntané, *La Música*, 138–39.
[20] Tileman von Wolfhagen, *The Limburg Chronicle*, 36. The original text reads: "In der selben zit sang man ein nuwe lit in Duschen landen, daz was gar gemeine zu pifen und zu trompen." Von Wolfhagen then goes on to identify the tune, an unnecessary detail in our context. Note that the expectation for the shawm band to play "songs" was geographically a widespread phenomenon. It should also be noted that *bas instruments* such as the lute, fiddle, and gittern also performed the contemporary song repertory, and on occasion these instruments would include a singer, which at this time could be either male or female. But the isolation of the shawm band continued in full force. Professional wind players did not interact in performance with soft instruments, nor with singers. This isolation did not break down until the end of the following century.
[21] On noble amateurs who wrote songs, see Dini Hogenelst and Margreet Rierink, "Praalzucht, professionalism en privé-collecties," in *Een Zoet Akkord: Middeleeuwse lyriek in de Lage Landen* (Amsterdam: Prometheus, 1992), 27–55.
[22] Sleiderink, "De international uitstraling," 53. Concerning the ballade *Fuiés de moi*, see Remco Sleiderink, "Pykini's Parrot: Music at the Court of Brabant," *Musicology and Archival Research*, Colloquium Proceedings, Brussels, 1993, ed. Barbara Haggh, Frank Daelemans, and André Vanrie (Brussels: Algemeen Rijksarchief, 1994): 368–69.
[23] The emphasis here is on performance by wind instruments, which was certainly prominent in the sources explored here. There were, of course, other means of transmission. In 1388 King John of Aragon wrote a letter in which he indicated he wished to engage the Burgundian organist Jean Visée, and in the letter noted that he wanted Jean "to bring [with him] the book in which he has notated the estampides and the other works that he knows how to play on the echiquier and organ." See Wright, *Music at the Court of Burgundy*, 116. And for purely vocal purposes, conventional written transmission was obviously also an option, but the striking lack of extant secular music manuscripts from the northern Low Countries and Spain from this era may be due in part to the very strong emphasis on instrumental performance at the time.
[24] Wegman, "The Minstrel School," 13–14. As he put it, "musical novelty must have been at a very high premium in [the minstrel's] profession."
[25] Robinson, "The Faenza Codex," 635–56, argues against the notion that the organist whom he posits as the originator of the Faenza collection being a chamber musician of general competence. Evidence on this point is scanty, but the little that is available suggests that young musicians who studied to be professional players of soft instruments, including organ, fiddle, and lute, were expected to command a variety of instruments, and that the careers of

such players (and the originator of Faenza was apparently of professional caliber) could include the expectation of performance with other musicians in the soft category. This would not rule out, of course, subsequent specialization. Conrad Paumann, while a renowned organist, was a generalist, performing on the lute on occasion with other performers. His Italian contemporary Pietrobono, on the other hand, evidently focused his career exclusively on the lute. In any case, it would appear that there were common elements running through fifteenth-century instrumental performance practices—emphasis on the art of decoration, for example. This is not to argue that Faenza embellishments were exactly those that would have been employed by shawm players. Every instrument would have had decoration patterns congenial to its own demands.

[26] For a listing of iconographical illustrations of the three possibilities (homogenous ensembles of various sizes of shawms, ensembles with shawms and bagpipes, and those with shawms and what appear to be trumpets), see Tröster, *Das Alta-Ensemble*. 626–31.

[27] Polk, *German Instrumental Music*, 56–59.

[28] Sabine Katharina Klaus, *Trumpets and Other High Brass*, vol. 2 (Vermillion, SD: National Music Museum, 2013), 1. Klaus also provides complete bibliographical citations for the articles by Besseler, Sachs, and Downey. Concerning the response to Downey, see especially Ross W. Duffin, "The *trompette des menestrels* in the 15th-century *alta capella*," *Early Music* 17 (1989): 397–402, and Herbert W. Myers, "Slide trumpet madness: Fact or fiction," *Early Music* 17 (1989): 383–89. Much of the present article draws on the background provided by these two articles.

[29] Klaus, *Trumpets and Other High Brass*, 2:7.

[30] Structuring the argument around combining the types of sources follows the approach laid out by Herbert Myers, "Slide trumpet madness: Fact or fiction." Concerning archival sources, see Keith Polk, "The trombone, the slide trumpet and the ensemble tradition of the early Renaissance," *Early Music* 17 (1989): 389–97. Iconographical sources are thoroughly discussed by Patrick Tröster, *Das Alta-Ensemble*. On the Zorzi Trombetta manuscript, see Victor Coelho and Keith Polk, *Instrumentalists and Renaissance Culture, 1420–1600*, 66–8; on Tinctoris, see ibid., 196–99.