A PERFORMER'S GUIDE
TO
RENAISSANCE MUSIC

SECOND EDITION

Edited by Jeffery Kite-Powell

A PERFORMER'S GUIDE TO

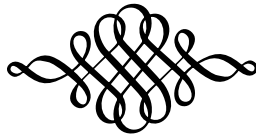# RENAISSANCE MUSIC

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SECOND EDITION

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Jeffery Kite-Powell

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PREFACE TO THE SECOND EDITION

Jeffery Kite-Powell

What does the hackneyed cliché "size matters" have to do with this current book? A quick comparison of the contents of this volume with its Schirmer-edition predecessor of 1994 will reveal that this is not just a second edition, but one with some rather considerable differences—and this is why size matters. If the current publisher had permitted an unlimited number of pages and an infinite number of illustrations and music examples—indeed, every author's dream—the present book could be considered an "expanded" second edition. But, alas, in order to include the new entries requested by numerous readers over the years, the size restrictions placed on these categories suggest that "revised" second edition would be the appropriate descriptor. This is not to say that the omitted chapters in the earlier edition have simply vanished from the intellectual domain entirely, but rather that one must find another way to access them. A recent online review of WorldCat's FirstSearch indicates the existence of 571 copies of the first edition in libraries all over the world, so anyone wishing to read Mark Lindley's "Renaissance Keyboard Fingering," or the chapters on "Publicity Guidelines for Early-Music Concerts" by Beverly Simmons or "Thoughts on the Program and its Notes" by Dean Nuernberger are encouraged to visit a nearby library or have the desired chapter interlibrary loaned to them. The information in Phillip Crabtree's "Copyright" is sufficiently out of date to warrant its omission, and the passing of Ingrid Brainard in 2000 has necessitated the replacement of her contribution.

It was not long after the appearance of the first edition that readers began to ask for information on the bagpipe and ornamentation; others suggested essays on how to rehearse an instrumental or vocal ensemble

would be beneficial or how to add a line to an existing polyphonic work. So it is with thanks to Indiana University Press and its willingness to bring out this revised edition that new articles by Bruce Dickey, Anthony Rooley, Adam Gilbert, and Yvonne Kendall are able to fill the lacunæ and honor readers' requests.

Indeed, this edition joins this press's earlier publication (2000) of *A Performer's Guide to Medieval Music,* edited by Ross W. Duffin, the third book in Early Music America's originally conceived series of Performer's Guides to Early Music. The second book to appear in the series, *A Performer's Guide to Seventeenth-Century Music,* edited by Steward Carter, was published in limited numbers in 1997 by Schirmer Books and is available in 211 libraries worldwide. The contents of these two companion guides appear in the appendices to this volume. It is a long-term goal to produce additional guides in this series, including one on the Eighteenth-Century Baroque and Galant Periods, the Classical and Early Romantic Periods, and a more thoroughgoing book on Early Dance.

The authors of the original contributions appearing here were all given the opportunity to update their work; some used the occasion to offer a few adjustments, while others let their work stand. Obviously, the greatest difference between now and 1994 is the great wealth of research that has appeared in print over the years and the vast number of CDs and videos that have flooded the market from locations all over the globe. Although books and articles are assured a more permanent existence by their place in libraries, recorded material is subject to a much more ephemeral existence.

But it is a digital age in which we live, and with every passing day more resources are becoming available through the Internet—much of it free of charge (albeit through public and university libraries in many cases). We can now go on the Internet to read articles in journals published over one hundred years ago;[1] we have the complete texts of dissertations at our fingertips,[2] and there are published facsimiles of manuscripts, both in book form and in digital format (see, for example, Early English Books Online, created and operated by the University of Michigan,[3] which provides texts from English titles published between 1473 and 1700). Or perhaps you are looking for a treatise in Latin (or Italian, French, English, etc.) that is searchable by keyword? Indiana University's Center for the History of Music Theory and Literature, Professor Thomas Mathiesen, director, may provide access to the information you are seeking.[4]

The list of online resources is endless, and we are just at the cusp of the digital millennium. Within the next decade, it is expected that a large percentage of the holdings of major world libraries will be digitized—libraries

such as those at the universities of Oxford, Harvard, Stanford, and Michigan, and the New York Public Library. This means that as the century progresses, the general public, already well versed in the use of the Internet, will become ever more reliant on digital books and streaming audio and video for their information and entertainment.

The user of this book is certainly familiar with the Internet, and it is this expertise that will inform and enlighten his or her research needs. Instead of being resigned to the lack of a source in the bibliography or discography, the perspicacious reader will log on to a powerful Internet search engine and type in a few choice keywords; in most cases the desired information—and often much more—will come flooding onto the computer screen, and the dilemma is resolved. It is with this assurance—the ability to find the proverbial needle in the haystack—that I leave further bibliographic and discography entries in this book in the able hands of the reader.[5]

I would like to acknowledge the assistance of three graduate students at The Florida State University College of Music: R. Wayne Adams (dance figures, Finale examples), Douglas Milliken (recruiting poster, bagpipe discography), and Leslie Johnson (partial update of the bibliography). I am especially indebted to Eric Harbeson of the Warren D. Allen Music Library at FSU for providing most of the Finale music examples, and to my colleague, Charles E. Brewer, who helped with the discographies and, when necessary, was there to lean on. Of course, without the steadfast support and understanding of my wife, Helga, none of this would have been possible.

NOTES

1. JSTOR: The Scholarly Journal Archive at http://www.jstor.org/

2. ProQuest Dissertations & Theses at http://wwwlib.umi.com/dissertations

3. Early English Books Online, located at http://www.lib.umich.edu/tcp/eebo/

4. The Center for the History of Music Theory and Literature at http://www.music.indiana.edu/chmtl/

5. One *caveat lector:* the URLs provided in some of the chapters of this book might not work any longer than tomorrow! Before giving up, try backspacing from one forward slash to the next (right to left); this procedure will often bring you to the parent directory which may have a new link to the information you are seeking. Good luck!

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PREFACE TO THE
FIRST EDITION

Jeffery Kite-Powell

This book is designed to assist anyone interested in the performance of Renaissance music. The approach was to solicit articles from people who have both the practical expertise and the historical insight in the area in which they have written. Each author strived to present his or her material in a manner that would be easy to understand and put into practice, yet sufficiently scholarly to satisfy those in need of more detail or source material. Every contribution was read and critiqued by several of the contributors to this *Guide,* and most of the book was "field tested" in a somewhat smaller version produced by Early Music America in 1989. Other than the essays new to this publication, all of the remaining ones have been revised by their writers.

The actual time span to be covered by the term "Renaissance" was left up to the individual writer. Most began their discussion somewhere in the second half of the fifteenth century and continued until 1600 or even 1620 or 1630 (particularly those writing on English topics). The chapter on mixed consorts is restricted to the sixteenth century.

The thorough coverage of Renaissance instruments and their use in this volume is not intended to convey a sense of supremacy of instrumental music throughout the period, or to suggest that there was a preponderance of it, but merely to provide information for those in need. To be sure, vocal music was ever-present in fifteenth- and sixteenth-century Europe, and it is with that thought in mind that the needs of the champions of the voice and of the choral enthusiasts have been provided for in three separate chapters by some of the leading practitioners in the field. However, the place of instruments in the Renaissance should not be underestimated: instruments,

after all, were heard on a daily basis—in the streets, homes, churches and courts, and from the towers—in towns and villages throughout Europe during the sixteenth century. Then, too, discussing a large number of instruments in the detail necessary here simply requires more bulk than writing about the voice—a multifaceted but singular topic—which would be largely speculative at best. Most people who are inclined to sing in the first place begin singing at an early age, eventually working their way into high school choirs, college madrigal groups, community choruses, and church choirs. The bottom line is that most choristers have a general idea of how to make an acceptable sound come out of their mouths. A good choral conductor can improve that sound only so much, and if it should prove to be insufficient, he must ask the participant to leave. On the other hand, how many people know enough about recorders and viols or "buzzies" and "bombards" to be able to talk intelligently about them or play them, much less lead a group of players performing on them?

The ensemble that performs early music today must take pains to bring vocal and instrumental music together in performance—certainly not on every composition, perhaps not on every program, but often enough and in sufficiently convincing ways to demonstrate an awareness of the possibilities and an understanding and appreciation of the music of the period.

Duplication of effort in two or more chapters (i.e., mention of *musica ficta,* tempo, tuning, pitch, transposition, and proportions, to list just a few) has intentionally not been expunged by the editor, as it was felt that the reader would benefit from the variety of approaches some of the writers have taken—even differing viewpoints—to these difficult issues. The index will help guide the reader to topics of interest.

It should be clearly stated here exactly what the book does not attempt to do. For one thing it does not pretend to paint a harmonious picture of a modern theory of performance practice. Just as sixteenth-century writers often disagreed with one another, I have allowed the airing of differing points of view in situations in which a particular issue is shrouded in ambiguity or uncertainty—the use of percussion in Renaissance music is a case in point (see the chapters by Harms and Tyler).

Another thing this book is not attempting to be is a catholicon for the *sole* use of the university "collegium" (a term somewhat skewed by modern usage). Granted, its foremost use may be by the director of a collegiate early music ensemble—there is even a chapter specifically devoted to the problems relating to such an ensemble—and it was originally conceived with junior faculty members in mind, that is, those who learn a few weeks before the semester begins that they have been assigned the duty of directing

the early music ensemble. Most of the essays in this *Guide* were in fact written by directors of early music ensembles at colleges and universities all across the country; many of them wear two hats, that is to say, when they are not teaching, they are touring with professional early music groups or taking part in a recording session somewhere. But in spite of its strong education bent, the book has been greeted with approbation by community and professional early music organizations, as well as by private individuals throughout the country.

Yet another item to add to the list of things this book does not do is provide a source for instrument makers, dealers, and suppliers. The omission is intentional and the reason is obvious: these artisans and merchants may no longer be in business or their locations may have changed since the publishing of this book. The reader interested in this kind of information, as well as prices, should contact the office of the society that could most likely provide the answers to such questions (e.g., The American Recorder Society, The Viola da Gamba Society, The Lute Society of America, The Historical Brass Society, The International Society for Early Music Singers, and others) or consult the publications of these organizations. Additional leads may be provided by the office of Early Music America (currently in Cleveland, Ohio) and its journal, *Historical Performance*.[1]

The purpose of all of this, of course, is to arrive at a performance of the music that avoids blatant stylistic incongruities. We perform or listen to the music of this period because we like it, because it communicates something to us, and because it is a significant part of our musical heritage. Since we are dealing with music that does not have a continuous tradition, performers and directors rely on historical information and evidence to achieve an effective performance of the music. Most people have their own idea of what is or is not, can or cannot be considered a "historical," "authentic," or "historically-informed" performance, so I won't enter into the matter here. (References to a lively discussion of these "hot" words are listed below.) To be sure, there is a lot that will never be known about this music, but in all fairness should we not make the effort to understand it and have the courage to experiment with it?

I would like to take this opportunity to extend my public thanks to all of the contributors to this book. Their willingness to share their knowledge and experience will doubtless have a positive impact on those who take these offerings to heart and on their performances of early music.

A special word of thanks is due to Jack Ashworth, Stewart Carter, Ross Duffin, Frederick Gable, and Herbert Myers, the principal readers of the articles contained in the proto-edition. In most cases they read each article at

least twice, and in a few instances three or four times. Readers of individual articles include Frank Hutchison, Edward Kottick, Karyl Louwenaar-Lueke, Willard Martin, Ray Nurse, Ben Peck, and Edward Pepe. I am especially indebted to Herbert Myers, who has been particularly resourceful with his comments and suggestions on the articles in this volume.

I would also like to thank Maribeth Anderson Payne, former editor-in-chief at Schirmer Books, for her willingness to work with Early Music America and me in seeing this effort come to fruition. She was always there with cogent answers when needed and her support was unflagging.

SOURCE LIST ON THE SUBJECT OF AUTHENTICITY

(Complete listings may be found in the bibliography at the end of the book.)
Boulez, "Vestal"; Brett, "Text"; Brown, "Pedantry"; Crutchfield, "Report"; Crutchfield, "Fashion"; Donington, "Present"; Dreyfus, "Early"; Kenyon, "Authenticity"; Kerman, "Historical"; Knighton and Fallows (Phillips), *Companion;* Leech, Wilkinson, et al., "Limits"; Morgan, "Tradition"; Morrow, "Musical"; Taruskin, "Pastness"; Taruskin, "Tradition"; Taruskin, "Spin"; Taruskin, "Limits"; Taruskin, "On Letting"; Taruskin, "Musicologist"; Temperley, "Limits"; Tomlinson, "Historian."

NOTE

1. Editor's note to second edition: the Early Music America office is now located in Seattle, Washington, and its publication is called *Early Music America Magazine*.

NOTE ON TRANSLITERATION

Octave Designation:

c' = middle c
c'' = one octave above middle c, etc.
c = one octave below middle c
C = two octaves below middle c
C_1 = three octaves below middle c, etc.

Instruments are often said to be "in" a specific pitch or key, meaning that their fundamental pitch or tone is the letter given. But "in" for early

instruments is not always the same as it is for modern band and orchestral winds, for which anything other than "in C" implies they are transposing instruments. For further clarification, see chapter 5. With regard to lutes and viols, however, the pitch given in this book for their tonality is that of their top string; a lute "in" a', for instance, has that pitch as its top course.

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PART ONE

VOCAL/CHORAL ISSUES

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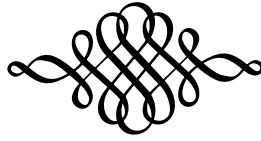
The Solo Voice in the Renaissance

ELLEN HARGIS

Taste in voices for Renaissance music has changed frequently in recent decades, with trends swinging from the operatic to the "folksy" and everywhere in between. Currently there seems to be a tendency to consider size as the most important feature of the "early music voice"; I have often heard singers say, "My voice is too big for early music" or "My voice is small, so I sing early music." However, if we give primary consideration to flexibility, ability to control vibrato, sense of intonation, and intellectual curiosity about the issues of ornamentation and text, we have a much more accurate set of criteria for determining the singer's ability to perform early music convincingly. If the variety among human voices was as great in the Renaissance as it is now, then clearly there is room for most singers to explore this repertory.

A rich repertory it is: like the nineteenth-century art song with which we are more familiar, Renaissance art song comprises hundreds of solo songs written to beautiful poetry of great literary merit, set for skillful singers to execute. It is a body of music spanning some two hundred years and nearly every European national style. These songs, along with the devotional music, carnival music, and theatrical music that also can be performed by solo singers, make up a fascinating and varied repertory for the singer to explore.

VOICE TYPES

Renaissance music was composed without designation for specific voice type, so we can choose who sings a piece based on the range, the text, and

the melodic style (lyric, florid, etc.). The somewhat narrow melodic range of much Renaissance music, together with the option of transposition, allows nearly all singers of appropriate ability to participate as soloists in an early music ensemble. Because singers in the Renaissance used their voices in a way that differed somewhat from today's usage, it is best to keep some of these differences in mind when recruiting singers.

Sopranos need to be willing to use the middle and low ranges of their voices, since there is very little repertory that lies mostly above the staff, and they will often have to sing down to *c'* and occasionally lower. For those pieces that do go to the top of the staff and above, it is useful to be able to float high notes with ease and without excessive vibrato or volume.

Countertenors who can sing into the tenor range will be very useful for fifteenth-century Flemish music; chansons of DuFay often range from *g* to *c''*, making them too low for most female voices and too high for tenors (assuming no transposition). Female altos or mezzo-sopranos will find that they can manage the cantus line of most compositions quite handily, but must be careful that text is still understandable in the high ranges of their voices.

Tenors, like sopranos, need easy high notes, but they also will often find themselves singing in a range lower than that to which they are accustomed. Tenors can sing much of the music available to upper voices, plus the German Tenorlieder, and particularly the highest of the English lute songs, as the text is easier to hear in the high range of the tenor voice than it is in the corresponding part of the soprano voice.

For solo singing, the bass needs to possess a good baritone range. There is little solo song for bass voice, but much of the middle-to-low music is good in the bass voice, provided that the accompanying instruments are low enough to avoid inversions (see chapter 25).

TECHNIQUE

There is little information in primary sources to give us a clue about vocal technique in the Renaissance, but there are descriptions of good and bad singing that give us an idea about what was prized in a voice (see McGee *Medieval:* 55–65, Knighton and Fallows (Potter), *Companion:* 311–16, and other entries in the bibliography). We can also learn from the sounds of modern copies of old instruments; this, along with current ideas about performance practice, gives us some aesthetic goals to strive for.

Renaissance music calls for purity of tone, a focused, clear sound without excessive vibrato, the ability to sing lightly and with agility, and the command of a wide range of dynamics: loud singing, particularly for

church music, and medium to soft singing, to most accompanying instruments. Some of these qualities are natural in certain voices; all are enhanced by good technique. It will be reassuring to the new singer of early music to know that good technique is still good technique. Essential elements include good breath support, well-formed, resonant vowels, and focused sound. There is a real danger of singers tending to sing off the support when first encountering early music, in an effort to produce a light and vibratoless tone. The result is flabby sound, poor intonation, and insufficient breath to fill out a phrase. It is important that we stress that "light" singing is not "weak" singing, and that a fully supported, firm, resonant sound is always good style!

When singing Renaissance music, technique takes a slightly different role in the complete vocal picture from that in later music: the primary concern of the early music singer is that technique must serve the music before the voice. This is not to say that a voice need not be beautiful to sing Renaissance music, but to say that it is our concept of beauty that must be considered. Text must be pellucid in Renaissance song; however gorgeous the high notes possessed by the singer, they are inappropriate if they obscure the text. Similarly, brilliant ornamentation, however skillfully executed, must not be allowed to supersede the transmission of the poetry. Occasionally, the voice must join the instruments in untexted sections of a piece (for example, the long melismas at the ends of phrases in DuFay chansons), and then the voice must be spare and agile, to join in sound with the vielles, lutes, organ, or other instruments. Thus, the term "beautiful singing" takes on a multifaceted aspect. We must always ask ourselves: what is my job in this piece? in this phrase? on this Word? to really understand how to use our voices intelligently and effectively. It is not that we are unconcerned about vocal sound; on the contrary, we are acutely aware of its importance and of the variety that is available to us.

Vibrato

This is the thorniest issue to confront the singer of early music! The argument about vibrato is probably the primary reason for singers' reluctance to become involved in early music ensembles. This is a real shame, because it leaves the directors with amateur singers to sing professional-level music and deprives singers of exposure to an enormous part of their repertory.

Thankfully, after years of "straight-tone" singing being the ideal, it is now generally accepted that a gentle vibration of the voice is natural and expressive, and an inherent part of a healthy singing voice. It is really the degree of pressure and pitch obfuscation that is the problem with the mod-

ern vibrato; therefore, the argument should be about how much and what quality of vibrato is being applied in a given musical context. Obviously, the effect of vibrato or nonvibrato is highly subjective and depends entirely on execution and context. The only vibrato that is really completely inappropriate to Renaissance music is one with a wide pitch variation, or any vibrato that cannot be consciously altered by the singer. Most singers are challenged and stimulated when asked to experiment with this aspect of their singing.

I have found that a positive approach helps immensely when dealing with a singer new to Renaissance styles. A director does much harm by starting from a rigid platform of "no vibrato!" and grudgingly allowing bits here and there when earned by the dutifully hamstrung singer. Instead, if you provide the singers with something new to do or to think about, you avoid depriving them of an element of singing that they have been programmed to think is fundamentally essential to their technique, expecting them to sing beautifully in spite of it. When vibrato is included in the array of expressive devices available to the singer, there is motivation for the singer to opt out of using vibrato in order to use something more appropriate for a particular effect.

Each singer must experiment and work with his or her teacher to learn to control vibrato. It is essential to maintain firm breath support when singing without vibrato or with reduced vibrato, and also to have very clearly focused vocal tone; otherwise, the sound can seem thin and flat. I work with vibrato control in vocal exercises first, adding vibrato, smoothing it out, increasing and decreasing the speed by changing breath pressure—initially, just exploring the possibilities. When the singer begins to feel in control of these variations, we apply them in a musical context.

Vibrato can warm the tone, adding direction and shape to long notes. It can convey a sense of urgency in the text, when combined with heightened dynamics and bright vocal color. With a dark and warm vocal color, it can help to communicate passion, tenderness, or grief. Starting a note with vibrato and then gradually smoothing it out can create a plaintive, poignant sound. Starting a note without vibrato and then adding it can have the effect of crescendo without the change in dynamics.

Nonvibrato can deemphasize text on multiple repetitions of words or phrases, can sound mournful, angry, exhausted, humorous, stern—the options are endless, depending on its combination with other vocal elements. Rapid diminutions must be sung without vibrato, and tuning at cadences is vastly improved when the vibration is reduced or eliminated.

The bottom line: nobody benefits from nonvibrato singing that results in harsh sound, straining, poor tuning, or vocal discomfort. Remembering

that the use of vibrato is just one tool of style, and not the basis of all style, will go a long way in helping singers learn to be flexible and imaginative with this aspect of the voice.

Ornamentation

Use of ornaments is probably the favorite "style-making" device of singers (and instrumentalists) new to early music. To the casual listener, it is the most obvious difference in performance practice and at first glance is the easiest change to make in one's performance of a piece. The important thing is to avoid what I call the "band-aid" approach to ornamentation: throwing in a bunch of ornaments to make a piece sound "early." For beginners, less is more; and all ornaments should be added to a piece with good reason.

A piece of music should be well learned before any ornamentation is begun. Once melody and harmony are understood, the text is learned, the phrasing decided, the dynamics sketched out, and the tempo established, *then* ornaments can be added to further embellish and fill out the piece. A good place to begin is at cadences: the singer can be encouraged to decorate final cadential figures, particularly on repeats of sections, with any stylistic cadential formula, or with patterns found elsewhere in the same piece or other pieces of the genre. (Obviously, the greater the exposure to a given style, the easier it is to develop an ear for stylistic ornamentation.)

Next, filling in of intervals, decoration of internal cadences, and ornaments for text painting can be added. Until the singer has been exposed to a sufficient volume of material to develop an instinctive sense, he or she needs rules and guidelines to follow. The best places to find these are in treatises and tutors such as Dalla Casa's *Il Vero modo di diminuir* (1584) or Bassano's *Ricercate, passaggi, et cadentie* (1598), and in written-out examples in other compositions. For instance, one can take a decorated piece and by careful examination "decompose" it to its basic melodic elements, thus finding ornamental patterns that can be applied in similar places in a similar piece.

Singers often find themselves quite shy about improvising ornamentation so they resort to writing out their proposed decorations in complete detail. Although this is fine at first, they must eventually be able to react to others' ornaments and be able to simplify or elaborate upon patterns in the event of a too-quick or too-slow tempo. Part of rehearsal time can be devoted to experimentation with ornaments, with one person producing ornaments for the others to imitate, and then changing roles so that everyone can try leading and following. I also encourage singers to participate in

classes on improvisation. These classes usually seem to be directed toward instrumentalists, but can be of great benefit to singers, too. (For further information, please refer to chapter 26.)

Texts and Pronunciation

The issue of historic pronunciation of Renaissance texts is discussed in Ross Duffin's chapter on pronunciation, as well as in Alexander Blachly's and Alejandro Planchart's chapters on "Singing and the Vocal Ensemble," and Anthony Rooley's contribution "Practical Matters of Vocal Performance." I add my voice to theirs in support of the attempt to find regional and historic pronunciation systems for performance, however daunting the task may seem. Historic pronunciation affects a vocal piece just as much as the sound of gut strings affects a string piece, or as much as mechanical action affects the sound of an old organ. The rewards of such efforts are immense for both the performer and the audience. I encourage singers to work with coaches in addition to using pronunciation guides. There are some aspects of a language (such as pitch modulation and phrasing) that are difficult to notate, but that affect our singing of the language as much as the individual sounds do.

It is important, however, not to lose sight of the forest for the trees. We must remember that most of these carefully pronounced words form poems, carefully crafted (some more, some less) and intended for life outside of a musical setting as well. By learning to appreciate these poems on their own, we bring new insights to our interpretations of the music. Elements such as phrase structure, meter, syntax, and rhyme scheme become clearer, and help us to make musical decisions that highlight or diminish these qualities in the musical setting.

Singers should always look at the text of a piece as written down separately from the music. First, if the piece is not in the singer's native language, a translation must be obtained. It is best to ask first for a strictly literal translation, and perhaps make it more poetic for the program. Translators can be found through most college and university modern language departments, or at language schools. Most Renaissance languages are not difficult for a modern linguist to translate, although some dialects may require a specialist. If all efforts fail, try asking a singer who performs the repertory to recommend a translator. Find out who the author of the text is, if possible, and what form the poem is in (sonnet, octave, canzona, etc.). Learn something about that form: is it fixed or flexible? Is there a standard subject matter for the form, and does your poem conform to it? For instance, the Italian canzona nearly always has a light, pastoral content.

More serious subject matter is treated in forms such as the sonnet. Although the poetic form is not always related to the musical form, it is good to have as much information as is available in order to make a musical interpretation. For instance, if the poem and its genre have many verses, that should affect how many of those verses are sung in a modern performance. All too often we eliminate text to shorten a piece if the language being sung is foreign to the audience. However, if length is a salient feature of the poetic and musical forms, that should temper our inclination to edit.

Poetic analysis is something few musicians are trained to do as part of their music education, but singers will find that much of the poetry they want to sing is dense, convoluted, and difficult to understand, and requires some formal analysis to appreciate. Analysis based on the principles of rhetoric that guided writers in the Renaissance can clarify meaning and syntax, explain symbolism, and reveal the beauty of language in new and subtle ways. Mary Springfels, Artist-in-Residence at the Newberry Library in Chicago, is working in this field, integrating the study of rhetorical devices into musical and poetical analysis; seek out her articles on the subject. She recommends several primary and secondary sources for reading; see the bibliography for these titles.

Transposition

It has become traditional for singers to request transpositions for their solo pieces into keys that "lie better for the voice." Although this is certainly a sound historical practice, some basic guidelines should be followed to maintain the stylistic aesthetic the composer may have had in mind.

Singers trained in the modern operatic style tend to prefer music that lies in the mid- to upper ranges of the voice, where they have the most power and brilliance. However, most Renaissance music does not need a lot of power and brilliance to put across the text, overcome a dense instrumental accompaniment, or fill an enormous concert hall. The low and middle parts of the voice are rich in color, sufficiently facile (at a gentle volume), and certainly the best part of the voice for the clear transmission of text. Most of the instruments used to accompany singers have a transparent sound and are soft to moderately loud in volume, allowing the singer great range of expression with their dynamics, articulation, and color.

When deciding on a transposition of a particular piece, the technical aspects of the music must be considered first. For example, the madrigal *Ancor che col partire,* with its plaintive, melancholy text, can be beautifully sung in its original range of *c′* to *c″* by a high or medium voice. However, if one decides to sing the Bassano diminution of the same piece, it might be

necessary for the high voice to transpose it to a higher pitch center in order to negotiate the runs at an appropriate tempo. If both versions are being performed as an extended form on the program, requiring that they be in the same pitch center, the choice of singer becomes crucial. To sing the original madrigal at a higher pitch would call for a voice capable of floating the high parts of the phrases without strain or excessive vibrato, and still bring out the affect of the text. Alternatively, a low voice with good agility could perform both versions at the original pitch.

An important consideration, too, is the quality of the transposition for the accompanying instruments. A general rule might be to stick to signatures of one or two sharps or flats, to avoid awkward fingerings and tuning difficulties. The tessitura of the piece should also help to determine the key: no instrumentalist wants to play an entire piece at either extreme of the instrument's range, and the piece would sound odd that way (unless one was seeking a special effect, such as low strings in a mournful piece).

Another concern when transposing a piece of music by one octave for another voice range is inversion—a problem when any of the lines go lower than the bass. Some examples from the *Glogauer Liederbuch:* suppose you want to have a tenor or baritone sing the top (melody) line of *Elselein, liebstes Elselein mein.* The cantus, if transposed down one octave, dips below the bass line in four places, causing unstylistic harmonic inversions. A better choice for a tenor would be one of the songs with the melody and the text in the tenor line, such as *In feuers hitz.* However, if you wanted your recorder consort to play this piece, with a tenor singing the melody, you would have inversions again, because the bass recorder sounds an octave higher. One solution is to use recorders with the tenor line sung up an octave by a soprano; another is to mix instruments, and have the bass line played at pitch, allowing the tenor voice to sing the tenor line. This practice, as logical as it seems, has yet to be established as historical, but is certainly useful (and not unthinkable, given Praetorius's comments on transposition).

TUNING

Most of us grew up knowing about two kinds of tuning: in-tune and out-of-tune. Singers are often frightened by the aspect of alternative tuning systems, and with good reason. Without strings to tune or fingerings to learn, we must depend entirely on our ears to learn new tuning systems. In the absence of a wide and constant vibrato, tuning discrepancies become all the more obvious and need to be addressed seriously.

The easiest place to start learning a temperament is at the beginning, before the rehearsal of the piece actually begins. Hearing repeated scales

played by the accompanying instruments, with an emphasis on leading tones and cadential notes, is very helpful. Next, one can learn to sing carefully tempered fifths and truly pure major thirds, followed by other intervals as they occur in the temperament being used. If a keyboard is being used in the piece, it can be quite instructive for the singer to be present at the tuning session to watch the keyboard and memorize those unequal semitones.

Early in the rehearsal period it is best to sing with reduced vibrato, or if possible, none at all, in order to focus more easily on tuning issues. It is also helpful to sing at a reduced volume in order to hear the instruments and arrive at good intonation together. In addition, I have found that encouraging the singer to develop a physical sense of tuning is very successful. Singing pure thirds, for instance, feels very "still" compared with the purring vibration of larger thirds. Singers are used to memorizing physical sensation as part of their technique and can use this to help learn new tuning systems.

Finally, singers must learn to be highly attentive and flexible about their tuning. A piece that might have been accompanied by instruments of one temperament might be played on instruments in a different temperament the next time. There is even a difference in the degree of pitch flexibility between lutes and viols, although they are both fretted strings, and the singer must be prepared to make the adjustments. If we continue to think of tuning as another of our expressive devices, learning to tune can be a welcome challenge. (For further information, please refer to chapters 24 and 25.)

Ensembles/Repertory

Renaissance instruments appropriate for accompanying solo singers include plucked strings such as lute, harp, cittern, pandora, and guitar; bowed strings such as vielle, rebec, viol, and violin; soft winds such as recorders, flutes, capped reeds, and sometimes the sackbut; and keyboard instruments. In short, just about any consort except the "loud band" or shawms will work.

There is a substantial body of work written to be sung as solo songs with accompaniment. Italian frottole are a good example; hundreds of songs from Petrucci's publications were arranged by the lutenist Francisus Bossinensis for solo voice and lute accompaniment. English and Scottish broadsides and other ballads are another example, as are French *airs de cours,* Italian devotional laude, and English consort songs. But there is an enormous amount of polyphonic literature, sacred and secular, of nearly every national style, that can be adapted for solo voice with instruments. This includes Burgundian chansons, German Lieder, Italian madrigals, English car-

ols, Spanish villancicos, and French chansons. Usually the melody is in the cantus, but is sometimes (as in the case of German Lieder) in the tenor. Because of the narrow range of much Renaissance music, the early–music director is not restricted to sopranos as soloists but can assign these pieces to any singer who can accommodate the piece. There is also the option of transposition, as discussed earlier.

To determine whether a polyphonic piece is suitable for performance as a solo song, look first at the text. Make sure that the whole of the text is present in the line to be sung. Often, grammatical phrases are split between voices, and one line completes the sentence begun (but not finished) in another. Even if the text is intact, a piece with a lot of "question and answer" phrasing can sound odd and incomplete. Next, check to see whether the musical phrases match the poetic caesurae of the text in the part to be sung, so that there is a sense of syntactic completeness in the musical pacing. Make sure that the line you have chosen really sounds like a "tune" when sung alone, that it does not cadence to the fifth too often, and that it has sufficient melodic contour (in the context of the piece) to stand by itself. In the end, the judgment is subjective; we have to decide whether a piece is effective based on our own taste!

There is, of course, some music which is absolutely inappropriate for solo vocal performance. For instance, polyphonic Mass settings and motets were almost certainly intended for choral forces, or at least all vocal forces, and we do not benefit from forcing these pieces into another form. With such a wealth of solo repertory available to us, why go looking elsewhere?

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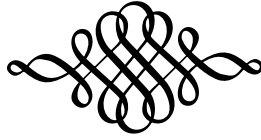
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2

On Singing and the Vocal Ensemble I

ALEXANDER BLACHLY

Because instrumental music constitutes only a small fraction of the Renaissance repertory, an ensemble (such as an early music ensemble) truly interested in exploring Renaissance music must allocate a considerable portion of its energies to vocal works, whether solo (accompanied or unaccompanied), one-on-a-part (polyphonic chansons and madrigals), or choral (most Mass and motet music of the middle and high Renaissance). Vocal music in this period was often more or less synonymous with "advanced," "challenging," and "serious" composition—thus a repertory for professionals. One might think it appropriate, therefore, for professional singers today to tackle it; but by and large this is not what happens. Professional singers in the Renaissance sang quite differently from modern professional singers; or, to put it the other way around, standard vocal training today often leaves the aspiring professional singer unsuited for Renaissance music. Many voice teachers still tend to encourage modern operatic technique as a universal goal for all their students, and the high-pressure, high-vibrato style such students use is antithetical to the delineation of counterpoint, to accurate ensemble singing, and to precise tuning independent of instruments. Thus, the "better-trained" singers in a university setting tend to do one of three things: (1) avoid the early music ensemble altogether; (2) create an ineradicable blemish in its sound; or (3) find themselves rejected by the director. As a result, an early music ensemble today typically begins with an ensemble of vocally inexperienced—albeit frequently talented and enthusiastic—amateurs.

Vocal Forces

In a fledgling early music ensemble with few if any skilled vocalists, rule one is that there is safety in numbers. Twelve or sixteen singers, even if they are insecure and tentative, can still usually manage a pleasing and musical performance of a chanson by Claudin de Sermisy or a madrigal by Verdelot that no quartet drawn from their ranks could negotiate. As the level of execution rises, this rule diminishes in validity, so that with very experienced and competent performers it is easier to create a musically expressive performance with only one singer to a part, especially in more difficult music (such as madrigals by Giaches de Wert or Luzzaschi). Naturally, the ideal would be for the vocal ensemble to match the size and caliber of its pre-Baroque model, with one singer to a part on madrigals and chansons. Choral music generally does not sound as effective with only one singer to a part; moreover there is internal evidence in the form of *divisi*'s at cadence points that at least two singers were expected on each line in much of the repertory. But having more than four or five voices per line also has drawbacks, notably in the loss of flexibility that tends to come with the larger forces. A vocal component of between eight and twenty singers would seem to be the ideal size for an early music ensemble, with smaller ensembles drawn from the larger group when possible for one-on-a-part music.

What types of singers are desirable? Generally speaking, the voices most necessary to perform Renaissance music are those found least often in nature, or at least not very often in the vicinity of early music recruiting stations: namely, high tenors. A vocal ensemble short on tenors will find that it is nearly impossible to function. Countertenors are also extremely useful, although they frequently find that the top line of polyphony is too high and the next highest line too low. Female altos and countertenors combined on the same line can produce a smooth effect that helps keep the individuals in the choir listening to voice parts other than their own. Basses should ideally be resonant in the bottom range but not boomy, and light in the upper range. (Could he only be enlisted into an early music ensemble, Dietrich Fischer-Dieskau would be perfect.) Sopranos are the trickiest to handle. First, there are usually more of them than one can use. Second, many singers who should properly be classified as mezzos or even contraltos wish to be considered sopranos. What one needs in the highest voice of the choral ensemble is the ability to float high F's and G's without strain or excessive volume. Sopranos should also, however, be able to sing comfortably as low as middle *c* and preferably one or two pitches lower.

Vocal Production

In conceiving how to perform Renaissance music, singers and instrumentalists can learn a great deal from each other. It is an immediately perceptible fact, for example, that the individual instruments in a well-balanced recorder ensemble or viol consort produce their sounds with focus and poise and a minimum of vibrato. The same should be true of a vocal ensemble. The type of singing that best matches the nature of the Renaissance repertory is light but clear, notable for its pure tone and expressive force. Gaffurius, in one of the few explicit remarks on vocal production from before the Baroque era, states in his *Practica musicæ* of 1496 that singers should not let their voices wobble because this obscures the counterpoint. He further criticizes "tones having a wide and ringing vibrato, since these tones do not maintain a true pitch."[1]

Solo singers of chansons, when accompanied by instruments, can profit from emulating the admirable qualities in effective solo instrumental performances: conviction, *brio,* and an interpretive point of view. A solo singer, even without trying to, automatically commands an audience's complete attention; it is wise, therefore, to limit singers who are placed in such a spotlight to those whose abilities merit the attention. (Few types of music fall flat as fast as poorly sung *formes fixes* chansons, which, after all, tend to be quite substantial pieces when measured by the clock, even if the score fits onto a single page.) What an audience wishes to know is (a) What is this song about? and (b) Is it a good piece? These questions can only be answered by a performance that conveys meaning and captures the melodic beauty of the music by means of good technique, that is, attractive vocal sound.

It is worth emphasizing that the sound of the voice *should* be attractive. Nowhere in the Renaissance literature is there any statement that would justify the cultivation, as the embodiment of some ideal of the time, of a deliberately bizarre or unpleasant vocal production. (*Pace* the self-conscious experiments by some early musicians seeking to reproduce the sounds they imagine emanating from the pained faces in certain Renaissance depictions of singers.) Like the sounds of the Renaissance instruments with which voices are associated in the documentary evidence—namely, harps, vielles, rebecs, viols, recorders, lutes, and flutes (that is, the "low" or soft instruments)—voices performing music from the same period should be well proportioned, light, agile, and suitable for small and moderately sized rooms. The qualities praised by Conrad von Zabern in his treatise of 1474 on the singing of plainchant—great resonance in the low register, moderate resonance in the middle register, brightness and delicacy in the highest reg-

ister—are of paramount importance. So, too, is good intonation, which we will discuss later.

Loud, heavy singing not only violates the spirit of good ensemble music-making, it would also seem to contradict the very essence of the proportion, balance, and "naturalness" that are so clearly idealized in the other arts of the time. This is not to say that Renaissance singing should be consistently soft. Far from it. It should be intense and shapely in both loud and soft passages. Renaissance artists shunned coarseness and aspired to eloquence, but these predispositions in no way imply a taste for weakness of any kind. Michelangelo's art was admired for its inspiring strength, as was Josquin's music. Ockeghem's vocal lines are often of such length that it takes unusual vocal prowess to navigate them properly. The bright colors in DuFay's music and Jan van Eyck's paintings should provide some clue to the bright, strong (vocal) colors appropriate to the period. People of means found singers in the Renaissance exciting to listen to and worth paying a great deal of money to acquire for their private chapels. The highly competitive arena in which Renaissance singers were traded, bought, and sold should convince us that music-making in this period must have been on a par with musical composition itself and with the creations of painters, sculptors, and architects; that is, consummately polished and intended to be impressive in every way.

Ensemble

The members of a good instrumental ensemble breathe and/or bow either together or in imitation of one another. Singers, too, must learn to produce their tone, phrase the music, and pronounce words identically—especially in the pervasively imitative textures of the later Renaissance repertory. Good ensemble singing is more dependent on the performers listening to—and precisely imitating—each other than on taking their cues from a conductor. In order to develop good listening habits, it is useful for the director to isolate one or two voice parts at a time to sing various passages. Another helpful exercise is to have the chorus sing one or two measures repeatedly until all the singers are aware of all the parts.

Importance of the Text

For the vocal repertory to make its full impact, the singing cannot be merely polished and strong. It must also be purposeful and self aware. That is, the singers must understand what the words they are singing mean, and they then must sing these words with untempered sincerity. Singing with a

clear projection of the sound and sense of the text is the easiest, most natural, and most obvious way to begin the process of interpreting a piece of vocal music. Yet it is one often overlooked, especially by amateurs.

In Mass settings, vocal ensembles today commonly begin the "Et in terra pax" and "Et incarnatus" softly, to accelerate or become otherwise more animated at "Et resurrexit tertia die" and at the "Osanna" (just to pick the most obvious cases), and this is entirely appropriate. It is equally important for the singer to adopt a heartfelt musical/interpretive stance for the tragic text of Busnoys's *Seule apart moy* or a jovial one for the amusing Freudian slips in the text of Lassus's *Matona mia cara*. A long theoretical tradition extending back to the ninth-century *Musica enchiriadis* proclaims the importance of matching music with the sense and sentiment of the text; the policy of refraining from doing so—on the grounds that changes of volume and tempo, for example, belong only to Baroque and post-Baroque music—is itself an anachronism, one that fortunately is becoming rarer in performances of Renaissance music with every passing year. Naturally, the degree to which one may wish to approach the more overt and theatrical musical gestures of the seventeenth century will probably vary considerably between a motet by Grenon, at the beginning of the Renaissance, and a lament by Monteverdi, at the end. The degree to which the singer "thinks" the text, on the other hand, should probably not vary much at all, regardless of the age and style of the music.

Because the words are so important to the singer, the vocal director will do well to make it a policy to include a translation of the text in every score he/she hands out. (It is not nearly so important for the audience to know what the words of a piece may mean, although all too commonly in concerts by the university early music ensemble *only* the audience has a complete translation in hand, this having been produced by a specialist in another department of the university just a day or two before the concert.) The most useful aspect of the translation is that it conveys the general meaning of the text. Nearly as important, however, is that the translation makes clear the meaning of each individual word of the original, since the singers will be pronouncing each of the words, even if they are conveying overall meanings. A confusion in the singer's mind about the translation of a single foreign word will manifest itself in a confusion or vagueness in interpretation—that is, in purposeless and directionless phrasing. Thus, an elegant and poetically inspiring translation will often be less useful to the singer than a straightforward but correct one. For the singer, after all, the task is to breathe musical life into the original words themselves, not into their translation.

Pronunciation

As mentioned earlier, in order to achieve good ensemble, the singers must pronounce the words identically. Ideally, this would match the pronunciation used by those who wrote the music and those who first performed it: recapturing ancient pronunciations can enhance the artistry of the performance, partly because of the added nuance, but also because the original pronunciation makes it easier to hear such elements as rhyme, which are intrinsic to the character of the piece. When old pronunciations are unknown or under debate, it is still important that the singers reach some form of agreement. (Under no circumstances should some of them adopt unusual ideas about the sound of Renaissance French or German or English without troubling to, or succeeding in, winning the others over to their point of view!)

It is a rare early music director who has sufficient command of all the languages found in Renaissance music to be an adequate coach to his or her singers. This is nothing to be ashamed of; but it is important to recognize that the singers will need such coaching. Bringing in a language expert can work wonders quite above and beyond the obvious benefit of achieving unanimity of pronunciation. When the singers focus on the words, which they will do under the tutelage of a language specialist, their ensemble will improve, the phrasing will become more purposeful, and the intonation will immediately begin to ring more true. Even if the language coach is not familiar with Renaissance pronunciations, the presence of a person familiar with modern foreign languages will aid greatly in helping amateur American singers to be conscious of deep-seated habits of pronunciation which, if left unattended, can render the most carefully prepared and solemn performance mildly comical. These habits typically involve all of the vowels and usually also the consonants "t" and "r." [Editor's note: for additional information, see chapter 27.]

Phrasing and Editions

In music before Willaert, phrasing often tends to be a subjective decision on the part of the director. My own experience has been that for fifteenth-century music, especially, five self-discovered rules of thumb go a long way in helping a vocal ensemble know how to make sense of the many passages where there are few syllables to go with many notes. Rule one is always to *lighten,* or lift, on the dot of dotted notes; this helps the following smaller notes, or following syncopated note, to be sung audibly yet lightly. Rule two is to sing legato (and group together) any succession of two or more

notes of the same duration, whether these are semibreves, minims, or semi-minims. Rule three is to crescendo on long notes, but to sing the subsequent note(s) at the volume level with which the long note began (not the louder volume achieved by the crescendo). Rule four is to observe *all* punctuation with *at least* a lightening, if not with a complete break, in the sound. Rule five is to treat ligatures (notes joined together in mensural notation) as useful guides to articulation. Interpreting them as if they were slur marks, with the second note softer than the first, helps give the line a convincing contour.

In music of the generation of Willaert and later, many problems of phrasing in vocal music are solved merely by correctly pronouncing the words, and this for the simple reason that after about 1550 most vocal music is written predominantly with one note per syllable. It is here that instrumentalists can learn a great deal from singers about how to bring a melodic line to life. As anyone who is capable of appreciating such things will attest, a vocal melody by Lassus correctly pronounced is a wondrous musical phenomenon. It has variety of color, linear tension, contrast of articulation, directionality—in short, all of the ingredients that go into making a performance interesting and coherent. The problem facing the director of a chorus singing Lassus (or Byrd or Willaert) is not so much in getting the singers of an individual line to phrase musically in isolation from the other parts, but in training them to *maintain* their independence—especially when the line calls for a falling-off (i.e., decrescendo)—at a point where other lines are singing other motives or other words.

Yet this is not the whole story. Even Lassus and Byrd write melismatic passages. These are normally best approached using the rules outlined above for fifteenth-century music. More importantly, the bar lines in modern editions often imply incorrect stress, for the phrasing of Renaissance music is different from music of later times, especially that of the last two centuries. Frequently in editions of Renaissance music, bar lines appear to come at the wrong place, that is, just before the final syllable of a Latin word, which is almost always weak. Some editors have therefore attempted to write irregularly spaced bar lines that are intended to avoid this problem. Others, including some performers, have experimented with editions that do away with bar lines altogether. Both of these approaches, in my opinion, are unnecessary and create new problems in turn. A choir can be taught in a relatively brief time that the words are the proper guides to stress patterns.

The practice of placing bar lines between the staves but not through them also strikes me as a bad compromise. Such bar lines, which the Germans call *Mensurstriche,* are intended to indicate the proper alignment of voices without requiring longer notes to be broken into constituent parts as

they cross from one measure to the next. Quite aside from the difficulties posed for the performer when a "measure" begins with a blank space representative of that portion of a long note from the previous measure which crosses the *Mensurstrich,* and then ends with a note that is "too long" (because it crosses the next *Mensurstrich*), such editions must be difficult to proofread, to judge from their many typos.

To say that speech and correct pronunciation are the guiding principles of Renaissance phrasing is to assert the primacy of speech rhythm *over* the apparent bar line stress. Surely, singers of Renaissance music are as able as performers of other repertories to master the particular conventions of the music they perform. Learning to overlook the unintended stress implications of modern bar lines is no more difficult than learning the springing rhythm of a gigue or the lilt of a Viennese waltz. As soon as a choir lets the words determine stress, the bar lines become merely visual guides to vertical ensemble and are to all intents and purposes invisible in other respects.

Some editors attempt to indicate the "long-range phrasing" by transcribing Renaissance music in double- or triple-length bars. This strikes me as a mistake on several counts. First, the issue of long-range phrasing is primarily an aural problem rather than a visual one. Second, to write two breves' worth of *tempus perfectum* in a single measure is to confuse the correct stress—it makes no more sense than placing a bar line in an eighteenth-century minuet every six quarter notes. In both cases, the edition would appear to be advocating a pervasive hemiola which is not implied by the original notation. Third, the singers I have worked with find it difficult to read editions which attempt to show the long-range rhythm. The vertical interaction of parts, and sometimes even the rhythmic organization in a single part, become so obscured by the excessive information packed between bar lines that the edition actually hampers the singers' ability to read the music. When this is the case, there is no hope for understanding or projecting the larger rhythm. Thus, these efforts seem self-defeating.

What can be learned from singing from partbooks? I have found that singers experience a tremendous thrill when they first find they are able to make music reading mensural notation with ligatures. Moreover, singing from partbooks frees the ear from the tyranny of the eye and allows the sound of the music—as it is happening—to serve as the guide to pulse and tempo. On the other hand, reading from partbooks greatly slows down the learning process, necessitating more rehearsals to prepare music up to concert level. Also, a photocopy of a facsimile of a Renaissance partbook is usually not sufficient for performance. Often the photocopy needs so much editing, primarily in the form of adding missing words, that one is in effect working from a modern edition. If one has the luxury to indulge in the

practice, singing from partbooks can be a great boon to phrasing, for the ear, following the *sound* of the other voices, instructs the mind to *imitate* more effectively than does the eye—a highly desirable thing, in as much as imitation forms the underlying basis for almost all late-fifteenth- and sixteenth-century composition.

