The Cornett and the "Orglische Art": Ornamentation in Early Sixteenth-Century Germany

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When Philip the Good of Burgundy hosted the famous Banquet of the Oath of the Pheasant in 1454, music and spectacle formed an important part of the proceedings:

> Inside there were three tables laid out, one of medium size, one large, and one small. On the medium one there was a church, with windows, very properly made, and a bell that rang and inside four singers.... On the second table there was a huge pie, in which there were twenty-eight living people playing on diverse instruments, each when their turn came.... The organ in the church began to play, and in the pie a German cornett played in a very strange way.[1]

This extraordinary account, from the *Mémoires* of Olivier de la Marche, is one of the earliest literary references to the cornett in performance. It is particularly significant that the instrument was considered to be German, as we know that German wind players were key to the early development of the cornett and its performance practices. During the last quarter of the fifteenth century we begin to see the first incontrovertible archival references to the activity of professional cornett players, which seems to have been focused particularly in the south of Germany. By the turn of the sixteenth century, we have evidence of German cornettists achieving notoriety abroad, and one player in particular was singled out for praise for his playing of this new instrument: this was Augustein Schubinger (ca. 1460–1532), whom Keith Polk has described as "the first international virtuoso on the zinck."[2]

Schubinger is depicted riding in one of the carts of the *Triumphzug Kaiser Maximilians* (Figure 1), together with the trombonist Hans Steudlin and the singers of the Imperial *Hofkapelle*, under the watchful gaze of court composer Ludwig Senfl and *Kapellmeister* Georg Slatkonia. Notwithstanding the triumphal cart itself, we know that this is a representation of a realistic performance situation because there are a number of archival records from different parts of the Holy Roman Empire at around this time documenting the performance of cornetts and trombones together with voices in a liturgical context.[3] Often these performances involved just one or two instrumentalists with the singers, and it is likely that these players might have added florid improvised ornamentation (or "divisions") to their lines. It is tempting to imagine such performances as a kind of sixteenth-century prototype of Jan Garbarek's collaboration with the Hilliard Ensemble![4]

There are two other main contexts in which the cornett would have been heard at this time: the loud wind band (where it seems gradually to have replaced the soprano

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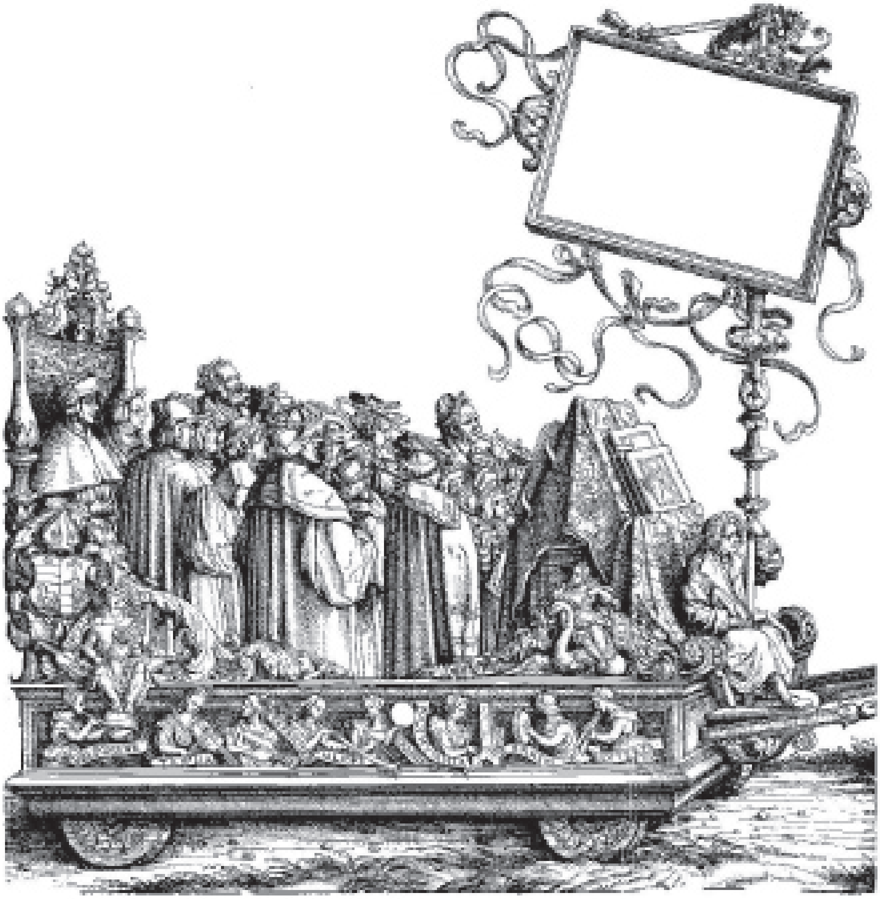


Figure 1: The Imperial Hofkapelle from Hans Burgkmair's *Triumphzug Kaiser Maximilians I* (1526), pl. 26.

shawm), and in various combinations with soft instruments and/or voices in what we might term "chamber" performances. The cornett thus transcended traditional medieval *haut* and *bas* distinctions. In each of these situations the primary repertoire was vocal music, and it is entirely probable that the musicians would have included a degree of improvised ornamentation in their performances.

When attempting to recreate improvised performance practices from the later sixteenth century, particularly in Italy, we are fortunate to have access to a whole series of treatises on divisions by some of the leading performers of the day. Unfortunately, the first half of the sixteenth century is less well served: we have only Silvestro Ganassi's

Fontegara (Venice, 1535).[5] Ganassi provides us with voluminous tables of ornaments on every interval, and in proportions involving the subdivision of the semibreve into groups of four, five, six or seven notes, sometimes resulting in a degree of rhythmic complexity not seen again until the twentieth century. Indeed, the level of complexity involved suggests that the publication of Ganassi's treatise represents not a new departure, but in some respects the culmination of a tradition whose roots must be much older. However, as there are no examples of complete ornamented pieces in *Fontegara*, we are faced with the question of how Ganassi's ornaments should be applied in a manner that is stylistically consistent with early-sixteenth-century practices.

Moreover, there is no treatise on divisions from Germany in the first half of the sixteenth century, although the two earliest treatises on musical instruments—Sebastian Virdung's *Musica getutscht* (1511) and Martin Agricola's *Musica instrumentalis deudsch* (1529)—both allude to ornamentation as an important aspect of performance practice. Ornamentation was so important, in fact, that they refuse to develop the subject due to the amount of space an adequate discussion of the techniques would require.[6]

However, in his revised and extended edition of *Musica instrumentalis deudsch* of 1545, Agricola gives us some significant advice. He says,

> The method and ornamentation of the organist is the best and should be employed properly on all instruments. Although there would be still more to say here about this art, such as playing *Coloriren* and introducing *Mordanten*, which decorate the melody excellently on all kinds of instruments, I cannot describe everything here at this time, however, as it would become much too long.… But take this advice from me: imitate the method of the organ in playing wind instruments, fiddles, lutes and whatever others can be mentioned, for I say at this time that this is the best method for playing ornaments and also fast passages. Therefore practise this usage well.[7]

We should note that Agricola draws attention to two different kinds of ornaments here: *Mordanten* and *Coloriren*. We shall consider these terms in more detail later.

If we are to take Agricola's advice seriously, we need first to consider a number of basic questions: Who were the leading organists of the time, and to what extent are they represented in the extant sources? What are the characteristics of their method of ornamentation, and to what extent is their style of (presumably improvised) ornamentation reflected in the sources? Finally, how transferable are the organists' ornaments to a wind instrument such as the cornett?

