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INSTRUMENTAL MUSIC C. 1500: PLAYERS, MAKERS, AND MUSICAL CONTEXTS

by KEITH POLK

Varied sources hint that new forces were at work in instrumental music in the early sixteenth century. Certainly by about 1520 conditions were very much different than they had been in the late fifteenth century. Ensembles had expanded and new instruments such as the cornetto and viol were now well established. Performance practices had shifted from an emphasis on improvisation over a *cantus firmus* to realization of textures which were consistently imitative, which in turn brought with it dependence on written sources. Howard Brown has observed that from this time onward the notion of consorts, i. e. „standard groups of like instruments“ became increasingly central.¹ While the general outlines of all this change have been clear, the details of the early stages have remained vague. It will be the purpose here to look at instrumental music at the turn of the century, to consider the new musical demands, and perhaps to come to a clearer understanding of the responses of performers and of instrument makers to the altered musical landscape.

A backdrop for developments in instrumental music was provided by changes in musical styles in general. These too were evolving at a dramatically quick pace – a brief summary of which is in order. In secular music around 1470 the predominant texture was three part. As exemplified in a piece such as the well known *De tous biens plaine* of Hayne, the discant and tenor provided a core duet to which was added a contratenor. Imitation could occur, but it was, not a regular feature. The total range (from the lowest note to the highest) of the piece, and most pieces like it, was slightly more than two octaves. At this time ensemble instrumentalists could evidently play such pieces, and they apparently continued to improvise in a similar texture; often in three parts, with a borrowed tune usually in the tenor, with an extemporized discant above and a contratenor below the *cantus firmus*. By about 1480 or so, the texture remained three part, but imitation became more consistent, especially between the discant and tenor. *La Martinella* of Johannes Martini provides an example of this approach. The total range expanded, but only modestly, perhaps to two octaves and a fifth.

Soon thereafter, by about 1490, perhaps following the lead of Isaac, imitation became more consistent, especially in pieces which appear to have an instrumental character, such as Isaac's *Helas* (and Josquin's *La Bernardina*, to cite another well-known example). The ranges called for remained roughly the same. At about this time (1490 or shortly after) four-part writing came to the fore, often imitative (this often in pairs) as exemplified in Obrecht's *Tsat een*

¹ Howard M. Brown, „Instruments“, in: Howard Mayer Brown and Stanley Sadie, eds, *Performance practice; music before 1600*, New York and London 1989, 169.

meskin, or the four-part version of Josquin's *Si j'ay perdu mon ami*. Perhaps surprising, the ranges demanded did not expand significantly, with many four part pieces within a range of two octaves and a fifth, although some did call for an additional step or two.

The increasing emphasis on imitation as well as the expansion to four parts created an entirely altered perspective for ensemble performers. Three-part improvisation over a cantus firmus was reasonably straightforward for a competent professional working within a familiar ensemble. Four parts, though, brought considerably more problems to bear in avoiding harmonic gaffes, even over a familiar tune – and improvising imitative textures, especially in four parts, was beyond the capacities of all but the most brilliant musicians. And such problems increased as expansion of textures continued, and five and six parts subsequently became a more consistent possibility in secular music – though this apparently did not become common until about 1510 or shortly after. With these additional parts the potential range widened yet again. Many pieces remained within about two octaves and a sixth, but composers could call on ranges of at least three octaves.

This sketch of developments of course simplifies circumstances which were much more nuanced for the performers of the time. They continued to improvise in three parts on many occasions – in dance halls, for example. Also, four parts remained the nucleus of the ensemble in most performances even if more voices could be added when demanded by more elaborate circumstances. Moreover, one important new texture in both three and four parts was one which emphasized the soprano (not the tenor) as the leading part, with which the bass then provided the core duet. Indeed, the bass itself assumed a new importance, often providing a pattern over which instrumentalists might develop elaborate improvisations. The most prominent developments, however, were that within a span of three or four decades textures augmented from three to as many as six parts; internal relationships changed, from a layered approach to consistent imitation, and total ranges expanded from slightly more than two octaves to a potential three octaves or more. Note that for instrumentalists and for instrument makers as well the key issue with this last was the demand for a deeper bass. Providing a smaller instrument was a relatively easy matter, but the need for larger instruments was a much more complex issue.