There are so many editions of vocal music from the Renaissance that there would be no practical way to list them all. What is important to the vocal director is to know how slavishly to follow the printed text. Generally, the performer will do well to remember that merely because an editorial decision has appeared in print does not confer on it automatic legitimacy. Even an edition with as respected a pedigree as Lowinsky's *Medici Codex* contains a considerable number of purely editorial decisions which the performer should feel free to question. The two areas in which editors usually have made the most subjective decisions (based on the least concrete evidence) are text underlay and *musica ficta*. A performer should know that it is his or her right *and obligation* to try to find solutions better than the printed ones (assuming, of course, that the performer is familiar with the historical evidence: "coloring" an edition with purely fanciful accidentals that have no basis in Renaissance theory is naturally a practice to be avoided). To deal confidently with many of the more intractable problems of text underlay and *musica ficta* requires years of experience and experimentation (some detailed studies of these problems are listed in the bibliography). Stated in its simplest form, however, most problems of *musica ficta* revolve about when and which of the following rules apply:

1. The cadential octave is to be approached by the nearest imperfect interval (major sixth: hence A–F♯ expanding to G–G, or B♭–G expanding to A–A) as is the cadential unison (minor third: hence C♯–E converging to D, or C–E♭ converging to D).
2. The perfect intervals (octave, fifth, fourth) must not be imperfected, or, in the language of hexachord theory, *mi* is not to be sounded against *fa* (hence, E simultaneously against B♭ is forbidden, as is F against B♮), unless the *mi-contra-fa* resolves correctly to a consonance.
3. Rule 2 is also to be extended to melodies in single voice parts: one normally adjusts a melody starkly emphasizing the interval F to B to avoid the tritone. A melody passing from F through B and on to C, however, does not require such adjustment.
4. A melody with a single note above *la* in a sufficiently prominent position may adjust this single note to *fa* (sing it as B♭ or E♭).

Although on occasion a good idea for *musica ficta* may arise spontaneously from within the ensemble, it is generally not only not useful, but

actually harmful to morale, to enter into discussions about these topics during rehearsal. Let the director's decision stand, at least until the rehearsal is over.

Most newer editions can be trusted to be more accurate than earlier ones, but performers should always read the introductory material to understand the underlying editorial premises. Volume VI of the *Polyphonic Music of the Fourteenth Century* series may serve as a good example of the potential pitfalls. This anthology presents *trecento* repertory, some pieces of which had already appeared at the time of publication twice or even three times before in other modern editions. In order to make a "contribution," and not merely to duplicate previous efforts, the editor decided occasionally to use sources that had been rejected by earlier editors (including himself), the result being that some of the best-known pieces appear in *inferior* versions.

Most editions contain useful information on sources and the transcription methods employed; but much of this material tends to appear in the introduction or the critical apparatus. A director who photocopies pieces from a Complete Works without also photocopying the editor's explanations of how the edition operates may make serious mistakes when interpreting the transcription at face value. For reasons explained later under "Tempo," it is essential, for example, to know the original note values and mensuration signs.

Pitch Level

Because the gauging of "naturalness" by reference to the human form is one of the most widely recognized tenets of Renaissance art, it is only logical for a vocal director to use the comfortable ranges of his or her singers as the gauge by which to pitch *a cappella* vocal music. My own experience has been that DuFay's music often lies well as written (accepting $a' = 440$ as the point of reference), but that later choral music (Josquin, Isaac, Willaert, Byrd, occasionally Lassus) tends to work best sung at least a whole step higher than written (although sometimes, as with Ockeghem's *Alma redemptoris mater* and Busnoys's *Victime pascali,* transposition down, by as much as a major third in the case of the Busnoys setting, is necessary). [Editor's note: see chapter 25, "Pitch and Transposition."]

It is a common mistake for a vocal director to program a "fascinating" piece that is not suited to the forces at hand. Singers who are forced to sing a line that lies below their effective tessitura cannot help but produce a washed-out, colorless sound. Conversely, a line that lies too high will almost always sound harsh and edgy. "Road-mapping" (switching two or more

parts for brief stretches) can sometimes remedy this problem. Another solution is to combine, say, an alto and a tenor on the same line and have them work as a team to cover the entire range of a part with good production (the tenor leaving out the highest notes, the alto pantomiming the lowest).

Tempo

One of the most difficult aspects of performing Renaissance choral music is the uncertainty surrounding the interpretation of mensuration signs. Some editors (especially in the *Corpus mensurabilis musicæ* series) prefer to transcribe passages governed by the signs O and ₵ by reducing the original note values by a 2:1 ratio, while transcribing passages governed by ₵, ₵, ₵2, or ₵2 in a 4:1 ratio. Should one disagree with the 2:1 tempo relationship between O and ₵ that is implied in this editorial practice, such editions present very considerable hurdles for the director. My own research and experience over the past fifteen years have convinced me that there is *no standard relationship* between "cut" and "uncut" signs. Therefore, there is no logical or musicologically sound reason to follow the teaching of, say, Sebald Heyden in 1540 (who advocated a 2:1 ratio between all cut and uncut signs in music of the later fifteenth century) rather than the equally forceful advice of Johannes Tinctoris in 1473 (who asserted that the stroke through a ₵ or ₵ meant simply that the *mensura* should be "somewhat faster"). All that can be said as a general rule is that the semibreve in the "cut" signs does go "faster" (never slower) than the semibreve in the "uncut" ones. The most practical policy is to ascertain the original note values and the original mensuration signs, and then to let the semibreve in the "cut" signs go as much faster as feels musically convincing. Generally, I find that the sign O is likely to be an *andante,* frequently of a somewhat "majestic" or "noble" character (though pieces like DuFay's *Navre je suy* and *Se la face ay pale* are unmistakably of a more rapid, sprightly type). The sign ₵ tends to be a *moderato* (often with the beat shifting to the breve in the early fifteenth-century repertory; in the later fifteenth century and throughout the sixteenth century the sign ₵, which is used almost universally for all sacred music, normally requires a beat on the semibreve.

It should be self-evident that any single sign used for a large and varied repertory over the span of more than a hundred years could not always have been meant to indicate exactly the same tempo. Experience suggests strongly that such a sign may not even necessarily indicate the same tempo within a single piece. Works like Ockeghem's *Missa Au travail suy* and DuFay's *Missa Sancti Antonii de Padua* (published as the *Missa Sancti Antonii Viennensis* in Besseler's edition of the complete works) show considerable

variety of character and texture among passages notated under ¢ (in the Ockeghem) and O (in the DuFay). Numerous examples from the sacred works of Josquin, Willaert, Lassus, and Byrd could be adduced to demonstrate the same principle. In the secular realm, flexibility in tempo is even more in evidence. Consider, for example, the way in which madrigals of the later sixteenth century are meant to adjust their tempo in response both to the words and to the composer's setting of them. In humorous pieces such as Lassus's moresca *O Lucia, miau, miau,* where contrasts of tempo may be quite extreme, one may draw an important conclusion from the fact that the entire piece is written under a single mensuration sign.

What evidence is there against a "subjective" interpretation of tempo which responds to the word and to the music, in favor of an interpretation in which the beat remains unvaried from first note to last? It must suffice here to note that the explicit injunctions for the *tactus* to remain constant throughout a piece are found only in some primers by German schoolmasters of the early sixteenth century and in treatises by their followers. All the more sophisticated commentaries on musical practice, such as Gaffurius's *Practica musicæ,* Glarean's *Dodecachordon,* or Zarlino's *Istitutione harmoniche,* carefully avoid rigid generalizations about tempo.

Tuning

Training a choir or small vocal ensemble to sing in tune can be the most difficult challenge facing the director of the early music ensemble. (Occasionally, the singers will sing in tune to begin with, and then practically no training is necessary. Or perhaps a single individual will be responsible for leading the entire ensemble flat or sharp; this person must then be dealt with independently of the others.) Most singers of even moderate experience have fairly specific, if unarticulated, ideas on how to sing in tune; yet very few know how to correct a problem that arises gradually during a performance. My own observation from directing vocal ensembles during the past fifteen years is that *just intonation* produces a more satisfyingly in-tune result, and produces it more consistently, than the "high major third/high leading tone" system most singers have been taught. Just intonation requires a *low* major third, a *low* leading tone, a *high* minor third, a *high* minor sixth—or, as most singers will complain when they are first advised to try it, the exact opposite of what they have been taught and have (successfully) practiced for years. The key to making just intonation work is to insist that the fifth of the chord be a *full* (perfect) fifth away from the final. Most singers when they attempt to adjust a major chord that seems out of tune will think first to raise the third; but in fact what is normally required is to

raise the *fifth* and to *lower* the third. Singing a chord without its third will often make this fact dramatically clear to everyone.

The underlying difficulty in tuning is that very few singers have a concrete notion of how the scale works (though they are usually surprised to find this out). Many singers therefore do not know where adjustments can be made in the scale without all the relationships being so distorted that everyone is left in a state of intonational dissonance with everyone else. In most of the Renaissance repertory, the key signature typically has either no flats and sharps, or only one flat. This simplifies the task of conceptualizing the scale, for most Renaissance scales are closely related. To determine the role of any given step in the scale, observe its relationship to the note a third above and a third below. If the note in question is F, it lies a major third below A, and should be thought of as "high," so as to keep the major third small. Conversely, F lies a minor third above D, and should be thought of as "high" so as to keep the minor third large. For any given key signature there are three notes that are the bottom notes of major thirds and simultaneously the top notes of minor thirds. These are the three "high" notes of the scale. The three notes that are the top notes of major thirds (A, E, B in the scale with no flats or sharps) are the "low" notes of the scale. One note is a minor third above a note and simultaneously a minor third below another note (D in the scale with no flats or sharps), and this note's role varies according to context.

Another way to approach the issue of just intonation is to perform all notes solmized as *mi* as "low" notes (thus, B, E, A in the Guidonian hand), all notes solmized as *fa* as "high" notes (thus, C, F, B♭ in the Guidonian hand). Though useful, this method is incomplete, for it leaves out of account the notes G and D. Still another approach is to perform melodic half steps as "large" intervals and melodic whole steps as "small." Again, this approach cannot be applied to two of the five whole steps of the scale, namely, the two that are "neutral" (F–G and A–B in the scale without sharps or flats). Nevertheless, this rule of thumb is useful, especially in singing the *subsemitonium* and *finalis* at cadences.

It is only fair to note that singers initially tend to resist just intonation with truly impressive persistence, and it will often require great determination on the part of the director in order to achieve success. [Editor's note: see chapter 24 for a technical discussion of just intonation and other Renaissance tuning systems.]

Conclusion

The challenges facing those who wish to sing Renaissance music are not to be underestimated—we should not forget that for professional singers half a

millennium ago mastering these pieces was a full-time job—but the rewards are great. The highpoints of the Renaissance vocal repertory, after all, belong among the treasures of Western culture.

NOTE

1. Gaffurins, *Practica:* 148.

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Atlas, "Paolo"; Bent, *Musica;* Bent, *Resfacta;* Berger, *Musica;* Besseler, *Bourdon;* Bowers, "Performing"; Bray, "Interpretation"; Dahlhaus, *Zur Theorie;* Doe, "Another"; Harran, "New"; Harran, "Pursuit"; Herlinger, "Review"; Hoppin, "Partial"; Hughes, *Manuscript;* Knighton and Fallows (Meconi), *Companion;* Lowinsky, "Treatise"; Plank, "Choral"; Wegman, "What."

Suggested Listening

Amarilli mia bella. Max van Egmond. Etcetera KTC 1056.

Antoine Busnoys: In hydraulis and Other Works. Pomerium, Alexander Blachly, director. Dorian DOR-90184.
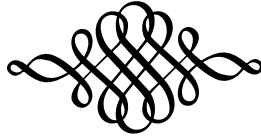
Codex Chantilly. Airs de Cours. Ensemble Organum, Marcel Pérès, director. Harmonia Mundi France HMC 901252.

John Taverner: Missa Gloria Tibi Trinitas, Leroy Kyrie, Dum transisset sabbatum. The Tallis Scholars, Peter Phillips, director. Gimell CDGIM–004.

Josquin Desprez: Missa Hercules dux Ferrarie, Motets & Chansons. Pomerium, Alexander Blachly, director. Glissando 779 043–2.

A Song for Francesca. Music in Italy, 1330–1430. Gothic Voices, Christopher Page, director. Hesperion CDA 66286.

Una 'Stravaganza' dei Medici. Taverner Consort/Choir/Players, Andrew Parrott, director. EMI Reflexe CDC 7 47998 2.

3

On Singing and the Vocal Ensemble II

ALEJANDRO PLANCHART

The director of the early music ensemble has become a relatively common member of the music faculty in most American colleges with a music program. This position is still a relatively new one, and one that often cuts across several areas of activity that in the teaching of the common practice repertory are often more compartmentalized. This requires an uncommon amount of care and sensitivity on the part of the director and an interest in the work of his or her colleagues. Moreover, it necessitates an effort, no matter how arduous, in drawing their interest and cooperation toward the enterprise of the early music ensemble and toward the idea of historically informed performance; these attributes will be a benefit to the entire institution as well as to the ensemble. Much of what I have to say here is addressed to the early music director in the early stages of his or her career. Experienced directors and mature artists need no advice from me; they have found their own solutions to all the points raised here.

Despite the strident "neophilistine" tone of much criticism of the historical performance movement, it would be imprudent to lose sight that what it offers is an imaginative reconstruction of past styles, a reconstruction that is enlivened, among other things, by historical information that has come down to us about the music and its performance traditions and by our own interest in these aspects of the artistic object we seek to reproduce. But, ultimately, it is our own sense of the beauty of the music we recreate, and our ability to communicate this sense, that lends "authenticity" to our activity. In this respect, the attitude of a performer who is interested in historical performance or in performance practice is not that different from the attitude of a number of thoughtful performers who work within what

may still be called "mainstream" tradition, and a young director of an early music ensemble may find in such colleagues both support and inspiration for his or her work. In the case of vocal ensemble music, the early music director will have to cross the path of the voice teachers and the choir director most often. In many instances the beginning director can profit from the experience of colleagues in choral conducting, for a great number of them are people of great talent, with extraordinary ears for intonation, blend, and balance, and who, increasingly, have a reasonable knowledge of (if not always a taste for) music before 1600. In the same manner, the basis of most modern vocal teaching at the undergraduate level remains the Italian seventeenth- and early eighteenth-century repertory, and younger voice teachers are increasingly curious about the stylistic and artistic context of this repertory. Any common ground that the director can map with other colleagues will help both with recruiting and with the status of the early music ensemble as a recognized, viable ensemble.

Thus, even though the majority of voice teachers have (with reasonable justification) an operatic voice and career as their ideal, there is an increasing number of younger teachers who are sympathetic to, if not always knowledgeable about, early music performance. And in any event, there are in any vocal program a number of well-trained students who have naturally light voices and who do not use an excessive amount of vibrato (sometimes because they simply have not yet learned how to do that). Among them may be the new generation of early music singers, and the director who does not recruit them and encourage them is missing a very good opportunity. We must remember that the early music ensemble often has two functions: to give performances of early music that are as good as the talents and knowledge of the performers and the director allow, and to provide serious music students with exposure to and experience in the early music repertory as living music. The kinds of voice production that many voice students in their late teens and early twenties will use (with the approval of their own teachers) for some of the simpler Italian arias that are so often chosen as teaching pieces, the Lieder of Mozart, and even the French *mélodie* repertory (I am thinking mostly of the very subtle songs of Fauré), will serve them well as a point of departure in an early music ensemble. In all of these cases a young singer with an undamaged voice seldom uses an obtrusive vibrato and yet is very conscious of proper vocal support and focus of tone. Encouraging such singers to join the ensemble and also emphasizing the common ground—primarily matters of vocal support and relaxation, focus of tone, and good intonation—between modern and early music singing will often create an atmosphere of cooperation rather than one of confrontation between the voice faculty and the early music direc-

tor. This also may lead some of these voice students to become interested in a repertory that they did not know and help prevent the "tunnel vision" that afflicts so many performers (modern and early alike).

Vocal Forces

With young and stylistically inexperienced singers, three to four voices to a part allows an ensemble to produce a beautiful sound without losing much flexibility and lightness. When I say "without losing much flexibility" I mean this in terms relative to what such singers would do when singing one to a part. The flexibility of one-to-a-part singing one hears in most of the outstanding professional ensembles is predicated on excellent technique and years of experience as solo and ensemble singers on the part of each member of such an ensemble. It also should be remembered that one of the roles of the early music ensemble is to provide experience in performing early music to as many students as practicable within the relatively short time of a college career, as such experience will create not just performers of early music but "mainstream" performers who will never have the distrust of early music that was almost a matter of course a generation ago. Such experience will also create an enlightened audience. The young non-music major who could only be a rank-and-file chorister in an early music ensemble will be the best kind of audience and patron that the early music profession may hope for, provided that the early music ensemble is well run and did music that is varied, challenging, and interesting to sing. At the center of all of this is the fact that an early music ensemble is not one thing but several: a performance ensemble that gives concerts, a performance laboratory where students need to try and learn unfamiliar repertories and techniques (not to speak of new instruments), and also something of a "music appreciation" experience directed not necessarily outward to the public but inward to the members of the ensemble. After all, they need to acquire in a short time the understanding of these repertories that they have gained in the case of the standard repertory as a matter of prolonged exposure. The early music ensemble should allow as many students to perform as much music as possible.

    This being said, it is important at the same time to begin giving students as early as possible experience in singing repertories such as the madrigal and the chanson with only one on a part. Recent research has shown that in certain institutions the sacred choral repertory was sung with only one singer to a part. Singing some of the sacred repertory with one singer to a part, when the students can do it well, should be considered. The

matter of size in fifteenth-century vocal ensembles may be something of a historical mirage. We know, for example, that the vocal forces of, say, the Burgundian chapel had a disproportionate number of soprano singers, who were adult falsettists. Now, the Latin term used for falsetto in dozens of documents from Burgundy and Cambrai is *voce submissa,* which had a long-established and firm technical meaning: "soft voice." It would thus appear that, at least in northern France, the remarkably strong falsetto that some modern singers have been able to develop was either not known or not wished for. If this is the case, then the result of the uneven number of singers for the different parts would be an even balance of the parts with regard to volume. Any combination of singers that would achieve such a balance now is thus acceptable. This would appear to be something of a "long way around" to come to a conclusion that could be dictated by common sense, that is, that any composer who spent the time and effort to write inner voices as beautiful and well crafted as those of DuFay, Ockeghem, Obrecht, or Busnoys, would want them to be heard clearly. But common sense, guided only by our own experience of the vocal power of modern falsettists (themselves largely part of the historical performance movement) could just as easily decide that, given the vocal disposition of the Burgundian chapel in 1477 (six trebles, three contratenors, two tenors, and three basses) the Masses of Busnoys were meant to be heard as soprano solos with a contrapuntal background.

Vocal Production

We might as well begin by saying that we have no evidence of what the vocal production of any period was like before the existence of recordings. Logically, singers can begin by listening to and imitating the qualities of the consorts of soft instruments from the period, though it is also worth noting that beginning in the sixteenth century some choral singing was done to the accompaniment of sackbuts and cornetts, and that the cornett was often likened to the human voice. Ultimately, for fifteenth- and sixteenth-century polyphony, the ability to hear each line clearly delineated, even when it is background rather than an important motive, is essential. For that a focused and unforced tone appears to work best.

The matter of vibrato should be mentioned here. In dealing with young singers the early music director will often face three kinds: (1) the untrained voice, often without a vibrato and equally often without focus; (2) the trained voice with a small vibrato; and (3) the trained voice where one can hear the vibrato and a constant high wind-pressure tone production. This

last category has no place in an early music ensemble, even when the ensemble is doing music as late as Mozart or Haydn. Of the other two, an untrained voice without focus adds very little to an ensemble, but can be used if the person reads very well and has a really good sense of pitch and rhythm. Often such nonsingers manage to learn relatively quickly how to focus their voices (and the early music director should encourage them to seek instruction in this) and become good choral voices. The well-focused but untrained voice and the trained voice with a small and unobtrusive vibrato will be the best resources an early music director may have. Short of a specialist ensemble, a combination of such voices will virtually always produce good results. The director would be well advised, however, not to try for an absolutely vibratoless sound from such an ensemble. The reason for this is that most young singers without training or with only the beginning of a modern vocal training (and here I am assuming the beginnings of a very good and relatively broad-minded modern vocal training) have little or no control over their vibrato, and any attempt on their part to iron it out will produce tense and colorless singing and tire their voices. If the director emphasizes a relaxed vocal production, a light and unforced tone, focused singing, and the use of absolutely pure vowel sounds, then the mixed group of untrained and trained voices described above should be capable of delineating all of the polyphonic lines of a fifteenth-century Mass or a sixteenth-century motet with remarkable clarity and ease. Should the director not have had extensive vocal or choral experience before, this is one field where there is much to be learned from a good choral conductor, and he or she should not be at all shy to seek assistance from a colleague if the school has a good concert choir, or even better, a good chamber choir.

Ensemble

Ensemble warm ups are one of the places where a director can promote good ensemble while at the same time encouraging a good tone and good intonation. The director can easily devise warm up exercises in which, in addition to limbering up the range of the individual voices, special attention is paid to vowel sounds, or to the proper tuning of intervals (for example, the use of just intonation, which goes contrary to what most modern singers practice), leading singers to begin to hear the resonance that will guide their ears toward correct intonation.

    With regard to phrasing it is particularly useful to isolate a problematic passage and then have the entire ensemble sing through each part of the passage, taking care to phrase the motives in the same manner, and then to

let them sing through the polyphony until they can hear how their part fits in the texture. Of course, no one can do this with every difficult section of every work in an entire program, but enough insistence on the students working out on their own similar passages, and pointing out to them the recurrent motives in a work and the clichés of a style, begins to build rather quickly an awareness of style and an instinct for listening that results in good ensemble.

Other useful procedures practiced by numerous choral directors with other repertories, involve having the singers rehearse in "cells," in which each cell has only one singer to a part, and having the ensemble stand in a full circle, everyone singing toward the center. With an inexperienced vocal group, this procedure helps to speed up the singers' ability to hear the other parts and phrase accordingly.

When dealing with passages in which there is a ritardando (all the more so if there is a return to the main tempo after it), an accelerando, or a change of tempo, it is extremely useful to have the ensemble attempt it several times without any conducting, to the point where the group develops a collective sense of where and how the tempo fluctuation happens. This will prevent the slightly ragged ensemble that one usually hears in such cases. Occasionally this approach will also point out a "stumbling block"—something in the music itself that interferes with the tempo fluctuation coming off smoothly, which can then be worked out or worked around by beginning or ending the tempo fluctuation in a different and often unexpectedly more logical place.

Importance of the Text and Pronunciation

The importance of singers knowing what it is that they are saying when they sing cannot be emphasized strongly enough. Translations of the texts—as literal as possible—should be handed out the same day as the music, and the singers should be encouraged to begin thinking not only about the meaning of each word they sing but also about the rhetoric and syntax of the different languages. In this way the often convoluted pronunciation (by modern English standards) of Italian madrigal and aria poetry, for example, begins to feel like familiar ground.

Uniformity of pronunciation will also be greatly aided if the director has insisted from the beginning on setting diction standards for the ensemble. The use of a language expert or a native speaker to demonstrate or to coach pronunciation is essential. In dealing with the secular repertories of the late Middle Ages and the Renaissance it is also essential that the singers

achieve not only unanimous and correct pronunciation of the text, but also a sense of the implied large-scale rhythmic patterns of the text as declaimed poetry. For example, in the line:

*Dúe róse **frés**che / e **cól**te in para**dí**so*

the first half of the verse moves toward the first syllable of *frésche,* and the second half moves toward the third syllable of *paradíso* with a small ritenuto at *cólte* and an equally small accelerando between *cól* and *di*. What I have indicated as a caesura, of course, is a syntactical break that is actually elided in declaiming the poem, but creates a moment of rhythmic repose on the prolonged "e" vowel. All this directly affects the way Andrea Gabrieli and Luca Marenzio set the text; it is something that comes as second nature to cultivated Italian speakers and should be understood by the singers who sing madrigals. Explaining just one line takes a bit of time, but the principle remains operative for virtually all poetry everywhere. Once the singers know that, they can begin to sense these rhythms if they do speak the language, or perceive them when they hear a language specialist or a native speaker declaim the poem. A good policy dealing with these repertories is to have a language expert declaim—that is, "perform"—the poetry, line by line, into a cassette tape that may then be put on reserve for the members of the ensemble to listen to in the music library or the language lab. If singers are to sing a madrigal or chanson as soloists or one-on-a-part, they should be able to recite the poem as a poem, comfortably and with correct line stresses, long before they perform the piece in public.

A serious problem concerning words is presented, however, by what should be the easiest language to sing: Latin. Simply stated, in virtually every edition of music with a Latin text written between approximately 1400 and 1550, the early music director will find dozens of infelicities of text underlay, where the way the text is set to the music not only does violence to the word declamation but also obscures the musical phrasing, plays havoc with cadences, and so on (sometimes this is simply because the composers actually "hear" Latin with their own regional accent). The causes of this are many, and the first may be called the "fatigue factor." Text underlay for much of the music from DuFay to Gombert presents fierce problems, and it is usually one of the last tasks an editor undertakes. Then, the sources are often uninformative, careless, or contradictory, and one senses that at the time considerable latitude existed in these matters. Faced with this, editors tend to be literalist and unimaginative, often with unmusical results from even the very best of them. We must realize that the judgment exercised by the Burgundian chaplains, steeped in tradition, was very different from that employed by a twentieth-century editor who has to justify everything and face reviewers who will complain about "arbitrary" decisions.

Well in advance of distributing the music to the singers, the director will be well advised to take a close look at the text underlay in order to determine where each phrase is going, and if the words, as set, help it. Such a review will almost always turn up dozens of places where shifting a word or a phrase by a note or two or sometimes by a measure or two, or adding a repetition of a word or a phrase, in one voice or another will yield unanimity of declamation that clarifies a cadence, makes the pronunciation of the text easier or clearer, and saves a great deal of time in rehearsals. In these revisions, which are often necessary in virtually all editions of sacred music written between 1400 and 1550, a good rule of thumb when adding a repetition of a word or a phrase to break up a melisma that appears clumsy or uncomfortable, or to achieve unanimity of text at a cadence point, is to think in terms of oratorical rhetoric. For example, in the following verse from Vulgate Psalm 88:

Domine Deus virtutum, quis similis tibi?

if there was an articulation point at *virtutum,* and the director felt that two or three extra syllables would help one of the voices to phrase into the articulation better, it would be better to expand the phrase by repeating the word *Deus* rather than the word *virtutum,* for the first would create a recognizable grammatical and rhetorical declamation:

Domine Deus, Deus virtutum, quis similis tibi?

Pitch Level

My experience with pitch level differs only slightly from that mentioned by Blachly in the previous chapter in that for all *a cappella* music between 1400 and 1600 I find that an a' at about 415 leads to a more relaxed and better sound in most cases. Works such as DuFay's *Missa Se la face ay pale* (not entirely an *a cappella* piece, since the tenor is an organ part and should not be sung) and *Missa Ave regina* sound very good at "written pitch" when one uses $a' = 415$ and a mixture of altos and tenors for both the contratenor and the tenor parts. At $a' = 415$ a high-tessitura work such as Ockeghem's *Alma redemptoris mater* can be sung at written pitch, but pieces like Josquin's *Missa Pange lingua* may need transposition up a tone (with male voices in all but the top) or even a major third (for an SATB ensemble). This pitch level will also allow most mixed ensembles to negotiate well the "high-clef" music from Clemens and Morales to Lassus and Palestrina (the four-voice cleffing being G2, C2, C3, F3) as written, while the "low-clef" music of the same period (C1, C3, C4, F4) would require a transposition up by a step, since young bass voices seldom have much resonance for the low F (at $a' = 440$), much less for the pitch near modern E produced by $a' = 415$ as

written *F*. It may be nothing more than an old wives tale, but my own experience with college singers confirms something that a number of choral conductors have told me over the years, and that is that singers seem to stay on pitch much easier when singing in "black note" keys.

Depending on the ensemble, a work like Obrecht's *Salve Crux* can be sung effectively at two pitches: as written, if one has a first-class male ensemble, or up a fourth with an ensemble of SATTB. Here the fourth-transposition switches the piece to a "slot" where a great deal of music by Clemens and Gombert lies, so that if Obrecht's motet was still sung in the 1530s it is not unlikely that it was sometimes sung at the pitch suggested here. And indeed this is what happens to Willaert's *Veni sancte spiritus,* as a comparison of its publication in 1545 with the *Medici Codex* shows, although in this case the later print has the piece down a fourth. Obrecht's motet was indeed sung in the 1530s, and ensembles of men and boys were capable of transposing it at sight, and would certainly have transposed it up a fourth. I invite the reader to think about what happened to this music as the decades went by and to suggest that transposition by a fourth or a fifth was, in fact, common. In a concert of music by Clemens, for instance, I realized that the transposition I had chosen simply "locked" into a set of ranges common in five-voice music used in Obrecht's own homeland at a time when his music was still being sung. This fact, in and of itself, interests me and feeds both my imagination and my curiosity—all the more so since such a transposition will not work for a piece such as Ockeghem's *Missa Ecce ancila*. I had a similar revelation with the transposition of the above-mentioned motet by Willaert. I pass the information on to my readers in the hope of stimulating their curiosity and research. I would be equally fascinated (though for different reasons), if I could find how an Obrecht work of any kind was done in the 1560s, or in the 1760s. How Obrecht was sung at Ferrara would also be of great interest and would deserve emulation, if we could find out and reconstruct a Ferrarese event.

Tempo and Proportions

Developing a sense for the tempo and the tempo relationships in this music is greatly hindered by the often tacit shifts in reduction of note values found in most modern editions. Although there apparently was no standard relationship between *integer valor* and *tempus diminutum* in the Middle Ages and the Renaissance, if one studies the music carefully one begins to develop a sense of what O and ₵ meant in DuFay's music of the 1430s or the 1450s, which is not quite the same tempo that Ockeghem had in mind for his own works of the 1450s, and so on. One goes at this the way one goes at

music of later times: *Allegro con brio* means different things in the music of Mozart, Mendelssohn, or Brahms. Even in the work of a single composer and within a narrow stylistic band, O will mean one of a number of tempos within certain limits, not a specific tempo in terms of beats per minute.

Nonetheless, there are certain inviolable rules: in any work where the composer goes from an uncut sign to a cut one or vice versa, he is indeed telling you "go faster" or "go slower" in no uncertain terms. Recent recordings of Josquin's Masses in which the tempo at ¢ is markedly slower than that in O are simply being perverse, no matter how beautiful the singing or phrasing. A case in point is a recent recording of Heinrich Isaac's *Virgo prudentissima,* in which the music goes from O to O2 in all voices except the tenor, so that a sharp acceleration of the free voices by a factor of two is spelled out unequivocally, and yet the performers take the tempo of O2 at a slower pace than that of O. The result is that, despite the exquisite singing, the work dies on its feet just when it should literally be racing ahead. To be sure, any performance of a piece is at the same time a critique of it, but there is a point at which the critic takes over, and we cannot quite hear the composer's own voice. This is something that performers have done for centuries and composers have lived with in varying states of annoyance, depending on their temperament. In the case of Renaissance music, reversing the basic meanings of cut and uncut time is, in fact, a major distortion of the work.

Composers and performers in the fifteenth and sixteenth centuries were trained to think of tempo relationships as mathematical proportions, so when we change tempo within a work in response to the presence of a new mensuration sign it behooves us to seek, within the range of tempos that we feel is appropriate, one that is related in a simple proportion to the previous tempo. The most common such shift in fifteenth-century music is one from O to ¢; its interpretation is still the subject of debate among scholars, though the theoretical traditions give strong evidence of two main interpretations: (1) a 1:2 shift at the semibreve level, and (2) a 3:4 shift at the semibreve level. Thus, these may perhaps be the first two avenues one should explore when encountering such a change of signs. In the sixteenth century an even more common shift is from ¢ to ¢3 (or simply 3). Here the theoretical tradition is virtually unanimous in calling for 2:3 shift at the semibreve level, although at the beginning of the seventeenth century such a change in signs may mean a 1:3 shift at the semibreve level. In the end the early music director cannot escape doing a fair amount of reading on tempo and proportions, even if the literature on this topic is immense, full of dogmatic statements by modern scholars, and on occasion bordering on lunacy.

Tuning

Given the tenacity of the resistance of modern singers to just intonation, a tenacity reinforced by their voice teachers (if they are voice majors), it is well to be prepared for slow progress in this area, but the director should ultimately neither give up nor let up. It is a frustrating experience since every new singer in the ensemble will disturb the intonation for a time, and each year one begins almost from scratch. The tuning of open fifths, however, is the place for an ensemble to start to hear the correct tuning of just intonation, and if one can get the ensemble to tune perfectly a $\frac{6}{3}$ chord using a kind of *fauxbourdon* pattern, where a chain of $\frac{6}{3}$ sonorities begins and ends with a $\frac{5}{8}$ for a warm up is a good way to allow a group of students that has been singing and playing in equal temperament for most of the day to lock into just intonation at the start of the rehearsal. Furthermore, intonation exercises may be profitably included in any warm-up routine used for the ensemble; during a warm up of some five to ten minutes devoting a little time to hearing the tuning of long-held chords, or hearing the interval sizes in a slow but steadily moving scale will begin creating habits of singing these intervals that will gradually break down resistance to just intonation. Compounding the problem is that occasionally, for expressive purposes, a high leading tone may be what one wants. Few college singers develop their ears quite to the point where they can play with shades of intonation the way some of the best professional early music singers can so well.

One bit of perhaps obvious advice is that in music that does not use continuo or concerted instruments, the director should rehearse without recourse to any instrumental assistance from the start. Even playing a single line on a keyboard to help out a voice part will interfere with the intonation. Once a choir can sing with just intonation it can begin to adjust to other temperaments when singing with instruments, as their ears will have become far more sensitive to interval sizes and shades of tuning.

Phrasing

We are almost entirely in the dark concerning phrasing in the vocal ensemble music of the thirteenth and fourteenth centuries, but a good place to start is the conductus repertory of the thirteenth century and the works of the Italian *trecento* in which all parts have text. In both repertories one can see at the outset that the text is preeminent in determining the sense of phrasing in the music, and that in a number of instances the composers are playing a subtle game where the textual prosody seems to color the groupings inherent in the melodic and rhythmic surface of the music in ways not

immediately obvious from the music alone. The operative word here is "subtle." Any wrenching contradiction between the text phrasing and musical phrasing in these repertories is uncharacteristic and could be the product of scribal error or a less than first-rate composer. In the long melismatic passages characteristic of fourteenth-century French and English music, as well as the rapid coloraturas of the Italian *trecento,* the performer needs to be acutely aware not only of the melodic shape and the interval sizes (often we tend to use large intervals as points of demarcation in phrasing, but ligature writing in the manuscripts would suggest *legato* singing of many of these) but also of the relationship of the part one is singing to the structural parts in the polyphony.

Fifteenth- and early-sixteenth-century music poses in some ways even more difficult problems, since in certain repertories, such as the Mass Ordinary and the Votive motet of the late fifteenth century, the relationship between text and music seems to be, at first sight, much looser than in earlier and later repertories. In the previous chapter, Blachly offers five rules of thumb for phrasing fifteenth- and early-sixteenth-century music that coincide almost exactly with what I have found useful. I do, however, prefer to make a small crescendo into a dot if at such point there is a dissonance with another voice, and then lighten up the resolution. In any event, these rules also hold for much of the early Baroque choral music, particularly the dense polyphony of the large-scale works of Schütz and his school. One phrasing mannerism that is to be avoided at all costs, however, is an abuse of the *messa di voce* in polyphonic music of the sixteenth century. It would be entirely appropriate in the solo voice repertory, but for a time it was fashionable to use this technique in works such as the five- and six-voice madrigals of composers like Marenzio and Wert. The result destroys the polyphony and the linear drive that governs virtually all of their music, although it can be used in passages, frequent in Wert and Monteverdi, that amount to ensemble recitative, if all of the singers phrase with absolute unanimity.

As noted earlier, developing a sense of the large-scale rhythm of text phrases will also contribute to correct phrasing and will create a sense of linear direction. In much late-sixteenth-century music there is a broad rhetorical structure in which the repetition of certain phrases such as the "*miserere nobis*" in the Gloria or the Agnus Dei are treated by composers as variations of a given set of motives (this is the case, for example, in a great deal of Byrd's music, notably in the *Mass for Four Voices*). This "macrophrasing" is crucial to the sense of progression of the music.

Some of Blachly's rules, particularly numbers one, three, and five can be easily incorporated into warm-up exercises, so that the ensemble members begin to respond to such phrasing situations instinctively. In working

with undergraduates I find that they tend to view each instance of something that happens in the piece itself as unique (at least at first) and need to be encouraged to begin taking the step of phrasing similar figures in a similar way. I would add a rule concerning the performance of fifteenth-century music: major color, that is, the hemiolia of three imperfect breves over two perfections, is virtually always used by DuFay, his English contemporaries, Ockeghem, Obrecht, and even Josquin and Isaac in ways that demand a slight crescendo over the course of the entire pattern and a minute accent of each major note of the figure (e.g., the *superius* hemiolia at the beginning of the first four-voice section in the Kyrie of the English *Caput Mass* and the large cadential hemiolias in the tenor pattern of the same work).

Editions

It is crucial that the director of the early music ensemble not be intimidated by the printed text of an edition. Problems of text underlay will very often sabotage the best efforts of an ensemble, particularly in fifteenth- and early-sixteenth-century music (text underlay becomes much clearer after around 1550). Editors are often extremely timid in matters of text repetition or moving the text as set in the source a few notes or bars to one side or another; and a number of modern editors—some with the most exquisite musical credentials—turn a curiously deaf ear to the natural rhythms of spoken language that very often suggest sensible solutions to problems of text underlay. The difficulties, of course, are based on the nature of the fifteenth-century scribal traditions and will never vanish, but indeed, the best training that a future editor of vocal music may get in dealing with these problems is long experience as a singer in an early music ensemble. After carefully studying a given work, a director may decide that the number of small text adjustments needed is so large that making his or her own performance edition of the piece is a necessity. The same applies to considerations of *musica ficta*. Such editions, even when the source is not the original, but a critical edition in a set of complete works, eventually save an immense amount of rehearsal time. In any case, the director should take great care that the text underlay and the *musica ficta* in any music given to the ensemble come as close as possible to what he or she actually wants. Inevitably some changes may suggest themselves in performance, but extensive changes during rehearsals are time-consuming and waste a great deal of energy.

Long arguments on text underlay or on *musica ficta* can be a waste of rehearsal time, although the occasional suggestion is sometimes helpful. But

the director should encourage the members of the group to think about these matters and to call to his attention possible solutions to difficult problems. This is all the more important because certain matters of text declamation and melodic and harmonic direction can often be perceived differently from "inside" the work; thus in some cases the individual singers do have a privileged view of the music.

It cannot be emphasized strongly enough how important it is for the director to understand the editorial procedures and assumptions that underlie any edition being used for a performance, and how carefully one must read the introduction and even the critical notes of the edition of any work that is being prepared. It is also important that the director trains the performers to sing at least some pieces from original notation as early as possible. This is well worth the initial extra time and frustration with regard to the sense of linear independence and of engaging the tonal and rhythmic ear of the singers in the ensemble. It will also give the students crucial experience of what the editor of this music faces in producing a modern score. The ultimate goal of the ensemble, it must be remembered, is the musical and intellectual growth of the students, a growth that comes from preparing performances as polished and as beautiful as possible—performances in which, ideally, every member of the ensemble knows why things are being done the way they are. In a very real sense, virtually all music up to the end of the Baroque is chamber music, and the "anonymous soldier" has no place in it.
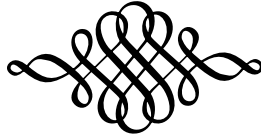
Practical Matters of Vocal Performance

ANTHONY ROOLEY

I believe passionately that the work of preparation for historically aware performance has barely begun, that the endeavors to achieve historical awareness over the last thirty years have merely been a preparation, and that great revelations are still to come. The essential philosophy of performance remains to be addressed, and some of what follows is an attempt to present a practical philosophy, distilled from thirty years of experience "on the road."

What we see in performance is the fruit of how a piece has been rehearsed, yet I have yet to read any musings on authentic rehearsal techniques. Something is surely wrong here, because if performance is an expression of how we rehearse, then rehearsal should be our utmost concern. Most music depends for its effectiveness on fantastically well-prepared teamwork—group endeavor of the highest caliber. This is particularly true of certain ensembles that concentrate on earlier, preclassical eras—the English viol consort repertory of the early seventeenth century, or the Italian madrigal genre of about 1550–1640 come to mind—and therefore require a sublime rehearsal approach. We do not have the tools readily available in honed condition, or the skills to use those tools—they have gone rusty through disuse. Our "received" attitudes from later eras of music-making are crude and inappropriate, and we have no language of communication to discuss elements of vocal polyphony and the interplay of voices, the resonances achieved by subtle harmonic spacing, nor the rhythmic species so brilliantly applied by the composers. We lack much of the essential knowledge of the language—including such things as poetic structure, form, and intent—to which the composer responds with deep familiarity and which

we cannot hope to approach. Actually, the list of specific features that are unfamiliar to us is so long and all-encompassing, we are prudent to admit a strangeness, an unfamiliarity, something approaching an alien culture, as the quote "the Past is a Foreign Country: they do things differently there"[1] proclaims! We might be expert in the quartet style appropriate to the late quartets of Beethoven, yet be utterly at sea with a six-part *In nomine* for viols by William Byrd. Or we might be steeped in the rigorous choral conducting tradition developed since the 1960s, where every inflection of the choir is controlled by dictatorial hand and finger gestures, leaving the choir as a complex piece of manipulated machinery, yet be utterly out of our depth in directing a playfully sensuous madrigal of Monteverdi. In both these cases, it is not so much the performance (important though that be), as the preparation for performance where the authentic insight is vital.

I prefer to use the word "director" rather than "conductor" for the following reasons:

1. The director gives general direction and inspiration, sets the outside parameters of a project, and generally is responsible for research, planning, and practical matters of organization and program theme and design. It is his view of the historicity of any given work which is imparted to the others. It is his awareness of the inner workings of the ensemble, the creative sparks, and the potentially destructive exchanges which often sets the tone for everyone. He steps out of the central performance role and allows each member of the ensemble to take decisions in the moment of performance. The function of a good director is to make himself redundant by the time of the first performance, which should happen without him.

2. The conductor conveys his specific interpretation in the performance, for the work is generated through him. The audience receives it through him, and the ensemble individuals are there to serve his insight and to subsume their own thoughts on interpretation to his. Their skills, individual and corporate, are at his service. He is at the very epicenter of the performance energy and receives the accolades personally. The function of a capable conductor is to make his presence essential at all performances, so that it cannot happen without him.

In a real sense the conductor is an anachronism in almost every case of music performance before about 1820. That is, he did not exist. One exception is Lully, who used his large stick to wave and stomp and set general tempi and changes of tempi, for no reason other than the king liked to watch him doing that. Directing from the harpsichord or violin is utterly

different in nature and function to that of the independent conductor. But to move toward this emancipated approach to unconducted performance, a completely different approach to rehearsal and preparation has to be conceived, and everyone involved has to develop new skills and awareness.

To demonstrate in detail what I mean, I have chosen a four-part ayre of John Dowland. This lyric can rightly be performed in several different ways, all allowed by Dowland and his era, but I will concentrate on a realization for solo SATB, but with an awareness of what it would be like for those four voices to have a lute provide an accompaniment, if available. This then is addressed directly to all singers—and their directors or conductors—and what is said here is relevant also to chamber choirs that use multiples of voices to each part.

First, it may be helpful to have a few general observations about the nature of performance in mind, that is, the energies that are at play and a review of the background philosophy. At best, "performance" is a transmission of inspiration, a communication of creative energy. What is the source of the inspiration, how is it channeled, and how is it received? These related rhetorical questions have a multiplicity of answers, changing as context and specifics change, but in a general sense they can be answered as follows.

The source of inspiration we can easily detect is the "concept" or the "idea" which holds a specific work together. For example, a song has words—it is a poem which is about a specific idea or emotion or situation. This is the conceptual level of inspiration which caused the poet to write. His resulting poem then fires the imagination of the composer, who casts the lyric in a unique way, adding to the initial inspiration, but the musical setting still conveys the original concept and might even strengthen it by its being cast in musical form. The performer is taken by the music, by the poem, and the idea, embracing all three, and will then serve that creative inspiration as best as able in performance. The audience is delighted by the performance, transported, and may only understand the brilliance of the performance as the reason for this elevated experience. But actually the original concept has been transmitted, and the greatest performers are those who are conscious of their role as transmitters. The mind of the auditor is then inspired by the initial concept, dressed in poetry and music, and presented in performance.

The lyric of the chosen Dowland song is anonymous, as so many song texts are from the Elizabethan period (this one was printed in *The First Book of Songs,* 1597). It is a love poem of unrequited love, and yearning is the dominant emotion. The poet, though, is enjoying his own creative wit and invention—it is self-conscious and exquisite in its beauty of language. The poet may be in love with his idealized lady, but he is also in love with the

English language and his own skill at manipulating it. The degree of self-consciousness in the poem's creation is important to note, for that quality should run through the performance as well, as it so movingly does in Dowland's sublime setting. Read this lyric a number of times to savor fully its inner music, its beauty of language, its lofty—even elevated—sequence of thought and imagery. Marvel at its poise, and say it aloud in order to taste the balanced vocabulary as a sensual sounded experience. Try reading it quite theatrically, with urgency, and with a plangent tone. In a sense, be the lover and play at being a noble courtier, imagining your lady so perfect, so unattainable, so beyond reach, so utterly desirable, yet pure, though unrelenting. Dwell on the sense of longing, an almost unbearably sweet yearning:

> Go christall teares, like to the morning showers,
> And sweetly weepe into thy Ladies brest,
> And as the deawes revive the drooping flowers,
> So let your drops of pittie be adrest:
> To quicken up the thoughts of my desert,
> Which sleeps too sound whilst I from her departe.
>
> Hast haplesse★ sighs and let your burning breath
> Dissolve the ice of her indurate harte,
> Whose frozen rigor like forgetfull death,
> Feeles never any touch of my desarte:
> Yet sighs and teares to her I sacryfise,
> Both from a spotless hart and pacient eyes.

[Note: "restlesse" in later editions. Two words have been modernized for comprehension purposes: "drooping" for "dropping," line 3, and "too" for "to," line 6]

I have retained the original spelling, for this gives a palpable sense of the era, just as working from the facsimile image of the original print keeps one's mind attuned to that time. The image is an artifact of those times and is therefore in a sense as precious as an Elizabethan silver shilling, a lady's lace glove, or a Jacobean sideboard. It is not being "ye olde worlde" for flippant reasons, quite the reverse. With original spellings, original notation, original contexts, we inhabit a little more closely the original mind-space, which undoubtedly helps assimilation and understanding. Of course, the convenience and ease of a modern edition, obeying all the carefully developed orthographic rules of our time, is a great aid to speed of study and rehearsal. In an ideal world, the facsimile and the modern edition should both be open for inspection at rehearsal. But modern editions can be misleading: compare the *Musica Britannica* first edition of the Dowland four-part ayres of 1964 with that of 2001. The changing tastes and parameters of what constitutes a good edition are also continually evolving.

It behooves every singer, ensemble as well as solo, to know their lyrics

utterly, virtually before they begin to sing it. They should have considered its surface meaning, the subtler layers of hidden meanings, the structure and architecture, the syntax, metaphor, verbal devices (like alliteration, assonance, and dissonance)—particularly key words, emotive or color words, which signify the chief passions involved—and above all words which have onomatopoeic potential. Words carry their own power, their own music, and are the chief aid to the performer's truth, assuring veracity in performance. To understand how far the contemporary mind of Dowland's time was attuned to English and its usage, the interested reader is urged to look at Henry Peacham's *The Garden of Eloquence.*[2] Like walking through a garden with an expert gardener to describe the plants and their context, Peacham the Elder takes our hand and surveys the wondrous variety of tropes, metaphors, and figures of speech. His own dedicatory epistle is a fine example of the rich use of eloquence:

> I was of a sodaine moved to take this little Garden in hande, and to set therein such Fyguratyve Flowers, both of Grammar and Rhetorick, as doe yeelde the sweete savours of Eloquence, and present to the eyes the goodly and bewtiful coulors of Eloqution: such as shyne in our speech like the glorious stars in Firmament: such as bewtify it, as flowers of sundry coullors, a gallant Garland: such as garnish it, as previous pearles, a gorgeous Garment: such as delight the eares, as pleasaunt reports, repetitions and running poyntes in Musick, whose utility is so great, that I cannot sufficiently prayse them, and the knowledge of them so necessary, that no man can reade profytably, or understand perfectlye, eyther Poets, Oratours, or the holy Scriptures, without them. ['The Epistle', Aiii]

And the purpose of this resonant language? *That Eloquence may be wise, and Wisdome eloquent.* And the relevance to us wishing to perform the songs of this era?