Before the sixteenth century, there are relatively few extant sources of German keyboard music. Apart from a handful of fragmentary manuscripts, there are only two substantial collections dating from the later fifteenth century: the *Buxheimer Orgelbuch*[8] and the compositions that are bound together with the *Lochamer Liederbuch* and Conrad Paumann's *Fundamentum organisandi.*[9] This paucity of documentation leaves us with a somewhat incomplete picture of German keyboard music prior to 1500.

However, numerous manuscript tablature books survive from the early sixteenth century, many of which were written to serve a pedagogic purpose. Improvisation formed a large part of the organist's art in the fifteenth and sixteenth centuries, and the act of notating keyboard music, especially when done in a didactic fashion for educated amateurs, essentially involved a "demystification" of the improvisatory art of the professional musician. This might be considered a typical Humanist act—it was the same educative impulse that led to the production of treatises in the vernacular by Sebastian Virdung, Martin Agricola, and others.

The compositions contained in these early sixteenth-century sources fall into three basic categories:

1. "Intabulations" of vocal music, i.e., pieces that retain all the original parts of the vocal model, often including more or less elaborate ornamentation.
2. "Arrangements" of vocal music, i.e., new compositions based on one or more parts of a vocal original; the original part is often used as a relatively slow-moving cantus firmus.
3. Original, independent, and idiomatic instrumental music, including *preambula,* dances, fantasies, and pieces simply entitled *carminum.*

Of course, these categories were not rigid, and there was some overlap, e.g., dances based on a cantus firmus, but in general terms these categories will suffice for purposes of discussion.

It is clear that the compositions that fall into the first category—intabulations—are likely to be of most interest to us for a study of ornamentation, as the principle of adding ornamentation to pre-existing vocal compositions correlates directly with the procedures outlined in the Italian treatises on divisions of the later sixteenth century. It will be possible to compare more or less elaborate intabulations with their original, unadorned, vocal models, and by means of such a comparative study we shall be able clearly to discern the ornamental figures. This is not to say that compositions in the other two categories do not contain material of interest—on the contrary, they are stylistically indistinguishable from intabulations in terms of ornamentation—but with these pieces it is much more difficult to ascertain where the process of "composition" ends and that of "ornamentation" begins.

Of the many extant German tablature sources from the first half of the sixteenth century (*New Grove* lists sixteen different manuscripts and four printed sources in Old German Tablature),[10] there are two principal sources that contain intabulations with added ornamentation: the "Amerbach Codex" (Basel, Universitätsbibliothek, F.IX.22) and the "Kleber Tablature" (Berlin, Staatsbibliothek Preussischer Kulturbesitz, Mus. 40026).[11] These sources are closely associated with the teaching of Paul Hofhaimer (1459–1537), who was court organist to Maximilian I, and a direct contemporary and colleague of the cornettist Augustein Schubinger. Such was Hofhaimer's importance at Maximilian's court that Burgkmair allocated him his own cart in his woodcut series, *Triumphzug Kaiser Maximilians* (Figure 2).

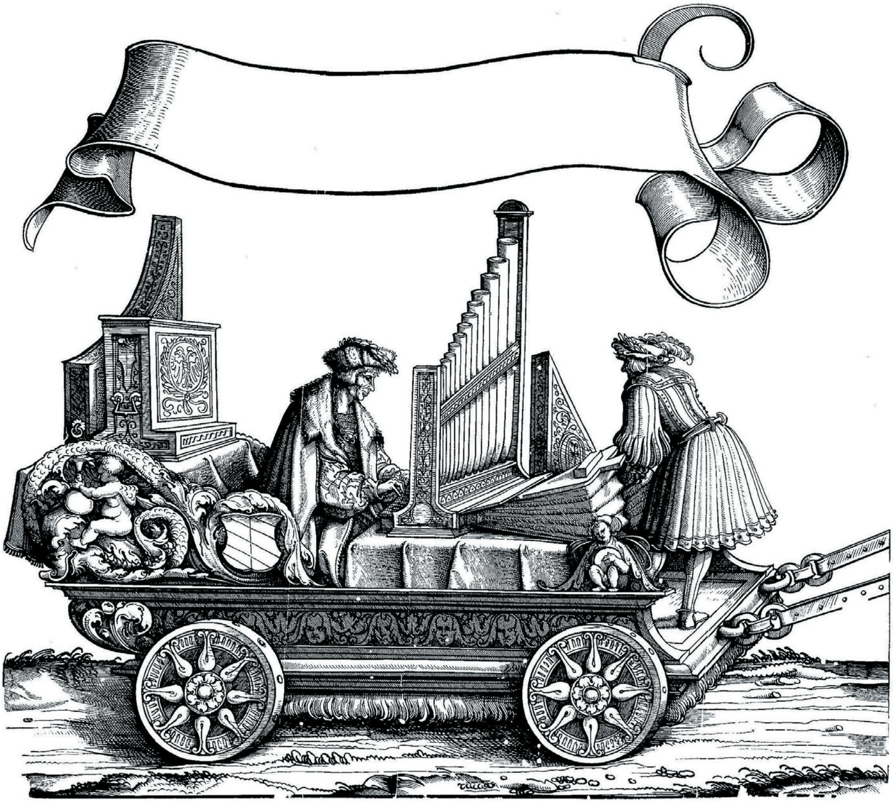


Figure 2: Paul Hofhaimer, from *Triumphzug Kaiser Maximilians I* (1562), pl. 24.

Hofhaimer was clearly regarded by his contemporaries as the most important organist of his day, and was considered particularly skilled in the art of improvisation. Luscinius wrote, "He uses such unending variety … that one can listen to him playing for years and wonder not so much where the ocean finds the water to feed all the rivers as where this man finds his tunes."[12] Hofhaimer's influence as a teacher was also remarkable. Luscinius nicknamed his students collectively as the *Paulomimi* or "Paulomimes," i.e., imitators of Paul. Two years after his death, the humanist Stomius wrote that "if the art of organ playing is flourishing everywhere today, this is mostly the result of [Hofhaimer's] teaching activity."[13]

Unfortunately, very few of Hofhaimer's compositions have survived, perhaps due in part to the improvisatory nature of his art. Those that do survive owe their existence mainly to a number of his students who preserved them in tablature collections such as the Amerbach Codex and the Kleber Tablature. Indeed, it seems that, in order to learn something of Hofhaimer's art of performance, composition and improvisation, we must look at the written works of his students, which we might assume to be broadly representative of his technique.

The Amerbach Codex (1513–32)

This tablature book was written over a period of nearly twenty years for the Basel humanist Bonifacius Amerbach (1495–1562). Amerbach was an educated amateur and as such the music that his manuscript contains was presumably played at home on a domestic keyboard instrument such as the clavichord, rather than on the organ.

Amerbach was a friend of the humanist scholar Erasmus, and was also one of the first patrons of Hans Holbein the Younger, who painted his portrait in 1519 (now in the Kunstmuseum, Basel). Amerbach was a great collector of contemporary music in both manuscript and print, and the significant musical library he compiled between 1510 and 1551 is housed today in the Universitätsbibliothek in Basel. He was clearly at the forefront of musical fashion: as early as 1510 he owned two sets of manuscript partbooks containing songs by Hofhaimer, Isaac, Compère, and Obrecht, and showed an interest in musical developments beyond the Alps, acquiring in 1512, for example, a copy of Antico's *Canzoni nove*.[14]

The Amerbach Codex is particularly interesting because throughout the manuscript there are several hands at work that are closely related to events in Amerbach's life. The first hand is that of his teacher, the Paulomine Hans Kotter, dating from 1513, when Amerbach was finishing his studies for the degree of Bachelor of Arts at Basel University. In 1514 Amerbach moved to Freiburg to study for his Master of Arts and there enlisted the help of the cathedral organist, Johannes Weck. A third hand in the manuscript would seem to be that of Christoph Cyr, who had been a member of the Kantorei of Duke Ulrich in Stuttgart, but in 1518 enrolled at the University of Freiburg and also entered the service of Amerbach around this time. The final piece in the manuscript is in the hand of Amerbach himself.