A. Responses in instrumental music: added parts

One development which affected all players was the addition of more voices to musical textures. In assessing the response to the presence of more parts, the most convenient ensembles for study are the professional wind ensemble. For these we have detailed records over the entire time span concerned and with a wide geographic sampling which allow a very ample survey. These show that about 1450 the core ensemble was usually three-part. Some ensembles were potentially larger, having four or even five performers available, but supporting evidence, such as iconography, suggests that in performance three parts sufficed.

By ca. 1470 the core group evidently increased to four. Some still remained at three, others could include five and more, but nonetheless, in performance the basic unit was usually considered to be one of four performers.²

The pace of change seemed to quicken, and within ten years or so many ensembles seemed to call on five players more consistently, with the expansion apparently in the lower register as it usually involved the addition of a second slide instrument. These developments appears to have taken place in quite varied locations, Bruges added a fifth player by 1479, as did Nuremberg and Siena at about the same time. Subsequently, again within ten years or so, some ensembles had six players available. The Venetian ensemble for which Giovanni Alvisse arranged motets by Busnois and Obrecht in the mid-1490's, was six-part, as was the band at this time in Siena. The additional player was usually a fourth double reed player, though by this time the players were being called upon increasingly to play other instruments as well (more on this shortly). The addition of six parts would appear to have come a decade or so later in northern ensembles, although even there the groups probably added another player earlier when particular circumstances demanded.

Ensembles tended to remain at the levels of ca. 1500 for several decades. About 1530 some of the larger cities, especially in Italy, expanded even further, to as many as eight (accounts in Bologna and Siena are particular clear in showing this change). Flemish and German groups in the large cities seem to have remained at five or six, though additional performers were available to these by the device of „supernumeraries“; which involved a kind of contracted part-time players to be ready if they should be needed. The more basic ensemble everywhere, however, seemed to have remained four-part.³ Perhaps the most noteworthy observation in all this is that instrumental ensembles had expanded to four by 1480, and to five and six parts before 1500 – oddly, instrumental performers appear to have these more ample textures available before they were called for by the extant written musical repertory.

B. Responses in instrumental music: the Instruments

The rapid pace of change manifested itself with the arrival of new instruments and with new configurations of those previously in use. This affected

² For a summary of the situation in Germany between 1450 and 1470 see Keith Polk, *German instrumental music of the late middle ages*, Cambridge 1992, 97–101 and 108–116; concerning the Low Countries see Keith Polk, „Susato and instrumental music in Flanders in the 16th century“, in: Keith Polk, ed. *Tielman Susato and the music of his time*, Hillsdale, New York 2005, 63–102.

³ Concerning ensembles in Italy, for Siena see Frank A. D'Accone, *The civic muse, music and musicians in Siena during the Middle Ages and the Renaissance*, Chicago & London 1997, 530–564, concerning Bologna, Osvaldo Gambassi, *Il Concerto Palatino della Signoria di Bologna*, Florence 1989, 122–130, on Venice see Rodolfo Baroncini, „Zorzi Trombetta and the band of Piffari and trombones of the *Serenissima*: New documentary evidence“, *Historic Brass Society Journal* 14 (2002) 59–82. For information on Germany and the Low Countries, see the sources cited in the previous note.

music making of all kinds, of amateurs and professionals, though again the changes can be followed in greatest detail with the developments within professional ensembles. A framework for study of this matter has been provided by previous scholarship, especially by Howard Mayer Brown, who emphasized the importance of the consort in the sixteenth century (i. e. homogeneous ensembles of such instruments as viols, recorders or crumhorns). Brown, however, put his focus on establishing the presence of the general principle, and he was not particularly concerned to lay down a close chronology, especially concerning the early sixteenth century. The object here will be to come up with a clearer sequence of events around during the key period of between about 1490 and 1520.