> The Oratour may leade his hearers which way he list, and draw them to what affection he will: he may make them to be angry, to be pleased, to laugh, to weepe, and lament: to love, to abhorre, and loath: to hope, to feare, to covet, to be satisfied, to envye, to have pittye and compassion: to mervaile, to believe, to repent: and briefly to be moved with an affection that shall serve best for his purpose. By figures he may make his speech as cleare as the noone day: or contrarywyse, as it were with cloudes and foggy mistes, he may cover it with darknesse, he may stirre up stormes, and troublesome tempests, or contrariwise, cause and procure, a quyet and silent calmnesse, he may set forth any matter with a goodly perspecuitie, and paynt out any person, deed, or thing, so cunninglye with these couloures, that it shall seeme rather a lyvely Image paynted in tables, then a reporte expressed with the tongue. ['The Epistle', Aiii]

So through a deep understanding of *Metaphora* (and a multitude of other less well-known tropes such as *Metonimia, Synecdoche, Antonomasia, Onomatopeia, Catacresis, Metalepsis, Antiphrasis, Acirilogia*) and how these

tropes work through the body, the senses, the mind (both rational and supra-rational), the orator (or for us, the singer) develops the skill to turn the minds of the hearers to a higher awareness. Such is the fundamental purpose of the lute-song genre.

Although it is obvious and self-evident, it is necessary to state again: all speech is made up of two fundamental aspects—vowels and consonants. The vowels carry the "ayre," both metaphoric and literal; the consonants interrupt that flow. The vowels bring underlying color unique to each sound; the consonants bring rugged features of detail. Vowels are horizontal and take time; the consonants are vertical and interrupt time. Considering that in English we use five basic vowels, and add complex mixtures of vowels and enjoy diphthongs (allowing vastly varying versions of English to manifest: American-English; Australian-English; Japanese-English; Yorkshire-English; Somerset-English; Shakespearean-English; Chaucerian-English, etc). And we have around twenty or so consonants, ranging from the soft and sibilant through the murmuring and mesmerizing to the strong and violent. All this raw material is then colored by our own individuality, timbre, and temperament. What fabulous freedom and diversity.

In teaching song, the differences are as important to explore and encourage as are the basic ground rules that hold good speech and song in place. Each one of us will enunciate the opening words of the poem *Go Christall Teares* differently, yet what unites all efforts is the fact that there are three expulsive sounds "g," "c," and "t." Contrast that with the opening of the second stanza, *Hast Haplesse Sighs*— "h," "h," "s"—three unvoiced aspirant sounds which transform the energy. Yet Dowland's music stays the same! Some commentators of the recent past have thought this to be a weakness of the lyric literature, and that Dowland was only consciously setting the first stanza. I believe what we see here is actually an inherent strength, not a weakness. How, too, the music is transformed, "indented" as it were, by completely different speech sounds—a miraculous transformation, which in the mouths of skilled singers becomes a truly breathtaking experience . . . if their minds are behind it!

When the commanding consonants of "g," "c," and "t" are consciously produced by each of the four singers (or multiples when done chorally), the listener is placed in the position of being addressed directly, as though becoming the "tear" of the poet/lover. Directly addressing or involving the listener is a potent means of drawing in the audience, convincing the auditors they are an important part of the alchemy of performance. Compare habitually pronounced consonants, lacking precision and having a sluggard dullness about them, to a precise conscious pronunciation—the difference is electrifying! Of course the degree of emphasis is a matter of taste, for

over-pronouncing sounds affected and precious. Here the director's independent ears become of crucial importance, for the ears within the ensemble can hardly discern the appropriate level of emphasis. In any event, the sharp precision of the commanding consonants should encourage a short, alert enunciation, moving rapidly to the following vowel, which carries the musical pitch and ayre. How loud should the singers be? Well, how loud is a lute? Being one of the quietest instruments invented by man, the vocalists should sing almost as though they were accompanying it (and this remains true of a choral performance); the volume level at the outset is close to a modern *pp,* yet having a commanding urgency. This low degree of dynamic encourages a sense of intimacy—and the audience is brought to the edge of its seat from the outset.

The diphthong in "teares" should be relished, for the complex journey made through the changing vowel sound ensures that this is the object of address: the tear symbolizes the unrequited feeling of the lovers' lament—it is the very epitome of it—and, curiously, an exaggerated diphthong on this word becomes a tear shape! The word becomes onomatopoeic, it becomes the thing. Certainly Peacham (and Dowland and his age) would have approved! The same must be said for "showers," too, and the painfully prolonged "weepe." Look for such power words, for the poetry is littered with them and they may easily be missed. How many one discerns in this little lyric depends on the reader's own imagination: my first list would include (aside from the power words already quoted), "sweetly," "revive," "drooping," "drops," "pity," "quicken," "sleeps"—in the first stanza only! Try your own list for stanza two.

In some sense, all the pointers toward a deeper understanding that I have surveyed here are addressed to the individual mind, rather than the "group" mind. That is, the "director" is the one who must take the lead in the alertness stakes, and impart this to the ensemble. However, it is my major contention that for vitally alert performances the "director" in each of us has to awake, and indeed dialogue with the "director" in the fellow singer next to you. An interesting exercise for a small ensemble (choral as well as single voices) is for each to sing *sotto voce* so as to be able to hear the other lines as clearly as your own. This is not a soggy unfocused kind of *sotto voce,* but a precise and detailed delivery, rather like looking at an object under the microscope. The mental alertness that attends this exercise allows an inner dialogue to be conducted: "Am I placing this or that consonant in a manner which integrates with the others?"; "Should I lengthen that vowel sound to emphasize a passing dissonance?"; "Is my word coloring too exaggerated/weak/just right?"; or, "Should I perhaps alert my colleagues to a feature they appear not to have noticed?"

This frame of mind leads to a completely different kind of rehearsal—one that could lead to open anarchy, excessive wordiness, and redundant dialogue. These things happen when you open several minds to a complex activity. Now is the time for the director's role to shine forth, for this is exactly when the ebb and flow of creative ideas needs to be trimmed and tacked, according to the weather. Squalls will blow up and will need negotiating, and it is certainly no good to anyone (least of all to Dowland's exquisite music and the inspired performance of it) for the ensemble to be rudderless at such times.

Simple rules can be subscribed to: only speak if you have something of value to say; keep silence a moment longer before speaking; listen to what is being said by others and consider it quietly; only one can speak at a time, and that person deserves full attention; become alert to "hobby-horses." We all have them, most particularly when we have just learned something new that seemed to work brilliantly in another context. Finally, the director has the last word, not so much as a dictator or adjudicator, but more because those are the ears "outside" the performance in the position of the audience. If what he decides irritates you too frequently, then find a new director. Conversely, if this crucial role tells you a particular singer is continually not responsive to input, change your team. Making great music and delivering great performances are, in the last analysis, about working creatively with other people.

This is how we can arrive at a short, commonsense list of rehearsal techniques. The following suggestions have proved to save enormous amounts of time in rehearsal. These things are not found in original sources, for they arise and develop to meet the practical needs, and every good rehearsal should have room to explore similar ideas.

Speaking the text precisely in rhythm, all parts together, shows many things and saves a lot of energy (it is, by the by, great fun, too!) The ear is alerted to rhythmic precision, to the composer's use of verbal repetition, vertical alignment and displacement of vowels and consonants. In short, this simple, obvious exercise raises ensemble awareness and tunes all parties in to the importance of the text. It is worth avoiding the tendency for some voices (and certain mentalities) that are inclined to speak in a monotone, to encourage a light "cantilena" style of speaking, rising and falling in what sounds like a rather affected manner. After initial laughter at the excessively "camp" effect, the ensemble quickly settles into understanding the immense value of this simple exercise. Use it often, and not only when dealing with a foreign language.

Singing all parts to a vocalized syllable (such as "da") acts as a counterbalance to the previous technique and encourages a greater awareness of

line and horizontal direction. Now the vocalists work more like a viol con-sort, "drawing" the sound out in an abstract manner and encouraging a clearer understanding of the overall harmonic language; the tensions and resolutions become palpable. The instrumental or abstract effect of this technique is truly liberating, making early polyphony seem as familiar as cool jazz.

Other techniques (little more than "tricks" sometimes) engage the en-semble and enliven the rehearsal. The alert director will spot the time for a change of energy and respond in an improvisatory way with an appropriate exercise. It would be quite wrong to list such things here, for every occasion there is a newly discovered way through, and it is the momentary discovery of the appropriate device that heightens rehearsals together.

There are, however, two essential rules to adopt in unconducted perfor-mances: first, whenever beginning a piece, a new phrase or new section, the breath of the highest part leads. Such coordination brings everyone together at the start of anything. Second, at the close of a phrase or end of a section or work, the last moving part leads to the cadence and close. This knowledge ensures every piece ends precisely together. Nothing could be simpler than these two instructions; they are well nigh universal, but, of course, there might be the exception, where consensually you make a new rule.

There is little new to say on a number of questions that arise with te-dious regularity. One of the most frequently raised topics with regard to early vocal music is that of vibrato. Now, all voices vibrate (sound after all is vibration, is it not?). It is really a question of degree, and of appropriateness. If you have followed with some sympathy the argument thus far, you will understand that other matters come higher in importance than vibrato: clarity of diction and consciously-formed vowel sounds both preclude ex-cessive vibrato. For some decades there has been a school of thought in singing which encourages an incessant vibrato, which has been put at the center of "good" voice production. This is actually untenable and is more often than not the last retreat of the old, very conservative approach to teaching singing, which is dominated, sadly, by a pedigree of singing teacher who is locked in an indeterminate non-historical past. If singing is regarded as a heightened form of speech, who then speaks with a continu-ous wobble or vibrato? That speechlike singing was revered can be attested by some of the earliest phonograph recordings, living alongside the blessed *bel canto,* which also confirms that vibrato should be used judiciously, as an ornament, and not as a permanent feature. A Dowland four-part ayre pre-sented with incessant vibrato in all four parts is as close to seasickness as sound can bring you, and all pleasure in the original lyric—the reason for the creation of the music—is lost. Matters such as improvisation and orna-

mentation must lie outside the scope of this brief excursion, other than to say all good performance arises in the moment and therefore, perforce, contains an element of improvisation; ornamentation can be as subtle as simply enriching a diphthong, or as complex as a continuous set of divisions.

I think Dowland and his time were finely tuned to philosophical ideas. He created the four-part ayre as a musical miniature of the Universe, which, it was thought in the Renaissance, was made up of four elements: Earth, Water, Air, and Fire. These four were the cause of the original Chaos, continually fighting among themselves. This unstable state continued until Eros (the God of Love), or Harmony descended and showed them how to cohabit peacefully, creatively. The result was a finely tuned balance and harmony, like an eternal, delicate dance. As it happens, the four natural human voice ranges were likened to the four elements: Earth/Bass, Water/Tenor, Air/Alto, Fire/Soprano, and Dowland's lute, with its seven tuned strings incorporating them all, represented Harmony. So the sensitive director "plucks" his mixed ensemble with delicacy and sensitivity, creating an exquisite balance and draws the best nature from each of his elements. The Fire carries the spirit of the poem, as the chief orator, and its quality "rises upward"; the Earth gives "support" and harmonic foundation; Air and Water "weave" together the outer parts echoing or anticipating the poetic message. The four-part ayre of John Dowland is truly a most sublime mirror of the "Little World of Man,"[3] and an ensemble that works in accord with this idea will find its performances reflect that fact, and the audience without necessarily knowing quite why, will appreciate that subtlety.

NOTES

1. Hartley, *Go-Between*.
2. Peacham, *Garden*.
3. Bamborough, *Little.*

BIBLIOGRAPHY

Bamborough, *Little;* Hartley, *Go-Between;* Peacham, *Garden*.

Editor's Suggested Listening

Recordings by following ensembles will provide ample opportunity for the interested reader to hear how the remarks of the authors of the three chapters on choral ensembles have been put to good use. Although many other fine groups qualify for this list, those provided here offer a sampling of some of the very best.

The Consort of Musicke, Anthony Rooley, director; Hilliard Ensemble; The Tallis Scholars, Peter Phillips, director; Pomerium Musices, Alexander Blachly, director.

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PART TWO

WIND, STRING, AND PERCUSSION INSTRUMENTS

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5

Recorder

HERBERT MYERS

Of all the early winds the recorder is surely the most familiar. In fact, for many it stands as a symbol for the whole of early music, for until not so long ago it seemed that the recorder movement and the early music movement were almost synonymous. Fortunately for both, that day is now past. In many an early music ensemble, however, the recorder ensemble still provides the main (if not the only) opportunity for students to become acquainted with an early wind. This modern emphasis on the recorder is not without some historical justification, particularly for Renaissance music, as it is evident from the sixteenth-century treatises of Virdung, Agricola, Ganassi, and Jambe de Fer (whose principal readership was undoubtedly the literate bourgeois citizen) that the recorder was often the primary woodwind of the musically cultivated amateur. Then (as now) its value as a pedagogical tool was recognized; Virdung specifically mentions that what is learned through the recorder can be applied to learning the other woodwinds, and the same thought appears to underlie the method books of Agricola. The recorder was also one of the instruments upon which the professional wind player was expected to double; some, such as Ganassi himself, may have specialized on it, and his own method attests to the high level of performance attained by some players. However, it is worth remembering that the ultimate achievement of the professional musician of the Renaissance was not playing any one instrument but several, and that those woodwinds that commanded the most respect were not the recorder but the shawm (in the fifteenth century) and the cornett (in the sixteenth). Thus, a student with the interest and aptitude should be encouraged to look beyond the limitations imposed by the recorder and to explore other avenues of Renaissance performance as well.

Nevertheless, it should be stressed that for many the recorder is an ideal medium through which to experience Renaissance music. Because (as instruments go) it is comparatively easy to learn, it can serve as a common meeting ground for players of diverse musical backgrounds. Players of other woodwinds have a decided advantage in picking it up, of course, and since it requires no special embouchure, it is not perceived as a threat to their modern technique. Its rather limited dynamic range encourages a concentration on subtleties of intonation and articulation, whereas its "cool"—some would say impersonal—tone color can help inspire a less driven style of musical expression than that typical of contemporary orchestral instruments.

However, the *modern* recorder is far from the ideal tool for Renaissance music. Recorders come in a variety of types and styles, but the one most common today is based loosely upon Baroque models, particularly regarding its basic internal and external shape. (It normally consists of three joints—a head joint with cylindrical bore plus a body and foot with contracting conical bore.) Its standardized range of two octaves and a tone and its fingering system (with some minor exceptions) are likewise a Baroque legacy, as is the basic layout of the family. Five sizes are in common use: sopranino (in f''), soprano (in c''), alto (in f'), tenor (in c'), and bass (in f); a sixth size—great bass or contrabass (in c)—is somewhat rarer. (In Britain the soprano is called the descant and the alto, the treble. Note that for recorders the expression "in f'''" has a meaning different from that for modern orchestral and band instruments. For the latter it implies a transposing instrument, on which a written C would result in a sounding F. For recorders it merely signifies the specific pitch of the bottom note. Octave displacements aside, recorder music is generally written untransposed; the player is expected to make the appropriate adjustments in terms of C or F fingerings.) Unlike most Baroque recorders, the modern instrument is usually intended to play in equal temperament at $a' = 440$. When well conceived and executed, it is an excellent all-purpose design. However, it should be clear from the following historical discussion that it represents a concept very different from that of the Renaissance recorder.

DESCRIPTION AND HISTORY

The recorder is a member of the family of duct flutes, which also includes the three-hole tabor pipe, flageolet, penny whistle, and various related folk instruments that share its method of tone production. A built-in duct or windway defines the entering air stream and directs it across an aperture or "window" and against a more or less sharp edge, thus causing the air column to vibrate. As in all woodwinds the frequency of vibration (and thus the

pitch) is controlled by the effective length of the air column, determined by the opening and closing of fingerholes by the player. Thus, the tone-generating geometry of the duct flutes is fixed at manufacture; it is out of the direct control of the player, who is able to regulate only the breath itself.

By contrast, the player of the transverse flute forms the duct with the lips, controlling both its size and direction as well the proximity to the edge; regulating these parameters provides the flutist with independent control of pitch, volume, and tone color. The resultant flexibility is not without its price, of course, as much effort and experience are required to develop the correct embouchure. Moreover (following the principle that "from him to whom more has been given, more will be expected") builders of early transverse flutes relied heavily upon this flexibility, requiring the player to compensate for defects of intonation inherent in the design of the instrument. By contrast, the inflexibility of the tone generator of the duct flute seems to have inspired makers to seek solutions to these defects, at least in the case of the recorder. As a result, for some time (through the Renaissance and into the Baroque) the transverse flute lagged behind the recorder in the sophistication of its acoustical design.

The design features of the recorder which separate it from the other duct flutes are subtle in nature but crucial to its unique development as an instrument for art music; it is not "just another whistle." Both surviving museum artifacts and present-day folk derivatives attest to the variety of medieval European duct flutes.[1] The recorder can be distinguished from the others by its fingering system, having seven fingerholes and a thumbhole. (On early recorders the lowest hole was often duplicated in order to accommodate all players regardless of which hand they held lowermost, the unused hole having been plugged up with wax; the resulting total of nine holes gave rise to the Renaissance French term *flûte à neuf trous* for the recorder.) Comparing the recorder to, say, the penny whistle, we see clearly the advantages conferred by the recorder's thumbhole. On the penny whistle, overblowing is achieved by simply increasing breath pressure, causing the high notes to shriek while the low ones are barely audible. Because of its thumbhole, the recorder's registers are more equal in volume. The thumbhole has two functions: it serves not only as a tone hole (extending upward the fundamental scale), but also as an aid to overblowing (much as the register keys on modern woodwinds). By partially uncovering it while fingering one of the lower notes, the player is able to ensure overblowing without greatly increasing breath pressure. Furthermore, the bore of the penny whistle must remain fairly narrow in order for it to overblow easily; the bore of the recorder can be made fatter, giving a rounder, fuller timbre and a more telling bottom register.

It is difficult to determine just when the recorder was invented. Iconography is of little help here, naturally, as the crucial element—the thumbhole—is usually hidden from view. Among the few surviving medieval instruments is the famous recorder excavated in 1940 from the moat of a fourteenth-century castle near Dordrecht, Holland. This instrument, now in the Gemeentemuseum, The Hague, has been the subject of various reports; estimates of its date of provenance have ranged from the thirteenth to the fifteenth century.[2] In 1987 a recorder was unearthed from the latrine of a medieval house in Göttingen, Germany; this one is almost certainly from the fourteenth century.[3] Despite any uncertainty about dating, however, these finds establish that the recorder as we have just defined it was known from the earliest period we can legitimately call the Renaissance.

These recorders are (in modern terms) both sopranos. The bore of the Dordrecht instrument is a simple cylinder of comparatively narrow diameter (11mm), whereas the bore of the Göttingen one is similarly narrow but slightly more complex.[4] Without keywork, successful cylindrical recorders can be made down to about the size of a modern alto. In order to overblow accurately they demand rather large fingerholes, particularly at the lower end; with instruments larger than an alto, the holes become impractically large and the finger stretches impossible. The solution, seen on the majority of surviving Renaissance recorders, is to constrict the lower bore, allowing smaller fingerholes with closer spacing. This solution then makes the larger sizes of recorder practicable. The constriction is rarely sudden; the bore profile generally begins to contract near the upper tone holes, reaching its narrowest dimension near the lowest ones. From this point to the bottom end the bore flairs out again, attaining nearly the diameter of the top of the instrument; to the casual observer such instruments may even appear cylindrical—and have often been so described by those who should know better! A further benefit of this "choke bore" (as it has been called) is the effect it has on timbre; as pointed out by Bob Marvin, the choke seems to deemphasize the second harmonic of the lowest tones, taking away the "honking" quality characteristic of the cylindrically bored instruments.[5] In some surviving Renaissance recorders, the constriction takes place even lower down and the bore fails to expand; the resultant "step bore" (as Adrian Brown has characterized it) is found in about 18 percent of extant examples (see Brown, "Overview" and Brown and Lasocki, "Renaissance").

Unfortunately (and somewhat inexplicably) Renaissance makers did not always exploit the full potential of the complex bore to solve intonation problems; few of the surviving examples live up to what we might expect of professional instruments. (This is not to say that Renaissance recorders could not be *played* in tune, but that doing so often demands considerable

effort.) Typically ●●●/●●○○ overblows as a wide octave, and ●●●/○○○○
sometimes overblows as a narrow one; these problems can be cured by a ju-
dicious profiling of the tapered section of bore, as shown by Bob Marvin in
building his improved reproductions. We can never know, of course,
whether the surviving instruments represent an accurate sampling of the
ones available to Renaissance musicians; quite possibly the best ones were
literally used up. But one still has the impression that the achievement of a
really good example was to some extent fortuitous.

The Renaissance recorder was clearly developed as a consort instru-
ment for playing vocal-style polyphony. The performance of such music on
recorders is documented unequivocally from the second half of the fif-
teenth century, beginning with the celebrated recorder quartet (dressed as
wolves and playing a chanson!) at the marriage of Charles the Bold of Bur-
gundy to Margaret of York in 1468. The practice is undoubtedly even
older: a quartet of recorders also performed at the Banquet of the Vow (or
Feast of the Pheasant) given in 1454 by Charles's father, Philip the Good,
and a set of four recorders (along with four shawms and four douçaines)
were ordered by Philip in 1426 to be sent to the Marquis of Ferrara.[6] The
first depiction of a set of recorders playing together seems to be the trio (of
three distinct sizes) in the Flemish painting *Mary Queen of Heaven* (ca. 1485)
by the Master of the St. Lucy Legend (National Gallery, Washington, D.C.).[7]
No hard evidence has yet been discovered attesting to the development of
a bass recorder in the fifteenth century, although the musical repertories of
the late fifteenth century would seem to demand one.

The first solid evidence of the bass recorder is in the *Musica getutscht* of
Sebastian Virdung (Basel, 1511).[8] (Although Virdung's crude illustrations do
not give us the absolute sizes of the instruments he treats, the fact that his
largest recorder has a key suggests that it is significantly larger than a tenor
recorder—a size rarely provided with a key in the Renaissance.) Three sizes
of recorder are mentioned by Virdung: *discant* in *g, tenor* in *c,* and *bassus* in *F.*
(These represent the *written* pitches of the lowest notes, the *sounding* pitches
being an octave higher.) His nomenclature is thus similar to ours, except
that his smallest recorder would be called an alto (or treble, in Britain). A set
of recorders, according to him, could include four or six; the latter would
consist of two of each size (including bass). For four-part music—the norm
at that time—one would usually need a *discant,* two *c* tenors, and an *F* bass;
this is the consort he illustrates. However, an unusually high *contratenor altus*
part might demand a second *discant* recorder in place of one of the tenors,
as he points out. The same three sizes of recorder (*g, c,* and *F*) are men-
tioned by Martin Agricola (*Musica instrumentalis deudsch;* Wittenberg, 1529
and 1545[9]), Sylvestro di Ganassi (*Fontegara;* Venice, 1535[10]), and Philibert

Jambe de Fer (*Epitome musical,* Lyons, 1556[11]). Conspicuously absent from any of these discussions is any mention of a soprano (British descant) recorder in the modern sense; clearly there is some discontinuity between the early sixteenth-century practice and that represented by the Dordrecht recorder discussed above. The first sixteenth-century citation of such an instrument is found in the manuscript writings (ca. 1546) of the scientist, mathematician, and amateur musician Jerome Cardan.[12] Cardan is aware of Ganassi's experiments with expanding the high range of his soprano (i.e., alto) in *g,* but he himself prefers instead to use one yet a fifth higher (in *d′*) to cover that range.

By the seventeenth century, the family of recorders had expanded considerably. Michael Praetorius (*Syntagma Musicum II;* Wolfenbüttel, 1619[13] lists eight sizes: *klein Flötlein* or *exilent* in *g″; discant* in *d″; discant* in *c″; alt* in *g′; tenor* in *c′; basset* in *f; bass* in *B♭*; and *grossbass* in *F.*[14] Thus, only the tenor retained its original name, the *discant* and *bassus* having been renamed (and their old names having been reassigned to the sizes next further out in the system). Just when this expansion took place is uncertain, but it cannot have taken place overnight. On this question the didactic sources must be supplemented by other sorts of information, such as inventories, extant instruments, iconography, and documented performances. Collectively these confirm that the larger sizes of recorder were available (to the nobility and more affluent institutions, at least) by about the middle of the sixteenth century.[15] Information regarding the smaller sizes is less abundant, in part because they are simply less remarkable as objects. Again, however, inventories—such as those of the Graz *Instrumentenkammer* (1577) and the Berlin *Hofkapelle* (1582)—are of some help; although terminology is sometimes debatable, they do establish that smaller *discant* recorders had become normal members of the consort by the last quarter of the century.[16]

It will be noticed that Praetorius's pitch designations are an octave higher than those given in the sixteenth century; he has the credit for mentioning in print what some must have already known: that recorders and flutes normally sounded an octave higher than written (at four-foot pitch, in organists' terminology). He mentions that the tenor recorder or tenor crossflute can serve either as *discant* at written pitch or tenor sounding up an octave. Undoubtedly the larger recorders had for some time been used to play at written (or eight-foot) pitch. However, the traditional use of the smaller recorders and flutes at four-foot pitch seems to have continued long into the seventeenth century.

Surviving instruments present a somewhat more complex picture than that given by Praetorius. To be sure, several among them attest to his scheme of pitches, assuming a reference pitch of about *a′* = 460 (almost a

semitone above $a' = 440$; see chapter 25). But many do not fit this scheme. Some would appear to be alternative sizes a tone above those he mentions: *bass* in *c, basset* in *g,* tenor in *d′;* these are quite numerous in museum collections and would have been handy when playing the large recorders at eight-foot pitch (being an octave below the normal tenor, *alt,* and *discant*). However, these could be regarded instead as "standard" sizes (as defined by Praetorius) conforming to a reference pitch a whole tone higher than $a' = 460$ (about $a' = 520$, then), although there seem to be no surviving *grossbass* sizes (and few *alt* sizes) at this pitch to confirm such a notion. A few recorders (those in modern *e♭, b♭, f′,* and *c″*) could best be explained as instruments built at a pitch standard about a tone below $a' = 440$ (i.e., about $a' = 392$); if Praetorius's reference pitch was indeed about $a' = 460$, these would then represent the pitch standard a minor third lower which he says had been common for winds in England and was still common in the Netherlands. Finally, there are a few surviving recorders that play at about $a' = 440$ (though among these some of the essential sizes are missing), plus a few "leftovers" that do not fit any of these standards.[17]

Modern Reproductions: Selection and Use

What does all this information mean for the modern practitioner of Renaissance music? Obviously it would be very impractical—not to mention expensive—to have recorders at all of these early sizes and pitches; some choice is necessary. Furthermore, modern versions of "Renaissance" recorders are available in a bewildering variety of models. Among these the most carefully conceived and executed are produced by individual builders, who naturally charge fairly high prices and commonly have long waiting lists. Factory-built products tend to be more loosely based on historical examples and more often have additional nonhistorical keywork and other compromises aimed at pleasing a more general clientele. (Exceptions are to be found in both categories, however.) Given the variability of such a market, it would seem most helpful here to discuss the factors to be considered in choosing makes, sizes, and pitches, rather than to make specific recommendations that may soon be rendered obsolete. First of all, priority must be given to the four-foot pitch set. Praetorius's *bass* and *grossbass* recorders were developed comparatively late in any case and must have been rather rare in their own era. Thus, as lovely and wonderful as an eight-foot-pitch set is, it must be considered a luxury; we need not fear we are misrepresenting Renaissance timbres if it is lacking. On the other hand, the addition of a single *bass* (great bass, in modern parlance) to a four-foot-pitch set can be a considerable boon, particularly for the performance of the later repertory

in which the bass parts often descend below *F.* Such an instrument also can allow the transposition of some pieces down a fourth or fifth, giving some relief from the stridency of the four-foot set. (It is only with a *bass in B♭* rather than *c* that the transposition down a fifth could be made automatic by having the players merely shift down a size, as explained in chapter 25, "Pitch and Transposition." At the present time, however, such a *bass in B♭* is extremely rare; it is offered by few makers.) Instruments smaller than Praetorius's *discant* also appear to have been rather late developments, lying outside the realm of the normal recorder consort. (They are not included in the various quartets suggested in his chart of ranges. He does mention the use of a *klein Flöitlein* to double a cantus line in the *tutti* of a large concerto;[18] this use recalls Monteverdi's employment of a *flautino* as an orchestral "color" instrument in *Orfeo.*[19] However, these uses reflect more a Baroque than a Renaissance aesthetic.)

Perhaps a more difficult—and certainly a more binding—decision concerns the pitch standard. (One can always buy additional instruments later; changing pitch, however, demands replacing those already purchased.) As we have seen, there was clearly considerable latitude in pitch among the surviving antique instruments. We cannot regard any one pitch as more "correct" or "authentic" than another (except, perhaps, in a statistical sense); again, we are not "misrepresenting the Renaissance" by choosing, say, $a' = 440$ over $a' = 460$. There are, however, clear physical advantages to a higher standard. It is difficult, for instance, to make a keyless Renaissance tenor at a standard lower than $a' = 460$; most makers building Renaissance-style recorders at $a' = 440$ resort to a key for the bottom note of the tenor. Still, most people will find that the practical benefits of adhering to modern standard pitch outweigh the drawbacks of the larger dimensions.

The ranges of Renaissance recorders are generally smaller than those of the normal modern instrument design. Most Renaissance sources specify a range of an octave plus a sixth or seventh; Jambe de Fer is unusual in specifying two octaves. In all cases, the high-note fingerings (those for notes above ∅●●○/○○○○) differ from the standard, Baroque-derived modern ones, and the latter do not work on surviving Renaissance examples. The modern high-note fingerings depend on the short contracting foot of the later design; the expanding lower bore of the most common Renaissance design (which is responsible for its fuller low register) is proportionately longer, causes them not to work. A further restriction in range is to be encountered in some modern Renaissance-style recorders, particularly those (by several makers) based on the superb designs worked out by Bob Marvin. Here, priority has been given to the tone and intonation of the middle and lower registers; as a result, the fingerings for notes above

⌀●●●/○○○○ are often quite tricky and do not follow the dictates of any historical chart.

Given these restricted ranges, it is particularly important in dealing with Renaissance recorders to have the proper alto—meaning one in *g′* rather than in *f′*. (The question of the *d″* or *c″* soprano is less crucial, partly because of the specific part ranges involved.) The *superius* parts of many sixteenth-century pieces fit beautifully on an alto in *g′* but are just a little too high for an *f′* alto of Renaissance design; if the latter is the only one available, the only solution is to use a soprano instead, giving rather the wrong timbre to the ensemble (especially for the earlier literature). Not surprisingly, having just the right instrument is often a helpful guide to its own historically correct employment.

The intonation system is also extremely important. Despite their reputation for being easy to play, recorders are actually quite difficult to play in tune, especially with each other. Playing in tune is aided immensely when the instruments themselves are tuned to a system using just or "pure" thirds instead of equal temperament; in practice, this means something resembling meantone temperament. (See chapter 24 for a theoretical explanation.) Most makers of handmade Renaissance-style recorders are aware of this fact and are happy to oblige; they are frequently frustrated by the reluctance of their customers to "experiment" with systems they fear are odd or unnatural. Such fear is ill-founded, however, as the whole point of tuning an early wind with pure thirds is to ease the task of intonation, not to make it more difficult. Furthermore, the reasons to use equal temperament—playing together with modern instruments or playing in keys far removed from C major—simply do not apply to Renaissance recorders; the probability that one would ever be called on to play in F♯ major with a piano accompaniment is slight indeed![20]

Closely allied with the question of intonation is that of so-called combination tones—buzzing sensations in the ear resulting from the interference of two or more soundwaves. These subjective phenomena are particularly noticeable with recorders (and flutes, as well) because of the high pitch. They are also called "difference" tones, since it is the numerical difference in frequency between pairs of actual sounding tones that determines their pitch. For the simple musical intervals formed by adjacent members of the harmonic series, the difference tone is the fundamental of that series. Thus, with the major triad *c″-e″-g″* (when played perfectly in tune) the fifth *c″-g″* produces the difference tone *c′*, and both the major third *c″-e″* and the minor third *e″-g″* produce *c*. (Changing the voicing of the chord will still produce Cs, but at different octaves.) With a major chord, then, the difference tones serve to strengthen the root; with a minor chord, things are not

so simple. In the case of the minor triad *c″-e♭″-g″*, the fifth again produces *c′*, but the minor third produces *A♭* and the major third, *e♭*—altogether a rather cacophonous jumble. No wonder it is often so difficult to tune a minor chord, when even the best intonation still produces a dissonant effect! (Editor's note: for more on "difference" or "residual" tones, see chapter 22.)

Fortunately for an audience difference tones are less noticeable the further one is from the source. To the player, however, they can be extremely useful indicators to help achieve better intonation. In playing harmonic (i.e., simultaneous, as opposed to melodic or successive) intervals, one often has difficulty identifying the direction of any mistunings; that is to say, the effect is rather similar if the interval is slightly too large or too small. The difference tone, however, is an immediate and unfailing guide; if it is too low, the interval is too small; if too high, the interval is too large. As an indicator it is surprisingly sensitive; moving from a pure major third to an equal-tempered one raises the difference tone by more than a quartertone.

This brings us back to the importance of pure-third-oriented intonation on recorders. It is here, in my opinion, that we sense the greatest failure of the modern, equal-tempered recorder as a consort instrument. However, with some judicious tinkering with tone-hole sizes one can often work wonders with inexpensive instruments, if they are cleanly voiced and have fairly accurate octaves. An early music ensemble could do far worse, while waiting for its "ideal" set of Renaissance recorders, than to acquire a set of cheap recorders and "have a go" at improving their intonation; the experimentation is itself instructive.[21] This is in no way to be construed as an open invitation to butchering fine instruments, but it is based on the experience that most of what one might reasonably do to change the size of tone holes is reversible, as long as one is fairly neat about it. With inexpensive recorders the potential musical and pedagogical benefits will outweigh the dangers.

Hole sizes are only part of the answer; in order to play really well in tune on any recorder one must be willing to experiment with—and use—alternative fingerings. In particular, one must find flatter fingerings for sharps and sharper fingerings for flats. This, of course, means differentiating between common enharmonic pairs, such as G♯-A♭, finding a fingering for the G♯ that makes a pure major third with E and one for A♭ that makes a pure major third with C. In searching for the proper fingerings it is often helpful to make use of partial coverings, even as part of cross-fingerings. The modern recorder has been designed from what we might call a "digital" (i.e., all-or-nothing) approach to fingering, in which the only adjustable covering is done by the left thumb. Partial coverings, however, formed a regular part of the fingering technique of earlier recorders, Renaissance and Baroque.

Ganassi stresses the need for such shaded fingerings both for good intonation in normal playing and for soft expressive effects. Perusal of his charts shows that the sixth finger in particular was often required to make a partial covering of its hole; this is because on Renaissance recorders the modern second-octave fingerings ∅●●●/●○●○ and ○○●●/●●●○ are usually too flat and ∅●●●/○●○○ is too sharp; ∅●●●/●○○○, ∅●●●/●●○○, and ∅●●●/○●○○ were used instead, at least by Ganassi.[22] Modern versions of Renaissance recorders often demand the same treatment. One may also find that ●●○●/○○○○ is too sharp and ●●○●/●○○○ is too flat, in which case the "analog" solution ●●○○/∅○○○ may be less awkward (and more transferable between instruments) than a "digital" solution involving some lower hole.

Mention should be made of the so-called Ganassi recorder offered by some makers. Ganassi's regular fingering charts give an octave plus a major sixth for all sizes, a range he claims is normal for most players. However, in addition he gives special charts for high notes—his own invention, he says—extending the range of his *soprano* (alto) in *g* yet another octave. There are three of these special charts, which are "brand specific" (carrying the makers' marks "B," a stylized "A," and a trefoil; the latter two marks have been found on surviving instruments). Unfortunately, these high-note fingerings do not work on most Renaissance originals; in fact, only one promising instrument seems to exist—an atypical alto in Vienna with a cylindrical bore terminating in a short flare.[23] Using this design as a point of departure, various makers have developed instruments which respond to Ganassi's extended-range fingerings. By a similar process of extrapolation from a fingering chart, makers have also endeavored to fill in another important gap in the recorder's history by producing a "van Eyck" recorder. In some copies of Jacob van Eyck's *Der Fluyten Lust-hof* (Amsterdam, 1644–ca.1655) are included fingering charts (for soprano in *c′*, written pitch) in which the high-note fingerings are those of later Baroque recorders; the instruments illustrated, however, are of one piece and have the plain outline of the Renaissance design. To date, no example has been found of an original with Baroque bore and Renaissance appearance, although there do exist a few "transitional" instruments with Baroque bore, one-piece construction, and some ornamental turnery.[24]

Historical Technique

Most of the sixteenth-century method books have little to say about recorder technique beyond fingering. Again Ganassi stands out as the great exception, although there are a few helpful remarks about articulation to be found in the 1545 edition of Agricola. From the latter we learn that the

basic tongue stroke for slower notes is "de de de . . . ," well coordinated with the fingers; this implies what we might now call "tongued legato." For faster notes one is to employ a kind of double tonguing, alternating "di" and "ri"; players disagree, he says, on whether to use single or double tonguing for medium fast notes. His practice thus differs from the modern one in two significant ways. Modern double tonguing alternates "t" and "k," to the exclusion of other consonants, and it is usually employed only when the notes are so fast as to make single tonguing impossible; one normally attempts to equalize the sound of the two consonants, so that alternating them at slower speed would be meaningless. Agricola's examples thus imply both a smooth connection and a subtle distinction between alternating tongue strokes. For the fastest ornamental notes, he says, some use a "flutter tonguing," which he spells "tellellellelle . . ." Because a literal repetition of an "l" produces almost no effect on the recorder, it has been suggested that the intended effect is akin to that of the "diddle" or "tootle" tonguings described in the eighteenth century.

Double tonguing is also of primary concern to Ganassi. His patterns range from the sharp "teche teche" (essentially the modern form; Italian "ch" = English "k") to the smooth "lere lere" (which is hardly articulated at all, he says); between them stands "tere tere" (similar to Agricola's "diri diri"), which is a mixture of sharp and smooth. (Note that the "r" of both Agricola and Ganassi is most probably a single "flip" of a rolled "r"; it is certainly not the North American English "r"!) Ganassi suggests experimenting with different vowels ("tara; tere; tiri; toro; turu," etc.) in order to find out which is personally most conducive to speed. The purpose of these different articulations is clearly to provide the largest possible range of expression for the divisions that make up the bulk of his *Fontegara*. In fact, for him imitation of the singer's full range of emotional expression is the chief task of the recorder player. Bound up with imitating the artifice of the singer are *prontezza* (breath control) and *galanteria* (the art of making *tremoli,* or trills); both are to be varied in their effect from *suave* (tender) to *vivace* (lively). Ganassi provides a chart of trills in which those marked with a "V" (for *vivace*) produce larger intervals and those marked with an "S" (for *suave*), smaller. The former are commonly as large as a third and the latter as small as a *diesis* (quarter tone), the exact size depending on how far the trilling finger is removed from the hole.

Jerome Cardan confirms much of Ganassi's information about recorder technique and expressive effects. He is particularly enamored of the tremolo of a *diesis* made by barely lifting the finger from the hole. (It should be noted that this effect is the opposite of the *flattement* of the French Baroque, in which a finger beats against a lower hole; in the latter

case, the microtonal fluctuation is below the note, not above.) He does, however, mention two techniques not described by Ganassi. One is making the tremolo (a specific ornament, not a constant vibrato) by means of the breath as well as the fingers; the other is extending the lower range by a tone or semitone by resting the end of the recorder against the leg and abating the breath.[25]

REPERTORY

Music appropriate for Renaissance recorders encompasses virtually every genre, vocal or instrumental, from the late fifteenth to the early seventeenth century. (One might point to intabulations for, say, lute as an obvious exception but for the fact that scholars have occasionally reconstructed plausible original polyphonic versions of such pieces.) As one of the first instruments to have been developed as a family, the recorder is certainly suitable for the many Franco-Flemish compositions preserved in manuscripts of the late fifteenth century. Although much of this repertory was originally vocal, the fact that it was often transmitted in untexted form points to a penchant for instrumental performance at the time; in addition, many of the pieces do seem to have been conceived originally for instruments.[26] In the early sixteenth century, the secular songs of France and Germany appear to have been vehicles for performance on consorts of recorders, and there is no reason to exempt the parallel literature from other countries. Although recorders are perhaps not the most effective dance instruments, they would probably have been the first choice of amateurs playing the many printed sixteenth-century dance collections; they are mentioned by Arbeau as possible instruments for playing pavans and basse dances.[27] Recorders were also important elements in the various mixed consorts of the sixteenth century, whose documentation starts with the Messisbugo "cookbook concerts" of 1529.[28] Recorders (including a set of large ones) were used by Lassus in performances at the Bavarian ducal court in the 1560s.[29] A professional recorder consort was employed in the English royal court beginning in 1540, when five Bassano brothers were imported by Henry VIII from the Venice of Ganassi. Much of the surviving literature composed by members of this long-lived ensemble would appear to have been intended for recorders.[30] In selecting vocal music for performance on recorders one should bear in mind that the word-paintings (so-called madrigalisms) characteristic of the late sixteenth and early seventeenth centuries often create interesting motives and textures that are effective instrumentally. However, those pieces that rely mainly upon the expressive pronunciation of actual words or that feature vocal exclamations (*Ahi!* or *Ohimé!*, for instance) seem

especially unsuited to recorders. Similarly, those instrumental works from the same period which depend for their effect more upon sonority and less upon contrapuntal interest are often less satisfying on recorders (particularly at four-foot pitch).

Modern practical editions of the repertory for recorders constitute an embarrassment of riches; just playing through all that has been published could take years. Much of it is now available in quasi-scholarly editions, in which the editors have taken some pains to distinguish their own contributions from those of the original text without losing the "user-friendly" feel of the practical edition. In general, the main fault of such editions is that they still have the modern recorder family in mind, meaning that pieces in the "high clefs" (see chapter 25) almost always appear at their original pitches. Such pieces usually require transposition downwards (usually by a fourth) in order to fit on the *F-c-g* consort of the early sixteenth century; even those from a later period (when a soprano is appropriate) could often benefit from downwards transposition so that they might lie in a more sonorous range. The same pieces would of course appear at their original pitches in scholarly editions, too. The best solution, short of writing out a transposed version, is to learn to transpose, imagining different clefs (including the various C clefs) and sometimes different fingerings. Such a process will work out better for some players in an ensemble than for others. For instance, transposing a part in treble clef down a fourth on an alto in *g′* is simple; one need only read it as a soprano in *c″*. Unfortunately, the solutions for the other parts are not so straightforward.

Suggested Listening

There are, to my knowledge, no available recordings of original Renaissance recorders, as there are of Baroque examples. However, several excellent recordings have been made by the Wiener Blockflötenensemble using a set of Renaissance-style recorders (at *a′* = 460) by Bob Marvin. These include *Blockflötenmusik der Renaissance: Italien* (Teldec 6.42033, 1977); *Blockflötenmusik der Renaissance: England* (Teldec 6.42356, 1979); and *Blockflötenmusik der Renaissance: Niederlände* (Teldec. 6.42635, 1981). (The last of these has been reissued by Musical Heritage Society as *Renaissance Recorder Music from the Netherlands*—MHS 7191Y, 1985.) Using sizes from *F grossbass* to *c″* soprano, they demonstrate almost the full range of Praetorius's expanded consort. From the standpoint of sheer sonority the low (eight-foot pitch) grouping is especially compelling, even when its use for the earlier repertory is historically questionable. Recordings featuring mixtures of individual Renaissance-style recorders with other instruments and with voices are

somewhat more common. A fine example (again using recorders by Bob Marvin) is *Au verd Boys! To the Greenwood* by the New World Consort (Collegium Records COL 8407, 1985, reissued as a CD by Musical Heritage Society—MHS 512326W, 1989). As more instruments of this type become available—and as players come to appreciate their special qualities—we can look forward to their increased use in both concerts and recordings. A few tracks are performed on a matched set of Renaissance recorders made by Bob Marvin by the Musica Antiqua of London (*A Songbook for Isabella,* Signum 039, 2003). A consort made by the Prescott Workshop is used for four compositions by William Byrd by The Frideswide Consort (ASV Gaudeamus 170, 1997).

[Editor's note: An extensive Web site of interest to the recorder player may be found at http://www.recorderhomepage.net/, which includes this link to a large reference section: http://www.recorderhomepage.net/torture9.html. The bibliography at the end of this book is replete with references to the recorder.]

NOTES

1. For a tabulation and analysis, see Moeck, *Typen.*
2. See Fitzpatrick, "Medieval": 361–364 and Weber, "Recorder": 35–41 for divergent opinions as to the age of the Dordrecht recorder. Fitzpatrick claims that radiocarbon dating of items found with it "proves" a date of ca. 1250; other circumstantial evidence suggests a later date (the castle itself was inhabited from 1335 to 1418).
3. See Hakelberg, "Some": 3–12, and Reiners, "Reflections": 31–42.
4. For further discussion of these precious finds, see Myers, "Flutes" in Duffin, *A Performer's Guide to Medieval Music:* 379–380.
5. See Marvin, "Recorders": 30–57, for a list of surviving Renaissance and Baroque recorders, their physical and musical characteristics, and information that he has gleaned from making reproductions of them; see also Brown, "Overview."
6. Marix, *Histoire:* 105–106. The word *fleutes* (or *flustes*) employed in Burgundian records can be taken only to mean recorders, given the lack of evidence for transverse flutes in fifteenth-century Europe.
7. Remnant, *Musical:* 115–117.
8. See Hettrick, "Sebastian": 100–104.
9. See Hettrick, "Martin": 108–109 and 141–145.
10. Ganassi, *Opera.* It is unfortunate that these modern editions print Ganassi's fingering charts without including his pitch designations (except for the charts included in the appendix showing a few facsimile pages). The texts, too, leave much to be desired and are in need of thorough revision.
11. Jambe, *Epitome:* 53–55 and (unnumbered) recorder fingering chart.
12. Cardan, *De Musica:* 68–69.
13. Praetorius, *Syntagma II:* 33–34.
14. A ninth instrument—described and illustrated with the recorders but not listed with them—is his *gar kleine Blockflötlein* with *d‴* as its bottom note. Some three or four inches long, this is not, properly speaking, a recorder, since it has but three fingerholes and a thumbhole. The modern "garklein" offered by some makers is usually, in

fact, a tiny recorder—a "supersopranino" in c'''—which is so small as to be barely playable by most adults.

15. For instance, the famous *grossbass* (with extensions down to C!) now in the Vleeshuis Museum in Antwerp was part of a chest of recorders (now dispersed) once belonging to the Hansa House of that city. The instruments were probably purchased between 1569 and 1591 and were made by the builders Hans Rauch von Schratt (fl. 1535) and Casper Rauchs Schrattenbach (fl. 1570). A matching *bass* in c (with extensions to G) now in Munich is signed "Hans Rauch von Schratt" and was probably once part of that same Antwerp set. (See Lambrechts-Douillez, "Een contrabass.") The Accademia Filarmonica of Verona was another institution that owned numerous recorders; their *flauti grosse* were mentioned as early as 1552. (See Woodfield, *Early:* 188.) In fact, there is evidence suggesting that some of the large recorders still in Verona (including one *grossbass*) were part of a collection predating the foundation of the Accademia in 1543. In any case, we can be certain that by 1562 the deepest recorders owned by the Accademia were larger than *basset* size, since the inventory of that year mentions "three crooks for playing the basses"; such crooks were generally used only on *bass* and *grossbass* recorders in the Renaissance. (See Di Pasquale, "Gli strumenti": 8.) What appears to be a *bass* (blown through a crook) is shown in the hands of one of Lassus's musicians in the famous Hans Mielich miniature (1570) depicting the Bavarian court "orchestra."