The composers and intabulators represented in this source include Alexander Agricola, Jacques Barbireau, Hans Buchner, Sixtus Dietrich, Paul Hofhaimer, Heinrich Isaac, Josquin Desprez, Hans Kotter, Johannes Martini, Pierre Moulu, Nicolaus Craen, and Johannes Weck. Hans Kotter is well represented as both composer and intabulator here, with eighteen pieces attributed to him. Heinrich Isaac is represented by nine pieces, while Kotter's teacher Paul Hofhaimer is represented by six pieces. The inclusion of a number of French chansons is testimony to Amerbach's taste for the very latest in contemporary music: as Hans Joachim Marx has observed, they must have been intabulated here immediately after the publication of the original models by Attaignant in 1528–31.[15]

The *Kleber Tablature* (1520–24)

This tablature belonged to Leonhard Kleber, who was organist at the collegiate and parish church in Pforzheim from 1521 until his death in 1556. Like the Amerbach Codex, there are a number of hands in evidence in this source, although the only one that can be identified with any certainty is that of Leonhard Kleber himself: he helpfully wrote at the end of the penultimate piece, "Finis 1524," and underneath, "Per me Leonardum Kleber." Although only around a third of the works in the collection contain any attribution to a composer or intabulator, and even when an attribution *is* given it is usually in the form of initials only, it is possible to identify the following as composers or intabulators: Alexander Agricola, Jacques Barbireau, Conrad Brumann, Antoine Brumel, Hans Buchner, Antoine Busnois, Loyset Compère, Heinrich Finck, Hayne van Ghizeghem, Paul Hofhaimer, Heinrich Isaac, Josquin Desprez, Leonhard Kleber, Othmar Luscinius, Jacob Obrecht, Pierre de la Rue, Ludwig Senfl, and Johannes Weck—a list which reads rather like a "who's who" of composers and organists of the early sixteenth century!

Cleveland Johnson argues that the inclusion of pieces by Hofhaimer and his students Hans Buchner and Conrad Brumann, together with pieces by the humanist Luscinius and Maximilian's court composers, Isaac and Senfl, are evidence that we should consider Kleber within the Paulomime circle.[16] However, Kleber matriculated at Heidelberg University in 1512 to study for the priesthood. It seems likely that he would have come into contact there with another renowned master of the organ, Arnolt Schlick (ca. 1460–after 1521). Schlick was the author of *Spiegel der Orgelmacher und Organisten* (1511) and a tablature collection for organ and lute (1512),[17] and was described by one commentator as "the most consummate musician and the most eminent organist of the prince-palatine."[18] We should certainly not consider the great organists Hofhaimer and Schlick to have been mutually exclusive in their influence on the next generation of players, and Kleber may therefore represent an important link between these two "schools."

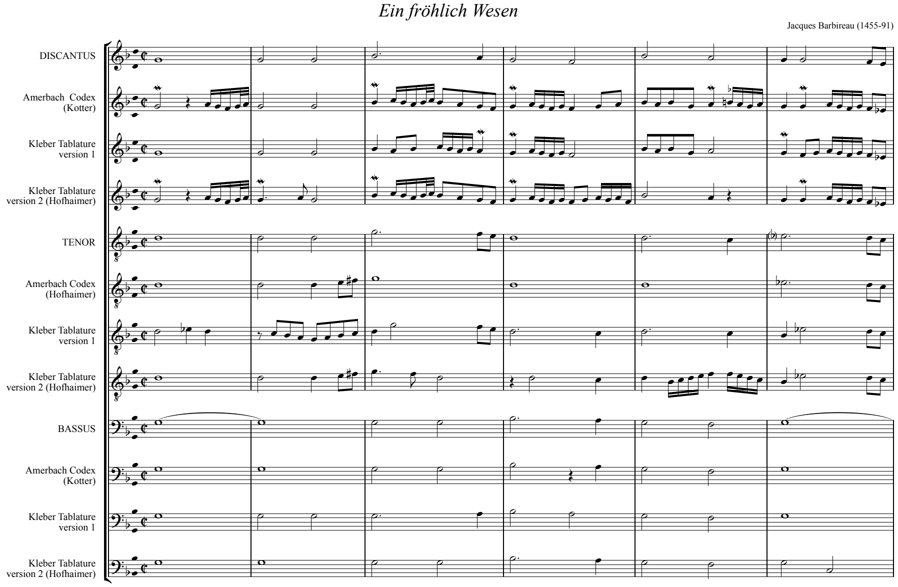
The sources of German keyboard music prior to ca. 1550 are written in "Old German Keyboard Tablature." In this method of notating keyboard music, the upper (*discantus*) voice is written in staff notation ("staff tablature"), using the forms familiar in mensural notation on a staff of five or six lines, while the lower voices are written using letters rather than notes ("letter tablature").[19]

Old German Keyboard Tablature is, then, a curious hybrid notational system. As Johnson has written,

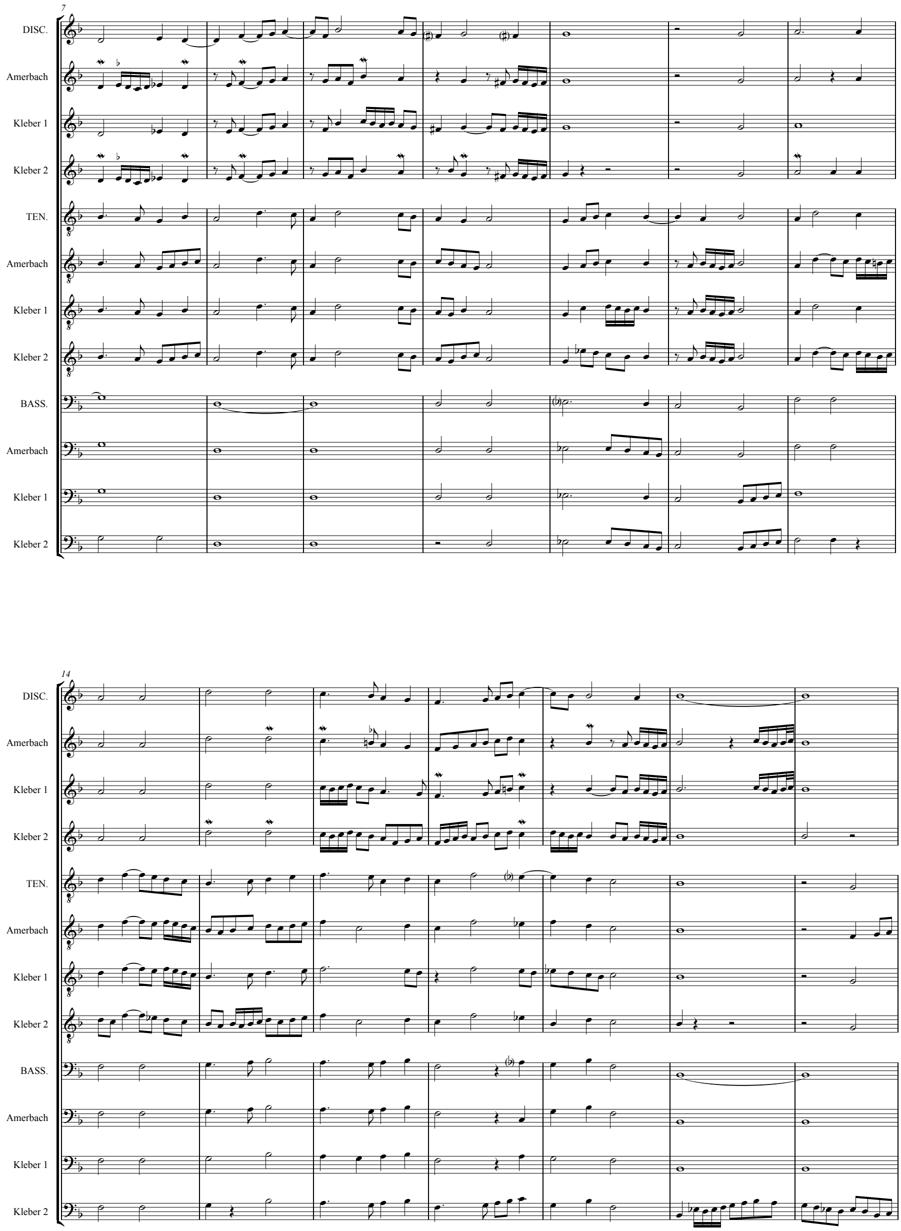
> The apposition of the discant staff and the lower letters tended to divide the music (and the keyboard) into two distinct regions: the 'busy' discant region (from around middle c and above) and the lower accompanimental region. There was a clear reason then for writing the discant voice in mensural notation: it was consistently the most rhythmically complicated and melodically embellished of all the voices."[20]