Prior to about 1480 the choices of instruments within ensembles was rather narrow and well defined. With wind players, almost every reference (and these exist in great quantities in such documents as pay records and literary descriptions) is to shawms or sackbuts. For chamber ensembles the dominant instruments were fiddles and lutes, occasionally accompanied by a keyboard instrument. Moreover, the late medieval tradition continued with strict division of these two general classes of ensembles into either „loud“ (the wind ensemble) or „soft“ (the chamber groups). The system was not rigid, a very few documents, for example, indicate that wind players might on rare occasion play recorders. Also, a number of soft instruments such as harps, psalteries, or rebecs, were optional choices for chamber players. Still, from about 1450 to 1480, shawms and sackbuts on the one hand, and lutes, fiddles, and keyboard on the other, were evidently the primary choices.⁴ Consideration of a selection of instruments can show how emphatically this changed in the last decades of the fifteenth century.

Recorders

From their rare appearance in contemporary documents, one might assume that the recorder lurked on the fringes of instrumental practice before about 1480. As shown in table one only a handful of documents appear to refer to the instrument before that date. The recorder, though, was probably at least somewhat more called upon then, as the common term for it was „pipe“ (*Pfeif[f]e* in German, *pijp* in Flemish), i. e. the term for wind instrument in general. *Pfeif[f]en* in German, to take that example, most often referred to shawms, but at least a few of such references were to recorders. One further point that is important about the early references to the recorder which are more specific is that these documents reveal that from early in the fifteenth century the instrument seems to have been often used in homogeneous consorts – with four being an adequate number for such groups.

⁴ The classic study on „loud“ and „soft“ remains Edmund Bowles, „Haut and Bas: the grouping of musical instruments in the Middle Ages“, *MD* 8 (1954)115–140. For updated information see Polk, *German instrumental music*, 13–86.

Table 1: Recorder consorts and records of professional wind players playing recorders

1408	Brescia [Malatesta court]; payment for „4 flauti novi“ [Atlas, 1988, 53]
1410	Aragon court, „tres flautes, dues grosses e una negra petita“ [Gómez Muntané, 1986, 53]
1426	Burgundy/Ferrara; purchase of (among other instruments), „quatre fleutes“ [Marix, 1939, 105]
1443	Burgundian court; purchase of „4 flutes d'ivoire“ [Marix, 1939, 106]
1454	Lille; Feast of the Pheasant „quatre menestreaux de fleutres“ performed [Marix, 1939, 40]
1480/81	Bruges; purchase of a set of recorders („eenen coker met fleuten“) for the city ensemble [Gilliodts, 1912, 50]
1484	Verona; city musicians claimed to be capable of performances on shawms, trombones, recorders and other instruments [Prizer <i>Power and pleasure</i> , chapter IV]
1492/93	Ghent; Jan and Willekin van Welsenens apprenticed to Joose Zoetinc (a civic musician in Ghent) to learn to play „shawms, recorders and other instruments“ („de conste van sclameinine, fleutine ende andersins“) [Polk, 1975, 18]
1498	Mantua; a student of Maestro Piero trombone (of Ferrara) hired who played trombone, cornetto and recorder [Prizer, <i>Power and Pleasure</i> , chapter IV]
1501	Mantua; ensemble of recorder players sent from Mantuan court to Verona [Prizer, <i>Power and Pleasure</i> , chapter IV]
1502	Mechelen; purchase of a case of recorders („eenen coker floyten gecocht“) [SA, SR, 183] NB: in 1508/09; SR, fol. 205 verso payment for „6 floyten der stede toebehoirene“
1505	Venice/Mantua; Letter from Giovanni Alvise, describing a motet he had arranged for eight recorders [Prizer, <i>Power and Pleasure</i> , chapter IV]
1508	Nuremberg; purchase of „8 floten pfeyffen unsern statpfeiffer“ [Nickel, 1971, 22]
1512	Nuremberg; payment for „8 flöten pfeyffen unsern statpfeiffen“ [Nickel, 1971, 22]
1518	Mantua; a „beautiful consort of recorders“ offered to court by Testagrossa [Prizer, <i>Power and pleasure</i> , chapter IV]
1523	Leipzig; purchase of „6 neue Flöten“ [Wustmann, 1909, 36]
1526	Leipzig; purchase, „9 neuen Floten in einem Futter“ from Nuremberg [Wustmann, 1909, 76]
1531	Oudenaard; purchase of set of recorders [Polk, 1975, 18]
1532	Antwerp; Alamire furnished the civic ensemble with a set of recorders; also, inventory included 28 „flutes“, most of which would have been recorders [Polk, 1975, 18]
1536	Oudenaard; purchase of set of recorders [Polk, 1975, 18]