16. The Graz inventory lists a set of recorders containing "two basses, four tenors, four discants, and four smaller discants, plus two very small recorders"—thus five sizes in all; see Schlosser, *Sammlung:* 19. The Berlin inventory lists one set made up of four sizes (*bass, tenor, alt, discant*) and another of five (the same four plus a *klein discant*); see Sachs, *Musik:* 206.

17. See Brown, "Overview" for an analysis of the pitches of surviving Renaissance recorders.

18. Praetorius, *Syntagma III:* 173; Kite-Powell, "Michael Praetorius": 176.

19. However, Monteverdi's *flautino* is most likely a soprano in c'' rather than the sopranino (*exilent*) in g'' specified by Praetorius. Monteverdi refers to it as the *flautino alla vigesima seconda* ("little recorder at the twenty-second"); this is organ terminology, the "twenty-second" being the third octave above C (the bottom note of the organ manual at eight-foot pitch)—that is, c''.

20. If called on to play with equal-tempered Renaissance instruments (specifically, fretted strings), one still has enough flexibility through breath pressure to make the necessary accommodation.

21. A useful publication when making such modifications is Brown-*Recorder.* Brown has little to say about intonation systems per se, but the physical principles involved in tuning are universally applicable. Of the natural scale one must raise by increasing amounts Gs, Cs, and Fs and lower (again by increasing amounts) As, Es, and Bs, leaving Ds alone. One can either do this "scientifically," using a tuning meter, or purely by trial and error.

22. The less sophisticated charts of the other sixteenth-century authors are "digital" in nature and do not show the partial coverings recommended by Ganassi.

23. See Morgan, "Making": 19–20 and Loretto, "When": 64–65.

24. See Griffioen, *Jacob* for a discussion of the recorder appropriate for this repertory.

25. Cardan, *De Musica:* 62–71.

26. See Lockwood, *Music:* 266–277.

27. Arbeau, *Orchésography:* 67.

28. See Brown, "Cook's": 233 and 238–240 and Brown, *Sixteenth-Century:* 61, 67–68, 97–99, and 104–107.

29. See Baines, *Woodwind:* 256–257 for a partial listing.

30. See Lasocki and Prior, *Bassanos:* Recorder.

6

Renaissance Flute

HERBERT MYERS

The Renaissance transverse flute remains one of the more neglected instruments in the revival of early music; it was, by all accounts, much more important in the period than its modern use would indicate. The consort of flutes appears to have been developed in the first decades of the sixteenth century. Transverse flutes had been in common use throughout Europe in the Middle Ages but seem for some mysterious reason to have suffered a marked decline in popularity near the end of the fourteenth century, and little evidence exists of their use throughout the main part of the fifteenth. The flute first reappears near the end of the fifteenth century as a fife, played in association with the side drum for dancing and in military contexts. Virdung (*Musica getutscht,* 1511) makes casual reference to this military use, which seems to have been the origin of the appellation "German flute," which continued to distinguish the cross-flute from the recorder long after the flute had become a chamber instrument. (Within Germany itself, however, soldiering was associated specifically with the Swiss, giving rise to the term "Schweitzer Pfeiff" found in German sources.) Perhaps surprisingly, the first evidence of the development of flute consorts is to be found within this outdoor, military setting; the fife cases carried by Maximilian I's fifers (Plates 3 and 4 of Burgkmair's *The Triumph of Maximilian* I, ca. 1519) were clearly designed to carry instruments of at least three different lengths. This evidence is soon followed by the first known illustration of a flute consort "in action"—a pen-drawing (1522/23) by Urs Graf showing a quartet of flutes being played out-of-doors by four Swiss soldiers (reproduced in the article by Anne Smith cited later).

By the second quarter of the sixteenth century, the playing of flute

consorts had caught on with amateurs and "civilian" professionals, as we can gather from the more extensive treatment of the flute in Martin Agricola's *Musica instrumentalis deudsch* of 1529 (fully revised in 1545). In France, flutes were given equal status with recorders in Attaingnant's famous chanson collections of 1533, in which several of the pieces are annotated as to their appropriateness for one or the other (or for both). The flute consort received equal treatment with the recorder consort in *Epitome musical* of Philibert Jambe de Fer (Lyon, 1556). Most later sources (Zacconi, Virgiliano, Praetorius, Mersenne, and van Eyck) have more to say concerning one particular size of flute (usually the tenor), and it is a single tenor flute that figures prominently in the English "broken" consort of Morley and Rosseter. However, it seems clear that the idea of a consort of flutes of different sizes remained viable well into the seventeenth century, although authors from the late sixteenth century onward mention replacing the bass flute with a stronger instrument, such as the sackbut, curtal, or serpent. The Renaissance flute was finally eclipsed by the one-keyed Baroque flute developed in France in the second half of the seventeenth century.

At least forty specimens of the Renaissance type survive, giving a clear picture of the instrument's physical and musical properties. In design it is a model of elegant simplicity, appearing on first glance to be a mere cylindrical pipe, open at both ends and provided with a mouthhole and six fingerholes, but no keys. More careful examination reveals that, although the bore is indeed cylindrical, the exterior profile tapers slightly from the mouthhole to the last fingerhole, causing a small but significant change in wall thickness. Concealed inside, just above the mouthhole, is a plug whose lower surface defines the top of the air column; the extension of the tube upwards past the plug has no acoustical function but helps balance the instrument both physically and visually. Most surviving examples are of one piece, except for bass flutes, which were often provided with one tenon-and-socket joint (strengthened by either a metal band or a localized swelling of the wood around the socket). The size most often depicted in the hands of Renaissance musicians is the tenor, whose pitch approximates that of the modern (soprano) flute, "six fingers" producing roughly the same d' on both instruments. According to the majority of the relevant sources, however, this was nominally the d an octave lower, so that the flutes, like the recorders, generally played at four-foot pitch. (Unless otherwise noted, subsequent references will be to nominal, or written, pitches rather than to sounding pitches.) The tenor in d also served for alto parts; following Renaissance principles of consort design, the other members of the flute family radiated in fifths from the tenor, producing a bass in G and a descant in a. Flutes, however, seem to have remained limited to just these three sizes (in

contrast with recorders, which had expanded to at least seven sizes by the beginning of the seventeenth century). In compensation, the flutes have a very large range by Renaissance standards—two and a half octaves or more on the tenor, and two octaves on the bass.

Although the pitches as just outlined—G for bass, *d* for (alto-)tenor, and *a* for descant—were those generally agreed on in the sources, other pitches were given as well; a short review may be useful. Assuming that the physical size of the flutes remained relatively constant, these resulted in different transpositions. Agricola presented three different schemes of pitches: D-A-e, C-G-d, and G_1-D-A (the first in 1529 and the other two in 1545). The last, which he characterized as the "regular," easiest, most common, and most comfortable one, is yet another octave below the sounding pitch of the flutes; taken literally, it means that they regularly played at two-foot pitch. This is puzzling information, as it would mean that they constantly played in their highest, shrillest register, using their most awkward fingerings; at the same time, their bottom octave would have remained almost totally unused since such low notes are rarely to be found in music of the time. (It is perhaps more reasonable to assume that his pitch notation is off by an octave.) The first two schemes (D-A-e and C-G-d) would seem much more practical, since they often place the music in the most effective range (avoiding both high and low extremes of register). Of these two schemes, the second (C-G-d, which in effect transposes the music down a fourth from two-foot pitch, or up a fifth from four-foot pitch) has the advantage, since here prominent notes are less likely to fall on the difficult half-hole fingering ●●●/●●∅.

Jambe de Fer's flute consort, by contrast, clearly played at four-foot pitch. It differed from Agricola's additionally in consisting of only two sizes—the Frenchman's flute quartet was made up of a bass in *G* and three tenors in *d.* His recorder consort, like Virdung's and Agricola's, was made up of three sizes (*F, c,* and *g*); for the descant of the flutes, however, the third size was unnecessary, as he explains, because of the flute's larger range. Unfortunately his fingering chart for the tenor flute has not survived, but from his description we know that the range was nineteen notes, from *d* to *a″.* Exactly the same range was given by Aurelio Virgiliano (*Il Dolcimelo,* ca. 1600) in a chart for tenor flute. Virgiliano's chart is further annotated with clefs for transposition up by a fourth and downwards by both a fourth and a fifth. Also in agreement concerning the nineteen-note range for the tenor flute is Michael Praetorius (*Syntagma Musicum II* and *III,* Wolfenbüttel, 1619), who chose, however, to report it in terms of its actual sounding pitch (*d′* to *a‴.* He specifies altogether three different uses of the tenor flute: first, as a descant at eight-foot pitch; second, as a tenor at four-foot pitch (apparently

the most common use); and third, as a tenor at two-foot pitch (effective when the part lies too low to be heard at four-foot pitch, but only when other parts are not being played—or doubled—at four-foot pitch). He also gives illustrations and ranges of the bass flute in *g* and descant flute in *a′*.

Marin Mersenne's information (*Harmonie universelle* III, Paris, 1636) is somewhat enigmatic. He provides two charts for the flute, one starting on *d′* and one on *g*. These have often been understood as charts for tenor and bass flutes at sounding pitch, despite the fact that the nineteen-note range for the *g*-flute is impracticable on a bass. It seems much more likely that a descant in *g′* such as the one illustrated as an alternative to the *c″*-soprano recorder in some editions of Jacob van Eyck's *Der Fluyten Lust-hof* (Amsterdam, 1646), is actually intended. Like the Baroque *c″*-soprano and *f′*-alto recorders, such a *g′*-descant flute is a tone lower than its closest Renaissance equivalent.

Renaissance flutes are by nature difficult instruments, a fact that more than any other accounts for their current neglect. The need for a special embouchure is an obvious impediment for amateurs, but it is intonation that remains the greatest problem for all players. The tuning difficulties are inherent in the basic design—cylindrical bore with small fingerholes. As one ascends the scale in the second register, the overblown octaves of the fundamental notes are increasingly flat. The historical solution, as seen in fingering charts, was to switch to overblown twelfths partway up the scale. Thus there is a discontinuity between overblown ●●●/○○○ (*g′* on the tenor) and ●●○/●●● (*a′*—a twelfth above the low *d*), as the first of these is naturally flat and the second is naturally sharp. Considerable embouchure correction (uncovering the mouthhole more to sharpen the *g′* and covering it more to flatten the *a′*) is therefore required to play this part of the scale in tune. Virtually every modern maker of Renaissance flutes has been asked by customers to improve upon the early design, and some makers have responded with remodelings which (regardless of their virtues) are fundamentally different in character from the original concept. For instance, a tapered bore (as found on the recorder and Baroque flute) will help to open out the compressed octaves but produces a different timbre. Larger fingerholes, too, will overblow more truly but will make cross-fingering less effective. The fingerhole layout of the originals is actually the result of quite sophisticated compromise, given the constraints of the cylindrical bore.

Even flatter than the second-octave ●●●/○○○ is the second-octave ●●●/●○○ (the semitone just below—*f♯′* on the tenor). This fingering requires extreme embouchure correction to play in tune (unless the maker has enlarged the fifth fingerhole, in which case ●●●/●○● is rendered ineffective as a cross-fingering—a large price to pay!). A possible historical so-

lution is found in Jambe de Fer's chart for the bass flute, in which $b\natural$ is fingered ●●●/○●∅ instead of the ●●●/●○○ found in the charts in other sources. However, this cross-fingering tends instead to be sharp, requiring a strong act of will on the part of the player to be played in tune. Requiring a similar act of will (and skill) is the note ●●●/●●∅ ($e\flat'$ on the tenor). Although undeniably difficult, this note *can* be produced; it is not impossible as suggested by some modern writers. The trick is not to depend solely on the finger to flatten the pitch but to help it out both by covering with the embouchure and by abating the breath.

The question of pitch standard represents a greater problem for flutes than for most other early instruments. Renaissance flutes were, as a rule, built to pitches lower than $a' = 440$ (in contrast with recorders and most other Renaissance winds, which were usually built to standards *higher* than modern pitch). In scaling flutes to play at $a' = 440$, one loses much of the telling quality of the low-pitch original, particularly in the low register. One of the better solutions is to build the flutes at a whole tone below $a' = 440$ thus in effect striking an average among the low pitches of surviving flutes; the resulting consort (in *f, c′,* and *g′,* sounding pitch) is then able to possess both the character and behavior of the originals. The flutes then have to transpose upward, of course, when playing with other instruments. There is an additional disadvantage for the player of the bass flute, as it becomes ever more unwieldy and tonally uneven as it is made longer.

For the beginner who has had no experience with flutes, the first task is acquiring an embouchure. Here, in the absence of a specialist in the early flute, an open-minded teacher of the modern flute can be of immense help, as the lip formation is similar in principle. For the modern flutist coming to the Renaissance flute for the first time, the primary concern is the reordering of musical priorities, placing intonation ahead of power—or even beauty—of tone. One of the best exercises is to alternate (overblown) ●●●/○○○ and ●●○/●●● (*g′* and *a′* on the tenor), exaggerating the pitch corrections mentioned above in order to produce too "small" a melodic second. This not only focuses one's attention on intonation, but makes producing the melodically correct interval almost easy. All of this energy expended on correcting intonation and equalizing an uneven scale tends to limit dynamic flex-
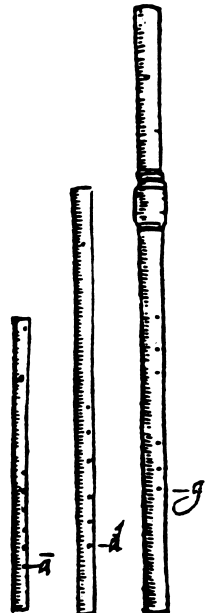
FIGURE 6.1 Complete set of flutes: discant, alto-tenor, bass (from Plate IX of Praetorius's *Syntagma Musicum II*)

ibility. One must nonetheless learn to counteract this limitation and to exploit the expressive possibilities of the flute, which represent, after all, its primary advantage over the recorder. Without dynamic expression the flute remains a mere alternative timbre to the recorder's, on a grand scale only subtly different (and requiring a great deal more work!).

Perhaps the repertory most effective for a consort of flutes is that associated with them historically: the quartet chansons and Lieder from about the first half of the sixteenth century. This is not intrinsically difficult music, but it may nonetheless represent a real challenge to perform well on flutes. Players wishing to reduce some of the difficulties may wish to begin with music with fewer parts (*bicinia* and *tricinia*), which abound in sixteenth-century prints. By contrast, Franco-Flemish music of the fifteenth century is often more complex and engaging; although it predates the development of the flute consort, much of it was recopied and reprinted in the sixteenth century, attesting to its continued popularity among later performers (who would have had no qualms about adapting it to flutes). Much of the vocal music of the second half of the sixteenth century lends itself better to performance on the more lush mixtures of instruments and voices (typical of Italian practice) than to performance on pure consorts of flutes; flutes were, of course, regularly employed in such grand consorts, often playing inner lines at four-foot pitch. Some of the instrumental styles that matured in the latter half of the sixteenth century—ricercare and canzone—are suitable for performance on flutes. As these forms developed further in the next century, however, there came to be such an emphasis on the violin and on the *basso continuo* that the flute consort was pushed further and further out of the picture. The flute itself then reemerged (along with the other remodeled Baroque winds) as something of a "surrogate violin."

The most thorough examination of sources for the technique and repertory of the Renaissance flute is Smith, "Renaissancequerflöte." The fact that it is in German may be daunting to many, but the several charts and tables (including a composite table of fingerings) are intelligible to anyone who can remember that German "B" means B-flat and "H" means B♮. A somewhat more cursory treatment of the same material (but in English) is Smith, "Renaissance," in which the composite table is reprinted. A similar review (with composite fingering charts) is Godwin, "Renaissance." Bernard Thomas in his article of the same title (Thomas, "Renaissance Flute") suggests (on the basis of both the pitch of surviving instruments and a questionable reading of Praetorius) that early flutists invariably transposed up a step; experience shows that such a transposition is often very useful, but that just as often it creates more problems than it solves. In Brown, "Notes," the various transpositions implied by Agricola's charts and their

possible implications for Attaingnant's 1533 chanson collections are examined; however, I believe he has slightly misinterpreted some of Jambe de Fer's information, which may actually be more relevant than Agricola to Attaingnant. Finally, for those interested in the period of transition between the Renaissance and Baroque flutes, the available evidence concerning this still somewhat murky area is to be found in Bowers, "New."

It should come as no surprise that recordings of flute consorts are hard to find. One of the few is the recent CD: *Flute Music of the 16th and 17th Centuries,* directed and performed by Nancy Hadden with the Renaissance Flute Consort (Hyperion CDA66298). This presents several French chansons, German Lieder, and the Senfl four-part "Tandernaken" played on a quartet of flutes; it also includes pieces for solo flute as well as flutes mixed with other instruments. Other recordings of single flutes participating in mixed instrumentations are the pieces for English consort performed by The Musicians of Swanne Alley (*Popular Elizabethan Music,* Focus 822, 1982, and *As I Went to Walsingham,* Harmonia Mundi HMC 5192, 1987) and the various earlier mixtures of instruments and voice represented by the group Circa 1500 (*Renaissance Music from the Courts of Mantua and Ferrara,* Chandos ABTD 1110, 1984, and *The Flower of All Ships: Tudor Court Music from the Time of the Mary Rose,* CRD Records CRDC 4148, 1987). A number of dances are performed by flute consort by the New London Consort (Tielman Susato, Dansereye 1551, L'Oiseau-Lyre 436 131, 1993).

Capped Double Reeds:
Crumhorn—Kortholt—Schreierpfeif

JEFFERY KITE–POWELL

If we were to give the crumhorn a name in English that most aptly describes its appearance, we would probably call it "the curved horn," as did the Germans (*Krummhorn, Krumbhorn*), the Italians (*storto/storti* or *storta/storte*), and the French (*tournebout*—first used by Mersenne in 1636). Rather than refer to the instrument in such a descriptive manner, the Spanish word *orlo* may simply be a translation of the German word for horn, but it could also be a general name for a double reed instrument.

Not only does the curved lower end of the crumhorn give it an unusual appearance, but the sound produced by the instrument is quite striking as well—rather like that of a kazoo to the uninitiated listener. It is referred to as a capped double reed instrument, because the reed is enclosed in a small chamber by a windcap and is never placed directly into the mouth or touched by the lips. There is a small slit in the end of the windcap through which the player blows, sending the air through the reed and causing it to vibrate. This technique of setting the reed in motion is most likely derived from the bagpipe and bladder pipe tradition beginning in the thirteenth century.

The country of origin of the crumhorn is not certain, but the first written record of the instrument is in Berlin, Germany in 1486; the first pictorial evidence is found in Bologna, Italy, two years later. It is reasonable to assume that the crumhorn was in use a few decades prior to its appearance in the 1488 painting, but it would be inappropriate to use it in music written before 1450, as there is simply no documentation of its existence. After 1500 records of the crumhorn's use and whereabouts are plentiful in

both sacred and secular settings, as demonstrated by the following testi-mony from 1500 (Boydell: 103, fn16): ". . . the singers . . . sang two Masses with the help of the organ, three sackbuts and a cornett, and also four crumhorns with the positive organ which were quite joyful to hear." Proof of its popularity is seen in the frequency of organs containing a crumhorn stop, particularly in Germany and the Low Countries. Frequent encounters in church and court inventories in Italy, Germany, and the Low Countries suggest that the crumhorn enjoyed a considerable amount of popularity—indeed, the title page of a publication by the Antwerp printer Tielman Susato gives his address as "near the new weighbridge at the Sign of the Crumhorn." The crumhorn was also extant in Spain and, to a much lesser extent, England and Poland. France may have had crumhorns, but it is un-known exactly when they were introduced or what they were called. De-cline in the use of the crumhorn occurred in most countries shortly after 1600, but not until after 1650 in Germany.

Standard sizes for the crumhorn are soprano, alto, tenor, and bass, and all are played at eight-foot pitch (no octave transposition necessary). The range of the standard sizes is a major ninth:

soprano: *c′–d″*
alto: *f–g′*
tenor: *c–d′*
bass: *F–g*

Variations on this include the *g*-alto (actually the original pitch of the alto), the extended tenor, the extended bass, and the great bass. On the ex-tended bass, an additional key (below the *F*) can be preset by means of slider keys to produce an *E, D,* or *C.* Changing the preset note requires a short pause in the player's part. There was no upward extension on the crumhorn, even though many makers misrepresent the range of the origi-nal crumhorn on their modern replicas by adding two keys on the upper end of the horn, thereby providing a few extra notes. This misleads modern performers into thinking they can play music that has a range of an eleventh, which would have been unthinkable, not to mention impossible, in the sixteenth century. It should be pointed out, however, that having an upward extension key on an f-alto crumhorn enables those who don't have a *g*-alto or who don't wish to learn a new fingering to play the *g*-alto line.

If a particular work you would like to perform does not exceed the range of a ninth in any of the parts, but is pitched too high or too low, you might try transposing it down a fourth or up a fifth, a common practice of the period. Additionally, the standard configuration SATB will not work for all pieces, and you may have to try SAAT, SAAB, STTB, ATTB (by far the

most typical arrangement of the period), or some other combination; so it is therefore always good to have an extra alto or tenor lying around.

Reeds are made of cane or plastic. Cane reeds are obviously authentic, and they tend to produce a louder, more robust sound with more pitch stability. Plastic reeds have the advantage of being more economical, as they can last for a very long time, if well cared for. Students should be given very careful instruction on how to remove the reedcap so that the reed is not damaged in the process. Many a reed has been destroyed by the careless or hasty removal of the reedcap; also, crumhorns should never be carried by the reedcap, as it is prone to come apart, possibly damaging the reed or the instrument in the ensuing fall.

Because of the similarities in fingering, crumhorns are often the first instrument recorder players turn to when looking for an alternative early instrument. It should be stressed, however, that the two instruments are quite different in every other respect; in fact, the crumhorn was always a professional—never an amateur—instrument in the Renaissance. Crumhorns are more difficult to play in tune and, because of the reed's greater resistance to wind pressure (as opposed to the whistle of the recorder), one's endurance is greatly diminished. The inexperienced player loses his embouchure altogether after only a few minutes of playing, whereas the practiced performer will surely experience lip exhaustion at the conclusion of a few pieces. Articulation on the crumhorn requires a lot more energy, too. The initial sound of each note must be made with a sharp attack of the tongue, almost an explosive effect, while the end of the note must have a crisp, clean release. Be creative with your articulation by giving stressed notes their full value while shortening other notes somewhat. The way you articulate a piece—particularly one that is homorhythmic—can enhance it tremendously. Dynamic shading, vibrato, and slurring should not be attempted on the crumhorn.

Tuning crumhorns is achieved primarily by breath pressure. Generally speaking, a considerable amount of air is needed to obtain the proper sound (and pitch) on the crumhorn, depending, of course, on the type of reed you are using. There is very little tuning latitude when inserting the reed's staple into the instrument, so it is imperative that one learn the particular idiosyncrasies of one's instrument; for instance, some pitches may need more breath pressure than others to make them higher, while one or two pitches may need less pressure than the average pitch to lower them somewhat. As a reminder, it sometimes helps to put little upward or downward arrows over the notes in the music for the troublesome pitches. Intonation can also be affected by the reed aperture; opening it slightly will lower the pitch, whereas squeezing it just a bit smaller will raise the pitch and make it a bit

easier to blow. Great care must be taken not to damage the reed during this procedure.

The last point to be made with regard to intonation concerns the general maintenance of the horn. A periodic check of the finger holes (usually quite small on most modern crumhorns) may reveal that natural skin oils have combined with dirt and grime to clog a hole or make it smaller by collecting around the rim of the hole, causing the pitches depending on it to play somewhat flat.

The beginning crumhorn player should start out by playing scale passages in whole notes, perhaps using just the left hand at first. When good intonation and steady breath pressure have been achieved, the right hand may be added. Continue by playing the same scale in half notes, two halves for each pitch, and then quarters, repeating all four before moving to the next pitch. All the while, care should be taken to start and stop the tones with a firm tongue, which should make direct contact with the reedcap opening or the roof of the mouth with each attack. When playing in a group you should establish the habit of tuning the octaves and fifths (both pure or beatless) to the bass crumhorn; add the third (also pure) only after the octaves and fifths are perfectly in tune. And remember, the more you play the stronger your embouchure will become and the more endurance you will have. The sound of a well-rehearsed, in-tune consort of four to eight crumhorns is nothing short of awe-inspiring.

Many editors of Renaissance music give the range of each voice part at the beginning of the piece. This makes life much easier for those looking for music which is suitable for a consort of crumhorns, and there is truly a wealth of music available (both sacred and secular) that fits the limited range of this consort. There are several publications which contain works that either fit the crumhorn's range as written or that have been adapted to fit it. The most important of these are:

At the Sign of the Crumhorn: Anthology for an Ensemble of Crumhorns, Recorders, Shawms, or Curtals SATB, N.M. 148, ed. by Block & Nothnagle. London: Nova Music, 1980.

Crumhorn Consort Anthology (Vols. 1–3): 43 pieces for four instruments. Musica Rara, MR 1902, 1903, 1565.

Crumhorn Consort Music Vols. I, II, III (Harriman), and IV (Neumann) for SATB. Musica Sacra et Profana (out of print).

Music for Crumhorns: 15 pieces in 4–6 parts and *Crumhorn Collections* in 3 vols; 31 pieces for ATTB, edited by David Hogan Smith. The King's Trumpetts and Shalmes Music Editions, 1720—19th Avenue, San Francisco, CA 94122.

Music for Crumhorns 1: 43 pieces in 4 parts. London Pro Musica Edition, LPM MCR1

Music for Crumhorns 2: 24 pieces in 5 & 6 parts. London Pro Musica Edition, LPM MCR2

Music for Crumhorns 3: 33 pieces in 3, 4, & 5 parts. London Pro Musica Edition, LPM MCR3

Many of the Susato dances and pieces from Michael Praetorius's *Terpsichore* fit a crumhorn ensemble, but transposition is often necessary. It should also be noted here that Praetorius occasionally recommends pieces which have ranges that are not always obtainable on the crumhorn, suggesting that adjustments must have been common at the time.

Large-scale polychoral works are also quite effective when one of the choirs is performed on crumhorns. Many of the compositions by Italian composers of the late sixteenth century, as well as the Germans who were influenced by them, work well with crumhorns in combination with choirs of sackbuts, viols, curtals, flutes, recorders, and voices.

Mention should be made of two other members of the capped reed family, both restricted to German-speaking lands: the Kortholt or Kurzpfeif (meaning "short wood" or "short pipe") and the Schreierpfeif (appropriately, shouting or shrieking pipe—also called Schreyerpfeif).

As in the case of the crumhorn the Kortholt gets its name from its appearance. It is a short "woodwind" instrument, but its size, like that of the racket, is deceiving, for inside the wooden cylinder the tubing doubles back on itself, thus causing the sound to be decidedly lower than expected. The Kortholt has twelve open finger holes and two closed (keyed) holes for upward extension by two pitches. The tips of the fingers and thumbs are used to cover ten of the open holes, and the sides of the index fingers must be employed to cover the remaining two holes. Praetorius depicts only one Kortholt in his *Syntagma Musicum II,* but it is included with a set of Sorduns—a seemingly identical instrument, but without the windcap—and in the range chart for Sorduns as well. Based on this slim evidence, modern makers have extrapolated a family of Kortholts. The sound is soft and pleasing, and because of its extended range, it can serve as the eight-foot foundation of a recorder choir or play a part a bass crumhorn could otherwise not play.

The Schreierpfeif dates from the end of the fifteenth century and is nothing other than a capped shawm. It is an excruciatingly loud instrument due to its expanding conical bore and the fact that you have no choice but to blow as hard as you can in order to attain some semblance of intonation. "Strong and fresh" are the adjectives Praetorius uses to describe the sound,
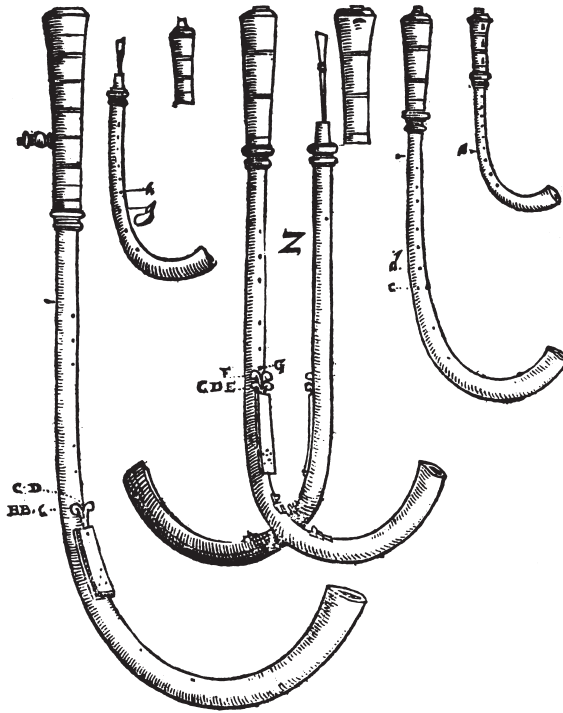
FIGURE 7.1   Crumhorns (from Plate XIII of Praeto-
rius's *Syntagma Musicum II*)

but "loud and raucous" or "coarse and strident" might be more appropriate.
There are seven finger holes and a thumb hole, and the range is basically a
ninth, but by leaking the index finger on the left hand a bit, it is possible to
increase the range by as much as a fourth. These must have been popular
outdoor instruments, as their use has been documented into the late seven-
teenth century. It should be pointed out that before Boydell's exhaustive
study of capped-reed instruments, the Schreierpfeif was known as the
Rauschpfeif. It is also interesting to note that Praetorius's depiction of
Schreierpfeifen seems to have been a mistake, since it does not square with
the rest of the evidence.

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Thomas, "Introduction"; Thomas, "Playing"; Wells, "Crumhorn." An interesting Web site,

complete with pictures and other useful links, may be found at: http://www.recorderhome page.net/crumhorn.html, compiled by Nicholas Lander.

Suggested Listening

At the Sign of the Crumhorn. Convivium Musicum Gothenburgense. Naxos No. 8554425.

Dictionary of Medieval & Renaissance Instruments. Ensemble Gilles Binchois & Dominique Vel-lard, La Reverdie, Currende Consort, Concerto Palatino, Erik Van Nevel, Accademia Strumentale Italiana & Alberto Rasi, Roberta Invernizzi, Juan Carlos Rivera, Musica Antiqua & Christian Mendoze, In Stil Moderno, and many more. Cantus Records C9705/6 (2002).

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8

Shawm and Curtal

ROSS DUFFIN

Perhaps the first and most important point is that the shawm was throughout its history the property of the professional, specialist player. Its value was its thrilling sound, audible even at crowded indoor gatherings and large outdoor events. Its exclusivity was probably a result of the sheer difficulty of playing—something that has served to keep it out of most modern early-music groups in spite of its importance. This is not the kind of instrument that can be picked up easily in the middle of a concert by a student player who has just put down a recorder. Nevertheless, the sound of a shawm band perfectly in tune is one of the most satisfying musical experiences a wind player can have, and the instrument's resurrection by conscientious directors and courageous students is to be hailed as long overdue.

Generally, smallish shawms are shown in depictions as early as the thirteenth century, such as in the *Cantigas de Santa Maria,* but the pictorial and documentary evidence points to the middle of the fourteenth century as the beginning of the instrument's heyday. The glory days last until about 1500 when the supremacy of the shawm band begins to be challenged by the more refined cornett and sackbut band. Shawms underwent the same kind of size development enjoyed by other instruments in the sixteenth century, but at the high end they begin to lose ground to the more agile cornett, and at the low end to the more portable curtal or dulcian (see below). As instruments of the town bands (which also sometimes played in the churches), they lasted well into the seventeenth century in some places, notably Spain, Germany, and England.

The function of the shawm band was to play for dancing, banquets, ceremonies, processions, and so on. The greatest difficulty in reconstructing

what they played is that the bulk of the repertory during the heyday of the instrument seems to have been improvised. This is evident, for example, in the dozens of long–note tenor melodies of the fifteenth–century *basse danse.* We have a few reports of them playing part music too, including motets and chansons, so these are the starting point for the written repertory, although presumably performances of these normally vocal forms were probably purely instrumental when shawms took part. The exception to this rule is in Spain where shawms were respected denizens of the choir lofts of the great cathedrals, and thus likely participants in all of the music making which took place there (more on this subject in Kreitner, "Minstrels").

The following are typical trio combinations for shawms in consort and with associated instruments:

pre–1400
>   treble, straight trumpet, drums
>   2 trebles, 1 bagpipe

post–1400
>   3 equal (trebles or altos)
>   2 trebles, one alto (most likely a fifth below)
>   2 trebles, one slide trumpet
>   1 treble, two altos
>   1 treble, 1 alto, 1 slide trumpet (after ca. 1470, a sackbut)

Four-voice combinations in the early decades (to ca. 1450) are compli-cated by the apparent use of a spare fourth player, clearly shown not play-ing, who must have alternated with one or more of the other players for reasons of endurance. This fourth player adds a treble, an alto, or a slide trumpet to any of the ensembles in the post–1400 list. In fact, this supernu-merary principle seems to have lasted into the sixteenth century, as Keith Polk's study of Flemish wind bands shows almost invariably one more member of the ensemble than was the standard number of parts in written music at the time.

One problem of terminology related to sizes of instruments is in the use of the designations "alto" and "tenor." Instruments larger than what we now call the alto were rare before 1500, but the term "tenor" occurs from the early fifteenth century to describe the alto shawm (also known as the "bombarde" or "Pommer"), because of the function that the instrument filled in the ensemble. This confusion persists throughout the sixteenth century in some places. The true larger sizes began to appear in the early sixteenth century, and by about 1550 there seems to have been a proper bass (in *F* with extension keys down to *C*). With such an instrument, or perhaps a basset (a tenor in *C* with extension keys down to *G*), a fully equipped

shawm band might consist of one or two trebles, one or two altos, one or two sackbuts, and one basset or bass shawm. This combination should work well as a resource for all otherwise suitable ensemble music up to six voices written to ca. 1600. (Praetorius also includes a *klein discant Schalmey,* which is a fifth higher than the treble). I might also mention at this point the reason for combining brass instruments with shawms in the loud band: there is something about the brass that "knits" the ensemble sound together and makes it easier to tune. Obviously, since a brass instrument regularly joined the band from an early date, late medieval and Renaissance musicians thought so, too.

Such an ideal shawm band may not have been a frequent occurrence in the Renaissance, because in the early sixteenth century, cornetts and Schreierpfeifen (windcap shawms, often formerly referred to as Rauschpfeifen) began to make appearances in the loud band. The former work very well if a balance can be achieved, but the latter invite disaster, in my view. The tone color and tuning of Schreierpfeifen are not easily matched with shawms in spite of their ostensible similarity as loud double-reed instruments. A more successful double-reed newcomer was the curtal or dulcian, introduced in the second half of the sixteenth century and serving in the shawm band as a kind of "folded" bass.

Of all problems in making a shawm band work (after the reeds are adjusted and functioning), the most fundamental is that of ensemble pitch. I'm not talking about $a' = 440$ versus $a' = 460$ or any such pitch standard. I'm talking about standard transpositions. Baines, Polk, and Myers have established that the shawm band, by convention, transposed all its written music up a whole step or a perfect fifth. This is related to the pitches of most of the surviving originals which tend to be in D for the trebles and G for the altos. Thus, if you have shawms at those pitches, you will find that in order to accommodate the ranges of the instruments, you must follow one or the other of these transposition formulas or almost none of the music fits: it goes one or two notes too low, or seems to require a larger size of shawm. Not all modern makers produce D trebles and G altos, however. If you have C and F instruments, you will still find that much repertory will open up if you cultivate the ability to transpose up a fourth, particularly for the period up to 1500. (If you have some odd combination of D and G and C and F instruments, I doubt that you can make it work.) Sackbut players will get used to whatever transpositions you use regularly; they're a durable breed, already used to reading three or four different clefs anyway.

One advantage of shawms is that they are fairly tough as compared with other Renaissance woodwinds; the great wall-thickness means that cracking is rare. The obvious difficulty is in the making of reeds. Modern
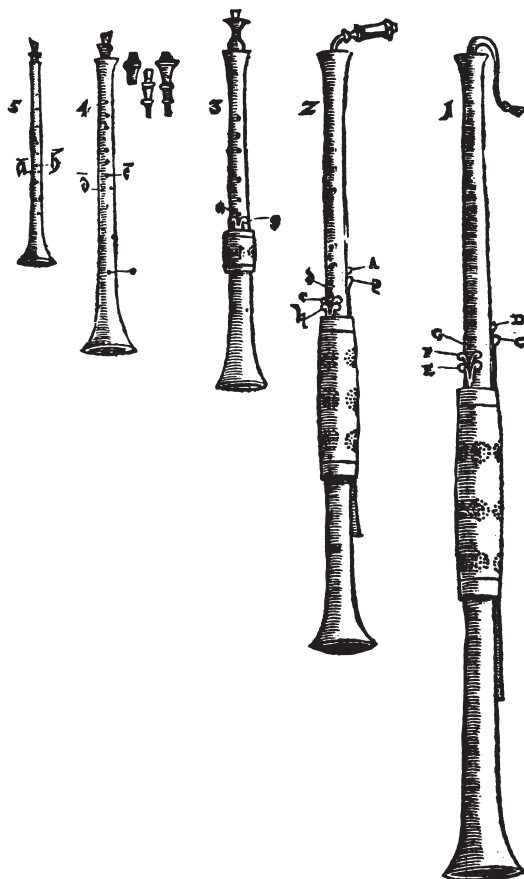
FIGURE 8.1   Shawms (from Plate XI of Praeto-
rius's *Syntagma Musicum II*)

shawms vary a lot in design and therefore in the reed design required to
get the best out of the instrument. The best idea is to follow the maker's
advice, using any supplied reeds as a model for future efforts. (Try not to
modify a maker's reed that works as advertised, and by all means, don't
throw it out when it dies!) Unlike oboe reeds, shawm reeds can last a long
time (months or years) if nursed along. When the time comes to make new
ones, find a clever bassoon reed maker if you are not experienced in this
yourself. Bassoon reed makers tend to be especially adept at experiment-
ing, and are used to working with the larger sizes of cane normally re-
quired for shawms. (One useful tip for the reed maker is to try a thinner
gouge.)
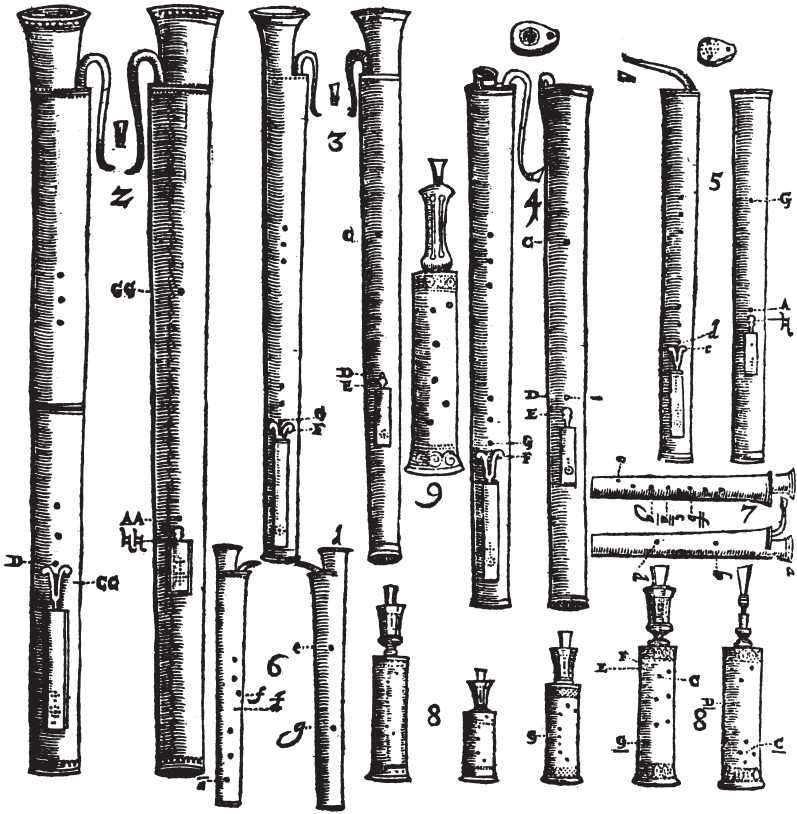
FIGURE 8.2   Curtals and Rackets (from Plate X of Praetorius's *Syntagma Musicum II*)

There is no easy way to prepare shawm players except to get them to play a lot. Endurance is the main thing. Fingerings are not a problem for someone already used to playing other Renaissance woodwinds, but for the inexperienced player, chops give out sooner in performance than in rehearsal. The repertory can encompass the same range as that of the Renaissance recorders (i.e., about a thirteenth per part), although the instruments are most comfortable up to about an eleventh or twelfth. Virtually all sixteenth-century dance collections up to Holborne's work well. I do not recommend Brade or Praetorius simply because too many of the phrases are uncomfortably long for loud wind players. The early-sixteenth-century chanson, Lieder, and frottola repertories are also fertile territory. Perhaps the most exciting and idiomatic but also the most challenging possibilities are in the late-fifteenth-century Franco-Flemish instrumental *carminum* repertory for three to four voices (sometimes five). Written pieces in an im-

provisatory style are probably the relics of what shawm bands did most up to the early sixteenth century.

CURTAL

Curtal is the sixteenth-century English name for the instrument which the Germans knew as the Dulzian and which has therefore been commonly known as the Dulcian, without any historical foundation whatever. Other sixteenth-century names for the same instrument include the *fagotto* (It.), the *Fagott* (Ger.), the *basson* (Fr.), and the *baxon* or *bajon* (Sp.). The curtal seems to have originated around the middle of the sixteenth century, although the exact time and place are obscure. Like other Renaissance instruments, it achieved a complete family of sizes. Praetorius (*Syntagma* II, p. 38) gives several sizes, the smallest with a sounding length approximately equal to the alto shawm but much smaller in overall length, due to the bore that doubles back on itself. The largest instrument he mentions is a *Fagot-contra,* with a sounding length twice as long as the bass shawm. In spite of this size proliferation, there was really only one size in general use: what Praetorius calls the *Choristfagott*—a bass with a bottom note of *C* (two octaves below middle *c,* the same bottom note as the bass shawm). This helps to explain why, as mentioned earlier, one of the uses of the curtal was as the bass of the shawm band: it was more portable. This was an important consideration in a band whose duties often took them outdoors!

But the curtal was capable of a much more subtle sound than the bass shawm, and for this reason it found a place, not just in the shawm band, but also in the cornett and sackbut band, in mixed ensembles with strings, as a foundation doubling the lowest sounding voice in choral groups, and ultimately as a popular continuo instrument, particularly with organ. Its use in these capacities lasted well into the eighteenth century, although no examples that have a post-1707 date are known to have survived. By that time, the curtal was beginning to be supplanted by its jointed successor, the bassoon, which had a much larger serviceable range over a sounding length which was only slightly larger.

There are two basic categories of curtal: open (*offen*) and stopped (*gedackt*). The stopped instrument has a perforated cap at the top of the instrument in the bell, giving it something of the appearance of an overgrown pepper shaker. This has a softening effect on the sound, although curtals have a good dynamic range anyway, as is evident in the variety of their uses. Probably as significant in terms of tone is the variance in bell size, some of which are fairly conical and others substantially flared. The choice of instrument for your ensemble should, to some extent, take into account its

intended use: conical/stopped for softer uses; flared/open for louder ones. Basically, the message is that the curtal in its most common size, the *Choristfagott,* is an extremely useful addition to any instrumentarium for performance of music from about 1550 to roughly 1650 and beyond. Of course, many performers, including some professionals, use the curtal for earlier repertory as well, rationalizing that it is a bass shawm substitute.

Like any instrument with a bocal, there is potential for swift and irreversible disaster through mishandling. The bocal is the most sensitive acoustical part of the instrument; a poorly designed bocal can ruin the tone, tuning, and articulation of an otherwise well-constructed horn. The curtal's reed design is even closer to the modern bassoon than that of the shawm, so bassoon reed makers will easily succeed once they learn to make the reeds big enough. Bassoon players make excellent conscripts as players, by the way, finding their way around the double-bore fingering system with ease and reveling in the simplicity of the keywork.

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Suggested Listening

The material for listening unfortunately matches that for reference with regard to availability. Aside from a few selections in instrumental survey recordings and elsewhere, for shawm band I recommend:

Gabrieli Consort. *Music for the Duke of Lerma.* Archiv Produktion 471 694-2 (2002).

Gabrieli Consort. *Officium Defunctorum (1605) Tomás Luis de Victoria.* Archiv Produktion 447 095-2 (1994).

Convivium Musicum. *Song of Songs: Music of Renaissance Spain and the New World* (2004).

Dictionary of Medieval & Renaissance Instruments. Ensemble Gilles Binchois & Dominique Vellard, La Reverdie, Currende Consort, Concerto Palatino, Erik Van Nevel, Accademia Strumentale Italiana & Alberto Rasi, Roberta Invernizzi, Juan Carlos Rivera, Musica Antiqua & Christian Mendoze, In Stil Moderno, and many more. Cantus Records C9705/6 (2002).

Dufay Collective. *Cancionero: Music for the Spanish Court (1470–1520).* Avie 1505 (1997).

Il Giardino Armonico. *Viaggio Musicale.* Electra/Asylum 82536 (2001).

Gothic Winds. *Les Haulz et les Bas.* Christophorus CHR 77193 (1996).

For curtal, good recordings include:

Piffaro. *Trionfo d'Amore e della Morte: Music for a Medici Procession.* Dorian XCD-90312 (2003).

———. *Music from the Odhecaton.* Dorian XCD-90301 (2002).

———. *Stadtpfeiffer: Music of Renaissance Germany.* Dorian XCD-90292 (2001).

———. *A Flemish Feast: Flemish Renaissance Wind Music.* Archiv Produktion CD 457609-2 (1999).

———. *Los Ministriles: Spanish Music of the Renaissance.* Archiv Produktion CD 453441-2 (1997).

———. *Chansons et Danceries: French Renaissance Wind Music.* Archiv Produktion CD 447107-2 (1994).

———. *Canzoni e Danze:Wind Music from Renaissance Italy.* Archiv Produktion CD 445883-2 (1994).

Syntagma Amici. *Fagotto, Basson, Dulcian, Curtal: Une Énigme de la Fin de la Renaissance.* Ricercar RIC 195 (1999).

Whole Noyse. *Lo Splendore d'Italia.* Helicon 1011 (1997).
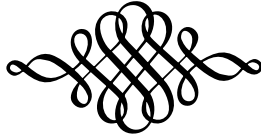
Racket: *Rackett, Rankett* (Ger.), *Cervelas* (Fr.), *Cervello* (It.)

JEFFERY KITE-POWELL

There is relatively little known about the history of the lowest woodwind family of the Renaissance. The common practice of Renaissance organ builders to copy the actual sound of real instruments provides us with the first evidence of the existence of the racket in 1564, the date of an organ with a register called *Rancket*. The instrument must have existed prior to this date, however, in order for its sound to have been copied, but there is no factual account of it until Praetorius's description of the family in his *Syntagma Musicum II* of 1619. The racket is found on inventory lists in the last two decades of the sixteenth century, and it is pictured being played in an illuminated manuscript of Lassus's "orchestra" from ca. 1570 and in an ivory carving dating from 1618–1624.

For its size, the racket produces perhaps the most surprising sound of all the Renaissance instruments. The largest racket, the contrabass, is shorter than an alto recorder and about the same size around as a bass recorder, but the lowest sound it produces is that of the contrabassoon—a subcontra $B\flat_1$ (an octave lower than the $B\flat$ below the bass staff). It seems impossible that an instrument so small can emit such low tones, but appearances can be deceiving. Inside this nearly foot-long cylinder peppered with holes all around it is a labyrinth of tubing which, if stretched out, would reach approximately nine feet in length. The tubing—nine sections in all—is cylindrical in bore and connected alternately at the top and bottom. Holes must be carefully drilled in the wall of the outside container so that they penetrate the proper tube at the correct location and thereby produce the desired pitch—an unusual demonstration of Renaissance technological "know-how."

Its German name (*Rankett,* from *ranken* = to wind around) may be an

attempt to describe its inner workings. Its nickname, "sausage bassoon," derives from the Italian *Cervello* and the German *Wurstfagott*.

Praetorius's account of the racket family is hardly flattering (*Syntagma II,* p. 40). He complains about its sound as being comparable to a comb kazoo and states that as a consort, there is no special charm. Combined with viols the sound is pleasing, especially a single bass racket in the hands of a master, together with other winds or strings.