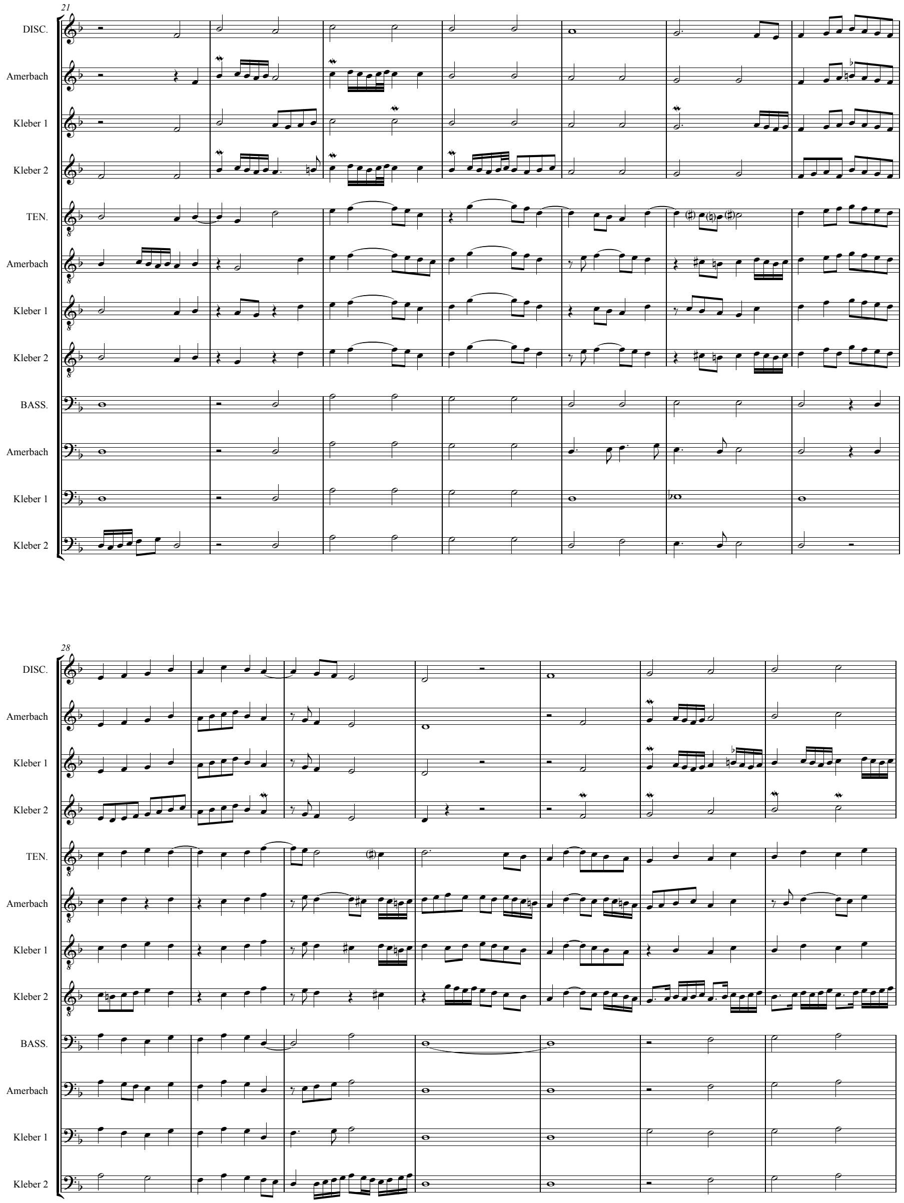
Of course, this also meant that the discantus part, at least, would have been quite comprehensible to players of other instruments. It would seem that the possibility of performing on another instrument from notation in keyboard tablature is actually made explicit in the *Buxheimer Orgelbuch*, where an intabulation of a chanson by Binchois is given the subscript *In Cytaris vel etiam In Organis*.[21] Although the precise meaning of this phrase is unclear, it certainly suggests the possibility of an alternative performance of this piece on a plucked instrument, such as a lute or harp. In all likelihood the player of such an instrument could have played all voices of the intabulation, although the intriguing possibility remains that a player of a single-line instrument, such as the cornett, could have played an ornamented discantus part with a simple keyboard accompaniment, with both players reading from the same tablature.

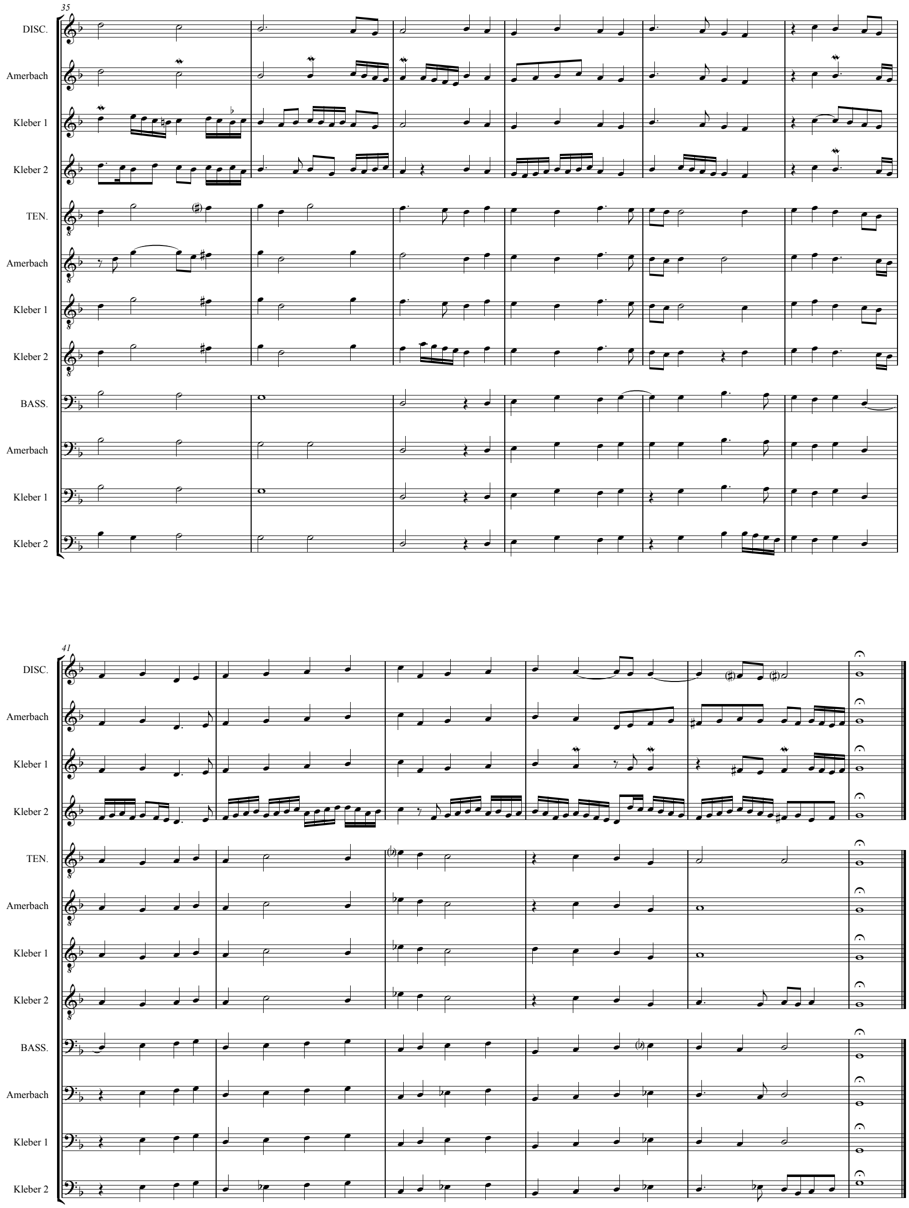
The intabulations contained in the Amerbach Codex and the Kleber Tablature draw upon a common repertory of popular songs, some of which appear in multiple settings. One of the most popular songs of the day was *Ein fröhlich Wesen* by Jacques Barbireau (1455–91). There is one setting of this piece in the Amerbach Codex (in the hand of Hans Kotter) and two in the Kleber Tablature, the second of which is attributed to Paul Hofhaimer himself.[22] These three settings are transcribed from the original manuscripts below in an "exploded" form, so that the individual parts may be compared with each other, and with Barbireau's original (see Example 1).[23]