Whatever the situation was before 1480, after that date came a rapid expansion. Markedly more ensembles purchased recorders, as the entries in Table 1 show. Ensembles throughout the leading centers in Italy, Flanders and Germany purchases sets of instruments, and the new trend was obviously not restricted to any one region. Just as important, more instruments were considered necessary within an ensemble, as the numbers of recorders exceeded the number of players in the groups. Earlier this disparity was modest; Mechelen in 1506 had six recorders when the civic ensemble there numbered four, Nuremberg shortly thereafter had eight instruments when the band included five players. But within a few years the figures became remarkable. By 1532 Antwerp had provided over twenty recorders for its five-man ensemble (which incidentally included Tielman Susato and Hans Nagel). All this may verify that recorder players of that time faced the same difficulties of modern performers – for all its virtues, the instrument can be exasperatingly difficult to play in tune. And here we have evidence of an interaction between players and instrument makers. As the musical textures became more complex, simply providing one instrument per musician was not adequate. The solution arrived at that time was two-fold. First, the instruments were made and acquired in matched sets (i. e. if six instruments were felt to be needed, one did not simply purchase two instruments to add to an existing set of four, one bought six matching instruments). Second, and probably resulting from the new demands resulting from the increased complications of the interactions of the musical parts (especially in the inner voices, as described above), the players were provided with extra instruments evidently so that they might choose the most adequate instrument to match a particular part. Only for the recorder were these multiple options felt to be necessary. Shawms and sackbuts, for example, were owned (or purchased) in much smaller numbers – with these essentially one instrument for each player sufficed for most needs.

Perhaps the most salient point to be made is that the recorder was consistently a consort instrument, and this was the case well before 1500.

Viols

Until the end of the fifteenth century fiddles and rebecs were the dominant bowed stringed instruments. While these were often used in duos and trios they evidently were more often called upon in ensembles of mixed colors – a duo of lute and fiddle, for example, was a favored combination. The notion of a grouping of four like bowed instruments did not, evidently, match the taste of the time. This changed with the sudden appearance of the viol around 1490. Whatever the origins of the instrument, the concept of the viol consort made up of four and more instruments, as Ian Woodfield has shown, first manifested itself in Italy, with the courts of Ferrara and Mantua being most active in exploiting the instrument.

Table 2: Viols

1493	near Milan; Spanish players played „viols almost as large as myself“ [Woodfield, 1984, 81]
1495/99/1502	Mantua; Isabella d'Este purchase/use of 3/4/5 viols [Prizer, 1974, 22–24]
1496	Augsburg; „Hertzog Philips Geygern und Singern*; a4, probably 2+2 [Polk, 1989, 540]
1497	Mantua; order of lute to be „two steps higher than the viola you made, which is a little low for our voice“ [Holman, 1993, 15]
1497	at Ferrara; a third della Viola, a 4 th added, 1499 [Holman, 1993, 16]
1499	Mantua; request for five „viole da archio“; also Isabella ordered a „viola grande ... [made] the same size of the larger ones“; also ordered viols „in all the possible sizes in the world“ [Woodfield, 1984, 93]
1501	Cologne; 3 „gigern“, players of the Bishop of Cologne [Polk, 1989, 540]
1502	Leipzig; 4 performers; „gefiedelt hatte“ [Polk, 1989, 541]
1502	Ferrara; at marriage of Lucrezia Borgia, performance by six „viole“ [Woodfield, 1984, 82]
1505	Sanudo; report, in Rome, „two large viols“ noting „sweetness of sound“ [Woodfield, <i>ibid</i>]
1506	[Spain]; Court of Philip the Fair; „quatro violines“ [Polk, 1989, 541]
1508	Augsburg; „konigs von Bolland geyger“ [a4;] [Polk, 1989, 541]
1511	Ferrara; repair of „viole e violini“; consort of „sei ... Viole da gamba“ [Holman, 1993, 18]
1512	Mechelen; at court of Margarete of Austria, „A maistre Henry Bredemers ... pour avoir fait mectre à point, gardé et entretenur les grandes violes, pour le ... passetemps ... de madite dame ...“ [VanderStraeten, 1885, 202]
1513	Florence; soprano voices sang to four „violoni“ [Cummings, 1992, 105]
1515	Augsburg; 3 „geigern“ of Maximilian I [Polk, 1989, 541]
1516	Augsburg; 4 „geigern“ of Maximilian I (and the same in 1517 and 1518) [Polk, 1989, 541]
1520	Ferrara/Rome: Cardinal Ippolito d'Este, instruments included „7 viole da archioe nove ... 1 viola grande da archio, 1 violone grande da archio“ [Woodfield, 1984, 92]
1523	Ferrara: letter specifies „viole, il numero delle quali vole esser di sei ...“ [Kämper, 1970, 82]