In all he discusses and depicts four sizes (*Syntagma II,* p. 39 and Plate X: Curtals and Rackets [see chapter 8]). Modern rackets have the following ranges:

cantus: *F–d′*
tenor/alt: *B♭–g*
bass: *F₁–d*
great bass: *B♭₁–G*

It only takes a few moments to become accustomed to the fingering system of a racket, once you realize that your hands must be *next* to each other and not *one above the other.* As with other Renaissance wind instruments, recorder fingerings, with occasional modifications, will serve you well on the racket. If you have experience with the extended notes on the curtal, kortholt, and extended shawms, you will have no trouble playing the lower notes on the racket. If this should all be new to you, a fingering chart and a bit of practice will be necessary.

Perhaps the most unusual aspect of racket finger technique is the need to utilize the sides of both index fingers as well as the pads. Altogether there are twelve finger holes on a racket, so unless you have two extra fingers, you will need to cover the added holes (fitted with small protrusions called "tetines" or "teats," on most modern instruments, but which originally were found only on Baroque rackets) with the sides of your index fingers in a wrapping maneuver, keeping the ends or pads of the fingers on their holes all the while.

Unlike the Baroque racket, the Renaissance racket was provided with a pirouette. This differed in construction from that of the shawm, however; because of the racket's much larger reed, its pirouette envelops proportionately more of the reed blade, placing the embouchure at an optimum position for control. In fact, an experienced player using a good reed can extend the range upward by a third or fourth by regulating embouchure pressure on the reed.

For someone just beginning a double reed instrument, the first several practice sessions should be devoted to playing long, sustained notes. Do not attempt to play the lowest notes until the left-hand notes can be played with ease. Once this has been accomplished, you can begin adding the notes of the right hand until you can eventually play all notes, including

those in the extended range. Never let the fingers stray too far from the finger holes, lest you have difficulty finding them quickly when you need them. More difficult material should only be attempted after an acceptable tone quality has been achieved, and no music written before about 1550 should be played, as the instrument would not have existed. Music written after the mid-seventeenth century is best played on a Baroque racket (which was in fact a bassoon in the shape of a racket, developed by J. C. Denner at the close of the seventeenth century).

As with any reed instrument, the reed must be soaked in a small container of water for a few minutes before being used. If it is not soaked sufficiently, the blades may not vibrate freely enough to produce the proper sound. In addition, a lack of water absorption may cause an air leak along one of the sides, which will result in faulty tone production. Playing on a dry reed may cause it to crack or split, rendering it unfit for further use. Making, repairing, and adjusting double reeds requires special tools and materials and is best left to those who work with reeds on a regular basis such as bassoonists and oboists (see Smith, *Reed*).

The fact that the racket is not an open-ended instrument means that water condensation collects inside the tubing and cannot run out freely. After long periods of playing an annoying gurgling sound may occur. The best way to purge the instrument of this water is to remove the reed, cover all the finger holes except the upper left tetine, hold the instrument upside down, and blow into the center hole where the reed staple goes. (Be prepared for a shower!)

The contrabass racket (or a bass racket) is a wonderful instrument with which to double a bass line for additional weight and support in the performance of polychoral or otherwise large-scale works. If you should have a consort of rackets (and the players to match), the four-part hymns by late Renaissance and early Baroque composers provide ideal literature. (In particular, see M. Praetorius's *Musæ Sioniæ,* Teil VI.)

The only method book for rackets on the market at the present time is by Steinkopf and Kernbach: *Directions for Playing the Shawm, Dulcian, and Rackett* (Edition Moeck Nr. 2079). Further information can be obtained from the article on the racket by W. Waterhouse in the *New Grove Instrument Dictionary,* Vol. 3: 185 and *New Grove* II, Vol. 20: 719–723.

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Music of the Middle Ages and the Renaissance. David Munrow. Angel Records SBZ-3810 (1976).
Praetorius: Terpsichore. New London Consort, Philip Pickett, director. Loiseau-Lyre CD 414 633-2 (1986).

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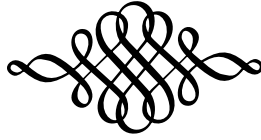
Bagpipe

ADAM KNIGHT GILBERT

> They jump as if demented and the place they meet
> fills up with hands and legs and flying feet.
> There is no sense or wit or measure here, I say:
> I mean the dancing when the bagpipes play.
> —Eustache Deschamps[1]

Despite the lack of surviving originals, bagpipe makers offer a bewildering array of convincing historical instruments designed and named after famous paintings and engravings.[2] Several features that affect the sound (and feel) warrant consideration when choosing an instrument.

Chanters are classified between conical "oboe" and cylindrical "clarinet" styles.[3] Conical bore chanters are typical to most Western European pipes, the drone usually sounds an octave or two below the second note of the chanter, resulting in an instrument well suited for melodies in an authentic modal range. Cylindrical bore chanters like those of the hümmelchen (see fig. 10.1) and early musette tend to be quieter and sweeter sounding.[4]

A single drone commonly appears in depictions of fifteenth-century pipes. A second drone, appearing during the second half of the century and tuned a fifth higher, was common throughout the sixteenth century.[5] By the end of the Renaissance, bagpipes with multiple drones (some tunable) appear on specific types of bagpipe. Bagpipes can come with one, two, or multiple drones, usually tuned at the fifth or octave.

The relation between the chanter and drone affects musical choices. An authentic range chanter can play a melody with the drone a fourth below the final, as in piping *Amazing Grace.* For example, situating the tonic

of a major melody a third above the drone creates a mournful effect. On some instruments the drone may sound in the middle of the chanter range. It is usually pitched at the fourth or fifth note of the chanter, resulting in an instrument well suited for plagal melodies. Shuttle drones on musettes can be tuned for authentic or plagal ranges.[6]

Chanters use three different fingering systems:

1. open fingerings, like those on most woodwinds, are most familiar for beginners;
2. partial covered system, in which the notes of the upper hand are played with some holes covered by the lower hand.[7] Although less familiar, this system offers better opportunities for the graces associated with surviving pipe traditions.

FIGURE 10.1   Hümmelchen bagpipe (from Plate XI of Praetorius's *Syntagma Musicum II*)

3. closed system, in which a single finger is lifted for each note of the chanter; real silence is achieved by covering all fingers, because the end of the chanter is closed. This system is common to early musettes and later bellows-blown pipes.

Many chanters play with the fourth note of the chanter tuned somewhere between a major and minor third above the drone pitch. Although this "neutral" third remains a common feature of modern folk traditions, an instrument with major and minor thirds above the drone offers more potential uses.[8]

For a versatile instrument, choose a conical-bore bagpipe by a reputable maker based on Dürer, Brueghel, or Praetorius. Select an instrument with as many accidentals as possible. Some pipes have enticing options, such as interchangeable chanters and tunable drones, but remember that the more things a single instrument does, the less it tends to do well. If you want a quiet bagpipe and intend to play later Renaissance music, consider a hümmelchen or an early musette.

Getting the Hang of the Bag

The trickiest part of playing the bagpipe is keeping an even air pressure while blowing into the bag and while squeezing the bag when inhaling. Beginners commonly breathe and squeeze at the same time, then let the bag go while inhaling, resulting in a "sick cat" sound. Some get the hang of it immediately; others need days or weeks. Be patient.

To arrive at a good comfort level with the bag, remove the chanter and plug its stock with a cork; practice playing the drone while walking around. On instruments with multiple drones, start by plugging all but the main drone with tape or wax earplugs. Next—and only after you can play the drone for long periods of time without it sagging in pitch—add the chanter, but play *one note only,* either the drone pitch or the fifth. Avoid the temptation to play a melody, and listen for the rich overtones and an even pitch. Most people think of the bagpipe as an instrument with a drone accompaniment. The secret lies in learning to hear the drone as an instrument into which a melody blends. With this exercise an initial sense of forcing the bag should give way to a feeling of relaxed energy blowing against the arm.

Although there is no inherent correlation between breathing into the bag and musical phrasing, avoid inhaling at the end of a phrase, blowing instead *through* a phrase to carry the melody forward.

Playing the Chanter

Because direct tonguing is impossible on a bagpipe, finger articulations (called "graces") separate notes of the same pitch, create a sense of motion, and distinguish personal and regional styles. Ranging from simple to elaborate, techniques include lifting fingers to make short high-pitched sounds between melody notes and brief dropping of fingers over holes below the melody.[9] In a style common to plagal range chanters, playing the fifth above the drone (either the bottom or second note of the chanter) creates the illusion of silence and a staccato effect. A similar effect can be achieved on an authentic range chanter by playing the drone pitch.

A useful French folk method is easy to learn: to grace notes of the lower hand, simply lift the third finger of the upper hand; to grace notes of the upper hand, lift the thumb of the same hand (see ex. 10.1a).[10] Also, dropping down to the drone pitch punctuates the melody notes fingered higher on the chanter.

Develop your own repertory of graces and explore the potential of the instrument. Get started by playing the bottom note of the chanter; then lift each finger briefly from the bottom to the top of the range of the chanter, keeping an even beat with a metronome or your foot. While playing the next note on the chanter, briefly drop the bottom finger, then lift each finger to the top of the chanter range, creating a slow scale with the drone pitch as a grace note (see ex. 10.1b). Try this with successive notes of the chanter as the grace. Also try fingers in combination and different graces in quick succession.

Lack of lingual articulation makes rushing a common tendency for

EXAMPLE 10.1a–c   Some graces

pipers. Practice graces *on* the beat, being careful not to let them drift in early. When playing staccato principal notes with long, low graces, be careful not to let the longer low note become the downbeat (see ex. 10.1c). Develop a strong inner rhythm or a good lightly tapping foot, and don't be afraid to use a metronome or steady drummer.

Treating the Bag

Bags are sealed with a variety of solutions from brine to brandy or commercial mixes.[11] Over time they tend to dry out, losing their airtight seal, so they will therefore need to be treated periodically.

Recipe for Bag Treatment: 4 oz glycerin (can be purchased at any drugstore); 2 tbs hot water; 1½ packets of unflavored gelatin; 2 tsp saddle soap; 1 tsp honey; 1 crushed aspirin.[12]

Put glycerin into a jar and heat in a water bath on the stove. Add the hot water, and stir until it is thoroughly mixed. Making sure this mixture is hot, add the gelatin, and stir until completely dissolved. Add the other three ingredients and stir until dissolved in the liquid. Remove from the water bath and let cool slightly before pouring into the pipe bag.[13] This concoction can be refrigerated for a long period of time.

After removing the pipes and protecting the stocks with paper, pour the mixture into the bag and massage it until the entire bag is moist. Empty the excess and continue to massage the remainder into all parts of the bag.

Clean the stocks and let the bag dry for twenty-four hours before replacing the pipes. Old bags may need more than one treatment.[14] Excess sealant may fall out later in small clumps and can cause unexpected playing problems.

Tips for Reed Care

With proper care, bagpipe reeds can last for years. Most chanter reeds need normal humidity, but are meant to be played dry. Ideally, reeds should be removed from the bag as seldom as possible. However, because reeds may shrink and loosen in dry climates or heated houses, they may be kept in a humidified box.[15] Before playing with full pressure, warm up the reeds by gently blowing air through the bag.

The most common problem with drone reeds is a tendency to clap shut from too much air pressure. To counter this, place a hair or thin cotton thread between the base of the tongue and tube of the drone reed.[16]

Repertory

Despite a dearth of music indicated for bagpipe, the modern piper can turn to a wealth of dance music, courtly song, and monophonic tunes. Adjustments may of course have to be made to melodies that extend beyond the chanter's range. Pipes provide rousing accompaniment for dances, from fifteenth-century balli to sixteenth-century pavanes, galliards, and choreographed dances.[17] Collections by Susato, Attaingnant, Mainerio, and Praetorius, to name a few, contain an abundance of music for pipes.[18] Melodies associated with ground bass progressions also offer opportunities for ornamentation and improvising divisions.

Some performers turn to courtly chansons, choosing whatever voice best fits the chanter.[19] My favorite sources for bagpipe repertory lies in monophonic songs and their polyphonic settings. For example, Petrucci's early prints and the Tenorlieder of Ludwig Senfl and his contemporaries provide a source of material.[20] Songs with mimetic or pastoral associations to shepherds and their pipes, like those found in combinative chansons, offer excellent material.[21] Extracting the essence of an "original" melody often requires conflation of multiple voices, removal of rests, and comparison between variant versions in monophonic song sources.[22] Finally, collections of sacred songs, hymnbooks, and modern folk-song collections preserve numerous versions of countless Renaissance tunes.[23]

Pipes in Ensemble

The excellent effect of bagpipes playing in duo was recognized from the days of Brueghel and into the Baroque era. Two common folk pairings with shawm and hurdy gurdy also compliment the instrument's limited range. Bagpipes can blend with a vielle or fiddle, and quieter models like the hümmelchen can even blend with a flute or recorder. In combination with the shawm and bombard of the *alta cappella,* the bagpiper can experiment playing a *superius* voice or doubling the tenor at the octave.[24] Because of the affinity between cylindrical bore instruments, a hümmelchen playing the melody line works well with crumhorns on the lower parts.[25] Finally, bagpipes in combination with voices make a wondrous sound.

When playing in duo, parallel thirds above or below the melody (or sixths) work nicely (see ex. 10.2a). A discant voice around the melody also creates an effective performance, perhaps with simple polyphony and parallel fifths (see ex. 10.2b[26]). I have experimented with a style of primitive three-part harmony derived from *fauxbourdon* style and traditional pentatonic and hexatonic motives (see ex. 10.3a). Also, unison can grow into polyphony (see ex. 10.3b). Although conjectural, such exploration represents the intersection between performance and research into lost traditions.

EXAMPLE 10.2a–b   a. Giorgio Mainerio's, *Putta nera* and *Ungaresca* b. Anon., *Omnes nu laet ons gode loven* (fifteenth-century simple polyphony)

EXAMPLE 10.3a–b   a. Tenor of *Jamais, jamais, jamais* b. Anon., *De winter is vergangen*

CONCLUSION

Wonder, fear, excitement, disdain, and an urge to dance are reactions to the bagpipes that modern listeners share with their Renaissance counterparts.[27] From choosing and learning to play an instrument to finding and arranging music, these are just some of the issues a would-be piper must face on the road to banishing wit and measure.

NOTES

    1. Eustache Deschamps, *Eustache Deschamps: Selected Poems,* trans. Ian S. Laurie et al. (New York: Routledge, 2003), 157.
    2. See, for example, Brueghel's *Peasant Wedding* and *Fat Kitchen, Dürer's The Bagpiper* and engravings in Praetorius/Crookes, *Syntagma:* 51, 39, and Plates 5, 11, 13.
    3. More than the presence of a double or single reed, bore shape affects the sound of the chanter. Unlike the conical bore which, like the oboe, produces all the overtones, cylindrical bores are missing the odd numbered notes in the overtone series, creating a less nasal sound and overblowing at the twelfth. For a detailed discussion, see Baines, *Bagpipes*: 19–22 and Cannon, *Highland:* 2.

4. Today, the cylindrical chanter is associated with most Eastern European bag-pipe styles.

5. Baines, 102.

6. See Baines, 125. The shuttle drone is equipped with four (or five) double reeds and can thus produce four (five) different tones at the same time. The end of the drone with the double reeds in it is set into the inside of the bag, so the reeds are not visible from the outside. In the shuttle-drone, a number of cylindrical tunnels ranging from approximately 3 to 5 mm in diameter are bored through the wooden block. The tunnel endings which are not fitted with reeds are corked up at both ends of the block. The concept of the internal shuttle bore system was also used in the racket. [Editor's note: thanks to Doug Milliken for this explanation.]

7. For a typical fingering based on the Highland chanter, see ibid., 23. and Cannon, 32. For an example of a Renaissance chanter tuning, see Boone, *Doedelzak:* 74. Also published in French as Boone, *Cornemuse.*

8. Paul Beekhuizen makes a medieval bagpipe that plays all three tunings. For a detailed discussion and extensive tuning measurements, see Podnos, *Bagpipes:* 35.

9. Baines, *Bagpipes:* 22. For a detailed description of Highland graces, see Cannon, *Highland:* 33–36.

10. Thanks to Tom Zajac for teaching me this method.

11. See Baines, 16. Commercial bag seasonings include Super Seal and Airtight by Hardie.

12. Thanks to Joan Kimball for passing along this recipe from Jonathan Swayne, which makes enough for three to four bags. Paul Beekhuizen offers a recipe for up to twelve bags, in European measurements: 50 cc Glycerin; 50 cc honey; 4 leaves white gelatin (7 gram). Weaken the gelatin in *cold* water until soft. Mix glycerin and honey together over a light flame. *Do Not Boil.* When hot, put the gelatin in and stir well until it is a smooth mixture.

13. It will start to solidify at room temperature.

14. It is not a good idea to wear a good shirt the first time you play after treatment.

15. For humidified reed case design and general information on making double reeds, see David Hogan Smith, *Reed Design for Early Woodwinds,* Publications of the Early Music Institute (Bloomington: Indiana University Press, 1992), 40f. A commercial cigar humidifier also works.

16. See Baines, 29.

17. For fifteenth-century dances, see Ernest Closson, *Le Manuscrit Dit Des Basses Danses De La Bibliothèque De Bourgogne* (Genève: Minkoff Reprint, 1976), Frederick Crane, *Materials for the Study of the Fifteenth Century Basse Danse* (Brooklyn: Institute of Mediaeval Music, 1968).

18. For dances that work particularly well on bagpipes, including *Schiarazula marazula*, *Putta nera*, *La parma*, *Tedesca,* and *Ungaresca*, see Mainerio, *Eight,* and Mainerio, *Il Primo*. *Hoboken dans* and *Mon amy* are just two lovely Dorian tunes in Susato, *Danserye*. See also Attaingnant, *Attaingnant*. For later sources that preserve Renaissance dance tunes, see Praetorius and Oberst, *Terpsichore*; Zanetti, *Il Scolaro*; van Eyck, *Der Fluyten*; and Barlow, *Complete*.

19. See DuFay's "J'ay mis mon cuer" in *Joan of Arc, Music and Chants from the XVth Century*. Amadis Ensemble. BMG Milan 1436. Jade 71067-2.

20. For example, see Helen Hewitt, *Harmonice Musices Odhecaton A* (Cambridge: Medieval Academy of America, 1942), or *Harmonice Musices Odhecaton Canti A: Quincentenary Performer's Edition,* ed. David Fallows (Shirley: Amherst Early Music, Inc., 2001). For Tenorlieder, see Ludwig Senfl, *Sämtliche Werke,* Das Erbe deutscher Musik 15. (Wolfenbüttel: Möseler, 1962), Vol. 2, 4–7.

21. Especially those in the *Dijon Chansonnier* and the manuscript *Escorial B,* edited in Maria Rika Maniates, *The Combinative Chanson: An Anthology,* Recent Researches in the Music of the Renaissance 77 (Madison: A-R Editions, 1989).

22. For example, see Théodore Gérold, *Le Manuscrit De Bayeux: Texte et Musique d'un Recueil de Chansons du XVe Siècle* (Genève: Minkoff Reprint, 1979).

23. See Hubert Boone, *Traditionele Vlaamse Volksliederen En Dansen* (Leuven: Peeters, 2003), Florimond van Duyse, *Het Oude Nederlandsche Lied: Wereldlijke en Geestelijke Liederenuit Vroegeren Tijd Teksten en Melodieën,* 3 vols. (Hilversum: Frits A.M. Knuf, 1965), Claude M. Simpson, *The British Broadside Ballad and Its Music* (New Brunswick, N.J.: Rutgers University Press, 1966). See also E. Bruning and others, *Het Geestelijk Lied van Noord-Nederland in de Vijftiende Eeuw. De Nederlandse Liederen van de Handschriften Amsterdam (Wenen Önb 12875) en Utrecht (Berlijn Mg 8o 190)* (Amsterdam: Vereniging voor Nederlandse Muziekgeschiedenis, 1963).

24. See Keith Polk, *German Instrumental Music of the Late Middle Ages: Players, Patrons, and Performance Practice* (Cambridge and New York: Cambridge University Press, 1992), 55, 61.

25. A combination suggested by Paul Beekhuizen.

26. Bruning, *Het Geestelijk Lied,* 164.

27. For a discussion of literary, social, and symbolic associations with bagpipes, see Adam Gilbert, "The Bagpipe: *Superexcellens Omnia Instrumentum,*" in *A Performer's Guide to Medieval Music,* ed. Ross Duffin (Bloomington: Indiana University Press, 2000), 402–409.

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Cornett

DOUGLAS KIRK

During its heyday, the high Renaissance and early Baroque, the cornett was considered the wind instrument of choice for virtuoso treble parts. It possessed a flexibility of color, dynamic range, and expression then unmatched by any other wind instrument except perhaps the trombone, its usual partner in the tenor and bass registers. A hybrid of brass and woodwind characteristics, the cornett is sounded by the player buzzing his lips into a mouthpiece (either separable or inseparable from the rest of the instrument) connected to a conically bored wooden tube vented by seven fingerholes. Like most other instruments during the Renaissance, the cornett customarily came in a family of different sizes. However, unlike other families of instruments, the cornett also appeared in three different forms, each with particular sonic and regional patterns of use. Nearly all modern discussions have concentrated on the most common modern form, the curved cornett, to the relative exclusion of the straight cornett (*cornetto diritto*) and the mute cornett (*cornetto muto*). Thus, the following brief historical survey, although not attempting to replace standard organological texts, will attempt to redress the imbalance somewhat.[1]

HISTORICAL SURVEY
Up to the Early Sixteenth Century

From early times through the Middle Ages, horns crafted from animal horns or ivory tusks were played. These are depicted frequently enough in art through the fifteenth century (Virdung even shows one in 1511) to pre-

sume that they must have been used at least occasionally for serious music making. At some time during the fifteenth century, a craftsman (probably in southern Germany)[2] designed a more sophisticated version of the finger-hole horn, probably straight (and therefore turnable on a lathe), with a longer body and seven fingerholes so that it possessed all the diatonic and chromatic notes up to the overblown octave. What is not clear from fifteenth-century representations is the nature of the mouthpiece—whether it was carved into the end of the instrument like that of the sixteenth-century mute cornett or whether it was detachable. And to confuse the picture more, curved varieties are also seen, although they sometimes have irregular numbers of fingerholes.

The *cornetto diritto* maintained its popularity in northern Europe, especially Germany, until well into the sixteenth century. It is clearly illustrated by Virdung and others.[3] Although the *cornetto diritto* is almost totally absent from collections of surviving historical instruments, this should not prejudice us against using modern reproductions in early-sixteenth-century repertory. This absence is more likely a result of the early form gradually wearing out and being replaced by the next developmental stage.

Sixteenth-Century Developments

This next stage was represented by the curved instrument, the "classical" cornett that survives in instrument collections today. The famed Nuremberg instrument maker Jorg Neuschel referred to these instruments in a letter from 1541 as "*welsche krumme Zincken,*" as if he thought them to be of French or Italian origin. My own theory is that they were a development of Venetian workshops, most likely that of Hieronymus Bassano, probably working together with the noted *piffaro* of the time, M. Andrea, whom we know as the source of at least some of the cornetts in the Academia Filarmonica collection in Verona. Certainly by the mid-sixteenth century, Venetian cornetts were famous all over Europe and had revolutionized the standards of instrument making and playing.

However, the curved cornett was not the sole member of the family during this time. The mute cornett was produced alongside it, and presumably played by the same players, although in different instrumental settings. Whereas curved cornetts were played with sackbuts and other loud instruments alone or *colla parte* with voices, mute cornetts were much more likely seen with flutes, strings (either plucked or bowed) or harpsichords and, like them, pitched at *Chor Thon,* a pitch standard a tone or so lower than the *Cornett Thon* of cornetts, shawms, and sackbuts and, as the name "mute" indicates, favored for use by choral ensembles.[4] We see this difference in pitch

in the surviving historical cornetts in museum collections: a large percentage of the surviving mute cornetts are about a tone deeper in pitch than the curved instruments. Although infrequently used in modern concerts, mute cornetts were common at the time, as evidenced by the major instrument collections in Brussels, Leipzig, Berlin, Paris, Verona, and Vienna, where there are almost as many surviving mute cornetts as curved ones.

By the mid-sixteenth century the normal cornett (Italian: *cornetto,* meaning high cornett; German: *Chorzink*), which was usually pitched in *g,* had been extended downward by a tone to produce an instrument in *f* and downward by a fifth to produce the lowest member of the family. The English called it "lysarden" because of its S-shaped, lizard-like form, without which the notes of the right hand would be unreachable. And even with the curve many lysarden were fitted with a key at the lower end to facilitate the playing of the lowest note—*c.* During most of the sixteenth century the lysarden was considered the lowest member of the cornett family and is referred to by Italian instrument makers as a *cornetto basso.* However, by the early seventeenth century, the family had clearly been completed with a true bass cornett (as distinct from a serpent, which properly has no acoustical commonality with the cornett); two surviving bass cornetts may be found in the Paris Conservatory collection. Coming as it did near the end of the cornett's Italian heyday, we cannot be sure how widely used the bass cornett was. However, there is ample evidence that the lysarden (*cornetto basso*)—referred to by Praetorius and Mersenne as a tenor instrument—was not just a curiously shaped, out-of-tune joke. First, as with the mute cornett, there are a lot of them surviving in European collections, particularly those with strong ties to Italian origins, such as Brussels and Verona. Second, there are actual reports of its ownership and use by serious musical organizations of the sixteenth century, like the Norwich and Exeter waites, and at the Medici court in Florence. Third, there is the musical evidence of scores known to have been played by unspecified sizes of cornetts that are simply too low to have been played by the normal *cornetto.* Here we might list pieces that specify "Zink" in the partbooks from the Danish court (ca. 1540), several parts in the various Florentine *intermedi,* reported to have been performed by cornetts,[5] and even musical works originating in the Veneto region of Italy. For example, the third cornett part in Monteverdi's *Vespers* of 1610, when the "Magnificat" is transposed down a fourth, features prominent low *g*s.[6] Thus the second (and certainly any third) cornett of the standard Italian wind ensemble around 1600 was probably either an "alto" cornett in *f* or a *cornetto basso.* It was this sort of group, composed in part of Girolamo dalla Casa, Giovanni Bassano, dalla Casa's two brothers (one on trombone), and others, that was active at San Marco in Venice all through

Giovanni Gabrieli's career there.[7] A few years later the German wind ensembles replaced the low cornett on the alto voice-line with an alto sackbut, providing a brighter sound; the Italians, on the other hand, seem to have preferred more mellow scoring. Other Italian preferences that emphasized mellow, softer timbres will be discussed below under "Embouchures."

When one reads reports of sixteenth-century performances or archival material on English waites and German *Stadtpfeifer,* the striking impression is just how conservative tastes were and how late instrument acquisitions often came. Certainly, it is clear that the primary instruments for loud outdoor playing—particularly of dance repertory—remained an ensemble of shawms and sackbuts until after the middle of the sixteenth century. Cornetts may have participated here, and doubtless sometimes did, but their usual documented use was accompanying voices, playing motets and chorales, or accompanying other polyphonic liturgical music.

Golden Age of the Cornett in Italy

The real golden age of the cornett in Italy was brief, from about 1575 to 1630. It was during this time that nearly all the flashy canzona repertory so often associated with the cornett was composed. Impressive though this repertory is, it is important to keep in perspective how small the group of real virtuosi was. They were nearly all active at San Marco in Venice or San Petronio in Bologna, and there were only a handful of them. Even at that time, the Italians often preferred the viola bastarda or the violin for real displays of virtuosity. In Venice, particularly, the use of the cornett declined relatively early, after the deaths of Dalla Casa (1601) and Bassano (1617). By the 1640s, it had been absent from San Marco "for some time,"[8] although the instrument was reintroduced later in the century, and a certain amount of difficult music was written for it.

The Cornett Outside Italy

The cornett was also actively cultivated until the early eighteenth century in Germany, England, and Spain and its Latin American colonies. In England, it was popular at the royal court, in the cathedrals and collegiate chapels, and among city waites until the reign of Cromwell effectively silenced music-making. It appeared again after the Restoration and saw some use until about 1700. In seventeenth-century Spain the cornett continued to be used, along with the vihuela, harp, sackbut, organ, and especially the curtal, for the support of choirs in cathedrals and monastic churches until skilled players became almost impossible to find in the last few decades of

the century. It does not seem, however, to have been used much for popular, semireligious music like the sacred villancicos. In any case, the shawm remained the most popular instrument for church and minstrel use.

In Germany, however, the situation was different. Here the cornett (called *Zink*) was widely employed by the *Stadtpfeifer* as a treble instrument in the company of sackbuts. In large part this was because it could sound trumpetlike and yet play diatonically in a lower register than the natural trumpet in use at the time. Even more important, it was not subject to the severe playing restrictions that court trumpet charters placed on trumpet players. The *Stadtpfeifer* and the Italians of the time approached the instrument in the same manner they approached the trumpet. Compositions of this period placed much more emphasis on trumpet-like arpeggiations than earlier works, and they were written much more often in the clarino register. Whereas Italian compositions between the years 1580–1620 keep the instrument mostly within the range of $c'-a''$ (never ascending higher than c'''), Praetorius (1619) lists the instrument's range as ascending to d''', and says that some players could reach a'''! The cornettino (in c or d, a fourth or fifth higher than the standard cornett) is also associated particularly with Germany. Although it may have been known in Italy, it is never called for or referred to there. References to it and scores calling for it become rather frequent in seventeenth-century Germany, and its bright, almost shrill sound seems to be better suited to that repertory than to the mellower, earlier Italian scoring. The Germans also made use of the mute cornett, although usually in a rather more Italianate mixed scoring. There are also surviving mute cornettini.

Although the German repertory includes some wonderful literature for the cornett, after 1700 the instrument is rarely called for in a solo capacity. Pieces such as the Fux *Sonata a quattro* of 1708 and the obbligato part in J. S. Bach's *Cantata No. 118* are real exceptions. Otherwise, the instrument returns to its original function of accompanying choirs (for example, in Bach motets or in *Cantata No. 4*) or playing tower music. Even this came to consist more and more of chorales, instead of the virtuoso *Turmmusik* of Pezel and his contemporaries. It finally fell into total disuse in the nineteenth century.

RANGE

Praetorius gives the following ranges for the various members of the cornett family:

The modern cornettino is built in c instead of d. This means that its lowest fingered note is d' and not the e' that Praetorius shows. The
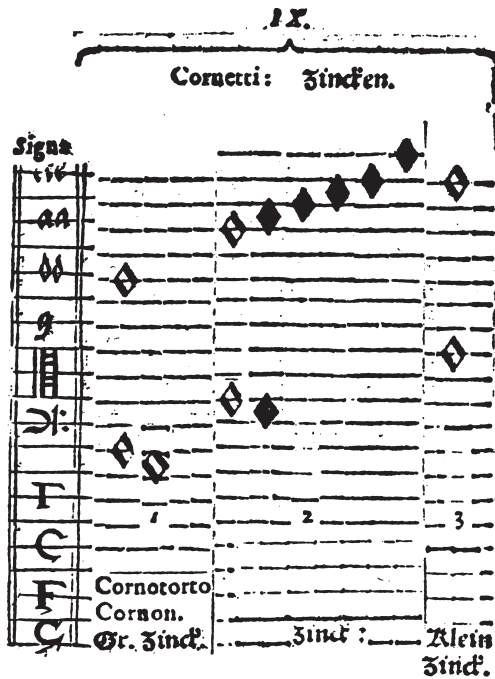
FIGURE 11.1   Cornett ranges (from page 22
of Praetorius's *Syntagma Musicum II*)

modern-day cornett (*Chorzink*), however, corresponds exactly to its
seventeenth-century counterpart in range. The low *g* shown by Praetorius
is (as described by him) a falsetto note below the normal range, produced
by a very focused embouchure and air stream. Practicing this note, and even
others below it, is very beneficial to the embouchure generally, and is
something that should be incorporated into the daily workout of all cor-
nettists. The notes from *a″* to *c‴* are called for in the more virtuosic reper-
tory from Giovanni Gabrieli onward. The *d‴* becomes important in the
German seventeenth-century repertory or in untransposed performances
of the Monteverdi *Vespers.* Notes above that should be practiced as a means
of increasing the player's control over the high register.

     Mute cornetts are built both in *g* and f (with *a* and *g* respectively as
their lowest notes), and Praetorius shows no special range for them. Al-
though both original instruments and modern reproductions will play
notes above the staff, the fingerings often become highly irregular above
g″ or *a″* because of the conical, hornlike bore and their deep, conical em-
bouchure cup. This is not really a problem because the register most

suited to their real repertory lies well below this (usually up to e'' or f''), and it is in this lower and middle range that they produce their most characteristic sound. Mute cornetts mix well with flutes and stringed instruments in Renaissance and early Baroque music. However, a different style, with a more cup-shaped mouthpiece and found uniquely in the collection in Vienna, may be what was used in the late seventeenth century in the repertory of Kromeriz, Moravia, as the soprano instrument in trombone choirs in repertory that also features pairs of clarino trumpets and curved cornetts.

The *cornetto basso* range shown by Praetorius is duplicated by modern reproductions, which play well in this alto/tenor register. The instrument usually is fitted with a swallowtail key for the bottom *c*. Its best range is *c* to a', although good instruments will play two full octaves, *c* to c'', quite satisfactorily. The instrument makes a very appropriate replacement for the alto sackbut, especially in music from around 1600, when the latter was probably only beginning to become widespread.

Tuning

Instruments with Adjustable Length

For all cornetts with separable mouthpieces, the only tuning adjustment is by positioning the mouthpiece farther out in its receiver to compensate for sharpness of pitch, or closer in if the instrument is flat. However, one cannot adjust very much in this fashion before the instrument goes out of tune internally (that is, some notes of the scale will be affected more than others), as is the case with all other Renaissance woodwinds.

Tuning isolated notes that are out of tune with respect to surrounding notes in the scale is accomplished by increasing or decreasing the size of fingerholes (usually the first open hole nearest the mouthpiece). However, one can quickly make drastic changes in an instrument by modifying the holes, and it is not recommended unless the person plays well himself or is working with someone who does. A word of caution: unlike recorders, cornetts are not improved by substantial undercutting of fingerholes because this destabilizes the pitch on expanding conical bores. Some slight undercutting is beneficial for reducing turbulence in the air stream where fingerholes meet the bore, but one should beware of instruments with "dished out," highly undercut fingerholes because the maker is trying to compensate for a faulty bore profile.

Questions of Temperament

Cornetts are usually tuned with equal temperament in mind. They often benefit, however, if the maker is capable of tuning the instrument in meantone or just intonation. The $g\sharp'$ is nearly always flat, and by tuning the $f\sharp'$ slightly flat, one will help insure that the f' does not come out too sharp. $c\sharp$'s and $d\sharp$'s can be controlled through the amount of fork-fingering used, but one should take special care that c' and c'' in the first two octaves are not sharp with the unforked fingering (●●●●/●○○). Having to add a fork (●●●●/●○●) is deleterious to the tone quality of the note. The notes e' and e'' should not be tuned too flat (as pure major thirds above c' and c''), for this will make them more difficult to play as pure fifths above a and a'. Also, in the case of e'', this will widen an already wide half-step between the e'' and f'' (the latter played ●●●●/●●● or ●●●○/●●●). Even though this harmonic fingered f'' tends to be rather sharp on most modern reproductions (the result of improper scaling of the bore from higher-pitched original instruments), it is aurally preferable to the very dull sound of ●●○●/○○○ in that octave. (Note that this is not necessarily the case on mute cornetts.)

Tuning Mute Cornetts

Mute cornetts present somewhat different problems, since they don't have separable mouthpieces with which to adjust the pitch. They really need to be built in-tune; out-of-tune instruments (sharp instruments in particular) are worthless in the heat of performance. Lowering the pitch of a sharp instrument can be accomplished by having the cup of the mouthpiece deepened by two or three millimeters. If the instrument is very sharp, or if the player is inclined to use mouthpieces of larger internal rim diameter on his curved instrument, one can have the mute cornett mouthpiece deepened at the throat and enlarged at the rim at the same time. This can bring down the pitch of the instrument by 5–10 hz, depending on the amount of modification. Individual notes can be tuned by adjusting the first open hole for the particular fingering. One should beware of drastic undercutting to raise pitch, as the undercutting will greatly destabilize the instrument.

Mouthpieces

Probably the greatest single source of problems with cornetts is not related to the instruments themselves, but to the mouthpieces. Unfortunately, bad mouthpieces abound—particularly with instruments more than a few years

old. The kinds of problems caused range from merely an unfocused sound to wide octaves—that is, flat low register and sharp high register notes. The only solution for a bad mouthpiece is to replace it with a good one. Every player needs a choice of mouthpieces. This is just as true for cornetts as it is for modern brass instruments; in fact, probably more so. If your cornett was made by the Christopher Monk Workshop, whose resin mouthpieces are easily available and inexpensive, order several with the instrument and then take your time sampling them all. Forget the compromise trumpet and horn cups. They never produce a good, focused sound. Request a sampling of the various "acorn" cups. Other good mouthpiece makers for cornett include Graham Nicholson (Basel), Bruno Tilz, and John McCann.

Care and Precautions

Plastic Instruments

The plastic (resin) instruments are exceptionally durable, and should last a lifetime when given the slightest amount of care. They should *never* be dropped or struck on anything hard, nor exposed to heat (such as leaving them in the sun in a closed car or on a heater). Also, students should *never* be allowed to leave mouthpieces in the instruments between playing sessions and, in the interest of good hygiene, the instruments should be swabbed out after playing. For this, trimmed down recorder or bassoon swabs work well for the instrument and pipe cleaners for the mouthpiece throats and backbores.

Incidentally, I would recommend buying plastic instruments with a leather covering rather than without. The leather gives a more tactile surface and thus a more secure grip, and also imparts some additional strength to the resin in case the instrument is dropped.

Wooden Instruments

It should be obvious that instruments made of wood need somewhat more care than those of plastic. They should be swabbed out religiously after playing and lightly oiled periodically. How often is the question. Generally, one should follow the directions of the maker for this; however, my view as a player is that it is not hard to tell when the instrument needs oiling. It will tell you by a slightly more diffuse sound and by being more prone to water absorption. I usually oil more in winter than in summer because that is when wood tends to dry out most. Use a light oil, such as almond or peanut, rather than something like linseed, which leaves deposits in the bore, and let the instrument dry out for a day (no playing) before oiling it.

Because wooden instruments are traditionally made in two lengthwise halves glued together, one needs to do everything possible to maintain the strength and integrity of the glued joint. Never use a swab that is too big for the instrument, never force the mouthpiece into place, and never subject the instrument to extremes of temperature that will crack the wood (especially, never allow the instrument to freeze).

Leather can be maintained just like fine shoes: use a dubbin compound or even black shoe polish from time to time.

Mute Cornetts

Mute cornetts require one special bit of attention, and one that is critical. Since their mouthpieces are a part of the instrument and are fragile, they must be protected—particularly the rim. It is worth the trouble to make a protective cap (I hollow out champagne bottle corks for this) to put over the end of the mouthpiece when the instrument is not being played.

Otherwise, care is about the same as for wooden, curved instruments: swabbing and oiling. The swab for the mouthpiece end of a mute cornett will need to be very small. I find that bassoon bocal swabs are perfect for this (though they sometimes need to be trimmed down in diameter). Don't neglect oiling the mouthpiece cup.

Basic Technical Considerations

Embouchure

It is important to the cornettist of today to consider the kinds of embouchure used by cornettists historically, as they had a substantial impact on playing technique.

There is ample pictorial evidence and one surviving treatise of Italian origin that discusses cornett technique; these indicate that Italian players generally played the instrument from an embouchure at the corner of the mouth (which corner and how far into the corner were probably left to the player's discretion, depending on the structure of his teeth). This is also recommended by various German writers, notably Daniel Speer, although he is more equivocal about it.[9] Indeed, the evidence from pictures and the large diameters of most surviving mouthpieces is that the situation in the North was much more split between players who adopted a side embouchure and those who preferred a central one. Although there are not enough modern-day side embouchure players for us to be too categorical about the relative merits of one position over the other, my own experi-

ence in playing for several years from each position leads me to the following conclusions:

A chief advantage of the side embouchure is that response is very fast, due to the thinness of the lips. This aids the delicate articulation of the Renaissance (*lingua riversa*—"te re le re," for example), and makes the fast scales and *passaggi* of late-sixteenth-century Italian ornamentation easier. Another advantage is that the cornett lies very comfortably in the hands, in much the same position as a transverse flute, and this can render the cornett playable for people with shorter arms or smaller hands who could not comfortably hold the instrument for a front embouchure.

One disadvantage of the side position is that sustained, loud playing is not accomplished as easily as with the front position, as the mouthpiece for the side embouchure is smaller than the front position mouthpiece. Of course, this is really a curse for the front embouchure, since beginning cornett players (especially converted modern brass players) tend to play much too loudly anyway, and the emphasis in good cornett playing should always be on obtaining a sweet, voicelike sound. But there are occasions when volume is needed, and it is harder to produce from the side position.

Another advantage of the side position is that it is totally independent of the front embouchure, in terms of the demand placed on the muscles. This means that it is of great convenience to players doubling on other instruments, as crumhorns and shawms (instruments that can really tire a cornett player's front embouchure) have little or no effect on a side embouchure. And it can be an advantage to a modern brass player who, obviously, has to use a different size mouthpiece on the cornett from his modern mouthpiece. The only disadvantage inherent here is that the player will need twice as much practice time because he has two embouchures to maintain.

It has been my experience that about the same amount of time is required to build up either kind of embouchure, if one is starting from scratch. Even though modern brass players usually prefer to play with their normal embouchures, they should be advised that using compromise trumpet or horn cup cornett mouthpieces seldom leads to good results and a characteristic cornett sound.

Articulation and Fingering

In his 1677 treatise on playing cornett and other wind instruments, Bartolomeo Bismantova recommends that persons wishing to become cornett players should first study singing (to learn phrasing, musicality, and breath control) and then recorder (to learn fingering and articulation). I can only

second this. However, in our more impatient world, we are often not able to accommodate these preliminaries, regardless of their importance. Today's beginning cornettists are generally university brass players, who come to the instrument with at least some idea of how to approach a brass instrument. They usually have no idea of woodwind finger technique, however, and all too often, they try to play the cornett as they would a marching band instrument, with heavy articulation and much too much air pressure. To combat these tendencies, get them to play scalar exercises of increasing speed and range with frontal double tonguing (trombonists know these as "doodle tonguings"). But make them start *slowly* and only progress in speed when the notes are very even. For developing good tone, make them imitate a good, natural-voiced soprano and play *colla parte* (double) with the sopranos (maybe at first, the altos) in your vocal ensemble. *Don't* plop them in with the shawms and sackbuts immediately, or you will never get anything sensitive out of them later. Never stop reminding them that a good cornett player should be capable of as much expression as a good singer singing without text.

To find technical studies for developing cornettists, one can look at those presented in the exercise books of Michael Collver or Jeremy West, who have distilled the fruits of many years of teaching and playing in their études. Other favorite exercises are those given at the beginning of the treatise of dalla Casa, which even provide suggested articulation syllables for practicing *lingua riversa*. These patterns can then be applied in *bicinia* and the various ornamented settings of chansons and madrigals by Bassano and dalla Casa. The treble ricercare by Ortiz are wonderfully musical also (although the version of *Douce memoire* is better transposed up a fourth if performed on the ordinary curved instrument). Don't forget ornamentation studies. Have the student practice the cadential ornamentation patterns of Bassano, Ganassi, Ortiz, and dalla Casa. The list of possibilities is very long indeed. For just all-around good technical material to develop range and agility, one can hardly do better than study the études in Arban's *Complete Conservatory Method for Cornet* (*cornet à pistons*), substituting *lingua riversa* for the long slurs in the scalar exercises. After the student can play anything in the first 100 or 150 pages of Arban fluently, he will be able to do well with seventeenth-century music also! (See also the collection of exercises by Michael Collver referred to under "Basic Exercises" below).

Tuning

Along with proper ideas of tone production, the first thing to emphasize to a new cornett player is the importance of consistent, good tuning, for with-

out that, all his music-making will be compromised. Unfortunately, the cornett can be a devilishly hard instrument to play in tune. This is especially true of the instruments made back in the 1960s and 1970s, when bores were particularly unsophisticated. Even now, with the state of the art continually advancing, cornett bores necessarily incorporate some compromises in the correct tuning of certain notes. Thus, no matter how sophisticated the instrument, it is probable that players will always have to know how to "lip" this note slightly sharper, that one slightly flatter.

The best way of gaining the ability to play in tune is by the constant use of a pitch reference while practicing (especially during the early stages of learning the instrument, with frequent use thereafter). This can be a tuning or pitch meter or an organ with a note sounding as a drone (a small weight on a key serves nicely for this). Pitch meters, like the Korg models, that "read" pitches played to them and show the amount of deviation from the nearest equal-tempered pitch, are very useful—especially for actually tuning an instrument. For the purposes of learning control over the instrument, however, it is better to use the meter as a pitch generator, which develops the ear and thus ear-lip coordination rather than eye-lip coordination. Although I would hate to do without my pitch meter, I still prefer to use an organ whenever possible because it gives a real, musical sound. I set it to play the tonic or dominant for an étude or passage and then tune constantly to it.

When one first starts learning an instrument, it is better to believe that the tuning of the instrument is correct; playing against a drone is probably the best way to learn how it works. One should also try to get advice from a teacher or more experienced player as soon as possible in case there are problems with the instrument or the beginner's embouchure. Although there are general tendencies among various makers' instruments, one very quickly realizes that every instrument is distinct, with its own behavior patterns. This is even true of the molded resin instruments which one would expect to be as nearly identical as possible. Wooden instruments can vary greatly, even within a single maker's production. Furthermore, as was mentioned earlier, the player's choice of mouthpiece will have a great effect on the behavior of the instrument, both in terms of the tuning of individual notes within a register, and of the general tendencies of registers themselves (the high register may tend to be sharp if the cup is rather shallow, or flat if it is too deep, etc.). Thus, it is probably not worth attempting to list possible problems here. The perceptive player will soon have made his own list—an important part of learning one's instrument.

Once the player gets beyond the rudimentary stages and is able to play simple pieces relatively well in tune, he should be challenged to start think-

ing in a more sophisticated harmonic sense. That is, he should start recognizing when his *b* is a major third in a G-chord and when it is a fifth in an E-chord. And he should learn where to place the note so that it is a pure third (either major or minor) or a pure fifth. This has relevance on almost every note of the instrument, but is especially important on those that already lie a little bit flat or sharp, because they will then have to be "lipped" more in one direction or the other. For example, *f′* is often a bit sharp, which may be fine if it is the third in a D-minor chord, but it may need some adjustment in a B♭ chord. By contrast, B♭ is often the flattest note on the instrument, and it will seem very different in a G-minor chord than in an E♭ or B♭ chord. The player will also need to notice the difference between the forked fingerings used for *c♯* and *e♭* in the first and second octaves (generally, one needs less fork in the second octave, but cornetts are very idiosyncratic). Again, the key to developing this kind of knowledge is constant tuning to a drone and then sensitive ensemble coaching.

Weak Embouchure

Most beginning cornett players will have to contend with the difficulties of developing a strong embouchure. Certainly this is true of beginners who have not played a brass instrument before, but even many modern brass players discover in coming to the cornett that their normal embouchure does not possess exactly the strength they need for the cornett.

One goes about building embouchure strength in about the same way for any brass instrument. First, it is necessary to get the embouchure to "focus," that is, to work as efficiently as possible. Then one can develop control and stamina. Although these are largely interrelated processes, we will consider them briefly as separate traits in order to prescribe exercises for the development of each.

The musculature involved in the embouchure consists of a ring of muscles running below the nose and around the corners of the mouth, which serves rather like support pillars for the embouchure. Sheets of muscles extend down in different planes to constitute the actual muscles for vibration in the lips. It is these muscles that must be trained to vibrate selectively and with very predictably controlled rates as we play cornett. Buzzing with or without the mouthpiece is the best way to refine the behavior of these muscles. Another way is to play "pedal tones" below the normal fingered notes of the instrument. Have the cornett player produce a descending c-scale down from *c′,* playing *g, f, e, d,* and *c* with all the fingers closed on the fingerholes. Do this slowly, using no mouthpiece pressure, and trying to hold each note as steady in pitch as possible. Repeat the scale, as-

cending and descending, for several minutes each day. Embouchure focus will improve, not overnight, but within a few weeks. After the player is more advanced, this exercise is still beneficial as a warm-up or to relax after fatiguing high-register playing.