Ein fröhlich Wesen
Jacques Barbireau (1455-91)
DISCANTUS
Amerbach Codex (Kotter)
Kleber Tablature version 1
Kleber Tablature version 2 (Hofhaimer)
TENOR
Amerbach Codex (Hofhaimer)
Kleber Tablature version 1
Kleber Tablature version 2 (Hofhaimer)
BASSUS
Amerbach Codex (Kotter)
Kleber Tablature version 1
Kleber Tablature version 2 (Hofhaimer)

Example 1: *Ein fröhlich Wesen*


7
DISC.
Amerbach
Kleber 1
Kleber 2
TEN.
Amerbach
Kleber 1
Kleber 2
BASS.
Amerbach
Kleber 1
Kleber 2
14
DISC.
Amerbach
Kleber 1
Kleber 2
TEN.
Amerbach
Kleber 1
Kleber 2
BASS.
Amerbach
Kleber 1
Kleber 2


21
DISC.
Amerbach
Kleber 1
Kleber 2
TEN.
Amerbach
Kleber 1
Kleber 2
BASS.
Amerbach
Kleber 1
Kleber 2
28
DISC.
Amerbach
Kleber 1
Kleber 2
TEN.
Amerbach
Kleber 1
Kleber 2
BASS.
Amerbach
Kleber 1
Kleber 2


35
DISC.
Amerbach
Kleber 1
Kleber 2
TEN.
Amerbach
Kleber 1
Kleber 2
BASS.
Amerbach
Kleber 1
Kleber 2
41
DISC.
Amerbach
Kleber 1
Kleber 2
TEN.
Amerbach
Kleber 1
Kleber 2
BASS.
Amerbach
Kleber 1
Kleber 2

I have applied this same procedure to a number of other compositions that appear in multiple ornamented settings. From these transcriptions I have extrapolated the individual ornaments into a series of tables, organizing them in much the same way as the Italian divisions treatises, beginning with unison ornaments, then ascending intervals, descending intervals and cadences. The result is essentially a new German Renaissance divisions treatise, containing over 250 different ornaments, which I intend to publish together with an extensive commentary in due course. In the meantime, I hope the following discussion will prove useful to those interested in incorporating historically and stylistically appropriate ornamentation into their performances.[24]

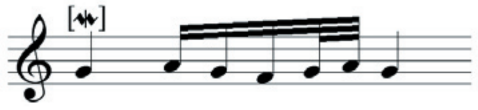
One very interesting aspect of the ornamentation that may be seen in these examples is the use of rests at suspension points in a deliberate avoidance of dissonance on a main beat (e.g., measure 12 in the tenor, or measure 18 in the discantus of *Ein fröhlich Wesen*). Of course, the ear will recognize the suspension by implication, and in the resonant acoustic of a church the dissonance will still actually be heard, albeit subtly. Although this use of rests is by no means universal or consistent within or between the intabulations studied, it is a common enough device to suggest a performance style in which suspensions are understated, rather than deliberately emphasized (as is so often the case in modern performances of sixteenth-century polyphony).

Before considering the ornaments in more detail, we should remind ourselves of Agricola's identification of two specific categories of ornamentation: *Mordanten* and *Coloriren*. Howard Mayer Brown drew a similar distinction between "graces" and *passaggi* in the Italian sources. He defined graces as "specific ornaments applied to single notes," whereas *passaggi* refer to "longer, freer, running passages that substitute for the slower-moving basic intervals of a melody."[25] It seems, however, that while *Mordanten* and "graces" might be considered to be more or less synonymous, the principles of *Coloriren* were rather different from the *passaggi* that Brown describes. What is very striking about the settings of *Ein fröhlich Wesen*, and indeed all the other intabulations studied, is that in sharp contrast to the later Italian divisions pieces, which employ numerous ornaments strung together in long and more-or-less continuous passagework, the ornaments here tend to be more sporadic, discrete events. (I should point out that the extended passagework in measures 41–45 of Hofhaimer's setting in the Kleber Tablature is rather unusual within the repertoire as a whole.) Through their relative simplicity, these ornaments serve to heighten and articulate the melodic structure, rather than obscure it, which as Brown suggests often seems to have been the deliberate aim of the later Italian virtuosi.[26]

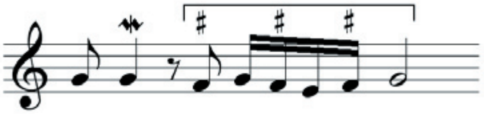
Mordanten

In his *Fundamentum* of ca. 1521, the Paulomine Hans Buchner describes *Mordanten* as a particular type of organ-specific ornament, played by sustaining the principal note with the middle finger, while striking the note below with a "trembling" index finger.[27] This was clearly an important ornament, as evidenced by its frequent occurrence throughout the sources studied. It is indicated by a little hook-shaped symbol attached to notes in the staff tablature, and in modern transcriptions is usually rendered as a traditional mordent (∿).

Due to the notational peculiarity of Old German Keyboard Tablature, the hook-mordent symbol can only be applied to notes in staff tablature, although in performance, mordents of this type should probably be applied to all voices. There are two situations in which mordents occur particularly frequently: before unison figures (Example 2) and in the approach to cadences (Example 3).



Example 2: unison turn



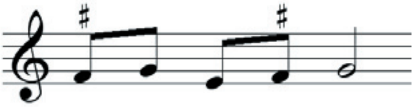
Example 3: cadential turn (compare Example 5a, below)

If we are indeed to imitate the method of the organist in ornamentation on a wind instrument such as the cornett, then it is important to find an equivalent "grace" to Buchner's organ-specific mordent. A more conventional mordent consisting of a rapid alternation of the principal note with the note below can be very effective in this regard, especially if it is executed without tonguing, but with a very crisp, clear finger articulation. In a resonant acoustic this can even give the impression of the principal note being sustained.