The taste for the instrument among the aristocracy quickly spread, and various members of the Habsburgs favored the instrument. Philip the Fair supported four „violas“ (almost certainly viols), his sister Margaret had at least one large viol available, and their father, Maximilian I, supported a quartet of professional players of the viol by about 1500. The figures in Table 2 speak for

themselves, but three points are especially important. First, the viol was an instrument for both the amateur and the professional, and second, the notion of a consort with as many as six instruments, was well established before 1500. Finally, from the early sixteenth century a large viol or two could be used to support the bass in mixed ensembles.⁵ And, in fact, a feature of the viol that set it apart from earlier stringed instruments was the appearance of the large instrument capable of a truly satisfactory bass. As with the recorder, again an interaction between instrument makers and performers with their needs took place, and from contemporary illustrations we can see that a variety of solutions were attempted. One response was an instrument, evidently of an Italian/Spanish type, with sloping shoulders and rounded corners. Another configuration, more favored north of the Alps, was distinguished by sharply pointed corners. Ultimately the Italian shape dominated, though, oddly, many of the makers in Italy were German speaking. In sum, the development with the viol before about 1490 is still murky, but it is clear that by the 1490's the instrument became firmly established, and consorts of four and more were on the scene before 1500.

The Cornetto

In 1484 the members of the civic ensemble in Verona submitted a petition to the town authorities with an appeal for an improvement in their financial situation. In support of this they listed the instruments on which they could provide whatever music the city might need. These included the shawm, sackbut, trumpet, bagpipe, and recorder, but, significantly, they made no mention of the cornetto. This reflected a situation which was to change very quickly, as by the mid-1490's the cornetto was to become an increasingly important instrument in the wind player's arsenal, as is reflected in the figures in Table 3.

Table 3: Cornetto/Zinck

1474	Basel; mention of „zinck“ in accounts [also in 1513] [Ernst, 1945, 207]
1485	Augsburg; „zinken plaser von Württemberg“ [SA, BB, folio 14]
1487	Nuremberg: „zwayen zinckenplasern“ of Brandenburg & Mecklenburg [BSA, Rep. 54/181, folio 219 verso]
1493	Augsburg; wedding of an Augsburg „zinckenblaser“ [Salmen, 2001, 179]
1495/96	Basel; „des romischen konigs zinken bloser“ [Ernst, 1945, 222]
1496	A German player of „cornu“ played at high mass with singers of St. Goedele [Haggh, 1988, 202]

⁵ This point emerges particularly in Howard Brown's discussion of the Florentine Intermedii; see his *Sixteenth-century instrumentation: the music of the Florentine intermedii*, Rome 1973 (=Musicological Studies and Documents 30).