Stamina is best improved through long tones, played in all registers. Each tone should last about ten seconds and, to develop the utmost control, one should vary the dynamics with the duration of the tone. Start the tone without the tongue, pianissimo, crescendo (always maintaining good tone) to fortissimo (a cornett fortissimo, not a symphonic trumpet one), and then decrescendo again. Try to end the note so softly that it is hard to tell exactly when it stopped. Long tones can be done as slow scales, either diatonic or chromatic, ascending and descending, or as regular or irregular intervals moving all over the range of the horn.

Overall range is best increased by playing scales in half or quarter notes at slow to moderate speed. Try to play higher than the notes called for in any music you are currently performing. If one needs to play a g'' reliably in a concert piece, then exercises for practice should include b'' and c'''. If one needs to play d''' in concert, then he should be able to play three or four notes higher than that in practice. I believe this is the point of Praetorius's description of certain German cornett players playing up to g''' and a'''. It wasn't that they were playing these notes in concert necessarily, but they probably did need a strong c''' and d'''. It is very likely that high scales, long tones, plus pedal notes gave them this extraordinary command of the high register.

Basic Exercises

Excellent sources of exercises assembled by virtuoso players are Michael Collver's *Chop-busters for the Cornetto* and Jeremy West's *How to Play the Cornett*.[10] Good sources of other material have been mentioned earlier; and, of course, the practice should also include study of real pieces of music. Early on, this might best consist, as it did in the sixteenth century, of *bicinia* that gradually increase in difficulty. Later, the player will move to solo ricercare and diminutions on chansons and madrigals. Vocal pieces, played as expressively as possible, should always be included in the study session. These can be taken from the sixteenth-century sacred or secular repertories, and the player's consideration of them will include such things as phrasing (parallel with text phrasing), articulation (to match word accent or lack thereof, as in melismas), dynamic variation, and ornamentation (as added by the player).

FIGURE 11.2   *The Concert*. Italian (Emilian), second quarter of seventeenth century. Oil on canvas: 99.7×146.7 cm. Courtesy of the Fogg Art Museum, Harvard University, Cambridge, Massachusetts (The Francis H. Burr Memorial, Alpheus Hyatt, Louise Haskell Daly. Richard Norton, and Gifts for Special Uses Funds.)

SUGGESTED REPERTORY

In addition to the more generic pieces referred to in the preceding section, any player will want to study the music really written with the cornett in mind. There are many such items in the Italian and German repertories of the early seventeenth century, and even a few English pieces have survived destruction. A complete listing of them is obviously much beyond the scope of this chapter, so I will only give a few for ensembles of cornetts. Serious players are advised to consult *A Catalog of Music for the Cornett,* which lists (nearly) all music specifying the cornett in both modern editions and historic collections.[11]

Bicinia

Preeminent among sixteenth-century *bicinia* collections are those of Orlando Lasso, with those of his associate, Francesco Guami, probably next in line. All of these are for unequal voices and thus best suited for cornett and sackbut. Collections of equal-voiced *bicinia* more for cornetts are: canons
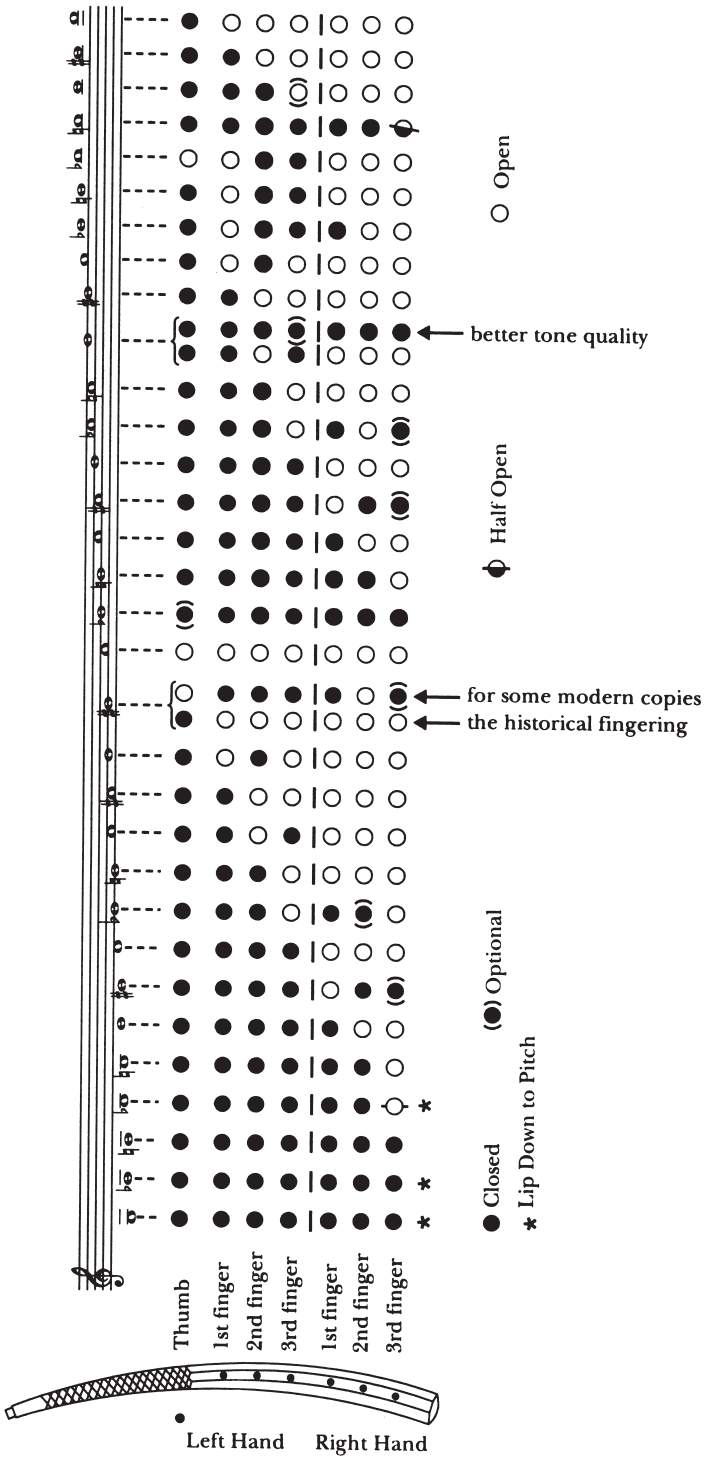
FIGURE 11.3 Fingering chart for Cornett in G

on the church modes by Johann Walter (*Hortus Musicus* edition 63), *bicinia* by Michael Praetorius (scattered throughout the *Musæ Sioniæ* in his collected works; the old Bärenreiter publication of just the *bicinia* is now long out of print), and Johann Vierdanck's *Capricci à 2* of 1641 (*Hortus Musicus* edition 21, now out of print). An English collection of simple duets is Thomas Whythorne's *Songs for two voyces* of 1590.

Tricinia

For three cornetts, try the pieces for three high voices in the Lasso collected works, or those of Praetorius. The Vierdanck collection mentioned above also contains two trios for cornetts or violins.

Quartets

The principal quartet for cornetts is Samuel Scheidt's *Canzona for Four Cornetts* (available from Robert King Music Co.) or in the Scheidt collected works.

Quintets

In his *Harmonie Universelle* of 1636, Mersenne reproduces a *Phantasie à cinq parties composée par le sieur Henry le Jeune, pour les cornets.* This is also reproduced on page 332 of the 1981 *Basler Jahrbuch für historische Musikpraxis.* If the piece is transposed up a whole step, it is playable on four treble cornetts and one *cornetto basso.* Other than this, the only probable quintets for cornetts known to me are the five *fugæ ad equales* in the partbooks of the Royal Danish court band, ca. 1540. (Some of these are playable as they stand on *cornetti alti,* and others seem to be more for *cornetti bassi.* However, they are all very playable on treble instruments if the low pieces are transposed up a fourth.) These can be found in the first volume of the Dania Sonans edition of the manuscript, Copenhagen KB 1872-4°, or from me (in a suitably transposed edition).

Sextets

There are at least two sextets for cornetts (or playable by them). One, specified for the instruments, is that of Wilhelm Lichtlein, ca. 1610 (his *Capriccio*), published by the firm Hans Gerig, Cologne. The other, for six treble instruments, but written at a time when the cornett would have been the most probable selection, is William Daman's *Fantasia di sei soprani,* published by *Mapa Mundi* Editions, London.

NOTES

1. There are too many discussions of the cornett to attempt a complete list here. Kärstadt, "Zur" is the first important one. Others include Baines, *Woodwind;* Munrow, *Instruments;* Gouse, *Cornett;* Heyde, *Hörner.* Very useful articles in journals include Dickey, "Decline" and a series of four articles on the cornett, its repertory, and technique by Kaye. The most useful, balanced, concise account of the cornett family is that of Anthony Baines and Bruce Dickey in the *New Grove;* see the articles "Cornett" and "Lysarden."

2. Recent discoveries about Augustein Schubinger, the first major cornett soloist, would seem to place the cornett's early development in the area of Augsburg. See Polk, "Augustein": 83–92. However, there are representations of cornetts in other parts of Europe contemporary with Schubinger's early career (1480s) that could be taken as evidence that the rise of the cornett was either more a general phenomenon, or else that it had a singular point of origin that is considerably earlier than we can validate through iconographical evidence. See, for instance, the clear representation, ca. 1480 in the Breviary of Isabella of Spain, reproduced in the *New Grove* article cited above in footnote 1.

3. See, for example, the German woodcuts from A. Schlick of 1511 and Georg Pencz of 1531 reproduced in the articles "Cornett" and "Zink" of the *New Grove* and *MGG*, respectively.

4. For the definitive information about Renaissance (and Baroque) pitch standards, see Haynes, *History.* Material especially pertinent to the cornett will be found on pp. 55–114 and *passim* to 157. The discussion of mute cornetts at *Chor Thon* begins on page 103.

5. The set of seven partbooks (Copenhagen, Koneglige Bibliotek, Gl.Kgl.Sml. 1873–74) contains several pieces with the preferred instrumentation written in by a later hand. Of specific interest to us is a *Laudate Dominum à 8* "for 4 *zincken* und 4 *pusauns*." While the sackbut parts are very playable on tenor sackbuts, all four cornett parts are too low to be played on the normal treble instrument. Concerning instrumentation in the Florentine *Intermedii*, see Brown, *Sixteenth*.

6. For comments on probable performing pitch for these works, see note 4 above; see also the article Johnstone, "High."

7. See Selfridge-Field, "Bassano," p. 153, and Arnold, *Giovanni Gabrieli*, pp. 128–162. The standard ensemble began at three, expanded to four with the arrival of Giovanni Bassano in 1576, and expanded again in 1582 to six. With the exception of major feasts when other players were brought in, it remained at six throughout most of the seventeenth century. For a large corpus of typical Venetian four-part repertory, playable by two cornetts and two sackbuts, see the *Pelpin Tabulatur*, transcribed in volume 8 of the series *Antiquitates Musicæ in Polonia*.

8. See Dickey, "Decline," p. 26.

9. Daniel Speer's comments on playing the cornett from his *Grundrichtigen . . . Unterricht der Musicalischen Kunst . . .* , 1697, pp. 232–233, are summarized along with those of all other early sources on the instrument by Leonards, "Historische." See p. 335 for Speer and pp. 350–352 for the comments of Johann Daniel Berlin (1744), who still advocates a right-corner placement but says that one can also play from the front of the mouth.

10. Arban, *Complete*. Collver, *Chop-busters* is very useful and provides excerpts from the best of Arban and Bassano and is available from its compiler at a cost of $10.00. Write: Michael Collver, 11 Ashby Road, Bedford, Mass. 01730. Another fine method for cornetto is West, *How*.

11. A basic tool for any serious cornett player is Collver and Dickey, *Catalog*. The result of many years of archival research, the *Catalog* lists all works known to the authors that mention the cornett and gives pertinent location information for them. A must have.

SUGGESTED LISTENING

Solo Recordings

Il Cornetto. Jeremy West and ensemble. Edition Open Window. OW 004.

Di Diversi Modi di Diminuir. William Dongois and the Concert Brisé. Carpe Diem 16254.

La Golferamma. William Dongois and Yoshimichi Hamada. Le Concert Brisé. Carpe Diem 16258.

Lassus & Palestrina: Motetti, Madrigali e Canzoni francesi diminuiti. Jean Tubery. Ensemble La *Quel lascivissimo Cornetto: Virtuoso Solo Music for Cornetto.* Bruce Dickey, Tragicomedia. Accent ACC 9173D. 1991.

Il vero modo di diminuir. Doron David Sherwin. Giulia GS 201010.

Fenice. Ricercar RIC 152137.

Ensemble Recordings (a very small selection of what is available)

Affetti Musicali. Concerto Castello. Deutsche Harmonia Mundi lC-06599-917. 1981.

Claudio Monteverdi: Vespro della Beata Vergine. The Taverner Consort, Andrew Parrott, directing. EMI DSB 3963 (2 CDs). 1984

Dictionary of Medieval & Renaissance Instruments. Ensemble Gilles Binchois & Dominique Vellard, La Reverdie, Currende Consort, Concerto Palatino, Erik Van Nevel, Accademia Strumentale Italiana & Alberto Rasi, Roberta Invernizzi, Juan Carlos Rivera, Musica Antiqua & Christian Mendoze, In Stil Moderno, and many more. Cantus Records C9705/6 (2002).

The Floating City: Sonatas, Canzonas and Dances of Monteverdi's Contemporaries. His Majestys Sagbutts and Cornetts. Hyperion CDA67013. 1998.

Gabrieli-Lassus: Venetian Easter Mass. Gabrieli Consort and Players, Paul McCreesh, directing. DG Archiv 453 427-2. 1997.

Giovanni Gabrieli: Canzonas, Sonatas, Motets. Taverner Consort, Choir, and Players. Andrew Parrott, dir. Veritas 7243 5 61934 2. (A double CD re-release with *Venetian Church Music.* 2001.

Giovanni Gabrieli: Sonate e Canzoni. Concerto Palatino, Bruce Dickey and Charles Toet, directing. Harmonia Mundi HMC 901688.

H.I.F. Biber: Vêspres. Studio de Musique Ancienne de Montréal, Christopher Jackson, directing. REM 311207. 1993.

Il Concerto Palatino di Bologna: North Italian Music for Cornetts and Trombones 1580–1650. Concerto Palatino. Accent ACC 8861D. 1992.

Mauricio Cazzati: Sonates, Antiennes & Requiem. Ensemble La Fenice. ADDA 581318. 1993.

Music for the Duke of Lerma. Gabrieli Consort and Players, Paul McCreesh, directing. DG Archiv 471 694-2. 2002.

Music for San Rocco. Gabrieli Consort and Players, Paul McCreesh, directing. DG Archiv 449 180-2. 1996.

Sonata Concertate in Stil Moderno, Virtuoso Instrumental Music by Castello and Scarani. Concerto Palatino. Accent ACC 9058D. 1991.

12

Sackbut

STEWART CARTER

Unlike many early instruments that have been revived in the twentieth century, the trombone has remained in continuous use, with relatively slight changes in construction, since its inception more than five hundred years ago. The term "sackbut," used today to distinguish the early form of the trombone from its modern counterpart, was current in England from the late fifteenth century to the end of the seventeenth century. Probably the name derives either from the old Spanish *saccabuche* ("draw-pipe" or "pump") or the old French *saqueboute* ("pull-push").

Keith Polk and others have shown that the sackbut evolved from the natural trumpet in several stages. Straight trumpets may have been fitted with rudimentary slides as early as the mid-fourteenth century. By about 1370, an S-shaped instrument had evolved, and around 1400 the folded shape appeared. The true sackbut, with a double-branched slide, appeared sometime in the fifteenth century—perhaps as early as the 1430s, but certainly by the 1470s. In the fifteenth century the sackbut, like the slide trumpet, was often associated with shawms (usually a discant shawm and a bombard) in the *alta cappella* or "loud wind band."

The physical characteristics of sackbuts of the sixteenth and seventeenth centuries have been described by Fischer, *Renaissance* and Smith, *Trombone.* In comparison to their modern counterparts, these instruments had a narrower bore (about 10 mm), a smaller, more funnel-shaped bell with less terminal flare, no slide stocking, no water key, and no lacquer. A few surviving tenor sackbuts had larger bores, approaching that of a smaller modern instrument (about 12 mm), but most of these are cut-down basses. According to Smith, the early instruments had thinner walls in the bell sec-

tion but thicker walls in the cylindrical sections. Early bass sackbuts often had tuning slides, though tenors and altos did not. Most tenors had flat stays, at least until about the middle of the seventeenth century, but a few had tubular stays, which were usually telescoping. Bass sackbuts had a hinged handle attached to the lower slide stay, to permit full extension of the slide.

In the sixteenth and seventeenth centuries, the most popular size of sackbut was the tenor, of which several specimens—mostly by Nuremberg craftsmen—survive. Precise pitch data for some of these extant instruments are difficult to obtain. But while there seems to have been a considerable amount of variation, the fundamental pitch in first position for most antique tenors is roughly modern Bb. However, early brass instruments were customarily tuned higher than today (often a half-step or more), so this first-position note was conceived as A (see Fischer: 4–7). According to Anthony Baines, this higher pitch standard was sometimes referred to as *Cornett-ton.*

First-position A for the tenor is confirmed by Aurelio Virgiliano, whose *Il Dolcimelo* (ca. 1600) contains the earliest known chart of slide positions (see fig. 12.1). The chart shows only four positions, arranged diatonically: adjusted upward by a half-step to conform to modern pitch standards, these positions correspond to modern first, third, fifth, and sixth positions, respectively. Praetorius (*De Organographia,* 1619) shows five positions for the bass sackbut (see fig. 12.2), but if we accept his second position merely as an extension of first, then his slide positions correspond to Virgiliano's. Praetorius indicates only one pitch, *f,* for this extended first position, whereas the corresponding note, *c′,* in Virgiliano's chart for the tenor is shown in unextended first position. Obviously this, too, must be lowered, but Virgiliano does not indicate needed extensions.

Virgiliano also shows that when playing the sackbut *in concerto* (i.e., in ensembles), the *canto* part is taken by a cornett, and the alto, tenor, and bass parts by tenor trombones. Avoidance of the alto and bass seems to have been typical of Italian practice.

Praetorius describes four different types of sackbut:

1. Alto—*Alto oder Discant Posaun* (labeled "4" in fig. 12.2). Apparently it was pitched in either D or $E,$ its range, B to d'' or e''. Praetorius says this instrument is the natural choice for a high part, but because of its small size its sound is inferior to that of the tenor; furthermore the latter, with practice, can be played as high as the alto.
2. Tenor—*Gemeine rechte Posaun* (labeled "3" in fig. 12.2). It was pitched in $A,$ although notes in "first position" were not always

FIGURE 12.1   Aurelio Virgiliano, *Il Dolcimelo* (ca. 1600). Reprinted by permission, Studio per Edizioni Scelte, Florence.
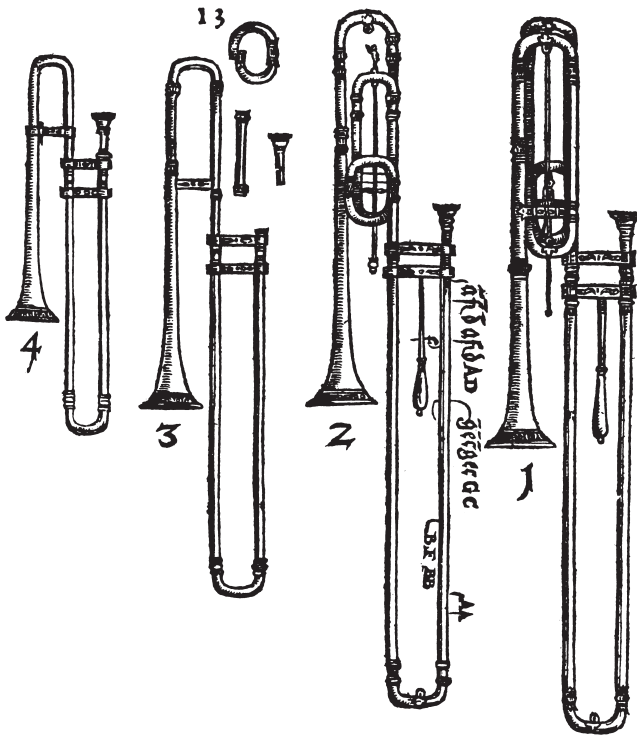
FIGURE 12.2   Sackbuts (from Plate VIII of Praetorius's *Syntagma Musicum II*)

played with the slide fully closed. Praetorius indicates this in another section of *De Organographia* when he recommends using a trombone (especially one made in Nuremberg) with its slide extended by the width of two fingers as the best source for an *a* in "choir" pitch. Variable pitch standards and the absence of a tuning slide apparently necessitated flexible slide positions. The illustrations at the end of the volume show that the tenor could be fitted with extra lengths of tubing, either straight or coiled, which could probably lower the instrument by as much as a full tone. The natural range of the instrument is identified in the text as *E* to *f′*, but the table on page 20 of *Syntagma II* lists *g′* to *a′* for the top. The table also shows extensions of this range from A_1 to *g″*. Factitious tones (false or "bendable" notes), mentioned by Praetorius for the *Octav-Posaun* (see below), and/or pedal tones must have been used to obtain the lowest notes. The author mentions two virtuosos capable of playing in the ex-

treme ranges of the tenor instrument, one of whom could match the agility of a cornett or viola bastarda.

3. Bass—*Quart-Posaun* or *Quint-Posaun* (labeled "1, 2" in fig. 12.2). These were pitched in *E* and *D*—a fourth and a fifth, respectively, below the tenor. In the illustrations at the end of the book, two *Quart-Posaunen* are depicted, varying slightly in size and configuration. Both instruments are fitted with a push-rod attached to a tuning slide, which was probably capable of lowering the instrument by a step, thereby instantly converting a *Quart*-into a *Quint-Posaun*. The range of the bass is A_1 or G_1 to c' (extendable downward to F_1 and upward to g'). Praetorius says that a tenor player can learn to play the *Quint-Posaun* by reading bass-clef parts as if they were in tenor clef.

4. Double bass—*Octav-Posaun*. This rarely used instrument plays an octave below the tenor, and the normal range is E_1 to *a*. The extended range is from C_1 to c', but the low C_1 and D_1 are described as "falset" notes (factitional tones?) which can be obtained with practice. Praetorius mentions two forms of the instrument: one doubles the tenor in all dimensions, whereas the other, not physically as large, achieves its low pitch by means of crooks and large bore.

The soprano member of the sackbut family, pitched an octave above the tenor, never achieved widespread use, but it was used occasionally, beginning in the late seventeenth century.

Mersenne's *Harmonie universelle* shows a tenor instrument fitted with a crook which lowers it by a fourth, thereby converting it to a bass. He also shows that the instrument could be disassembled at several points, since the joints apparently were not soldered. Mersenne seems puzzled by the acoustics of the sackbut, marveling that one can extend the slide some distance and yet obtain the same note, seemingly in defiance of the laws of musical proportion.

During the sixteenth century, the sackbut served a variety of functions. It kept its place in the *alta cappella* as this ensemble evolved (see chapter 8), but with increasing frequency it was teamed with the agile cornett in the cornett and sackbut ensemble. The sound of the instrument could be loud, but it could also be subdued enough to blend with softer instruments or voices. Evidence from Florentine *intermedii* indicates that sackbuts combined with voices, and occasionally with such soft instruments as lutes, recorders, crumhorns, and transverse flutes. Infernal scenes sometimes called for sackbuts combined with viols. In church music sackbuts frequently doubled voices in the lower and middle ranges.

In the seventeenth century sackbuts continued to be used in town, church, and court bands. The loud shawm band, often with one or more sackbuts, gradually disappeared in the seventeenth century, but the cornett and sackbut band (now customarily in five parts) saw its finest hour, particularly in Italy, England, and Germany. In church music sackbuts were used both to support voices and to play independent lines in the new *concertato* manner. Giovanni Gabrieli called for as many as twelve sackbuts in his sacred works, often with violins or cornetts on the upper parts. Throughout the seventeenth century, sackbuts continued to be associated with strings, in concerted sacred vocal music as well as purely instrumental music. Many Italian sonatas call for one or two violins or cornetts on the top, with sackbut or violone on the bottom, playing a part closely tied to the continuo.

Tuning

Many modern reproductions have tuning slides, which are anachronistic with respect to the tenor and alto. Others have a thumbscrew which allows adjustment of the amount of overlap between bell and slide sections. For more faithful reproductions, tuning bits, which are placed between bell and slide sections (see number 13 in fig. 12.2), are the only means of altering the basic pitch of the instrument. Some makers supply these bits with their instruments.

Slide Positions

Modern reproductions of tenor sackbuts are customarily built in $B\flat$. Basses are in $E\flat$ or F, with altos theoretically an octave higher, though most altos are in the lower key. Table 12.1 gives "modern" positions for tenor sackbut in $B\flat$ and basses in F and $E\flat$. Positions for alto may be obtained by octave transposition.

Small adjustments for some notes are normal, and one important advantage of the sackbut is its almost infinite adjustability because of the slide; large adjustments for notes other than those of the seventh partial may indicate a poorly made instrument.

Seasoned sackbut players who would like to reproduce the playing experience of a Renaissance performer as closely as possible are encouraged to learn to play the tenor sackbut in A, with four diatonic positions rather than seven chromatic ones, as indicated by Virgiliano and other writers of the time. Sackbut players who work with an ensemble that performs at $a' = 460$ or thereabouts (see chapter 25) can simply play A in "regular" first position, without recourse to radical tuning adjustments. But in order to

Table 12.1. Slide positions for sackbuts in B♭, F, and E♭

1	2	3	4	5	6	7
			B♭ tenor			
B♭	A	G♯	G	F♯	F	E
f	e	e♭	d	c♯	c	B
b♭	a	g♯	g	f♯	f★	e★
d′	c♯′	c′	b	b♭★	a★	—
f′	e′	e♭′	d′★	—	—	—
—	g′★★	f♯′★★	—	—	—	—
b♭′	a′	g♯′	g′★	—	—	—
c″	b′	—	—	—	—	—
			F bass			
F	E	E♭	D	C♯	C	B_1★★★
c	B	B♭	A	G♯	G	F♯★★★
f	e	e♭	d	c♯	c★	—
a	g♯	g	f♯	—	—	—
c′	b	b♭	—	—	—	—
—	d′★★	c♯′★★	—	—	—	—
f′	e′	e♭′	—	—	—	—
g′	f♯′	—	—	—	—	—
			E♭ bass			
E♭	D	C♯	C	B_1	$B♭_1$	A_1★★★
B♭	A	G♯	G	F♯	F	E★★★
e♭	d	c♯	c	B	—	—
g	f♯	f	e	—	—	—
b♭	a	g♯	—	—	—	—
—	c′★★	b★★	—	—	—	—
e♭′	d′	c♯′	—	—	—	—
f′	e′	—	—	—	—	—

★ denotes common alternate positions
★★ denotes seventh-partial notes, which must be raised slightly
★★★ seventh position is very difficult to obtain on most basses

make a tenor sackbut pitched in B♭ sound $a′ = 440$ in first position, the basic length of the instrument must be extended. It may prove difficult to lower the instrument a half-step with the most common tuning devices—tuning bits, or (anachronistically) a tuning slide or screw mechanism—but a good brass repairman could lengthen the tubing, as suggested by Smith. However, thinking of the instrument as keyed in *A* rather than B♭ is incon-venient, to say the least, for players who must switch back and forth from

sackbut to modern trombone. My personal preference is to tune the instrument so that first-position $B\flat$ is extended slightly—perhaps half an inch. This expedient permits upward adjustment of the slide for characteristically flat notes, and virtually obviates the need for fully closed notes, which can cause problems on an instrument without cushion springs on the slides.

Care and Precautions

Care of a sackbut is the same as that for a modern trombone. The slide must move freely and easily, and should be lubricated with slide cream, available in music stores. Some players spray water on the slide to keep the cold cream moist. Every few months the inside of the inner slide tubes should be cleaned with a "snake"—a long piece of flexible wire, often coated with plastic, with small bristles on either end (available in music stores). Mouthpieces can be cleaned with a mouthpiece brush.

Lacquer finishes for brass instruments are a fairly recent development, and are probably best avoided on historical reproductions, as the lacquer may inhibit vibration slightly. Unlacquered instruments tarnish, and may be polished periodically with brass polish.

Common Problems

It is relatively easy to convert good trombone players to tenor sackbut, although a certain amount of coaching on style will be necessary. They must be taught to articulate properly, and cautioned not to overblow. As the bell of a sackbut is often lower in relationship to the slide than on a modern instrument, modern players who are accustomed to judging third and fourth positions from the location of the bell will need to readjust.

Hand Position

Renaissance paintings and other iconographical sources often depict players with all four fingers of the right hand wrapped around the lower (moveable) slide stay, and with the left hand gripping the instrument just below the mouthpiece (see fig. 12.3), or perhaps with part of the hand around the stationary slide stay. As the grip has no effect on the sound of the instrument, I recommend the more flexible "modern" hand position described below.

For the tenor and alto, the right hand should be held so as to afford maximum wrist flexibility. Grasp the lower (moveable) slide stay with the thumb on the side closest to the mouthpiece, with the index and middle fingers opposite the thumb and the ring and little fingers below the lower

FIGURE 12.3   Hans Burgkmair, *The Triumph of Maximilian I.* Reprinted by permission, Dover Publications, Inc., New York.

slide tube. The palm of the hand should face the player so that the wrist can act as a "hinge," thereby allowing maximum flexibility. With the slide held in this manner, the wrist alone can move the slide the distance of approximately two positions. For longer throws of the slide, wrist and arm are used together.

Modern trombonists generally wrap all four fingers of the left hand around the upper (stationary) slide stay (sometimes with the index finger atop the upper slide branch), and the thumb hooked around the nearest bell stay. This method also works for many sackbuts, particularly those with tubular stays. On some modern reproductions this method is difficult because the left thumb cannot comfortably reach around the bell stay. This is particularly true for instruments which have tuning bits inserted between slide and bell sections, thereby lengthening the distance between the bell stay and the upper slide stay. In such cases, the player generally must wrap the entire left hand around the upper slide stay. Players should avoid grasping the bell itself with the left hand, as this inhibits vibration.

EMBOUCHURE

Embouchure development is a difficult and time-consuming process, and for this reason, conversion of musicians with little or no previous experi-

ence on a brass instrument requires a great deal of patience. The mouth-piece usually should be placed equidistant laterally between the corners of the mouth, with more of the mouthpiece on the upper lip than on the lower. It is important to keep the corners of the mouth firm while playing. For assistance in embouchure development, the novice sackbut player is encouraged to seek the assistance of a modern trombone teacher.

Tone Production

Because of its generally smaller bore, the tone of a sackbut is more easily "broken" than that of a modern trombone, and the most common problem of a modern player who converts to the early instrument is that of forcing the tone. The sackbut usually requires a smaller volume of air, but diaphragmatic breathing and proper breath support are essential, as with any wind instrument.

Articulation

Several early sources discuss articulation for wind instruments, although none of them specifically mentions the sackbut. By examining sources for cornett and trumpet, however, we probably can gain a fairly clear idea of articulation for the sackbut. Some excellent sources are Dalla Casa's *Il vero modo di diminuir* (1584) and Francesco Rognoni's *Selva di varii passaggi* (1620), which mention the cornett; and Fantini's *Modo per imparare a sonare di tromba* (1638), for trumpet. Dalla Casa mentions three principal types, all illustrated by passages moving in conjunct eighth notes. The first type is the *lingua riversa* ("reversed tongue"), which is further subdivided into three categories, ranging from the very smooth *lere lere,* to the moderate *dere lere* and the harsher *tere lere.* (Both the "l" and the "r" are articulated in the front of the mouth, on the hard palate behind the upper teeth, the "r" being flipped, Italian style.) The second type is the *lingua dritta* ("straight tongue"), *tere tere.* The third type, *teche teche* (the "ch" sound is hard), is used to sound "frightening." Dalla Casa also mentions two single tongue-strokes, *ta* and the smoother *da,* both appropriate for longer note values.

Choosing an Instrument

The prospective purchaser of a modern reproduction may consult Fischer's Appendix II, in which eleven makers are evaluated, and also my article, Carter, "Contemporary." Good reproductions are expensive, and anyone who is tempted to modify a modern instrument for use as a sackbut may be encouraged by Smith's remarks on this issue (Smith, "Trombone": 29).

Choosing a Mouthpiece

Only a handful of antique mouthpieces survives, but perhaps their most important characteristics are a relatively flat rim, a bowl-shaped cup with a sharp-edged throat, and no backbore. As some sackbut makers do not supply historical mouthpieces with their instruments, it may necessary to have a mouthpiece custom made. Dimensions for historical mouthpieces are given in Fischer (52) and Smith (32).

A good instrument is expensive, but the money will be virtually wasted if a modern mouthpiece is used, since it will be very difficult to obtain a good sackbut sound. Smith argues that the sackbut and its modern counterpart represent somewhat different acoustical systems, and therefore a mouthpiece designed to operate with one system is incompatible with the other. A modern trombone player, when converted to the sackbut, will frequently fight against using a historical mouthpiece. The response will prove quite different, and at first it simply will not "feel right." Encourage him or her to take some time to adjust to the unfamiliar mouthpiece.

Exercises

For building tone quality and endurance, long tones are very useful. These should be played in all ranges of the instrument, and with varying dynamic shadings. Lip slurs are excellent for embouchure development and flexibility. Experienced trombonists likely will have committed many such exercises to memory; the novice sackbut player may consult any of several modern method books, such as Fink's *Handbook.*

Scales are good for developing slide technique, and these should be done with a variety of tonguings: the normal *ta* stroke, the gentler *da* stroke, and the multiple tonguings described above. The player who wishes to study genuine Renaissance exercise material is encouraged to explore the multitudes of diminutions in the manuals of Dalla Casa, Francesco Rognoni, and other Renaissance authors.

Suggested Repertory

Sackbuts are capable of performing a wide variety of Renaissance music, in an equally wide range of timbral contexts. The instrument combines nicely with the raucous shawms in the *alta cappella,* with medium-loud cornetts in the cornett-sackbut band, and with soft instruments. For fifteenth-century music, one sackbut and two shawms make a good three-part combination (see the chapter on shawms for details). For sixteenth-century music, one or

two sackbuts can be used in the expanded *alta cappella*. The cornett and sackbut ensemble can be adapted to an enormous range of sixteenth-century ensemble repertory—dances, secular songs, motets. Such an ensemble in four parts most often consists of one cornett and three sackbuts. Five- and six-part music customarily requires two cornetts, with the remaining parts taken by sackbuts. Alto and bass instruments can be used, particularly for late-sixteenth-century music, but much of this repertory works just fine with tenors on all the sackbut parts. Particularly recommended for the cornett-sackbut band are the five-part dances of Anthony Holborne (London Pro Musica Edition), Thomas Stoltzer's five-part *Octo tonorum melodiæ* (*Das Erbe deutscher Musik,* vol. 22), or for simpler fare, the four-part dances of Susato (Schott). It is important to remember, however, that one of the chief uses of sackbuts was to support voices.

From the seventeenth century, the extensive Italian canzona repertory works well for cornetts and sackbuts. Among several works written expressly for the cornett-sackbut band, I recommend in particular nos. 19–21 of John Adson's *Courtly Masquing Ayres* (London Pro Musica).

Good sackbut players should not be too hard to find, but locating shawm and/or cornett players to complement them is another matter. Sackbuts can be joined with softer instruments, but another possible performing outlet is the homogeneous sackbut ensemble. Three or four instruments is the optimum number here, with tenors forming the core, and alto and bass taking the extreme parts if they are available. From the sixteenth century there is a fair amount of four-part literature in ATTB arrangement—French chansons, Latin motets, and the like—which work on four sackbuts. For some of these pieces with a high tessitura, downward transposition by perhaps a fourth or a fifth is a good possibility, particularly if a bass is available. Many three- and four-voice compositions will work with an ensemble of tenors only, but the lead player must have a strong upper range. From the early seventeenth century there is a small body of literature expressly written for sackbuts alone. It includes:

For four sackbuts and continuo

J.G.F. Braun: "Canzonato" (Max Hieber)
Giovanni Cesare: "La Bavara" (Musica Rara)
Biagio Marini: "Canzona" (Ensemble Publications)

For five sackbuts and continuo

Moritz von Hessen: "Pavana" (Ensemble Publications)

For eight sackbuts and continuo

Tiburtio Massaino: "Canzona" (Musica Rara)

An interesting and apparently unique sixteenth-century composition which specifies four sackbuts and solo (alto) voice is Francesco Corteccia's "Vienten' almo riposo," from the Florentine *intermedi* of 1539 (Minor and Mitchell, *Renaissance*). From the first half of the seventeenth century there are numerous works calling for sackbuts in varying combinations with other instruments and voices. As a seventeenth-century volume is planned for this series, such works will be covered there. However, it is impossible to leave this subject without mentioning—in spite of their late date—two stunning compositions by Heinrich Schütz for bass voice, four sackbuts, and continuo: "Fili mi Absalon" and "Attendite popule meus" (both in Schütz, *Werke,* vol. 14).

BIBLIOGRAPHY

Baines, *Brass;* Barclay, *Art;* Besseler, "Entstehung"; Fink, *Trombonist's* (Not historically oriented, but offers basic exercise material and sound advice on such matters as care of the instrument, embouchure placement, etc.); Fischer, *Renaissance;* Polk, "Trombone"; Praetorius, *Syntagma;* Smith, *Trombone;* Virgiliano, *Il Dolcimelo.*

Suggested Listening

Affetti musicali. Concerto Castello. Harmonia Mundi 065-99 9917.

Alleluia: Weinachtslieder von Praetorius. The New York Cornet & Sacbut Ensemble. Newport Classic, MC: NC 30021; CD: NC 60021.

Giovanni Gabrieli: Sacræ Symphoniæ. A Sei voci and Les Saqueboutiers de Toulouse. Adda 581245.

Music of the Stadtpfeifer. Musica Fiata. Harmonia Mundi 622D.

North Italian Music for Cornetts and Trombones, 1580–1650. Concerto Palatino. Accent ACC 8861.

Venetian Church Music. The Taverner Players. Angel CDC 54265.

A Venetian Coronation 1595: Ceremonial music by Andrea and Giovanni Gabrieli. Gabrieli Consort and Players. Virgin Classics DC, VC 91110-2; cassette, VC 79119-4.

Venetian Music of the Piffari and Canzonas. The New York Cornet & Sacbut Ensemble. FSM/Pantheon 68-905.

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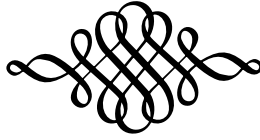
Bowed Instruments

WENDY GILLESPIE

The bowed string instruments available between about 1400 and 1650 display an impressive palette of colors and sounds. There are chordal instruments and consort instruments, instruments held on the shoulder and instruments held on or between the legs, instruments bowed overhand like the violin family (see chapter 14) or underhand like the viol family. The following survey of the instruments, their technique, and repertory cannot possibly be exhaustive, but perhaps it will at least provoke some curiosity.

Players of modern bowed strings can acquire a certain amount of facility on most Renaissance bowed instruments rather quickly. These musicians in particular are urged not to approach Renaissance instruments as merely ancestors or crude predecessors of their modern counterparts. Of course, it is possible to play the viol just like a modern cello, bowed with the right hand on top of the stick of the bow, no frets, strung in metal, and with more or less constant vibrato. But such a playing technique would capture the essence of neither the instrument nor its music. Qualities of sound such as the chiff of a fat gut string when bowed, or the nasality of an instrument without a soundpost, must be appreciated as the nature of that instrument rather than judged a defect. Listening to music outside the "classical" tradition might suggest ways to extend one's technical and aesthetic boundaries.

Bow grips must suit both the bow being used and the way the instrument is held. Generally speaking, instruments that are held on the arm are bowed with the hand on top of the stick of the bow, while instruments held with the legs are bowed with the hand facing palm upward underneath the stick. The length and weight of the bow help determine how far away from the frog the hand is placed. With an overhand bow grip, one can experi-

ment with putting the thumb underneath the frog or hair instead of on the stick opposite the fingers. It can be useful to think about dropping the elbow and letting the weight of the arm hold the bow on the string.

The weight of the arm also keeps the bow on the string when it is gripped from beneath, with the palm facing upward, and, once again, there are several possibilities for holding the bow. One grip might be likened to holding a pencil, with the thumb and index finger opposing each other and the middle finger (and also possibly ring finger), in active contact with the hair of the bow controlling the articulation. Another well-documented way of holding a bow from beneath involves curving three fingers around the stick of the bow, again opposed by the thumb.

However one chooses to hold a bow, the wrist, arm, and fingers must be controlled to yield the best result. The movement of the wrist should be relaxed but not loose, lest a loss of control at the change of direction adversely affect the sound. Fingers in contact with the hair or the stick must be responsive to both the tension of the bow hair and the possibilities of articulation and dynamics at any point in the duration of a note. It is useful to remember that the beginning, middle, and end of a note are almost infinitely variable, if one can gain control of the bow. Bow-hair tension should be low if one is attempting a chordal style of playing, thus enabling several strings to be played simultaneously. It is possible to manipulate the tension of the hair to play individual notes, if finger(s) are in contact with the hair and pull it taut.

With regard to the left hand, for the nonstring player, fretted instruments are somewhat easier to cope with than nonfretted ones (the fingers of the left hand are placed immediately behind, but touching the frets), although ultimately they are equally difficult to master. Nearly anything that hurts when playing Renaissance bowed strings is avoidable; the techniques of playing should be based on natural physical motion and accomplished with minimal stress. Nevertheless, the nonstring player can expect to feel some discomfort in the left hand at the outset. Common sense suggests a cautious approach, strengthening the fingers (especially the little finger) gradually and methodically. Calluses will develop on the pads of the fingers of the left hand. The tiny muscles controlling the movement of the fingers must be trained gradually to move efficiently, without strain to the hand that could result in injury.

Instrumental techniques are best learned from a teacher, but rebec and lirone teachers are sometimes a bit difficult to find. An experienced player of any bowed instrument will be able to help the novice with principles of bow speed, pressure, and distance from the bridge. A person coming to bowing for the first time requires more regular supervision than a person

who already plays a bowed instrument. Those more experienced players, in turn, sometimes need reminding that vibrato is an ornament, not an essential component of the sound.

In the absence of any assistance on bowed strings, the beginner is urged to isolate various aspects of playing. Posture is the first consideration to promote a relaxed and easy technique. For instruments played on the arm one can sit or stand comfortably with the feet slightly apart and the knees unlocked. For instruments held with the leg, sit forward on the chair, placing the left foot slightly in front of the right, with the instrument high enough to allow easy access to the low strings, but not too high for the left hand to be comfortable. The head is erect and the shoulders relaxed in both cases. One strives for a position where the instrument can sit firmly either on the arm or the legs, allowing access to all the strings with both the left hand and the bow arm. Starting with a natural seated position, then fitting the instrument to it rather than the other way around, is the best way to achieve a beautiful, relaxed sound.

There is nothing quite like the sound of someone learning to bow a string instrument, and the smaller the instrument, the more potential for unscheduled sounds. (It may help to bear in mind that beginners can only get better, and they will only get better by persisting.) Many beginners find that the bow slides around on the string. To remedy this, imagine that the bridge is a plane, and try to keep the bow parallel to the plane of the bridge. The bow then travels in a track at a constant distance from the bridge, which distance can be determined by experimentation. The speed of the bow, the distance from the bridge, and the weight of the arm all contribute to the ultimate sound, so beginners should spend a lot of time bowing open strings.

A clean sound also involves being able to cross strings and change bow direction successfully. Practice going from every string to every other string without lifting the bow, then with lifting it, without making unseemly noises, and keeping all motions small and relaxed. Invent repetitive patterns that use combinations of long and short notes in ever-increasing complexity to explore the potential of the entire length of the bow. Fat gut strings are harder to set in motion than metal-wound strings; they require a lot of weight from the arm before the note begins, which weight must be released when the bow starts to move.

Coordination between the left and right hands is unique to string instruments. The left hand must anticipate the right by a split second; it prepares the note during the bow direction change. It will be helpful to allow extra time between bow changes for this preparation, which will then gradually become automatic. An alert ear can detect problems of coordination that result in more than one pitch during one bow stroke.[1]

Patience is the key; slow and methodical practice, paying individual attention to the left and right hands, will yield the best results. Pluck a melody until the left hand works automatically, then try to bow it. Practice bowing patterns on open strings, then add the left hand. Begin in the middle range of the instrument, then explore the more difficult upper and lower reaches. When something does not work, let the ear analyze the problem. What one thinks is a right-hand problem may well be a left-hand problem.

THE INSTRUMENTS

Taking pride of place among bowed instruments of the Renaissance is the **viola da gamba** family. Associated particularly with English and Italian music of the sixteenth and seventeenth centuries and French and German seventeenth- and eighteenth-century music, the viol's history nonetheless begins in the late fifteenth century and extends all over Eastern and Western Europe throughout the Renaissance.[2]

Like many other sixteenth-century instruments, the *viole da gamba* (literally, "viols of the leg") are a family of instruments of varying sizes that play in different ranges. They usually have six strings tuned in fourths except for a third between the two middle strings.[3] Depending on the size, viols are held vertically between the knees or calves and are played with a bow that is held from underneath with the palm facing upward, "upside down" from a violin family bow. The viol is traditionally lightly constructed, with a flat back and a soundboard that is carved or bent to a slightly curved shape, a curved bridge and fingerboard, and seven frets positioned by half steps along the neck. Early viols probably did not have soundposts.

In an attempt to simplify a complex history, the viola da gamba family is often characterized as having three sizes. In sixteenth-century Italy, the three sizes seem often to have been tuned respectively in *a′, d′,* and *a.* (These "tunings" indicate the pitch of the top string, with the assumption that the bottom string is the same pitch two octaves lower.) This might explain why Praetorius refers to the D-tuned viol as a tenor viol. In England, a smaller D-tuned treble viol seems to have joined a G-tenor and D-bass in the consort.[4] And yet the issue of pitch is relative, for not only did absolute pitch vary in the Renaissance, but viol players transposed pieces to suit their instruments.[5]

There is a certain amount of information available about the playing technique of the viol. This technique was not the same in Italy in 1550 as it was in England in 1650, nor were the instruments themselves the same. The

player today must decide whether to pursue a single compromised technique on a compromised instrument, which will allow the performance of many different repertories, or else to apply a specific technique to an appropriate historical style of instrument, which will then not apply to other repertories. It is not impossible to become adept on instruments from several different periods. Instruments and bows differ significantly from one to another; one's approach to the instrument cannot help but differ subtly with instruments of different construction and feel.

In theory, the frets make every note sound like an open string, a contraindication for constant vibrato, though vibrato is a very effective way to "grace" individual notes. The lightly constructed viol can sustain a wonderful resonance after the bow is taken off the strings, thus the basic bow stroke can be more detached than the basic sound for which one strives on a modern violin or cello. One might think of the way a plucked instrument resonates as a sound image. The left-hand technique reflects this idea and is more closely related to the lute than to the cello, as it emphasizes horizontal, chordal fingerings and the holding down of fingers for as long as possible after a note is played.

Several modern instruction books for the viol are listed below that are intended for private and classroom instruction with or without an experienced player or teacher, though naturally live demonstration remains the best way to demonstrate the capabilities of any instrument.[6] Interested musicians are also strongly encouraged to look into historical sources such as Ganassi, Gerle, and Ortiz[7] for a picture of how people were taught to play the viol in the sixteenth century. Ganassi, for instance, introduces transposition, tablature, and chordal playing and teaches the player how to intabulate a madrigal to accompany a singer. Ortiz provides an introduction to improvisation on both the large and small scale.[8]

Classically trained musicians who are accustomed to being given exact information about which notes to play and how to play them may be intrigued to find that there is much more to playing the viol than ever appears on the page. Ganassi, for example, tells the viol player that the quality of performance is enriched by ornamentation of a composition with consideration for counterpoint, and that one should draw praise from the listener if the diminutions are executed with varied and well-planned *passaggi*. Ortiz devotes the first part of his treatise to embellishment, including the filling in of intervals in a melodic line and the decoration of cadences; the second part of the treatise contains examples of improvisation on tenor lines, chansons, madrigals, and grounds.[9]

Two special techniques that apply to the viol are worthy of mention. The first is the *viola bastarda* style, one involving virtuosic bursts of quick

passagework often using the entire range of the instrument. In sixteenth-century Italy this style is manifest in solo diminutions based on polyphonic pieces. The performer draws on different voices of a madrigal, chanson, or motet and adds to them to an extent that the original polyphony is often obscured. Alternately, the player improvises on a ground bass, at first one of the standard grounds such as the *Romanesca, Passamezzo antico* or *moderno, Ruggiero, La Folia,* etc. and later on newly composed grounds.