There are some other possible alternatives to the mordent available to wind instruments. Ganassi tells us that "the simplest ingredient in elegant and graceful playing is the trill," which "can be made with a third, with a whole tone, and with a semitone, in all of which the interval may fluctuate a little more or a little less."[28] He describes the wide trills as *vivace* and the narrow trills as *suave*, and explains that the character of the trill must be chosen in order to reflect the character of the music in imitation of a practiced and experienced singer, who in turn will be guided by the character of the text. He gives a series of recorder fingerings for trills on every note, which vary in effect from microtonal vibrato-like *tremoli* to wide thirds.[29] This principle may also be applied to the cornett, and the use of unmeasured trills, both narrow and wide, can be extremely effective, particularly when used at the height of a phrase that is already decorated with *Coloriren*.

If we take a more general definition of *Mordanten* as ornaments applied to one note, then ornaments of a unison (single or repeated notes) might be considered in this category. Especially common is the "unison turn" figure (Example 2).

Cadences are nearly always ornamented, and it is invariably the leading-note to tonic progression that is the subject for embellishment. The most common figure used to ornament this progression is the cadential turn, which is seemingly ubiquitous (Example 3). However, one other figure is also occasionally found at cadences, as at the final cadence of Hofhaimer's version of *Ein fröhlich Wesen,* shown in Example 4. Although by definition these two cadential figures involve the decoration of more than one note, I suggest they should be included in the *Mordanten* category because of their formulaic predictability.



Example 4: alternative cadential figure (compare Example 6f, below)

Coloriren

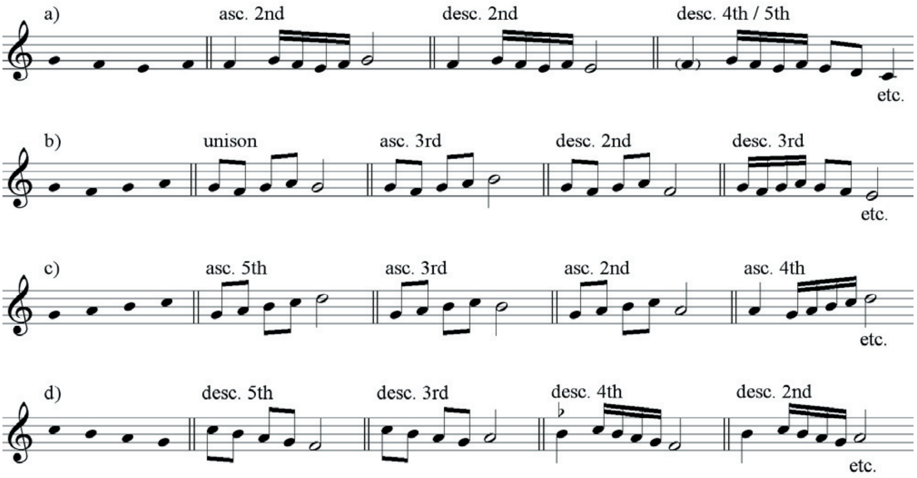
The intervals most frequently decorated with *Coloriren* are ascending and descending seconds. The most common figure used to decorate these intervals is shown in Example 5a. The same four-note figure is used for the ascending and descending intervals, and in fact, it is the same as the cadential turn figure already discussed (Example 3). It is also a component in other, more complex ornaments of larger intervals such as the descending fourth or fifth. Because this four-note pattern may terminate on the upper or lower auxiliary it might be described as a "pivot" figure, and as such it is an extremely useful improvisational tool.

When it comes to the decoration of larger intervals, many of the examples of ornamented thirds, fourths, and fifths, etc., are embellishments of an interval that is already melodically outlined, or "filled," by stepwise motion. Where the original interval is open, it is a common procedure to fill the gap by step (as in Example 1, tenor, measures 2–3, where the ascending fourth is "filled" in both the Amerbach and second Kleber settings; and *bassus,* measures 12–13, where the ascending fifth is filled in both Kleber settings). From the evidence of the intabulations, there was no imperative to end an ornament on its starting note, which was Ganassi's first requirement for the playing of divisions.[30] Ganassi warns us that any departure from this rule must be followed "with the utmost discretion, as it could easily lead you into making faulty divisions," i.e., consecutive octaves or fifths, and all the intabulations surveyed conform to the rules of counterpoint in this respect.

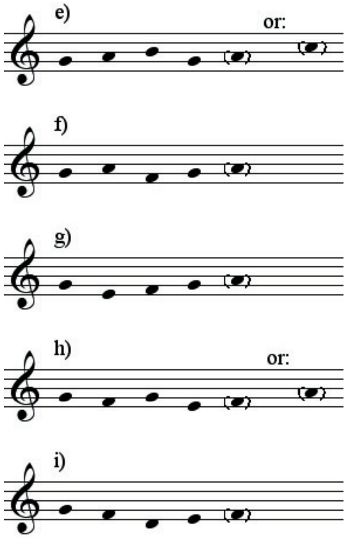
A melodically outlined interval may be subdivided, and each new subdivision treated as a subject for ornamentation in its own right, often allowing the possibility of sequential repetition. For example, an ascending fifth may be subdivided into a pair of rising thirds (e.g., Example 1, Amerbach Codex, tenor, measure 14); or into a series of ornamented seconds (e.g., Example 1, second Kleber setting, *discantus,* measure 42).

More complex ornaments normally include combinations of one or more "pivot" figures in addition to the simple stepwise filling of an interval. I have identified four such pivot figures (which may terminate on the upper or lower auxiliary) that are common in many of the intabulations studied. They are presented in Example 5, labelled *a* through *d*. I have also identified a further five "non-pivot" figures (Example 6, *a* through *i*), so-called because they normally terminate in just one direction.

These nine figures, *a* through *i*, used in various configurations, comprise the basic building blocks of the vast majority of ornaments that make up the category of *Coloriren* in the German organ intabulations of the early sixteenth century.[31] Measures 41–45 of Hofhaimer's *Ein fröhlich Wesen* setting (although they are, as I have suggested, somewhat untypical of the repertoire as a whole) in Example 1 illustrate how an extended virtuosic flourish can be creating by stringing these simple figures together.



Example 5: pivot figures.



Example 6: non-pivot figures.

Ensemble divisions

The most commonly decorated part in the keyboard intabulations is the *discantus*, normally the only part played by the right hand, which is thus free to play extensive ornamentation, while the left hand takes the remaining two or three parts, supplying ornamentation where it is technically possible. This means that, whereas the keyboard intabulations may provide useful models for ornamentation of the discantus part in a solo context, they are not necessarily good models for ensemble ornamentation.

On the other hand, it may be argued that this arrangement represents an aesthetic preference for a hierarchical distribution of ornamentation that favors the discantus. The change of notational method from "Old" to "New" styles of German Keyboard Tablature, which occurred around 1550, and the resultant redistribution of parts equally between the two hands, may reflect, therefore, not only a change in keyboard technique, but also an aesthetic shift to a preference for equality of parts.

In order to consider fully the extent to which the hierarchical principles evident in the intabulations repertoire prior to 1550 may be applied to ensemble performance, and thus the extent to which the intabulations themselves may be viewed as models for ensemble performance, we need to look for guidance in the theoretical literature.

In *Fontegara*, Ganassi explicitly says that his advice is for *solo* playing, which is interesting in itself, as it means there was a clear context for the solo performance of divisions, with the accompaniment of a keyboard or lute, at this time. His only advice for ensemble playing, specifically in relation to good intonation, is that "in concerted pieces, you must match your fellow players."[32] Perhaps this advice may be extended to ornamentation, which should be shared ("matched") throughout the ensemble.