- 1496 Leipzig; „Zinkenbläser“ of the Margrafen von Brandenburg [Wustmann, 1909, 28]
- 1496 Württemberg; 2 „zincks“ among court instrumentalists [Sittard, 1890–91, I, 3]
- 1498 [Innsbruck/Vienna]; „Hannsl Zincken plaser des pfallunczgrafen“ [Wesseley, 1956, 129]
- 1500 Innsbruck/Augsburg; „Augustin schubinnger zinngkennplaser“ [Wesseley, 1956, 116]
- 1501 Mechelen; Meester „Augustin ... speeld ter hoo[g]missen“ [Polk, 1990, 501]; also Stuttgart; „Hans Studlin, zinck“ (NB trombonist with Maximilian I) [Ruhnke, 1963, 238] Also, Nuremberg, civic ensemble a5, with one „zincken“; BSA, Rep/181, 293, folio 296, with same payment yearly to 1512.
- 1502 Toledo; „Augustine Schubiner, zinck“ at Mass [Polk, 1990, 501]
- 1503 Brussels; Lausanne, Heidelberg; „Augustine“ played „zinck“ at Mass [Polk, *ibid*]
- 1505 Brussels; „un jouer de cornet du roi des Romains“ (Augustine) [Polk, *ibid*] Venice/Mantua; Alvise letter; „1 pezzo and 2 mottett[i]“ for 4 tromboni, 2 cornetti [Prizer, 1981, 161]
- 1510 Heidelberg, at court, a „Zinckenplaser ufgnommen“ [Pietzsch, 1963, 730]
- 1512 Trier; Zincks and trombones with singers of Maximilian I [Pirro, 1940, 140]
- 1519 Bergen op Zoom; „Roelande de pipere ..metter sincken [metten sangers]“ [Polk 1975, 21]
- 1521 Basel; 2 „zingken bloser von Zurich“ [Ernst, 1945, 235]

And from the beginnings in about 1490 the cornetto had two distinctive uses. One was in combination with voices, and particularly in performances of sacred music. As shown in the table, a prominent cornettist was Augustine Schubinger, who performed with the singers of Philip the Fair on numerous occasions during Philip's travels around Europe (see the entries for 1501, 1502 and 1503). Up to about 1490 we see no sign at all of wind players working together with singers in performances within the liturgy, but this obviously changed very quickly, as by 1500 these became something of a standard demand. Among the famous illustrations of the Triumphs of Maximilian, illustrating the musical situation of c. 1510, is one which shows the singers of the Emperor accompanied by cornetto and trombone (the player of the cornetto was, in fact, Augustine Schubinger).⁶

The cornetto of ca. 1500 could well be another example of the cooperation between performers and instrument makers in the face of new demands – in

⁶ The woodcut is often reproduced, a convenient source is Louise Cuyler, *The emperor Maximilian I and music*, London 1973, 54.

the case the need for an instrument which could work effectively with voices. For this purpose existing woodwind instruments were imperfect; the timbre of the shawm potentially too penetrating, that of the recorder not having the capacity for projecting through voices. Sadly no information can be mustered concerning this; no documents appear to have survived detailing purchase of cornetti in this time span, nor have any instruments from this period survived.

The other use for the cornetto was as a discant voice in wind bands. This in turn could take place in various ways. One was as a replacement for one or both of the soprano shawms in a more or less standard wind band. This seems to have been viewed as successful in even the most raucous of sound contexts, as contemporary illustration show cornetti being used both to accompany dancing and in outdoor processions. Another use was as a discant voice, or voices, above an ensemble of sackbuts. This option was possible certainly by 1505, as indicated in one of the arrangements made by Giovanni Alvisi for the Venetian wind band in that year (see Table 3), but was also probably available a decade or so earlier.

As a practical matter musicians did not draw on the cornetto in whole consorts, rather, they preferred one or two of them in combination with other ensembles timbres. In any case the instrument increased rapidly in popularity after 1480, and it too was well established in contemporary practice before 1500.

The Sackbut

As indicated above, by about 1480 the wind ensembles were often five-part, with the lower parts being played by two sackbuts. By this time the instrument makers had developed the double slide – and the instrument reached the form which it has retained into the present time. Up to about this time the players of the slide instruments (called trombones in Italy, and the term will therefore be used interchangeably with sackbut below) were often considered rather as elite specialists, as reflected in that in some ensembles there pay rate was higher.⁷

By the mid-1490's the situation of the trombone changed. While trombones could continue to appear with shawms, they often also appeared in a configuration of one or two cornetts with three or four sackbuts. Or, on occasion, though this tended to be clearer only a bit later in the sixteenth century, if the musical context were appropriate an ensemble could be made up exclusively of sackbuts. This was probably if the ranges were low enough, for evidently the use of the trombone in the discant register never found any widespread favor. In fact we might more accurately view the mixture of one or two cornetts with sackbuts as a kind of whole consort, with cornetts substituting for the smaller-size slide instrument.