The second special technique is a chordal style, frequently character-ized by *scordatura* (i.e., nonstandard) tunings for the viol and music that is usually read from the same sorts of tablature that the lute reads. Ideas for this style of playing go back to Ganassi and forward into seventeenth-century England, where one finds a vast repertory of solo and ensemble tablature pieces in the chordal style.[10] Players are encouraged to explore the many possible ways of executing chords. The left hand should explore fin-gerings used by lutenists; the right hand can find many different ways of ar-ticulating and breaking chords to vary the color and texture.

The existing repertory for the viol is vast and widely available in mon-uments such as *Musica Britannica,* collected works of individual composers, and general collections of Renaissance music (for example, London Pro Musica editions). Among the large amount of music composed specifically for the viol, the English ensemble repertory of the sixteenth and seven-teenth centuries is the most visible, including instrumental fantasias, *In nomines,*[11] dances, consort songs, and verse anthems. There is also French, German, and Italian ensemble music for viols. Solo music includes the Ital-ian *viola bastarda* repertory (the written out improvisations of Ortiz, dalla Casa, Bassano, and others), English tablatures and division viol music.[12] Desktop publishing (by, e.g., the Viola da Gamba Societies of America and Great Britain, Northwood Music, Fretwork, and PRB Publications[13]) is helping to keep alive the tradition of transmission of repertory by viol play-ers to their colleagues.

In addition to music composed specifically for viols, one should not ignore the enormous sacred and secular vocal repertories, as well as specifi-cally instrumental ricercars, canzonas, fantasias, and dances. Intabulations of polyphonic pieces for performance by a single viol are possible, or one can play individual lines of polyphony in mixed ensembles with voices, key-boards, plucked instruments, soft wind instruments, and other strings. The English consort (treble viol or violin, flute or recorder, bass viol, lute, ban-dora, and cittern) deserves special mention as a specific mixed ensemble for which there exists a significant repertory.

A great deal of viol music is available in facsimile,[14] on microfilm,[15] and eventually in larger quantities on the Internet.[16] Even players of modest

FIGURE 13.1   Title page from Ganassi's *Regola Rubertina*

ability find that playing from original part books gives them a special sense of continuity with their counterparts from the time the music was composed. Unencumbered by bar lines, rehearsal letters, and scores, the player is forced to listen and learn a piece in a way that may take longer at first, but ultimately can be more satisfying.

Violone is a term that has generated much confusion. It was used in the sixteenth century to mean any viol (see Ganassi and Ortiz), possibly to distinguish it from violin family members. By about 1600 it seems to refer to any of the following: (1) a large bass viol with a string length of approximately 80 cm tuned a fourth or fifth below the bass viol; (2) an even larger instrument (about 114 cm) an octave below the D-bass; or (3) the largest member of the violin family. In 1609 Banchieri regarded the smaller violone as the true bass of the viol consort. Orlando Gibbons composed pieces for the "great dooble bass" which go down to A_1 and are probably intended for the smaller violone, possibly tuned in *A*. The violone can function at either eight-foot or sixteen-foot pitch for use in ensembles as a bass line for polyphonic music or as part of a continuo section.

The **fiddle** (*vielle,* Fr., or *fiedel,* Ger., or *vihuela da arco,* Sp. or It.) is a bowed instrument that survived into the Renaissance. There were amateur and professional fiddlers at all levels of society who played in churches, in

liturgical dramas, at feasts and entertainments, for dancing, and to accompany song.

The type of fiddle that was played in the Renaissance was generally oval shaped, with or without incurved sides. There is a clear demarcation between the body and the neck, and a flat or almost flat back. The fiddle has between three and six strings, one of which might be a lateral drone string that does not pass over the neck. There were probably fiddles both with and without features such as frets, a separate fingerboard, soundpost, and curved bridge. The concept of a family of fiddles does not seem to be relevant, as the alto-range instrument with a bottom note of perhaps *c* or *d* seems to predominate, if the apparent size in iconography is any indication.

Although there are some tunings known for fiddles in the Middle Ages, there is no specific evidence concerning its tuning in the Renaissance. The player is therefore free to choose a tuning which suits the set-up of the instrument (a flat bridge is more likely to want a tuning of unisons, fifths, or octaves, so that the open strings sounded together produce a consonance), the music being played, and his or her technical skills. Many string players find it useful to begin by tuning and playing their medieval fiddle like a violin or a viola, or, if the instrument has five strings, a combination of both. The more experienced player will probably experiment with alterations to those tunings.

It is appropriate to explore the use of the fiddle in Renaissance polyphony with singers or with other soft instruments such as the harp and lute. Depending on the sound, range, and set-up of the individual instruments one has at hand, experiments with many different instrumentations and many sorts of repertory can be tried out. An interesting place to start might be the early Petrucci prints of untexted three- and four-part music, such as *Harmonice Musices Odhecton A,* and its successors *Canti B* and *Canti C.*

The **lira da braccio**, a very important bowed string instrument in the Renaissance, is one of the most neglected today. Associated particularly with Orpheus and Apollo, it was cultivated in Italy during the fifteenth and sixteenth centuries, primarily for improvised accompaniment of narrative, epic, and many other kinds of verse, and the singer or reciter of the poetry often played the instrument himself. It was also specifically called for in dramatic entertainments in Italy and in ensembles such as the one employed in the *intermedio* for *La Pellegrina* (1589).

A successor to the medieval fiddle (or possibly a Renaissance version of it), the lira da braccio is held and tuned similarly to the violin, its seven strings grouped into two double courses and three single ones (*d/d′-g/g′-d′-a′-e″*, although Praetorius gives the pitch of the top string as *d″*[17]); it looks a lot like a violin with a wide neck, flat bridge, and lateral drone

strings. Designed for chordal playing, its bow was either very long or very wide between the stick and the hair to accommodate playing three or four strings simultaneously, as seems to have been the practice.[18]

The only surviving music for the lira da braccio is one setting of the *romanesca* and a bit of a *passamezzo* that are found in a late sixteenth-century Italian manuscript, which also includes several charts showing chord positions. This tiny bit of information suggests that the instrument could play a melody on its top two or three strings (the single courses) and chords to accompany it on the lower courses. In its most usual context, the lira da braccio might play simple chords and more complex melodic interludes to punctuate sung or spoken verse. Its range lies above a male voice, which can supply roots for chords that lie most easily in $\frac{6}{4}$ position on the lira da braccio (such as C major). A female voice lies in a similar range to the lira da braccio; the ear learns to accept $\frac{6}{4}$ chords as part of the character of the instrument. As an ensemble instrument it can play a single line, possibly decorated with passagework, adding the odd chord for accompaniment.

The **lirone**, or lira da gamba, is a larger, fretted, bass version of the lira da braccio that is documented until late in the seventeenth century. Like the lira da braccio, it is specified in some *intermedii,* but there is precious little surviving music that indicates its use; it seems to have been used mainly in Italy as a proto-continuo instrument, supporting a polyphonic texture or solo song with chords and a bit of melodic decoration. In recent years, the lirone has been enjoying a renaissance of its own as builders and players have brought its very special sound back to life.[19]

With as many as to two drone strings, nine to fourteen strings running along the fingerboard, and a tuning of either ascending fifths[20] or alternating ascending fifths and descending fourths,[21] many players will be daunted at the prospect of playing this instrument even if an ensemble is lucky enough to acquire one. But with a playable instrument and a bit of experimentation, the intrepid player will discover that one fingering will produce four- or five-note chords in all keys when applied to different strings. The addition of a *barré* technique, in which the index finger is laid across several strings, and one or two other fingering patterns will yield a great variety of chord inversions and progressions.

Although documentation is lacking regarding bowing technique for the lirone, an underhand bow grip allows control over the tension of the hair with the middle finger of the right hand. A well set-up lirone is particularly crucial to the success of the player, as the curve of the bridge must allow easy access to four or five strings at once (but not all fourteen of them simultaneously!); it will also allow the possibility of a bit of passage work on individual strings. Without this capability the instrument will be frustrating

and ultimately unplayable. The combination of a reasonable instrument and a performer willing to discover what it can do will yield a unique and magical sound that is well worth the effort.

Many people associate the **rebec** only with medieval music, but it survives in various forms even today. Sources which mention the rebec in the Renaissance include Tinctoris (ca. 1487), for whom it and the fiddle were "my chosen instruments, those that induce piety and stir my heart most ardently to the contemplation of heavenly joys"; Virdung (1511); Gerle (1532), who gives several pieces for four-part consorts of rebecs; and Agricola (1545).[22] There were rebec players at Henry VIII's court in England, and there is clear evidence of its use in both art and more rustic music well into the seventeenth century. The instrument also appears in Italian painting of the late fifteenth century and French painting of the early sixteenth century—in short, the rebec was in use all over Europe during the Renaissance.

The rebec is a pear-shaped wooden instrument with a peg box and a tailpiece much like a violin. There are usually three or four gut strings tuned in fifths or possibly fifths and octaves, depending on the shape of the bridge and the purpose for which the instrument was being used. Gerle indicates that the rebec is tuned in fifths, while Agricola gives tunings for four different sizes: a discant tuned *g-d′-a′,* alto and tenor tuned *c-g-d′* and bass *F-G-d-a.* A broad generalization is that the rebec was played on the shoulder in northern Europe and in the lap in the south. There seems not to have been any distinction between bows made for various instruments. Perhaps the particular instrument and the music to be played will suggest an appropriate length, weight, and shape of bow.

Professional musicians in royal courts and noble households played the rebec throughout the fifteenth and sixteenth centuries, in sacred and secular processions, at feasts, dances, and entertainments, and by nonprofessional players in rustic settings in taverns and at village revels.

Though it was organized into a family of instruments of varying sizes, this would probably not typify the use of the rebec in an ensemble. More commonly it is pictured playing with lute, harp, flute, and even violin. An instrument's role in any ensemble is based on factors as basic as whether there is anyone willing to even try this instrument, and, if so, whether they already play another bowed instrument. The player and director must let the sound of an individual instrument determine its place in an ensemble.

During the sixteenth century some rebecs appeared that were narrow in proportion to their length. These easily portable instruments, associated with dancing masters and dancers, became known as **kits** (French: *pochette*). In addition to the boat-shaped model derived from the rebec, later kits re-

semble viols, violins, guitars, or hybrids of various bowed strings. Instruments survive from all over Europe, some by makers as famous as Antonio Stradivari, some richly decorated, others very simple.

Generally, the kit has a narrow body and a relatively long string length, with three or four strings and no frets. It can be tuned like a violin, or a fourth, fifth or even octave higher. Played on the arm, its bow can be similar to a rebec or Renaissance violin bow. There is iconographic and literary evidence for the kit at all levels of society, though there is no surviving music specifically designated for it. The Renaissance violin repertory of dance music and popular tunes is appropriate for performance on the kit.

The **trumpet marine** (French: *trompette marine;* German: *Trumsheit;* Italian *tromba marina*) developed in the mid-fifteenth century from the plucked medieval monochord and dichord. It had several different shapes and sizes in the Renaissance that gradually merged into a mature form whose period of greatest popularity seems to have been in the mid-seventeenth to early eighteenth centuries, well beyond the scope of this chapter. Mentioned by Virdung, Agricola, Praetorius, and Mersenne, among others; there are five surviving sixteenth-century trumpets marine in museums today.

The trumpet marine is an open-ended, hollow resonator with an attached neck usually topped by a scroll with a tuning device of some kind. Usually there is only one string, though earlier examples may have had up to four strings. It was bowed from the fifteenth century onwards and was held either at the shoulder or resting on the ground, depending in part on its size. A striking feature of the trumpet marine in its most satisfying form, which evolved in the late sixteenth century, is its vibrating bridge, accomplished by placing the string(s) nearer to one foot of the bridge, leaving the other foot free to vibrate. This increases the volume and causes the buzzing or snarling sound that Glareanus (through Praetorius[23]) says is more pleasant to listen to from a distance.

The playing technique for the trumpet marine depends in part on how it is held, but is based on touching the string lightly with the fingernails or thumb of the left hand to produce harmonics. The smaller, shoulder-held model was bowed close to the nut and supported by the left hand, a method of playing that limits the dexterity of the left hand. The larger, vertically held instrument is capable of producing all the pitches of the harmonic series through the sixteenth partial. A skilled player can alternate between letting the bridge vibrate and playing normal harmonics; ornamentation is also possible. In short, the trumpet marine is an instrument that in the right hands could be a fascinating and very unusual addition to a Renaissance consort.

Yet another bowed instrument that had already been around for a long time in the Renaissance is the **crowd** (Welsh *crwth*), which is a bowed lyre. It is associated particularly with the British Isles and was played to accompany the voice. As such it might be considered a northern European counterpart to the lira da braccio.

The crowd is a rectangular lyre with a neck and fingerboard. It has from three to six strings and possibly also some lateral drone strings that do not run over the neck and might be plucked with the left thumb. Evidence indicates that the crowd generally sounded at least two notes at once. No Renaissance tunings are known, and the curvature of the bridge seems to be variable. As with the fiddle and rebec, a consonant tuning logically suits a flatter bridge. One might also experiment with grouping strings into double courses tuned in octaves or unisons.

Music specifically composed for the crowd is lacking, but its use would obviously be more appropriate for repertory from the British Isles. In addition to accompanying the voice, there is evidence to suggest the crowd was used together with the harp; it may also have been used for dance music or on festive occasions.

Maintenance

The person responsible for the maintenance of Renaissance bowed strings should establish a good relationship with a violinmaker, sometimes called a *luthier,* who is sympathetic to early instruments. Such a person can do most of the necessary repairs, even though ideally it is best to have the maker maintain the instrument. Seek assistance if the bridge warps, the soundpost (the bar under the treble side of the instrument near the bridge, if indeed there is one) falls down, if the instrument starts buzzing or changes sound suddenly, or the instrument develops bulges, cracks, or open seams.

All wooden instruments are happiest in a humidity-controlled environment. If the atmosphere is too dry (as often happens in heated buildings in the winter) the wood can shrink and crack. However, the use of instrument humidifiers, which are sold by violin supply shops, should be approached with caution, as over-wetting can also damage an instrument. Too much humidity causes instruments to sound soggy, glue to dissolve, and gut strings to disintegrate. It is best to avoid moving an instrument frequently from very dry to very humid conditions if possible. The fit of the soundpost is affected by climate changes and sometimes requires seasonal adjustment by a luthier.

Until the second half of seventeenth century, gut strings were the common denominator of bowed instruments. However, until quite recently

most modern makers and players have used lower strings made with a gut core wound with metal. Several string makers have developed a variety of thick gut strings for lower pitches, so it is quite possible to experiment with stringing instruments in gut, which can be advantageous to both the sound and the stability of intonation.[24] Often the only alteration needed to the instrument is the enlargement of the holes in the tuning pegs and tailpiece and possibly a slight adjustment of the bridge to accommodate thicker gut strings.

One needs to keep a supply of extra strings (though not too big a supply, as they get old and dried out), especially the thin top strings, which tend to break more easily than thicker lower strings. The player or ensemble director can change strings when they break, lose their sound or go false (i.e., no longer play in tune). Attaching a new string is accomplished by first fixing the string to the tailpiece by means of a knot or loop, then feeding the other end through the hole in the peg and winding it on, making sure the string lies in the grooves cut for it on the bridge and nut. One should not wind too much string onto a peg, maybe five or six turns, and end up with a turn close to, but not touching, the peg box near the part of the peg that is turned with the hand. Care should be taken not to loosen too many strings at once, as the sound post, if there is one, and the bridge may fall over if pressure on the top of the instrument is suddenly released.

Frets should be replaced when they loosen, flatten, or break. A simple way to tie a fret is to make a loose overhand knot in one end of the gut or nylon, pass the fret material around the neck twice (make sure to go *under* all the strings!) then put the unknotted end through the middle of the knot and pull tight. (The fret will cross over itself, but it is easy to adjust the place where it does so to be out of the way.) A more complicated fret knot that does not cross over itself and that can be accomplished with some practice is described by Thomas Mace.[25] With either knot, if the neck of the viol is varnished, there is a danger of making grooves in the varnish—yet the fret must be tight enough not to move.

The positioning of the frets can be done by ear or with the assistance of a tuning machine. There is evidence for various different tuning systems on fretted instruments,[26] but most sources agree that the player's ear is the final arbiter, and there is comfort to be taken in the knowledge that pitches on bowed strings, even on fretted instruments, are adjustable. It is possible to split double frets so that, for instance, G♯ and A♭ can be different pitches, but there is little evidence of this practice being common.[27]

Many, although not all, bows have a screw on the end that adjusts the tension of the hair. This modern convenience is helpful particularly for climates of extremely variable humidity and temperature. The player should

loosen the tension when the bow is put away and tighten it just enough to make playing possible. The bow is not tight enough if the stick makes contact with the strings; in contrast, tightening the bow too much makes it bounce and puts undue stress on the stick. A bow needs rosin periodically, the necessity for which is indicated by the bow sliding around on the string more than usual and the player having difficulty in producing a focused sound. The bow should be smoothly stroked along its length in one direction across the cake of rosin several times. Bows also need occasional re-hairing, something that is done by a luthier. A modern string technician will probably want to put too much hair on Renaissance bows and should be politely discouraged from doing so. Some find that a combination of black and white horsehair on the bow improves its contact with gut strings.

Priorities

Bowed instruments require a certain amount of care and attention, but they needn't be terribly expensive; as with violin family instruments, there are inexpensive yet very reasonable viols now being produced. Ideally, well-constructed and smoothly operating instruments should be given to inexperienced players, as badly made instruments are very difficult and discouraging to tune and play. A good bow can help even a mediocre instrument sound much better. One should consult an experienced player for advice on instruments, bows, and strings. For further information about players, instruments, bows, strings, repertory, and short courses for enthusiasts, contact the Viola da Gamba Society of America. This organization, despite its name, has members interested in all Renaissance bowed instruments.

If an ensemble were not in a position to acquire many bowed instruments, a logical instrument to begin with would be a bass viol on an English or Italian model from around 1575, which would combine flexibly with other families of instruments and voices. From there the director must consider which repertories the ensemble most frequently performs. If the ensemble is interested in complete families of instruments, it can gradually acquire a matched consort of viols (perhaps in the order of tenor, treble, bass, tenor, treble). Alternatively, an ensemble interested in variety of sound and mixed consorts might go in the direction of Renaissance fiddles and rebecs, crowd, and tromba marina. If solo singing and proto-continuo playing are to be stressed, the lira da braccio and lirone are the best instruments.

In an ideal world a Renaissance music ensemble would have available a chest of perhaps five Italian sixteenth-century viols (two *a*-tenors, two *d*-basses and a large *A*-bass), six English-style consort viols (two trebles, two tenors, and two basses), three lyra viols, a violone, vielle(s), rebec(s), lyra da

FIGURE 13.2   Violas da gamba (from Plate XX of Praetorius's *Syntagma Musicum* II)

braccio, and of course, a lirone. In the real world, an ensemble could begin with English-style viols, which can play nearly any repertory composed between 1500 and 1750, as well as most of the ever-expanding viol repertory of the present day.

Contact the Viola da Gamba Societies of America, Great Britain, Japan, Australia, and (one day, I hope) Earth, for further inspiration and information.

NOTES

1. Slurring, the playing of more than one note in the same bow stroke, is possibly best attempted after one can play one note at a time cleanly.

2. See Woodfield, *Early.*

3. This describes the general practice to which, of course, exceptions can be found. Ganassi, for example, also specifies tunings for viols of three, four, and five strings.

4. There has been a lot of discussion about sizes of viols, the outcome of which suggests that there were several possibilities. Instruments appear to have been proportioned to each other, that is to say, an instrument an octave lower than its treble version has a string length approximately twice as long. This makes both acoustical and logical sense without having to commit to absolute pitches.

5. See Brown, "How" and the current theories about transposition and clefs found in the *New Grove* article "Chiavette."

6. The Viola da Gamba Society of America (VdGSA) Web site (http://vdgsa.org/) also includes videos instructing the viol player on many different aspects of the instrument and its techniques.

7. All of which are available in facsimile and translation into English; see the bibliography of primary sources.

8. Editions Fuzeau's facsimile series *Méthodes et Traités 17* has published all known treatises, dictionaries, encyclopedias, and general works relating to the viol from 1600 to 1800.

9. See Brown, *Embellishing,* for more information about this important subject.

10. While there is much discussion about whether the *lyra viol* and the *viola bastarda* are distinct instruments, there is little doubt that both also describe styles of playing that can be applied to the standard viola da gamba.

11. A genre of pieces all of which use the Sarum antiphon *Gloria tibi trinitas* as a *cantus firmus* (more than 150 such pieces are known).

12. Gordon Dodd's *Thematic index of music for viols* provides an ever-growing list of original and modern sources of music for viols. It may be purchased as a CD-ROM from the British Viola da Gamba Society (http://www.vdgs.demon.co.uk/thematicindex.htm).

13. The Web sites are easy to find on the Internet.

14. Broude, Scolar Press, Alamire, Garland, Boethius, and SPES publications, for example.

15. The Harvester collection, which contains a large proportion of the English viol repertory in part books copied by players of the sixteenth and seventeenth centuries.

16. See, for example, the pieces available from the VdGSA at http://vdgsa.org/pgs/music.html.

17. Michael Praetorius, *Syntagma Musicum II:* 26; p. 40 in the Crookes translation.

18. Sterling Jones has written the definitive book to date on the lira da braccio (see Bibliography).

19. See Erin Headley's article in *New Grove* on the *lirone,* and Victor Penniman's DM document for Indiana University, *La lira d'Orfeo* (2004), which is a lirone method book.

20. Praetorius gives a tuning of $G\flat$-$d\flat$ for the drones, $A\flat$-$e\flat$-$B\flat$-f-c-g-d-a-e-b-$f\sharp$-$c\sharp$.

21. Mersenne gives two tunings, the most common of which is c-c' for the drones, d-d'-g-g'-d'-a-e'-b-$f\sharp'$-$c\sharp'$-$g\sharp'$-$d\sharp'$-$a\sharp'$.

22. See the bibliography for details on these writers.

23. Praetorius, *Syntagma Musicum II:* 58; Crookes translation, p. 63.

24. See current early music journals, Newsletters of the Viola da Gamba Societies, and the Internet for sources of gut strings.

25. Mace: 69–70.

26. See chapters 15 and 24.

27. Christopher Simpson, in his *Compendium of Practical Musick,* mentions with disapproval that some players split their first fret.

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Brown, *Embellishing;* Brown, "How"; Jones, *Lira;* Mersenne, *Harmonie;* Ortiz, *Tratado;* Panofsky, *Bass;* Penniman, *La lira;* Praetorius, *Syntagma II;* Remnant, *English;* Simpson, *Division;* Woodfield, *Early.*

SUGGESTED RECORDINGS

Chosen both to contrast different styles of playing and to illustrate specific instruments.

Renaissance viols

Four Temperaments. Phantasm, Laurence Dreyfus, director. Avie 822252205428, 2005.
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English-style viols playing Elizabethan music:
William Byrd: Consort Songs. Fretwork with Emma Kirkby, soprano. HMU 907383, 2005.

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Celestial Witchcraft: The Private Music of Henry and Charles, Princes of Wales; Fretwork, Virgin Veritas VC5453462.
Lessons for the Lyra-violl: Corkine, Ferrabosco, Anon. Jordi Savall, 1979. A*strée AS 51* [LP]; *Astrée Auvidis E 7750* [CD].

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Lirone

Portuguese vilancetes, cantigas and romances. Gerard Lesne, alto; Circa 1500 Virgin Classics (7243) 5 61840 2 (2), 1992.

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Sephardic Experience Vol. 1: Thorns Of Fire. The Renaissance Players. Celestial Harmonies, 0013711316728, 1979.

Rebec

Music from the Time of Columbus, 1968 [*sic*]. Musica Reservata, Michael Morrow, musical director. Philips 432 821-2 PM

Tromba marina

Old Czech Christmas Carols. Karmina Miroslav Sekac, conductor. Label: GZ, 1994.

Crwth

Cass Meurig featuring guest musicians Nigel Eaton on hurdy-gurdy and Bob Evans on crwth, Produced by Ceri Rhys Matthews. Fflach:tradd CD272H (visit http://www.cassmeurig.com/)

14

The Violin

DAVID DOUGLASS

It is still not common knowledge (even among violinists) that the violin family was an important part of the musical life of the sixteenth century. This condition is rarely addressed by stringed instrument educators or even early music programs. This apathy toward the early history of the violin has deprived violinists of an enjoyable repertory. But, more important, studying the origin of the violin, understanding and incorporating the techniques of the dance master, and developing an appreciation of Renaissance polyphony will open worlds to be experienced and will also cast a new light on later, more familiar repertories. Fortunately, unraveling the early history of the violin is not an impossible task, as there is sufficient information to assemble an account of the use of the violin during the Renaissance.

EARLY HISTORY

It is impossible to pinpoint exactly when the violin came into being, as bowed-string instruments existed in many forms and were continually evolving. The development of instruments we would recognize as violins occurred at the end of the fifteenth century, an especially active time of experimentation in instrument construction. The violin varied in design throughout most of the sixteenth century, and coexisted with other bowed-string instruments (such as the rebec) that were tuned likewise in fifths and played on the arm or shoulder. It was not until the mid-sixteenth century that Cremonese and Brescian makers, Andrea Amati and Gasparo da Salo in particular, began producing what we think of today as the "standard" violin model, although with some important differences: the neck

was very short (on the violin proper, just large enough to accommodate the hand) and set in the plane of the body, rather than arched backward as the modern one is. Bass bars were at first entirely absent, and the first ones were much smaller than the standard modern pattern.

The proto-violin of the early sixteenth century had three strings, and music theorists of that time indicate that it was tuned in fifths, which corresponds roughly to the lowest three strings of modern tunings. The fourth and highest string was added by the mid-sixteenth century. The expanded range improved the violin as a dance instrument, and made the entire family more versatile for the performance of polyphony. The bass of the family came in two sizes, large and small. The first was somewhat larger than the violin–cello (which began to supplant it in the late seventeenth century). It was tuned $B\flat_1$, F, c, g, a whole tone below the 'cello; Praetorius (1619) was the first to give the *C-G-d-a* tuning. The small bass was considerably smaller than a 'cello and was tuned either *F-c-g-d′* or a tone higher. Lines of polyphonic music that lie at the very bottom of the viola tuned in *C* would be much more easily played on a small bass in *F*. Of course, letter names for pitches do not take into account the wide range of frequencies that could sound for each pitch. Because violins often played with cornetts, sackbuts, and other high-pitched winds, they had to match that pitch standard (commonly $a′ = 460$, or even higher).

The first Renaissance theorist to discuss the violin family in a significant way (beyond the basics of tunings) was Philibert Jambe de Fer in his treatise *Epitome musicale* of 1556. This short text contains a wealth of information about how and when the violin was played in the sixteenth century. In a comparison of the viol and violin he states:

> The violin [*violon*] is very different from the viol [*viole*]. First of all it has only four strings, which are tuned in fifths . . . and in each of the said strings there are four tones [*tons*] in such a way that in four strings there are as many tones as in the five strings of the viol. The form of the body is smaller, flatter, and in sound it is much harsher [*rude*]; it has no frets [tuning instructions follow] and the French and Italians differ in no way as regards playing the instrument.
>
> Why do you call one type of instrument viols and the other violins?
>
> We call viols those with which gentlemen, merchants, and other virtuous people pass their time.
>
> The Italians call the *viole da gambe* [*sic*] because they are held downward, some between the legs, others on some seat or stool; others [are held] on the knees by the said Italians, although the French make little use of this method. The other type [of instrument] is called violin; it is commonly used for dancing, and for good reason, for it is much easier to tune since the interval of the fifth is easier [*plus douce*] to hear [accurately] than the fourth. It is also easier to carry, a very necessary thing while leading [*conduisant*] wedding processions or mummeries.

> The Italians call it *violon da braccia* [*sic*] or *violone* because they support it on the arm, some with a scarf, strings or some other thing; the bass [member of the family] is very difficult to carry because of its weight, for which reason it is sustained with a small hook in an iron ring or other thing, which is attached to the back of the said instrument very exactly so that it does not interfere with the player. I have not illustrated the said violin because you can think of it as resembling the viol, added to which there are few persons who use it save those who make a living from it through their labour.[1]

Because dance music was the primary repertory of the Renaissance violinist and dancing was an entertainment shared by most segments of society, fiddling was a source of employment as well as an enjoyable pastime. By the 1530s, the financial records of courts across Europe show payments to violin bands (a consort of violin family instruments) for both public festivities and private functions, and by the end of the sixteenth century violin bands were a fashionable entertainment medium for anyone who could afford them. One example of the extent to which violin playing permeated society is found in an account of Mary Queen of Scots' return to Edinburgh in 1561 by the sixteenth-century chronicler Branthome. He tells of hundreds of "scoundrels" who disturbed her sleep playing the "retched violins of which there is no lack of in this country" [*sic*]. A few violinists, such as Balthasar de Beaujoyeulx and Antonio Morari, became quite famous and were able to secure high salaries.

The term "violin band" is slightly misleading in that the repertory of the sixteenth century relied heavily on violas. In some instances a violin is not even needed because the range of the music is low and the parts are tightly voiced. Music written with two equal treble parts requiring two violins does not appear until the early seventeenth century. It is best to stay in the upper range of whatever sizes you choose for performing a polyphonic composition, in order to play on the most efficient and responsive gut strings, but some Renaissance violas were very large and can easily manage parts to the bottom of their range.

The fact that Renaissance instruments differed in construction from their modern counterparts should not deter string players from attempting to play the repertory on their twentieth-century instruments. With a few minor changes in equipment most novices can take a big step toward a Renaissance sound. The two most effective changes involve the strings and bow. Renaissance strings were made entirely of gut (specifically, sheep intestine) and provided quite a different sound from modern overspun strings. Determining what size and kind of gut string should be used is not difficult once a few basic concepts are understood. Pitch on stringed instruments is a factor of three main variables: string length, diameter, and density. Increasing the length or the diameter has the effect of lowering the pitch, and decreasing either has the opposite effect. Since the vibrating length of a

violin is a fixed distance from the nut to the bridge, the pitch of the instrument is established primarily by determining the proper string diameters. High pitches, such as $a' = 460$, allow the use of relatively thin strings that have the advantage of quick response with a clear sound. Thicker strings are noisier due to the greater friction required to activate them and are slower to respond. In fact, thick gut strings of normal construction are most unsatisfactory as bottom strings. It is suspected that before the advent of overspinning with metal (first documented in the late seventeenth century) string makers improved the response and intonation of the lower strings by imparting greater twist or even using a rope-like construction. Recently a few specialist makers have been applying these techniques to producing middle and lower strings. We may never know for certain whether their "catlines," "lyons," or "pistoy basses" are the same as those mentioned in Renaissance sources, but at the moment they are the only viable alternatives to (clearly anachronistic) overspun strings. It is usually best at first to let a string maker decide what strings should be used (once you inform him of the string length and desired pitches), and then after you have some experience with them, you can change them to suit your individual needs. There are no hard and fast rules about what is best. Some players prefer thick strings at a high tension, and some prefer the opposite.

The second most important change from modern equipment involves the bow. The Renaissance bow tended to be short, with an outward bend. Bows of this design, when used with the technique of the period, facilitate the clear and quick articulation of gut strings. Renaissance bows had no screws but used clip-in frogs which, once in place, brought the hair to playing tension. However, high humidity could make the hair too loose, and it would eventually stretch and have to be replaced. One style of Renaissance bow featured hair that was tied at the tip in a way that it could easily be detached and shortened to restore the proper tension—an asset for the professional musician who could thus do his own repair work.

Repertory

Once schooled in the basics violinists were often taught their parts by rote and almost always played from memory. Some dance music was improvised around a unifying melody or harmony but the extant music for violin band is vast and indicates the high level of ability that was required of these professional musicians. All of the numerous dance publications of the sixteenth century—by Susato, Gervaise, Phalèse, Bendusi, and others—if not written exclusively for violins, are perfectly suited to them. Canzonas, originating in the sixteenth century and popular well into the seventeenth, provide particularly complex rhythmic challenges and help to shatter the belief,

often held by modern musicians, that Renaissance music is simple. Another source of purely instrumental music is the ricercar repertory. Composers such as Gabrieli, Willaert, and Cavazzoni wrote their ricercars primarily for keyboard, but indicate that they can also be performed on other instruments. By the early seventeenth century composers such as Cifra and Trabaci specify that their ricercars are also appropriate for violin band.

The sixteenth-century English fantasy was probably intended for viols but, by the early seventeenth century, dances, canzonas, and ricercars of composers such as Dowland, Simpson, and Holborne approach the complexity of the English fantasy and were specifically written for violins as well as viols. Determining the suitability of a piece of music for violins (as opposed to viols) is complicated by the fact that professional violinists often played viola da gamba as well. There is no evidence to suggest that violins and viols *never* played together, and by the mid-seventeenth century, chamber works were scored for various combinations of the two. Because violins and viols produce different sounds at different volumes and with different articulations, an extra effort must be made to establish a consort with truly equal voices. For dance music, this effort is mostly the responsibility of the gambist, who must concentrate more pressure into the string at the moment of bow-change in order to match the greater volume and more aggressively articulated overhand bowing of the violin. For other music, such as fantasias, the violinists might imitate the sound of the viols, smoothing out the articulation somewhat. Matching the energetic bowing of the Renaissance violin is anathema to many modern gambists whose appreciation of the viola da gamba revolves around the voluptuous sound and seamless phrasing natural to an underhand grip. Modern gambists have also suffered from an unnatural isolation, for until recently the viola da gamba has been the only Renaissance bowed string instrument to enjoy a revival. In the sixteenth century, however, the sounds of the violin and its expressive devices were a part of the musical consciousness. One of the most important educational aids for the beginning Renaissance violinist is the alternative experience of the gambist, especially for those whose background has been the equally isolated environment of the modern violin. As the nature and capabilities of the Renaissance violin and violin band become more a part of the vocabulary of early music (it is, after all, a relatively recent rediscovery), violinists and gambists will incorporate each others' natural strengths to the benefit of everyone, and combining them will be less of an issue.

In the late Renaissance, music for violin band blossomed in variety, quantity, and degree of compositional daring, but the basic identity of the violin band remained that of a dance ensemble well into the eighteenth century. The dance music of Brade, Trabaci, Praetorius, Hammerschmidt, and innumerable others continue to widen the scope of this once-utilitarian music.

Even many of the late-seventeenth-century dances and consort sonatas of Biber retain the important characteristics of equal-voiced Renaissance polyphony, and are most fully experienced from the articulate and energetic perspective of the Renaissance violin band. Because music is inextricably entwined with time and historical context, it can be fully appreciated only from a forward-looking perspective. It is a simple principle that is easy to forget, since we are forced to look backward at this repertory in the first place.

In addition to the many instrumental forms appropriate for the violin, evidence shows that a wide variety of vocal music rounded out the repertory for violin band. Aside from the vocal forms that were closely related to instrumental music, such as the balletti of Gastoldi and Vecchi or the Neopolitan canzonas of Willaert, we know that violin bands performed their own renditions of motets and madrigals, particularly the arioso madrigals of such composers as Verdelot, Lassus, and Wert. The account of the 1568 wedding of the Duke of Barvaria to Renée of Lorraine describes violin-band performances of motets by Cipriano de Rore, among others. For modern violinists, playing vocal music is also an effective way of developing an awareness of articulation, by imitating the inflections of words and phrases, and by learning to communicate a sense of sentence structure. Becoming as subtle and as flexibly expressive as a singer is a captivating idea to the novice early violinist whose previous goals as a modern violinist had been the development of right-hand power and the mastery of ever more complex left-hand calisthenics.

Not all of the repertory for Renaissance violin is ensemble music. A large body of virtuoso solo repertory exists in the form of solo renditions of polyphonic works, ornamentations of songs, and improvised variations over ground basses. The Italian practice of division ornamentation—the origin of this solo repertory—can be studied in the treatises of the period, many of which are now available in modern English-language editions. Many ornamentations of madrigals have also been published in easily obtainable modern editions. These may be performed to the accompaniment of violin band or chordal continuo instruments that supply the remaining parts of the polyphony. Amadeus Press has published a wonderful edition of diminutions in which madrigals with all of their extant ornamentations are collected and presented in score. Besides providing a wealth of performance material, this edition is a very good educational tool that allows one to explore the important elements of style by comparing the different ornamentations. The most exciting goal of the modern Renaissance violinist is to be able to improvise new works in the appropriate style.

One long-lived spinoff of Italian ornamentation, the English practice of division playing, was born in the Renaissance and thrived well into the eighteenth century. Violinists of many nationalities gained international fame through their ability to improvise divisions of incredible complexity. The fact

that these Renaissance-style works were still in publication at the same time as the new solo sonata repertory in the seventeenth century gives added insight into the ways in which these early Baroque-style works were perceived and played. The legacy of the dance master and his technique lasted much longer and changed more slowly than most violinists would like to admit.

Learning to improvise Renaissance divisions is accomplished by first becoming comfortable with the rules of Renaissance ornamentation (adding notes to an established melody), and then gradually increasing the complexity of the ornamentations. One feature of divisions, a highly specialized form of ornamentation, is that the identity of the original melody is sometimes completely obscured in the most elaborate of the divisions. For example, take the melody to "John come kiss me now":

EXAMPLE 14.1   "John come kiss me now"

After stating the theme, the division violinist—in this case David Mell, as printed in *The Division Violin* in 1684 (which, in spite of its late date, represents an earlier practice)—ornamented it in a way that divided the melody (hence the name of the style of playing) into faster and faster note values:

EXAMPLE 14.2   Divisions on "John come kiss me now"

Eventually, the melody was left entirely, and he worked solely with the underlying harmony:

EXAMPLE 14.3   Improvisation based on "John come kiss me now"

Like improvisors of jazz, Renaissance division violinists develop a vocabulary of melodic devices that can be drawn on spontaneously. But before reaching that point the student of division playing practices by improvising simple variations to acclimate the fingers and ear to the pitches on the fingerboard. More complex divisions should be composed on paper as a mental and creative exercise, and then memorized as a vocabulary of ideas for later use. It is a long and difficult process, but the final result is the most exciting performance practice possible—a living creation rather than a studied recreation.

TECHNIQUE

What was the technique of the Renaissance dance master? The most important clues for unlocking that mystery are in the iconography of the period. In practically every instance it is easy to see that the instrument is held very low, comfortably nestled in the area of the armpit. Both arms hang in a relaxed position at the sides, and the arms need be raised only enough to make playing convenient. One example of this playing position, and one of my favorites for its simplicity and essence of relaxation, appears in Arbeau's *Orchésography,* a dance treatise published in 1589 (see fig. 14.1).

The results, from what seems like a relatively small change in position, are far-reaching. Because the instrument does not need to be held up, neither does the bow arm, and explosive articulations can be made

FIGURE 14.1 Violinist from Arbeau's *Orchésography:* 129. Mary Stewart Evans, trans., Dover Publications, Inc., New York.

from a sudden and complete release of the weight of the arm. In my opinion, it is the single most important reason that the violin was so highly prized as a dance instrument. Renaissance technique gives the dance master a bow stroke that is impossible to create from a higher-held position because the additional weight of the arm would overpower the string. Trying to imitate the stroke in a higher placement by using a faster bow speed will still betray the tension that exists in the arm from holding the arm up. The dance master's technique allows tremendous freedom, and that freedom can be communicated directly through sound as well as movement. Indeed, some paintings of violin bands in action depict musicians dancing to their own music. The simplicity of sound and the energy of articulation, natural to the bow arm when the instrument is held this low, is equally beneficial to the performance of polyphony for many of the same reasons. It lends a unique sound and an energetic detail to each line.

Because the weight of the arm is not so much a factor on the up-bow with this low placement, differences between up-bow and down-bow are minimized. A passage that might be "corrected" by a modern violinist, because it feels backward, is more easily played "as it comes" with a lower bow arm. In treatises by Gasparo Zannetti, Richardo Rogniono, and Francesco Rognioni, it is clear that the Renaissance violinist organized his bowing (with a minimum of corrections) so that down-bows fell on strong beats, regardless of whether they were "downbeats." Thus, pieces commonly began or ended with up-bows rather than down-bows, because more important notes occurred *after* the first note or *before* the last note. Here is an example of bow markings in a saltarello from Zannetti's *Il Scolaro per Imparar Suonare i violino* (1645):

EXAMPLE 14.4   Zannetti: *Il Scolaro per Imparar*

By starting up-bow (rather than down-bow, by convention), every important note of the melody is stressed, and the down-bow on the final note prepares the player for the up-bow on the return without unnecessary retaking. Following this example (Crequillon's *Frisque et Galliard*), a canzona might also begin with an up-bow:

EXAMPLE 14.5   Crequillon: *Frisque et Galliard*

An example of an unimportant final note might be the cadence of Anthony Holborne's *Spero,* published in his collection of *Pavans, Galliards, and Almains* of 1599. In the final two measures of the first section the *cantus* part extends the cadence in a manner that is most expressively bowed with a down-bow on the downbeat of the last measure, rather than last note:

EXAMPLE 14.6   Holborne: *Spero*

One other small change necessitated by the different position of the instrument involves the bow grip. When the violin is held on the shoulder and the right arm is raised, the contact point of the index finger on the bow is outside the large, middle finger joint, so that the wrist is at an angle offering the greatest degree of flexibility. When the violin is moved down on the arm, that advantageous contact point moves further into the hand, just inside the middle joint. Even though it might seem inhibiting at first, altering the contact point corrects the forearm and wrist angles and allows them to work together properly.

The large frogs commonly found on Renaissance bows produce a particularly large distance from the stick to the hair, which is often a psychological impediment for modern string players who are used to the feel of bows with smaller frogs. Some pictures show an alternative bow grip in which the thumb is positioned *underneath* the hair. This grip allows more direct control of the hair, which not only satisfies the player, but enhances the bowing of any music requiring aggressive or highly articulate bow strokes. Not surprisingly, this technique is particularly successful for dance music. An additional benefit to this thumb position is that the pressure from the thumb can tighten bow hair that has loosened from humidity or other causes. There is one repertory that in my experience does not benefit from this bow grip: division music. The open hand that results from the grip reduces the flexibility of the fingers, and this flexibility is essential for the subtle phrasing of rapid divisions.

One of the initial responses I get from students when they first attempt to play with low violin placement is that the left hand feels uncomfortable, particularly with the added reach necessitated by the low placement. The short necks of the period instruments are definitely more comfortable physically (and comfort should be a hallmark of any technique), but modern-length necks are perfectly manageable. Complaints about left-hand comfort usually mask the real issue, which is the modern prejudice regarding the need for total left-hand mobility. Doing anything to restrict the freedom of the left hand is considered foolish, and the added responsibility

of having to hold the instrument in place seems only to make it worse. The truth is that the left hand is relatively unimportant: all that is required of it is that a finger be at the right place at the right time. Information from a few sixteenth- and seventeenth-century sources tells us that the sound of the open strings was preferred to that of stopped strings, so the fourth finger (the finger most disadvantaged by the position, because of the angle of the hand to the fingerboard) is rarely used. If the fourth finger is called on, as a result of a particular melodic figuration that creates numerous string crossings, it can be aided by dropping the wrist as much as possible. Afterward, the wrist can return to its normal position. Even measured trills (*groppi*) to open-string notes are best accomplished through a rapid exchange of open string and leading tone, instead of fourth-finger and leading tone. The dissonance created from the ringing open string amplified the effect of the ornament.

Shifting through positions up and down the fingerboard is possible, with practice, although most repertory never requires you to leave first position. Even so, we know that many Renaissance violinists (particularly Italians) were famed for playing to the end of the fingerboard. Unfortunately, no modern violinist (myself included) has yet become sufficiently adept at Renaissance technique, or stylistically familiar enough with the repertory, to accomplish such a feat. At first, shifting while holding the instrument in the low position will seem like a physical impossibility, but once a player becomes more relaxed and understands the specific mechanics involved, shifting becomes easier. Shifting is most often accomplished through a crawling motion, traveling through positions one at a time. The thumb remains back in its first-position placement, ready to pull the hand back. Another advantage of the short Renaissance neck is that third or even fourth position, depending on the size of the hand, can be reached with the thumb still anchored to first position. Raising the neck slightly above the horizontal also aids shifting back. Accurate intonation is elusive at first, but it is easy to forget how hard it was to learn to shift accurately using any technique. Because shifting while holding the violin in a low position involves some complicated maneuvers, many students come to the quick and misguided conclusion that Renaissance technique is inferior and unnecessary. However, the primary reason for using Renaissance technique (or for that matter, the technique of any period for the performance of its music) has to do with the way in which the music is expressed. The bow arm is the major source of expression (often a surprising discovery to a modern violinist once vibrato is eliminated as the primary expressive device) and deserves a string player's undivided attention, while the left-hand works unconsciously.

As style evolved from the Renaissance into the Baroque, violin place-
ment rose higher on the shoulder. As the bow arm rose proportionately to
accommodate the higher position, the gathering weight of the arm effec-
tively allowed violinists to communicate with the new stylistic vocabulary.
The tension that results from constantly carrying the weight of the arm
creates the proper circumstances for expressing Baroque music in a way
that is natural to the whole body, just as total relaxation of Renaissance
technique allows the whole body to perform Renaissance dance music or
polyphony (or the early solo sonata, for that matter) in the most effective
way. Currently, students of Baroque technique tend to be fanatical about
erasing tension, because they know that it is a more relaxed technique than
the one they grew up with, but working by gradual subtraction does not
necessarily teach the proper role of tension and the weight of the bow arm
in a style. Coming from the perspective of Renaissance technique, from the
near absence of weight and tension, the effect of tension and its role in the
expression of style are easy to experience and understand. By beginning at
the beginning you can learn how to use your body as well as your mind to
lead you toward the expressive communication of many different styles of
music.

Once the importance of using the appropriate technique is fully ap-
preciated, it becomes necessary to determine the violin's (and the all-
important bow arm's) specific degree of elevation. Almost every piece, and
certainly every composer, needs to be evaluated individually, and the stylis-
tic requirements of the bow must be weighed against the logistical needs of
the left hand. One must not jump to the conclusion that a higher place-
ment is better only because the left hand needs to shift. Moments of shift-
ing are often sufficiently accommodated by rests in the music or strategi-
cally placed notes on open strings, and if the character of a piece of music
will be best served by a lower placement, it is worth working out a few left-
hand technical difficulties.

The violin-band repertory is a vast resource of music for viola, espe-
cially compared to later string music, and the egalitarian nature of Renais-
sance polyphony is usually a liberating experience to modern violists who
often see themselves as subservient inner-part players. Violinists who take
up the challenge of playing viola will at least widen their marketability, but
sensitive players will also deepen their understanding of string mechanics
and the expressive use of the bow. There is also a wonderful hidden benefit
in learning to adapt to many different string lengths: in order to play in
tune you must learn to engage the ear. You might be surprised at the num-
ber of string players who have stopped listening to themselves in the pro-
cess of acquiring proper left-hand mechanics. It is only a short jump, once
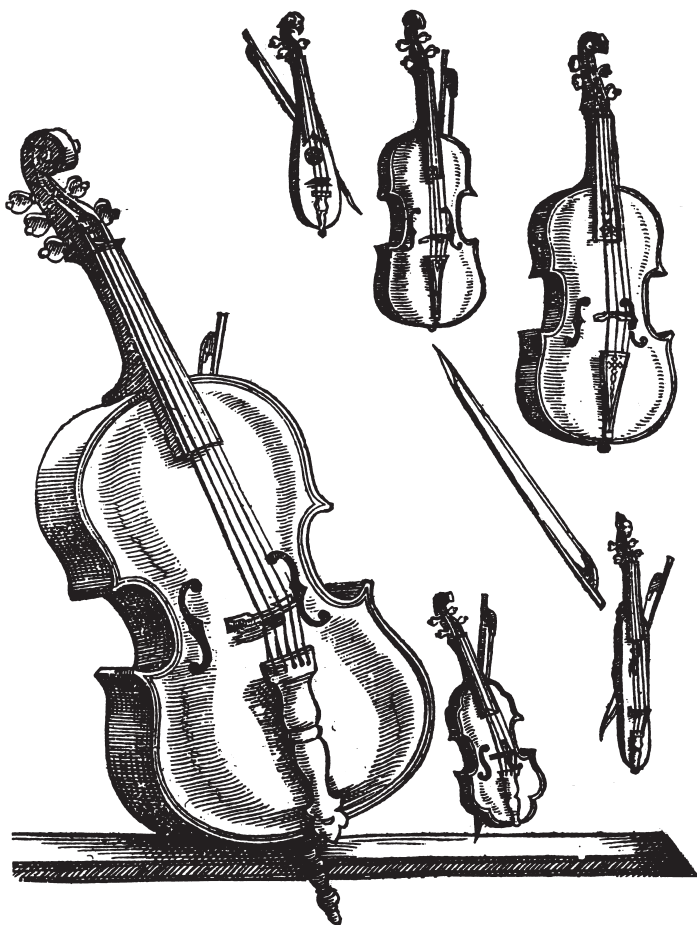
FIGURE 14.2   Violin family (from Plate XXI of Praetorius's *Syntagma Musicum II*)

you are listening, to concentrating on *how* you are playing that in-tune note, and then the path to phrasing, articulation, and effective communication is open.