In the absence of other direct information from the first half of the sixteenth century, it is necessary to look for evidence in later theoretical sources. We need to be cautious in this approach, however, as the second half of the sixteenth century witnessed some profound stylistic and aesthetic shifts, particularly between ca. 1580 and 1600, and these changes are inevitably reflected in the accompanying theoretical literature. I have therefore restricted this survey to those sources published during the 1550s and 1560s, which include

> Adrian Petit Coclico, *Compendium musices* (Nuremberg, 1552).[33]
> Diego Ortiz, *Tratado de glosas* (Rome, 1553).[34]
> Hermann Finck, *Practica musica* (Wittenberg, 1556).[35]
> Giovanni Camillo Maffei's "Letter on singing" (Naples, 1562).[36]

Although these theoretical sources sometimes offer conflicting or contradictory advice, they do seem to agree on a number of basic principles, most of which are in fact summarized by Maffei in his letter. As an interpretation of these sources, I would like to suggest a set of five guidelines for the application of ornamentation in an ensemble context.

1. Ensemble ornamentation ought generally to be simpler and more restrained than solo ornamentation (Ortiz).
2. Ornamentation should be shared throughout the ensemble (Ganassi, Finck, Maffei). The advice from the theorists is contradictory regarding the exact division of labor in this respect. Some seem to suggest a distribution that is more or less equal (Finck, Maffei), although they allow for the possibility that some performers may prefer to ornament just the *discantus* or *bassus* (Finck), or that the *bassus* ought not to be embellished at all (Coclico—despite giving a musical example to the contrary). On balance it seems that ornamentation is permissible in all parts of an ensemble, and that there is considerable freedom with regard to distribution, ranging from exclusive application in one part, to complete equality between the parts.
3. Cadences ought to be the primary focus for ornamentation (Ortiz, Finck, Maffei; they are, however, avoided by Coclico).
4. *Passaggi* (*Coloriren*) should be performed on long rather than short syllables (Finck, Maffei). I would suggest that this is good advice for instrumentalists as well as singers: sensitivity to the concerns of text setting should be regarded as part of the instrumentalist's obligation to imitate the voice.

5. Ornamentation should not occur simultaneously (Maffei), although brief moments of ornamentation in parallel thirds may be acceptable (Coclico, Finck), and there may be moments of "overlap" when ornamentation is passed from one part to another (Finck).

It would be irresponsible of me to conclude without taking heed of the warnings against excessive ornamentation by sixteenth-century commentators. One of the most outspoken of these was Hermann Finck. His *Practica musica* (1556) contains a passage that seems to be written almost as a direct retort to Agricola's exhortation to imitate the method of the organists, in which he castigates those

> self-learners, who, having had no instructor, sing as they please, and without scruple incorporate organ embellishments, even if they are incorrect, in their songs; by this they tear apart some of the most beautiful songs, just as a young puppy tears apart rags.[37]

Significantly, this provides retrospective confirmation that imitating the method of ornamentation of the organists was a familiar practice, even if it was not always done terribly well. It seems that Finck was also frustrated with what he considered to be the excessive ornamentation of the organists themselves. Elsewhere in *Practica musica* he writes,

> [German organists produce] empty noise wholly devoid of charm. In order the more easily to cajole the ears of untrained listeners and to arouse admiration for their own digital skill, they sometimes permit their fingers to run up and down the keys for half an hour at a time and hope in this manner, by means of such an agreeable din, with God's help to move mountains, but bring forth only a ridiculous mouse. They pay no heed to the requirements of Master *Mensura*, Master *Taktus*, Master *Tonus*, and especially Master *Bona* fantasia.[38]

I would suggest, then, that we follow the advice of the cornettist Girolamo Dalla Casa with regard to ornamentation, which provides us with an apposite conclusion:

> Poi nella Minuta far poca robba, ma buona
> or
> With divisions do few things, but make them good. [39]

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NOTES

[1] *Les Mémoires de Messire Olivier de la Marche* (Lyons: Guillaume Roville, 1561), 277–80. The original French reads as follows: "En celle sale avoit trois tables couvertes, l'une moyenne, l'autre grande, & l'autre petite: & sur la moyenne avoit une eglise, croisee, veree, & faicte de gente façon: ou il y avoit une cloche sonnante, & quatre chanters… La seconde table (qui estoit la plus longue) avoit premiérement un pasté: dedans lequelle avoit vingt huit personnages vifs, jouans de divers instruments, chacun quand leur tour venoit… en l'Eglise fut joüé des orgues: & au pasté fut joüé d'un cornet d'Alemaigne, moult estrangement." De la Marche's full description of the music at this banquet is translated in Christopher Hogwood, *Music at Court* (London: Folio Society, 1977), 21–24.

[2] Keith Polk, *German Instrumental Music of the Late Middle Ages: Players, Patrons and Performance Practice* (Cambridge: Cambridge University Press, 1992), 72.

[3] Keith Polk, "Augustein Schubinger and the Zinck: Innovation in Performance Practice," *Historic Brass Brass Society Journal* 1 (1989): 83–92.

[4] Norwegian Saxophonist Jan Garbarek and the English *a cappella* vocal quartet the Hilliard Ensemble collaborated on a pair of jazz / early music "fusion" recordings: *Officium* (1994) and *Mnemosyne* (1999), which became best-sellers on the ECM label, entering the pop charts in a number of European countries.

[5] The title page of Ganassi's original includes a woodcut illustration of consorts of three recorders and three viols, the back of a lute, and two cornetts. In the modern edition familiar to most recorder players, however, Ganassi's original title page is reproduced on the front cover, with the cornetts inexplicably removed! German transl. and ed. Hildemarie Peter (Berlin-Lichterfelde: Robert Lienau Musikverlag, 1956); English transl. from German, ed. Dorothy Swainson (Berlin-Lichterfelde: Robert Lienau Musikverlag, 1959).

[6] In *Musica getutscht* Virdung alludes to a larger treatise entitled *ein deutsche Musica,* which he promises to publish in full should he find sufficient sponsorship. This larger work was never published, and we might surmise that his financial backing was not forthcoming. No manuscript of *ein deutsche Musica* has survived, so whether Virdung actually wrote this work at all we shall probably never know. In *Musica getutscht*, though, he tantalizingly alludes to the subjects that would have been considered in the larger publication; these include making divisions, tonguing on a recorder, and improvising on a cantus firmus, all of which would have been of great interest for a study of the performance practices of the period. In the 1529 edition of *Musica instrumentalis deudsch*, Agricola writes, "I will not speak of ornaments [*Mordanten*], although they make music elegant. If you want to use them in this activity, then you can learn them by observing a *Pfeifer*" (i.e., a professional wind player). This translation from William E. Hettrick, *The 'Musica instrumentalis deudsch' of Martin Agricola: a Treatise on Musical Instruments, 1529 and 1545* (Cambridge: Cambridge University Press, 1994), 7.

[7] Hettrick translation, 112. The original German reads as follows: "Das die Organistische / art und Colorathur die beste, / und billich auff allen In- / strumenten zugebrau- / chen sey. / Wiewol

alhie noch etwas mehr / Von solcher kunst zusagen wer / Als nemlich vom Coloriren / Und von Mordanten zufüren. / Welchs trefflich ziert die Melodey / Auff Instrumenten allerley, / Dieweil ichs aber auff dis mal / Alhie nicht kan beschreiben all / Denn es wolt werden viel zulang / So las ich fahren diesen schwang… / [in margin: Nota.] Aber diesen radt hab von mir / Die Orglische art imitier / Im Pfeiffen, Geigen, Lautenschlan / Und wie man sie mehr nennen kan, / Denn ich sag es zu dieser fart / Das dieser ist die beste art / [in margin: Organica Coloratura optima] Mit Coloratur / Risswerck auch / Drumb üb dich wol inn solchem brauch." This text reproduced from the "diplomatic reprint" of the 1545 edition, ed. Robert Eitner, in *Publikation älterer praktischer und theoretischer Musikwerke* (Leipzig: Breitkopf & Härtel, 1896), 222.

[8] Munich, Bayerische Staatsbibliothek, Mus. 3725, ca. 1470. Modern edn. by B. Wallner in *Das Erbe deutsche Musik*, Bde. 36–38 (Kassel, 1958).