⁷ Polk, *German instrumental music*, 68–70.

As with the cornett, another important change for the trombonists was that they were now expected to perform on occasion with singers rather than in purely instrumental ensembles. Hans Neuschel of Nuremberg was credited in about 1500 with changes made in the construction of trombones – these may well have been associated with alterations in the shape of the bell which would result in a softening of the tone quality to make the instrument more effective when combined with choirs.⁸

Missing Instruments

Even in this very brief survey, mention must be made of instruments which either did not exist, or which have left little or no evidence of their presence. As the professional wind ensemble was required to expand into the lower register it immediately would have faced demands for larger instruments – but solutions for this demand were not quickly found. One possible solution concerning the double-reed contingent could have been a bass shawm. But this instrument was so long as to be impossibly cumbersome – interfering with one of the major virtues of the wind ensemble, which was its versatility and ability, for example, to play while walking in processions. The concept of doubling the tube on itself, as in the modern bassoon, was evidently not developed until after about 1520. Another possibility was a deeper trombone, but again, any potential lengthening faced a restriction – in this case the limitation of the possible arm extension of the average performer. In any case, no true bass trombone was available, evidently until well into the sixteenth century. Moreover, the cornetts, of course, were never used below the discant and alto registers.

Instrument Makers

Concerning the period from about 1550 we are able to assemble a sufficient base of information from which we can dig out some idea of the accomplishments of contemporary instrument makers. A precious few instruments survive, and we have some background information on the makers themselves. For the period concerned here (ca. 1480–1520), however, the prospects of our ever assembling much information are bleak, especially in that no instruments survive. We do know the names of a few makers. We know, concerning viol makers in Italy, that as early as 1520 some of these were of German origin – though this may not tell us much in terms of what it might have meant concerning the instruments themselves.

We do have some fascinating background information concerning makers of wind instruments. The Rauch family, which produced shawms for Augsburg as early as the 1470's were evidently from the very fine town of Schratzenbach. The Schnitzers, renowned in the later sixteenth century as makers of a variety of instruments, began as a clan of wind players in several cities in

⁸ Polk, *German instrumental music*, 71.

Bavaria, including Munich, Nuremberg and Nördlingen.⁹ We do have a few scraps of information on makers of brass instruments. We know that Nuremberg was a renowned center for the manufacture of trumpets and trombones by the end of the fifteenth century, and the leading figure there was Hans Neuschel. When it comes to details, however, we come up woefully short. One further observation that I can offer is that in this early generation, many, if not almost all of the makers – especially those of wind instruments, were also players, or were from families which included players within their ranks. Moreover, it is now clear that the period between about 1480 and 1510 was a crucial period in the development of musical instruments; one goal of our efforts should be to try to come up with more specific information on the makers during these decades.

Summary

When I proposed a topic for this paper, I had anticipated that I would show a series of developments beginning about 1490, and which evidence would show would culminate around 1520 with the „consort principle“ fully established. According to this assumption, the new approaches were stimulated by changes in musical styles and textures. I am now convinced that this was not the situation at all. The crucial period of change was not ca. 1520 but ca. 1490. All the important consorts, the recorders, the viols, the new cornetto/sackbut combination, all of them were in place in ensembles of up to six members by 1500 at the latest. Moreover, it is not possible to assert that these developments were engendered by changes in musical styles and textures; in fact, at a minimum the musical changes represented an interaction. Composers were hearing, and reacting to the new instrumental sounds that were available. Instrumentalists and instrument makers were not simply reacting. In the developments taking place they themselves played an important role.

⁹ A „Claussen Rauchen von Schraittenbach“ was paid by the civic authorities in Augsburg in 1473 for three shawms („3 pfeiffen“); Augsburg, SA, BB,1473, folio 35. Concerning the family of Schnitzers as players see Polk, *German instrumental music*, 79 and 113.

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Abbreviations:

- BB = Baumeisterbücher [title of City Account Books in Augsburg].
- BSA = Bayerisches Staatsarchiv [Nuremberg = references are to the City Account Books of Nuremberg, of which most are in the State archive, not the City Archive].
- SA = Stadarchief (Flemish); Stadtarchiv (German); [City Archive].
- SR = Stadsrekening [City Account Books].