[9] Berlin, Staatsbibliothek, Preussischer Kulturbesitz, Mus. 40613, ca.1452–56. Modern edn. by W. Salmen and C. Petzsch in *Denkmäler der Tonkunst in Bayern*, Sonderband 2 (Wiesbaden, 1972).

[10] See *Grove Music Online. Oxford Music Online*, s.v. "Sources of Keyboard Music to 1660," 2. (iii), "Germany, Eastern Europe, and Scandinavia," by John Caldwell, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/26298> (accessed 12 December 2008).

[11] *Die Orgeltabulatur des Leonhard Kleber,* ed. Karin Berg-Kottrerba, *Das Erbe deutscher Musik*, Bde. 91–92 (Frankfurt: Henry Litolff's Verlag, 1987).

[12] Cited in *Grove Music Online. Oxford Music Online*, s.v. "Hofhaimer, Paul," by Manfred Schuler, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/13167> (accessed 22 September 2008). The original German reads "Er ist so unendlich mannigfaltig, daß man ihn jahrelang spielen hören kann und sich nicht so sehr wundert, woher der Ozean alle Flüsse speist, als woher jener all seine Weisen nimmt." Hans Joachim Moser, *Paul Hofhaimer* (Stuttgart / Berlin: J.G. Cotta'sche Buchhandlung Nachfolger, 1929), 30.

[13] Ibid., 66: "Wenn heute überall die Orgelkunst blüht, so gilt das allgemein als Werk seiner Lehrtätigkeit."

[14] *Grove Music Online. Oxford Music Online*, s.v. "Amerbach, Bonifacius," by John Kmetz, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/00771> (accessed 22 September 2008).

[15] Hans Joachim Marx, "Der Tabulatur-Codex des Basler Humanisten Bonifacius Amerbach," in *Musik und Geschichte: Leo Schrade zum sechzigsten Geburtstag* (Cologne: Arno Volk Verlag, 1963), 63.

[16] Cleveland Thomas Johnson, "Keyboard Intabulations Preserved in Sixteenth- and Seventeenth-Century German Organ Tablatures: A Catalogue and Commentary" (D.Phil. thesis, University of Oxford, 1984), 52–54.

[17] *Spiegel der Orgelmacher und Organisten* (Mainz, 1511); facsimile edn. with English transl., Elizabeth Berry Barber (Buren: Knuf, 1980). *Tabulaturen etlicher Lobgesang und Lidlein uff die Orgeln und Lauten* (Mainz, 1512); ed. G. Harms (Hamburg, 1924). The title page of Schlick's *Spiegel* includes a woodcut illustration of a cornettist performing together with organ and singers.

[18] Ornithoparchus, *Micrologus* (1516); cited in Willi Apel, *The History of Keyboard Music to 1700* (Bloomington / London: Indiana University Press, 1972), 76.

[19] For a thorough exposition of the method, see Willi Apel, *The Notation of Polyphonic Music 900–1600*, 5th edn. (Cambridge, Mass.: The Mediaeval Academy of America, 1961), 22–32.

[20] Johnson, "Keyboard Intabulations," 40.

[21] Polk draws attention to this detail in *German Instrumental Music*, 137.

[22] The intabulation attributed to Hofhaimer is "in re," i.e., a fourth lower than the other settings, and is therefore transposed a fourth higher here for ease of comparison.

[23] This approach is modelled on that in *Italienische Diminutionen: Die Zwischen 1553 und 1638*

mehrmals bearbeiteten Sätze, ed. Richard Erig and Veronika Gutmann (Zurich: Amadeus Verlag, 1979).

[24] German readers might be interested to compare this discussion with Ernst Kubitschek's article, "Die Ornamentik in der Orgelmusik der Umgebung von Paul Hofhaimer und Heinrich Isaak," in Walter Salmen, ed., *Heinrich Isaac und Paul Hofhaimer im Umfeld von Kaiser Maximilian I,* Innsbrucker Beiträge zur Musikwissenschaft 16 (1997), 235–44.

[25] *Embellishing Sixteenth-Century Music* (Oxford: Oxford University Press, 1976), 1.

[26] Ibid., 34, 40.

[27] Buchner's *Fundamentum* exists in two ms copies: Zurich, Zentralbibliothek, 284 b (ca. 1520); and Basel, Universitätsbibliothek, F.I.8 a (1551); modern edn. by Jost Harro Schmidt as Hans Buchner, *Sämtliche Orgelwerke*, Das Erbe deutscher Musik, Bde. 54–55 (Frankfurt: Henry Litolff's Verlag, 1974).

[28] *Fontegara* (Venice, 1535), transl. Swainson, 87.

[29] Ibid., 88.

[30] Ibid., 18.

[31] It is instructive to compare these with the late fifteenth-century figures extrapolated from the *Buxheimer Orgelbuch* by Polk in *German Instrumental Music*, 185–86.

[32] *Fontegara*, transl. Swainson, 89.

[33] Facs. rpt. ed. Manfred F. Bukofzer (Kassel and Basel: Bärenreiter-Verlag, 1954).

[34] Facs. rpt. ed. Marco di Pasquale (Florence: Studio per Edizione Scelte, 1984). Ortiz's preface is translated into English by Peter Farrell in *Journal of the Viola da Gamba Society of America* 4 (1967): 5–9.

[35] Finck's comments on singing are reprinted in R. Eitner and R. Schlecht, "Hermann Finck über die Kunst des Singens, 1556," *Monatshefte für Musik-Geschichte* 11 (1879): 129–41.

[36] *Delle lettere del Signor Gio. Camillo Maffei da Solofra, libri due, dove … v'è un discorso della voce e del modo d'apparare di cantar di garganta.* The letter on singing is printed in Nanie Bridgman, "Giovanni Camillo Maffei et sa lettre sur le chant," *Revue de musicologie* 38 (1956): 3–34; see also Brown, *Embellishing Sixteenth-Century Music*, 54, for an English commentary on Maffei's five rules.

[37] Transl. in Carol MacClintock, *Readings in the History of Music in Performance* (Bloomington / Indianapolis: Indiana University Press, 1982), 63. Finck's original Latin reads as follows: "Multi quoque de eorum numero sunt, qui Autodidacti nullo præceptore usi fidibus utcunque canunt, & illis coloraturas Organicis, quae quidem mendolae sunt, inter canendum uti non verentur, quorum aliqui optimas cantilenas non secus ac catuli lacinias miserrimè discerpunt." This extract from the first edn. of *Practica musica*, "Liber quintus de arte eleganter et suaviter cantandi," unpaginated.

[38] Cited, in translation, in Gustave Reese, *Music in the Renaissance* (London: Dent, 1954), 665. Finck's original Latin reads as follows: "Cum autem aliquando in Instrumentis aut Organis artis suæ specimen aliquod exhibere debent, ad unam hanc confugiunt artem, ut inanem strepitum confusè & sine ulla gratia faciant: utque indoctorum auditorum aures facilius demulceant, admirationemque sui ob celeritatem excitent, interdum per sesquihoram sursum deorsumque digitis per claves discursitant, atque hoc modo sperant, se per istum iucundum (si dijs placet) strepitum etiam ipsos montes excitaturos esse, sed tandem nascitur ridiculos mus: *fragen nicht darnach wo meister* Mensura, *meister* Tactus, *meister* Tonus, *und sonderlich meister* bona fantasia *bleibe*." This extract from the first edn. of *Practica musica*, "Liber quartus de tonus," unpaginated.

[39] *Il vero modo di diminuir* (Venice, 1584; facs. rpt., Sala Bolognese: Forni, 1980), f. 2v. English transl. by Jesse Rosenberg, *Historic Brass Society Journal* 1 (1989): 109–14.