My experience has been that only adventurous and curious string players fully accept the challenge of new repertory, instruments, and techniques. It is hard enough to learn to play just one way, and most violin teachers actively discourage any deviation from their own personal method. Often (as in my case) the novelty of other, less familiar Renaissance instruments will lure modern string players into earlier repertories. Then, once convinced that their violin, viola, or cello is also a "period instrument," even if it is not in "period condition," they might be willing to come to grips with the sub-

tleties of Renaissance technique. With the advent of professional violin bands, such as The King's Noyse in Boston and the Orpheus Band in Chicago, young instrumentalists can experience this repertory first hand in concerts and through recordings. Aside from the obvious advantages of seeing and hearing convincing performances of this repertory, students cannot afterward deny the value of early techniques and what they bring to the music. They will have to question the premise that their modern technique can accomplish everything, possibly realizing that all the work involved in exploring different ways of playing is worth the effort.

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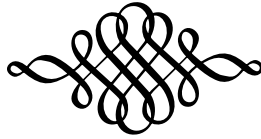
Plucked Instruments

PAUL O'DETTE

THE LUTE

Of all Renaissance instruments the lute was, in the words of John Dowland, that which "ever hath been most in request." Although one of the best-known Renaissance instruments today, the lute, and especially its role in ensemble music, is often misunderstood. It is important to realize that the lute is not just a single instrument, but an entire family of instruments, involving different sizes, tunings, playing techniques, and functions. Thus, the instrument used to perform fifteenth-century chansons is quite a different beast from that used to accompany Elizabethan lute songs or Italian monody. Although few players are able to afford the more than two dozen plucked instruments required to perform music from the fifteenth to the seventeenth century, it is useful to know what instruments were originally used so that, if necessary, intelligent compromises may be reached. In fact much of this repertory can be performed on one or two instruments providing the players understand the techniques involved and are willing to make occasional changes to the stringing of the instruments. Although ideally all of the instruments discussed in this chapter would become part of an early music ensemble's instrument collection, even a few lutes can be very effectively used in ensembles with the proper scorings and application.

In the late Middle Ages the lute generally had five pairs of strings, called "courses," the upper three of which were tuned in unison, the lower two in octaves. It is possible the octaves were added after the introduction of right-hand finger technique, as Tinctoris is the first to mention them, and the brightness produced by a plectrum would have made them less

necessary until that time. The highest course, or "chanterelle," was often, although not always, single for reasons of clarity and tuning (it being extremely difficult to get two very thin strings perfectly in tune). The strings were generally made entirely of gut, though Tinctoris mentions the use of brass for the octaves.[1] Notwithstanding that several different tunings were used in the fifteenth century, by the time Conrad Paumann invented German lute tablature around 1470, the familiar tuning in fourths, with a third between the third and fourth courses, had become more or less standard. Lutes of many different sizes can be seen in paintings and drawings of the period, ranging from small descant instruments to large bass lutes. The keys of early German and Italian intabulations suggest that a tuning in *A* or *G* may have been the most common, at least for solo playing. (See tuning examples later in this chapter.)

By 1500 (perhaps even several decades earlier), a sixth course had been added a fourth below the fifth course. Throughout most of the sixteenth century, lutes had six courses with the lower three tuned in octaves. These octave strings were not only used to brighten the timbre—the thick gut bass strings of the time probably did not have very good pitch definition—but also were used melodically by composers such as Capirola, Spinacino, Francesco da Milano, and Bakfark. Thus, melodies on the upper strings will sometimes appear to stop in mid-phrase in the tablature, when they merely jump to the octave of the fourth or fifth courses, a situation almost never reflected in modern transcriptions of the music. The octaves also serve to enrich the sonority of the instrument, producing seven-note chords for instance, when only four courses are played.

A seventh course, and eventually an eighth, became commonplace by the 1590s, while nine- and ten-course lutes had become standard by 1610, with the basses all strung in octaves. The Neapolitan Fabrizio Dentice appears to have been the first continental lutenist to tune the fourth, fifth, and sixth courses in unisons, possibly a result of the Spanish influence on Naples.[2] (See vihuela later in this chapter.) How far beyond Naples this practice spread is not known; however, from at least the fifth course down, octaves seem to have been standard well into the seventeenth century with the possible exception of England. Dowland was critical of octave stringing, since it sometimes produced faulty voice-leading. Whether other English lutenists followed Dowland's advice we just do not know, though it would appear that his predecessor John Johnson used octaves.[3] Indeed, they are indispensable for most Renaissance lute music.[4]

Lutes of a variety of sizes are documented in court accounts and required in surviving ensemble music.[5] The most common lutes in sixteenth-century ensembles were trebles in *a′*, altos in *g′*, tenors in *f′* and *e′*, and

EXAMPLE 15.1a–d   a. Typical Renaissance six-course lute tuning b. Typical English eight-course lute tuning c. Tuning for bass lute in D d. Tuning for Praetorius's French mandore

basses in *d′*. A descant lute in *d″* was used in late Renaissance ensembles, as well as the mandora in *g″*. Praetorius also mentions descants in *b′* and *c″*, as well as a large octave bass lute in *g,* an octave below the tenor lute. The reason for the variety of sizes was not only to expand the available range, but to provide more resonance over a wider range. For example, in transposing a soprano lute song for an alto singer (or a tenor song for a baritone), it was common practice to change from a tenor lute to a bass lute, rather than to transpose downwards on the smaller instrument. Although most, if not all, of the notes required are playable on the smaller instrument, the effect is not nearly as sonorous as it is on the larger instrument. The reason for this is that gut-strung instruments sound best when notes are produced by the longest vibrating string-length possible. This is because thick gut strings produce a dull, thuddy sound, whereas thinner strings are brighter and more resonant. In order to use thin strings however, the string length must be long enough to place those strings at, or near their breaking point, the point at which gut strings sound best.[6] Although the smaller lute produces low notes on thick, short strings, the larger lutes will produce the same notes on the bright, clear upper strings of the instrument. This corresponds

to the Renaissance and early Baroque practice of performing viol consort parts on the strong, resonant treble strings of large instruments, rather than on the middle and lower strings of smaller ones.[7] For this reason, bass lutes were extremely popular ensemble instruments in the sixteenth century, as they would project the lower and middle parts of ensemble music more clearly than can standard tenor lutes. One further advantage of transposing by changing lutes is that it enables the player to read from the same tablature part.

Although the left-hand technique of the lute is quite similar to that of the classical guitar, the right-hand technique, at least in the sixteenth century, was quite different. Until the third quarter of the fifteenth century, the lute was played with a quill, restricting it to either single-line passages or strummed chords.[8] Tinctoris reports that some German lutenists in the middle of the century began to play with the right hand fingers, instead of a quill, in order to perform polyphony.[9] The two styles coexisted into the beginning of the sixteenth century, when the quill was eventually abandoned. (The well-known virtuoso Giovan Maria was heard performing with a plectrum as late as 1526.) It was probably ensemble players who retained the plectrum-style the longest, while solo performers cultivated the new finger-style for its greater flexibility. For single-line playing in fifteenth-century music the plectrum is the most appropriate, while performing two or three parts on one lute, as in playing the lower parts of a chanson, is most easily accomplished using the fingers.

For plectrum playing, a downward stroke was used for strong beats and an upstroke for weak beats. This sequence was replaced in the finger-style by the alternation of the thumb and index finger. This remained the basis of lute fingering into the seventeenth century, when the middle-index stroke gradually took precedence for much solo playing. Until about 1600 the right arm was held nearly parallel to the strings, allowing the thumb to pass under the index finger, a technique often referred to as "thumb-under" today. The right hand was supported by the little finger, which rested on the soundboard, providing a point of reference for the freely-moving arm. In fact, the movement of the arm provides most of the energy for the thumb-under technique, allowing the fingers to relax and concentrate on contacting the strings with as much of the fingertip as possible. This technique provides the ease and lightness required to articulate the rapid divisions of Renaissance lute music. By the early seventeenth century the right arm had been brought around to a more perpendicular position with the thumb moved outside the hand, jutting out toward the fingerboard, a position now known as "thumb-out." Although less suitable for early sixteenth-century music, this position is nevertheless more familiar to classical guitarists, most

of whom will feel more comfortable beginning with it. The basic thumb-index alternation was maintained for single-line playing even in the thumb-out position. (For a summary of the two hand positions and their use, see Beier below.) The sound produced by the "nibble end" of the fingers was preferred for solo playing, while many ensemble lutenists apparently used fingernails.

The following methods provide much more detailed information about the playing techniques, repertory, notation, interpretation of the music, and so forth:

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Stefan Lundgren. *New Method for Renaissance Lute* (Munich: Lundgren Musik-Edition, 1986)
Patrick O'Brien and Paul O'Dette. *The Lute Made Easie: A Tutor for the Renaissance Lute* (in preparation)
Diana Poulton. *A Tutor for the Renaissance Lute* (London: Schott ED 12324, 1991)

The Use of the Lute in Ensembles

As a result of the use of a quill, the lute in the fifteenth century primarily played single lines or strummed chords. Intricate polyphony was not possible on one lute until the adoption of finger technique in the last quarter of the century. Strumming was probably confined to dance music, making monophonic playing the most common for participation in secular art song, perhaps the primary repertory in which lutenists would have taken part. The plectrum produces a bright, articulate sound ideally suited to playing the active contratenor and triplum parts of fifteenth-century chansons.

The upper strings of the lute are generally the strongest and clearest, and it is this register that is usually the most effective in ensemble playing. Slow, sustained parts rarely work well on the lute, particularly in the middle and lower registers. Rhythmically active writing, parts with numerous leaps, or highly florid passages are particularly effective on the lute, since dynamically it is able to dart in and out of the texture as required. When lutenists did perform slow-moving lines, *cantus firmi,* and the like, they tended to repeat notes or to ornament, as can be seen in the tenor parts of Francesco Spinacino's lute duets,[10] intabulations of vocal music, settings of, for instance, *La Spagna, Tandernaken, In Nomine.* This is important to keep in mind when scoring fifteenth- and sixteenth-century

music. Try to choose a part which suits the strengths and characteristics of the instrument. If that is not possible, the player must adapt the part to make it fit the instrument.

From the early sixteenth century on it would appear that lutes most often played two to four parts. Although there are many examples of very florid single-line lute parts, there is surprisingly little evidence to suggest lutenists played simple single-line parts in Renaissance ensemble music after about 1526. Without a plectrum it is difficult for a lute to hold its own against other instruments playing only a single line, unless it is either very active or up high on the fingerboard. This is not to say it was never done, but I do not believe it was very common.

Arrangements of four-part frottole, chansons, and Lieder for voice and lute made between 1500 and 1530 indicate that the *superius* line was sung, while the lute intabulated the bass and tenor with some added ornamentation to assist the flow of the lines.[11] Although occasional chords are filled out with a third voice, the alto part is, for the most part, left out. Even when a flute is added to this ensemble, as in the famous paintings by the Master of the Half-Lengths, it plays the tenor line together with the lute. This is probably because most cadences in this music occur between the *superius* and tenor. If the alto were to be played by the flute, the least important line would become quite prominent, confusing the cadences. Why the lute did not trade the alto for the tenor in this situation is not clear. By contrast, judging a practice by a few paintings is indeed risky, and there were undoubtedly approaches to this problem we just do not know anything about today. Nevertheless, the type of part found in Bossiniensis, Attaingnant, Schlick, and Paris Rés. Vmd. Ms 27 (all available in facsimile editions) gives valuable clues about the style of early-sixteenth-century lute accompaniments. Even when all four parts are otherwise covered by voices, viols, recorders, and the like, these slightly ornamented two- to three-part accompaniments work well for the lute. For performances involving two lutes, as was often done, it would seem reasonable to assume that one lute played the tenor and bass, the other the alto and bass.

In Willaert's 1536 arrangements of four-part Verdelot madrigals for solo voice and lute, we find the three lower parts intabulated intact.[12] Still later in the sixteenth century an even fuller texture was used with the soprano part doubled by the lute as well. Many of the accompaniments in the *Bottegari Lute Book,* for example, are essentially full intabulations of the madrigals (complete with ornamentation), which were apparently used to accompany a solo singer.[13] Indeed solo lute intabulations often make good accompaniments to vocal ensembles as well as to solo singers. Sometimes the ornamentation will need to be simplified or the texture thinned out to enable

the lutenist to maintain a singable tempo. My own preference, and one expressed by several sixteenth-century authors, is not to double the soprano part, particularly in solo songs. It was nevertheless done by some sixteenth-century musicians.

In vocal ensemble performances, multiple lutes were often employed. The most valuable models for this practice may be found in Verona Accademia Filarmonia Ms.223 and in Emanuel Adriaensen's *Pratum Musicum* of 1584. The former is particularly interesting in that it contains four- to eight-part madrigals with multiple lute accompaniments for instruments in different pitches. Each of the surviving partbooks contains a vocal part with written-out ornamentation, and aligned beneath that, a lute intabulation of some of the lower parts. The soprano part of the four-part madrigals is never doubled in this source, at least not by the lute in the soprano partbook. Unfortunately the manuscript is missing at least one, and possibly several partbooks, so that we cannot be sure how the six- and eight-part madrigals were performed. Each of the singers may have had his own accompanist, or what is more likely, the singers accompanied themselves. At any rate, it is clear that lutes in ensembles of this period played several parts at once, doubling vocal lines and often each other. (In some examples from this manuscript two lutes play virtually the same intabulation, undoubtedly for additional resonance.)

Adriaensen's 1584 settings for four lutes and four voices are somewhat thicker in texture.[14] The lutes are used in the following way:

LUTE 1 (in *a′*) plays the cantus, adding some ornamentation and filling in chords of three to four parts down to the bass
LUTE 2 (in *g′*) plays the alto and bass, filling in chords of three to four parts
LUTE 3 (in *e′*) plays the tenor and bass, filling in chords of three to four parts
LUTE 4 (in *d′*) plays the bass in octaves and fills in the harmonies

It should be noted that all four lutes are of a different size and tuning, making the sound even richer. Renaissance musicians apparently tried to avoid combining more than two lutes of the same size. Most surviving lute trios and quartets call for three or four different sizes, a practice employed in mixed ensembles as well. Thus, it seems that in large ensembles, lutes usually played two to four polyphonic parts each, not the single lines or block chords heard in many modern performances.

A word of caution: the notated pitch of vocal parts, especially in frottole, vihuela songs, and *airs de cour,* is not necessarily an indication of the pitch of the lute required to accompany them. Although in larger ensembles, for example, Adriaensen, Verona Ms., and so on, the pitch of the lutes does seem to correspond to the pitch of the vocal parts they accompany,

often the vocal parts simply indicate the mode of the piece using the fewest sharps or flats, not the actual performing pitch.[15]

Another use of the lute in late-sixteenth-century ensembles was as a florid single-line instrument weaving rapid divisions throughout the texture of the ensemble. This technique is most clearly documented by the "in concerto" settings of Terzi,[16] the Elizabethan broken consort lute parts,[17] and in the descriptions given by Agazzari and Praetorius.[18]

Perhaps the best way to acquaint oneself with the various approaches to ensemble playing is to play as many of the original lute ensemble parts as possible. Although these may not always represent what the finest professional players of the time did, they will nevertheless provide a point of departure. In addition to the obvious skills anyone playing in an ensemble must possess, lutenists should become fluent in clef reading, transposition, intabulation, and ornamentation. Of these, intabulation is perhaps the least familiar. It is the art of scoring a vocal or instrumental ensemble piece for the lute, transposing where necessary, thinning out or revoicing chords to make them easier to play, or more sonorous, and most important, adding ornamentation to facilitate phrasing and to add variety.[19] This process is described in many sixteenth-century sources, of which Adrian LeRoy's *A briefe and plaine Instruction to set all Musicke . . . in Tableture for the Lute* written in 1574 is the most accessible.[20] The acquisition of these skills will greatly facilitate the lutenist in devising parts to play in ensembles. (Several of these styles may be heard on the recording *Three, Four and Twenty Lutes* listed in Suggested Listening.)

Guitar and Vihuela

Appearing in many medieval artworks—often alongside the lute—is a small lutelike instrument, long called the mandora by historians. However, Laurence Wright[21] has pointed out that "mandora" (or its variants) is rare in any language before 1570, and that the instrument we had been calling by that name was most probably known in the Middle Ages and early Renaissance as the gittern or qui(n)tern—early forms of the word "guitar." (Meanwhile, Wright has demonstrated that the holly-leaf–shaped instrument we had been calling the gittern was actually the citole, ancestor of the Renaissance cittern; see later in this chapter.) The early gittern shares many characteristics with the rebec (see chapter 13): hollowed-out construction, smooth transition from body to neck, and sickle-shaped pegbox, often terminating in an animal head. (An amazingly well-preserved example, made by Hans Ott in Nuremberg about 1450, is to be found in the Wartburg, Eisenach.) By the time of Praetorius, however, the gittern had acquired the flat back

EXAMPLE 15.2a–b   a. Five-course Baroque guitar tuning b. Four-course Renaissance guitar tuning
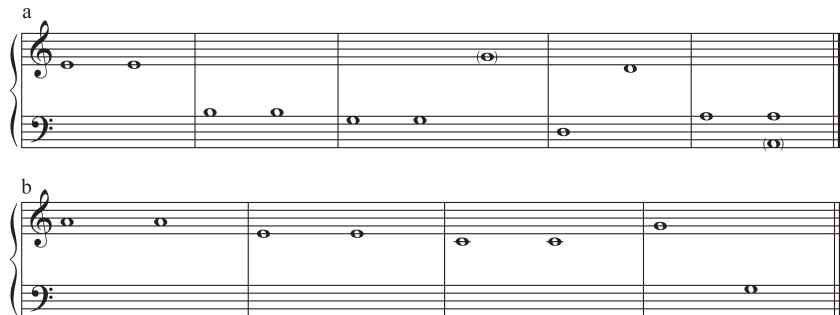
and waisted outline we now associate with the guitar, although the two body shapes undoubtedly overlapped for some time. Adding to the confusion was the advent of the true mandora (mandürichen, bandürichen, pandurina) with its lutelike shape, whose tuning (alternating fifths and fourths), however, represent a real departure from the lutelike tuning (in fourths, with an interior third) of the gittern or guitar.

The four-course Renaissance guitar is an unjustly neglected instrument today. Although its solo repertory is not large, it can be a very useful ensemble instrument, particularly for lighter music such as villancicos, villanelle, dance music, and chansons.[22] The Renaissance guitar was plucked as well as strummed and is thus able to play polyphonic as well as homophonic textures. (Plucking refers to striking each string individually with a different finger, whereas strumming involves sounding several strings with one finger.) The Renaissance guitar is technically not difficult to play but can contribute a great deal of rhythmic verve in the right kinds of pieces. It survived well into the seventeenth century when it was joined by the larger five-course guitar, tuned a fourth lower, which eventually replaced the smaller instrument as the most common type. The five-course instrument, often referred to today as "the Baroque guitar," made its appearance in the late sixteenth century and was extremely popular as a solo and as a continuo instrument throughout the seventeenth century.[23] The elaborate right hand strumming techniques discussed in seventeenth-century sources are reminiscent of many Latin and South American folk traditions and provide much of the character of the instrument. Unfortunately, very few players today have taken the time to learn these sophisticated techniques, many of which were undoubtedly already in use in the sixteenth century.[24]

In Spain, the vihuela, a six-course, guitar-shaped instrument that shared the same tuning as the lute, was played in place of the lute. The pri-

mary difference between the vihuela and the lute, besides the shape, is that the vihuela was strung in unisons throughout. This gives the instrument a darker, more somber sound well-suited to the moodiness of its repertory. The Italian Paolo Cortese complained that "the evenness and sweetness of the lyra hispanica (presumably the vihuela) is usually rejected by the satiety of the ear, and its uniformity is longer than could be desired by the limits imposed by the ear."[25] Vihuela music was sometimes played on the lute in Italy and Northern Europe and can be executed successfully, particularly if unison tuning is employed. For specialists, however, the characteristic sound of the vihuela is irreplaceable. (For more information about surviving instruments, sizes, shapes, the repertory, and so on see the vihuela article in *The New Grove Dictionary of Musical Instruments.*) Vihuelistas employed a few specialized playing techniques, such as the *dedillo,* a rapid tremolo produced by the back and forth motion of the index finger, a technique not yet convincingly reproduced by modern exponents of the instrument. Other aspects of the vihuela repertory not yet sufficiently explored include the use of left-hand ornamentation, as discussed by several of the vihuelistas and the keyboard players Henestrosa and Tomás de Santa María,[26] as well as the use of rhythmic alterations, also encouraged by Santa María.

Cittern, Ceterone, Orpharion, and Bandora

Another underused instrument in today's early music groups is the cittern. Its solo repertory is second in size only to that of the lute in the sixteenth century, and as an ensemble instrument it was popular throughout the Renaissance and early Baroque. The cittern was strung with a combination of iron and brass strings arranged in pairs—some of the low courses were even triple strung with a fundament and two octave strings—and plucked with a quill. Most English and French citterns had four courses, while Italian instruments often had six. The cittern is a chordal instrument fulfilling much the same role as a rhythm guitar in a rock band. Because of its "reentrant" tuning, the cittern lacks a real bass, and produces many chords in inversions. For this reason it is best used in combination with another instrument that is able to provide the written bass line. The cittern was most commonly used in dance ensembles and to accompany broadside ballads. Frederic Viaera's cittern parts, written to fit with Giovanni Pacoloni's lute trios, provide good models for the former.[27] (Some of these may be heard on the recording *Three, Four and Twenty Lutes* listed in Suggested Listening.) The cittern is an essential member of the English broken consort and survived in Italy as a continuo instrument. The ceterone, or archcittern, is a large bass cittern with a second neck and pegbox to hold the diapasons. An

EXAMPLE 15.3a–c   a. English cittern tuning b. French cittern tuning c. Paolo Virchi's cittern tuning

exquisite original ceterone by Gironimo Campi survives in the Bardini Museum in Florence. A picture of it is shown on page 325 in *The New Grove Dictionary of Musical Instruments.* Monteverdi calls for ceteroni in *Orfeo,* a fact ignored by most recordings of that work to date. The parts were probably similar to those provided by Pietro Paolo Melii in his *Balletto* of 1616.[28]

The bandora, or pandora as it is called in some sources, was devised "in the fourth year of Queen Elizabeth" (i.e., 1561) by the viol maker John Rose. It is essentially a wire-strung bass lute with a scalloped shape, perhaps vaulted back and often a slanted bridge and nut to increase the length of the bass strings. The surviving music for bandora includes a small but rewarding solo literature, a number a song accompaniments, and several lute duet grounds; it is, however, in the broken consort repertory that the bandora really shines.[29] It is an irreplaceable member of that ensemble, filling a double role as continuo and double bass. Together with the cittern, the bandora provides a continuo with the dynamic flexibility required in such a delicately balanced ensemble. Although keyboard instruments such as the virginal and spinet are sometimes shown in paintings of broken consorts taking the place of the bandora, they are rarely mentioned in musical sources and were probably not considered as desirable as the bandora, since they would be the only member of the ensemble incapable of subtle dynamic shading. The bandora is mentioned as a continuo instrument on the title page of numerous seventeenth-century collections including a few

EXAMPLE 15.4   Seven-course bandora tuning
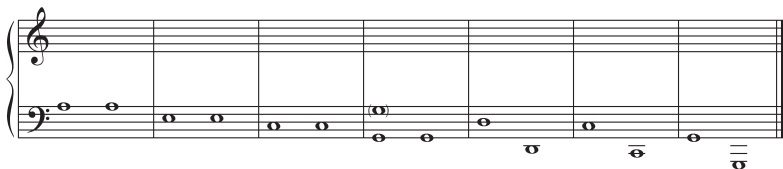
published in Germany. Nevertheless, the bandora seems to have fallen out of favor in the 1620s, along with the broken consort, although Roger North mentions bandoras strummed with quills accompanying oboes and violins in late-seventeenth-century consort music.

The orpharion is a wire-strung instrument with a scalloped outline and a flat, or slightly vaulted back, tuned like a lute. It was played almost exclusively in England and in some parts of Holland and northern Germany. Mentioned as an alternative to the lute on the title pages of several books of lute songs, the orpharion may, because of its tuning, be used to play any English lute music. In fact, in thirty-two household inventories made between 1565 and 1648 the bandora and orpharion occur as frequently as the lute. Although music published specifically for the orpharion mostly requires a seven-course instrument, the finest surviving example has nine courses.

Chitarrone, Theorbo, and Archlute

The terms chitarrone, theorbo, and archlute have been a constant source of confusion over the centuries. Although Robert Spencer finally sorted them out more than a decade ago, conductors, scholars, and performers still have trouble keeping them straight.[30] To a nonplayer, the distinctions can seem minimal if not insignificant. To the player, however, the differences are enormous; they have to do with tuning, size, repertory, and playing technique. To begin with the chitarrone and theorbo are one and the same instrument; the first being the common name from the instrument's invention in the 1580s until the 1640s, the second, a term used from around 1600 to the late eighteenth century.[31] Praetorius distinguishes between the paduan and Roman "theorba," the latter of which he says is called "chitarrone," but the surviving instruments do not substantiate his account, and his description of two different instruments has resulted in mass confusion in the secondary literature. Although undoubtedly much experimentation with different body shapes and sizes, string lengths, tuning, and stringing took place after the invention of the chitarrone in the 1580s (most of which is undocumented; it is clear that most seventeenth-century Italians used "chi-

EXAMPLE 15.5   Typical seventeenth-century theorbo tuning
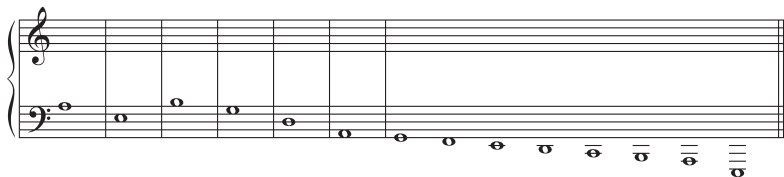
tarrone" and "tiorba" as different names for the same instrument).[32] It is likely that what the players in the 1589 *intermedi* called "chitarrone" was different from what Monteverdi or Kapsberger or Piccinini meant by that term, but that was the result of individual preference rather than terminology. Praetorius and Piccinini discuss the use of metal strings on the chitarrone, but gut was probably more common—it is certainly more reliable. The most common number of courses was fourteen, six on the fingerboard with eight diapasons. The diapasons were tuned diatonically according to key. Some early examples have only twelve courses, while Kapsberger used a fully chromatic, nineteen-course instrument, no example of which appears to have survived. Many modern players compromise by placing seven or eight courses on the fingerboard to access the low G♯ and F♯ so crucial for continuo playing, as recommended by some French sources. Surviving instruments and iconographic evidence indicate that some players used double courses over the fingerboard, while others preferred single strings. (The latter are easier for articulating the long, slurred passages called *strascini* so common in solo theorbo music.) The diapasons were always single. The theorbo was the instrument of choice in accompanying Italian monody and early recitative. It was commonly used in early trio sonatas, opera, English and French song, oratorio, and *concerti grossi* well into the eighteenth century.[33] Indeed, theorbists played in operas in Berlin, Prague, and Vienna after 1750, though the instrument they used may have been a kind of Baroque lute rather than the seventeenth-century type theorbo.

The archlute, by contrast, is simply a Renaissance lute with an extra octave of bass strings. The term was not, as suggested in many modern books on musical instruments, a generic term for long-necked lutes. Although it is possible that uninformed observers may have used "archlute" or "theorbo" generically in the seventeenth and eighteenth centuries, experienced musicians clearly knew the difference, since parts specifying one or the other are usually idiomatically well conceived. Small archlutes, sometimes called *liuti attiorbati,* usually had double courses in the bass, while the larger instruments had single basses. It is these latter instruments, with their long extended necks, that are most often confused with the theorbo, since

EXAMPLE 15.6   Typical fourteen-course archlute tuning
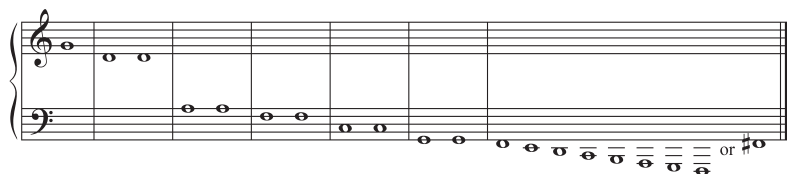
their appearance is so similar. (The archlute, in fact, has a smaller body and a shorter string length than most theorbos.) The major difference between the two is that the treble strings of the archlute are tuned in the standard Renaissance lute tuning, while the top one or two strings of the theorbo are tuned an octave lower. Because of this the theorbo has a very full tenor register but lacks a true treble, while the archlute has a bright, clear treble but lacks the fullness of the theorbo. In addition, the basic pitch of the theorbo was usually a step higher than that of the archlute. For that reason the choice between the two instruments was made not only for their tonal characteristics but according to the keys they favored. This is an aspect we do not yet fully understand. Although Handel uses the theorbo primarily for flat keys and the archlute for sharp keys, the reverse actually provides more resonant, technically convenient chord shapes. Even though the theorbo was preeminent in the seventeenth century, the archlute seems to have overtaken its larger cousin after 1700, probably because its shorter string length makes for easier playability in a wider variety of keys. Archlutes remained popular into the second half of the eighteenth century.

INSTRUMENT PRIORITIES

For early music ensembles, the most versatile first lute would be an eight-course instrument with a string length of 58 to 60 cm tuned in g'. If there is more than one lutenist in the ensemble, I would recommend another of the same, this being the size of instrument best suited to the largest portion of the solo repertory, most flexible in ensembles, and most utilized in lute duets. After that, the choice of instruments will be determined primarily by the director's preferences in repertory. For seventeenth-century music, a theorbo is the most suitable, while for the eighteenth century an archlute is the most useful. If one wishes to specialize more in Renaissance music, I would recommend a bass lute in d' (string length of 84–88 cm) or e', an alto lute in a', then a soprano lute in d'' (string length 42–44 cm) as the next instruments. Others, such as the cittern, bandora, Renaissance guitar, and the like, can be added according to the number of players available and the
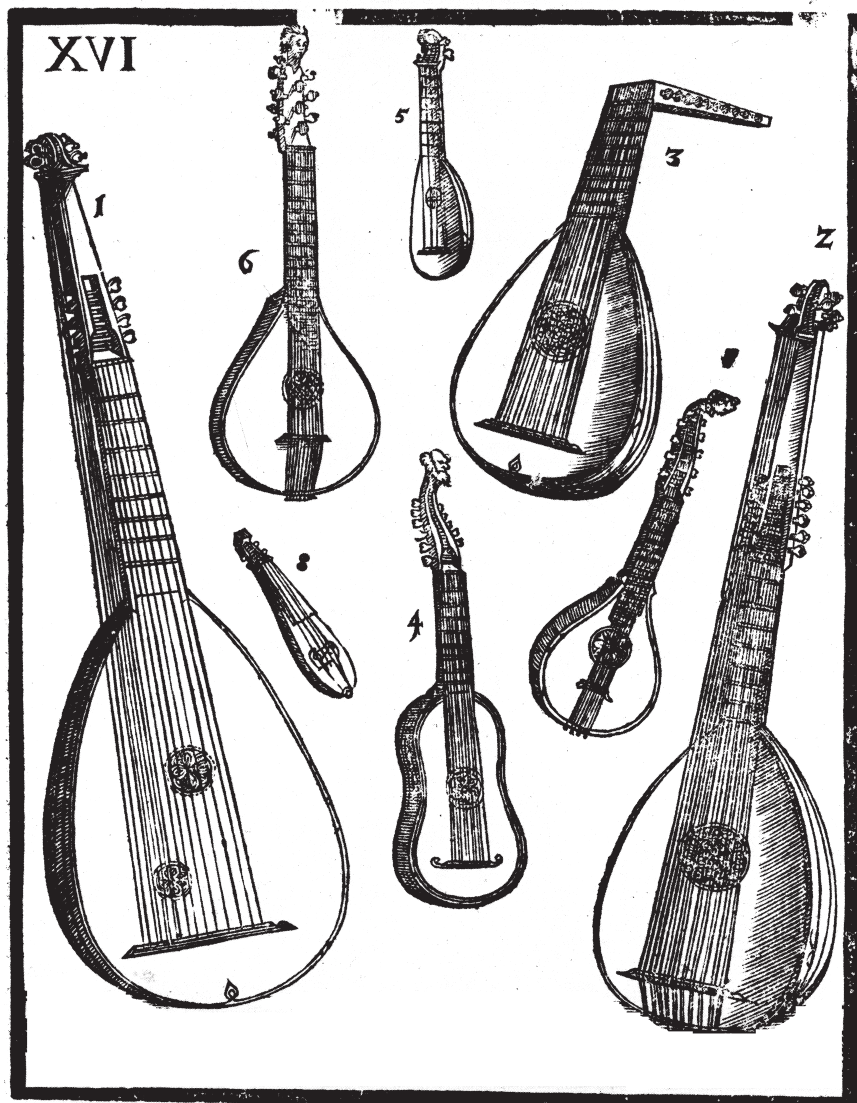
FIGURE 15.1   Plucked Instruments (from Plate XVI of Praetorius's *Syntagma Musicum II*)

requirements of the music. It is worth keeping in mind, however, that Ren-
aissance ensembles often included a large number of plucked instruments.
(As many as forty lutes took part in some masques and ballets!) This not
only improves sonority and balance, but has the practical advantage of in-
volving a lot of guitarists, both folk and classical, in Early Music programs.

NOTES

1. Baines, "Fifteenth-Century": 24.
2. Le Roy, *Briefe*: f. 41′.
3. Nordstrom, "Lute": 33.
4. Radke, "Beiträge": 34–51.
5. Rooley and Tyler, "Lute": 13–24; and Brown, *Sixteenth-Century*.
6. Nurse, "On the Development": 102–107.
7. Morrow, "Sixteenth-Century": 163.
8. Danner, "Before": 4–17.
9. Although plectrum players undoubtedly managed to play simple polyphony by damping undesired adjacent strings with unoccupied left-hand fingers, as is done in some types of jazz today, the thicker textures of late-fifteenth-century polyphony must have made this increasingly impractical.
10. Spinacino, *Intabulatura*.
11. Arnolt Schlick's settings of Tenorlieder in his *Tabulaturen etlicher lobgesang und lidlein* of 1512 are something of an enigma. Although ordinarily the tenor of these songs was sung, accompanied by instruments playing the surrounding parts, Schlick has intabulated the tenor and bass for lute and has left the *superius* in mensural notation. This leaves the melody in the lute while singing (or playing) the accompanying descant line in the soprano. Whether this was a common practice or an aberration is just not known. I prefer to believe the latter, and have found that intabulating the *superius, altus,* and *bassus* of Tenorlieder for lute to accompany a tenor singer works very well in much of this repertory.
12. Willaert, *Intavolatura*.
13. Bottegari, *Bottegari*.
14. Adriaensen, *Novum*.
15. Ward, "Changing": 27–39.
16. Terzi, *Intavolatura*.
17. Beck, *First;* Nordstrom, "English": 5–22; Nordstrom, "Lute": 50–63; and Edwards, "Music".
18. O'Dette, "Chordal."
19. Lawrence-King, "Perfect": 354–364.
20. LeRoy, *Les Instructions*.
21. Wright, "Medieval": 8–42.
22. Tinctoris, *De inventione*.
23. The two types may be heard side-by-side in the closing *Ballo* to the 1589 Florentine Intermedii, recorded as *Una stravaganza dei Medici*, The Taverner Consort and Choir, conducted by Andrew Parrott (EMI CDC 7 47998 2), 1989.
24. Weidlich, "Battuto": 63–86; and Tyler, *Early*: 77–86.
25. Pirrotta, "Music": 127–161.
26. Myers, "Vihuela": 15–18.
27. Pacoloni, *Longe* and Viaera, *Nora*.
28. Melii, *Intavolatura*.
29. See footnote 14.
30. Spencer, "Chitarrone": 407–423.
31. Mason, *Chitarrone*.
32. Spencer, "Chitarrone": 407–423.
33. North, *Continuo*.

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Beier, "Right"; Brown, *Instrumental;* Brown, *Sixteenth-Century;* Danner, "Before"; Knighton and Fallows (Smith and Thomas), *Companion;* Mason, *Chitarrone;* Munrow, *Instruments;* Myers, "Vihuela"; Nordstrom, *Bandora;* Nordstrom, "Cambridge"; Nordstrom, "English"; Nordstrom, "Lute"; North, *Continuo;* Nurse, "On the Development"; O'Dette, "Some"; Pirrotta, "Music"; Poulton, *Lute;* Radke, "Beiträge"; Sadie, *Grove Instruments* (Refer to individual instrument entries.); Spencer, "Chitarrone"; Tyler, "Checklist"; Tyler, *Early;* Tyler, "Mandore"; Tyler and Sparks, *Early;* Ward, "Changing"; Wright, "Medieval."

Suggested Listening

Franscesco da Milano: Intabolaturea da Leuto. Paul O'Dette. Astrée CD E7705. 1986.

In the Streets and Theatres of London. Musicians of Swanne Alley / Paul O'Dette, Lyle Nordstrom. Virgin Classics VC 7 90789-2. 1989.

Italian Lute Duets. Paul O'Dette / Hopkinson Smith. Seraphim S-60361. 1979.

John Dowland: Lacrimae 1604. The Dowland Consort / Jacob Lindberg. BIS LP 315 / CD 315. 1985 & 86.

Love is Strange—John Johnson, Anthony Holborne, Thomas Robinson, John Daniel and John Dowland—Le Poème Harmonique. Alpha No. ALPHA081 (1–5 lutes and voices).

Luys Milan: El Maestro. Hopkinson Smith, vihuela. Astrée AS 95.

Robin is to the Greenwood Gone. Paul O'Dette. Nonesuch 9 79123-2. 1987.

Three, Four & Twenty Lutes (includes Italian madrigals). Jacob Lindberg, Robert Meunier, Nigel North, Paul O'Dette. BIS CD-341. 1986.

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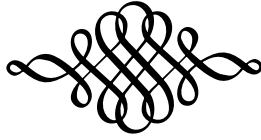
The Harp

HERBERT MYERS

The harp is yet another instrument that has not found its rightful place in modern performances of Renaissance music. Held in the highest esteem in the fifteenth century, the harp was a symbol of musical nobility and erudition. (Of course, its biblical association with King David cannot have hurt its reputation!) Entering the sixteenth century as a diatonic instrument, it was increasingly perceived as defective because of its inability to cope effectively with chromaticism. As the century progressed, methods were developed to render it completely chromatic; however, Praetorius in 1619 seems to have regarded the diatonic harp as still the most common type, and such simple instruments continued for some time to coexist with more developed forms.

The graceful shape of the Renaissance European harp is familiar to many from the paintings of the Flemish masters such as Jan van Eyck and Hans Memling, whose depictions of angel musicians have appeared on countless Christmas cards. This form of harp is often called "Gothic" by historians to distinguish it from the earlier, so-called "Romanesque" type. The three main elements (body, neck, and forepillar) of the latter were typically about equal in length, producing a fairly squat form. From early in the fifteenth century we see evidence of the elongation of the body and forepillar—presumably to accommodate longer bass strings—producing the taller, slimmer outline of the Gothic design. At the same time the forepillar (often quite outcurved on earlier harps) was somewhat straightened and was carried upwards beyond the joint with the neck, terminating in an ornamental, hornlike protrusion; an answering protrusion was often to be found farther back on the neck. Both forepillar and neck were often deeply fluted, evidently in order to reduce mass while retaining strength; the flutings also

serve to emphasize the graceful curves. The body was both narrow and quite shallow, expanding rather minimally toward the bottom. The result of these modifications is (visually speaking) an extremely well-integrated design; the Gothic harp appears to the casual eye to have been made of a single piece of wood.

This appearance is, of course, somewhat deceptive; for strength, the grain of the wood must run generally parallel to the length of each principal element, requiring the joining of separate pieces. But in one sense the appearance is quite genuine, for all three elements (including the body or soundchest) were made of a single type of wood. This means that the active acoustical surface—the belly—was, like the rest of the instrument, of hardwood (although the particular species of wood varied among instruments). The soundchest was not so much constructed as carved, being made up of two hollowed-out planks joined at the edges to form an enclosed cavity. Its cross-section (as viewed from either end) was often a flattened oval; three surviving examples from around 1500 (in Nuremberg, Eisenach, and Leipzig) have the latter form, and it is depicted clearly by Hieronymus Bosch in his famous *Garden of Earthly Delights* in the Prado, Madrid. However, many pictures show that the cross-section could also be rectangular or almost so, with a flat back and either flat or bulging belly. (A flat back is a definite advantage when one wants to lay the harp down!)

The choice of hardwood as belly material has considerable acoustical significance, for it is inherently much stiffer than the softwood (spruce or pine) employed for the bellies of the more recent types of harps with which we are familiar (and, indeed, for the bellies of most other stringed instruments, bowed or plucked, from the Middle Ages to the present). The stiffness of the hardwood belly, coupled with its small surface area, makes for a very inefficient radiator, particularly for bass frequencies. However, the Renaissance builder had quite an effective solution to this problem: bray pins.

Perhaps the most remarkable feature of the Renaissance harp is its use of these devices (often simply called "brays")—L-shaped wooden pegs that served both to anchor the gut strings in the belly (much as modern guitar bridge pins do) and to touch them a short way along their vibrating length, imparting a buzzing quality that amplifies and prolongs their sound. They are most efficient at this in the bass, where the amplitude of vibration of the string is greatest—and where, as we have seen, their amplifying effect was most needed. They are clearly depicted in art works from early in the fifteenth century, through the sixteenth, and into the seventeenth; they also figure in illustrations of harps in musical treatises (notably the *Dodecachordon* of Glareanus, 1547, and the *Syntagma Musicum II* of Praetorius, 1619). In addition, they are to be found on several surviving instruments (including two

of the three mentioned earlier; the Eisenach example has lost them, it seems). Mersenne (*Harmonie universelle,* 1636) calls them *harpions* and claims that they had gone out of fashion in France; however, they are still present on some later seventeenth-century harps, and their use on the Welsh harp continued into the nineteenth century.[1]

One might be tempted to regard the use of brays as but one of the available options (or a mere fad among certain players) but for the evidence that the nasal quality they impart was then considered characteristic of harp timbre. For instance, in the lute book of Vincenzo Capirola (ca. 1517) we are advised to make the frets of the lute almost touch the string so that they will "harp."[2] Similarly, in describing a newly invented keyboard instrument, Sebastian Virdung (*Musica getutscht,* 1511) says, "This is just like the virginals, except that it has different strings (of sheep gut) and nails which make it 'harp' . . ."[3] The implication is clear that this was a keyboard instrument meant to sound like a harp. Such instruments may have been more common than hitherto realized; several Italian writers of the sixteenth and early seventeenth centuries distinguish between *arpicordo, clavicembalo,* and *spinetta,* and there is some evidence that the first of these terms referred specifically to a keyboard-harp.[4] *Arpichordum* was, in addition, the name of a stop often applied to Flemish muselars, being a batten (carrying metal hooks) placed next to the bass part of the bridge; it could be moved to bring the hooks close to the vibrating strings, causing them to buzz. Praetorius uses the expression *Harffenierender Resonantz* (harping sound) to describe the buzzing effect of both this stop and the peculiar bridge of the trumpet marine, even claiming that the term had this buzzing connotation for the common man.[5] Finally, "harp" was the name of a Renaissance organ stop consisting of regal pipes (which also, of course, buzz). Given all this evidence for the use of brays throughout the period, it seems odd that they have been so generally rejected by modern builders and players.

Authors throughout the period confirm the basic diatonic tuning of the ordinary, "simple" (i.e., single-strung) harp, although some indicate that Bs (and sometimes Es) might be tuned either flat or natural. Such harps commonly possessed from twenty-four to twenty-six strings. Most sixteenth-century sources give either *F* or *G* as the bottom note, but Juan Bermudo (*Declaración de Instrumentos musicales,* 1555) says that, although some players think of the harp as beginning with *F* (and some with *G*), it actually begins with *C*. This should remind us that such pitch designations represented concepts more than "actual" pitches in the modern sense, but it is perhaps significant that Praetorius–the first author we can reasonably trust regarding a reference pitch—gives *F* as the bottom note of his diatonic harp of typical Renaissance size.[6]

The harp figures prominently among the *instruments bas* (soft instruments) in fifteenth-century art works, both of "angel consorts" and worldly ensembles; the combination of harp and lute is particularly common. Some idea of its somewhat lowered position in the early sixteenth century (in certain musical circles, at least) may be gleaned from a perusal of the various accounts of court entertainments listing specific instrumentations; here it had a rather limited showing compared to other chordal instruments, such as lutes and harpsichords, until the final decades of the century.[7] Still, there were some notable virtuosi, such as the celebrated Ludovico, harpist to King Fernando el Católico; something of his idiomatic style is embodied in the famous vihuela *Fantasia X* of Alonso Mudarra (1546) "which imitates the harp in the manner of Ludovico." According to Bermudo, when Ludovico needed a chromatic alteration, he placed a finger under the string to raise it a semitone; this technique, however, required "great skill and certitude" (Mudarra had mentioned the same technique, adding that the finger was placed "near the wrest-pins.") The alternative, according to Bermudo, was to preset certain necessary leading tones, making them available in one octave but not in another. Either of these techniques could account for the prominent cross-relations (f against $f\sharp'$) near the end of the fantasia.

The most effective solution, however, was to add extra strings; the problem was to differentiate the added strings from the diatonic row, just as the chromatic notes are differentiated from the naturals on a keyboard. Bermudo proposed adding eight strings for the most-needed accidentals, differentiating them by color. He adds (almost as an afterthought) that this solution was still insufficient for some players, who had added all nineteen (or at least fifteen) chromatic strings to the twenty-seven naturals. How (or even if) the added strings were distinguished he does not say, but his remark has been taken to be an early reference to the *arpa de dos órdenes* (harp of two ranks), of which there is clear evidence in Spain from early in the next century. In this instrument the planes of the diatonic and chromatic ranks cross each other, so that the strings of each are available to one hand at the top and to the other at the bottom.[8]

The Italian *arpa a due órdini* represents a different approach, despite its similar name.[9] Here the planes of the two ranks are parallel, and the player reaches through the diatonic strings to pluck the chromatic ones. Since the hands approach from opposite sides, the two ranks actually switch sides about halfway up the scale, so that the diatonic row is closer to the right hand in the treble and to the left hand in the bass. Thus each hand is basically limited to its own part of the range. Possibly in order to overcome this limitation came the invention of the three-rank (or "triple") harp, in which the chromatic row is sandwiched between duplicated diatonic rows. (The

extremes of range are, however, often left single.) The term *arpa doppia* could apparently refer to both two- and three-rank harps, possibly because they were "double" in another sense as well, having acquired an extended lower range. The two-rank instrument was known in Italy from before 1581, when Vincenzo Galilei reported that it had been introduced there a few years previously; an extant example (in the Galleria Estense, Modena) appears to be from rather earlier, having been made in France some decades before it was decorated in Ferrara about 1587. The invention of the triple harp followed close behind, occurring just before the end of the century.[10] The triple harp is now associated primarily with Wales, but that association is not documented before the beginning of the eighteenth century.

Coexisting with the gut-strung Continental harps was the wire-strung Irish harp, which represented a completely different concept of tone and performance. Elegant in its own way, it was much more robustly constructed. The joints between its members, rather than being disguised, were emphasized by ornamentation. Its massive soundchest was hollowed out completely from behind to make a deep trapezoidal box, whose "lid" then constituted the back of the chest. This back was left removable to allow access to the inside for attaching the strings, which were held in by toggles, never brays. (This remarkable chest often served the itinerant bard as a sort of suitcase!) Irish harpists traditionally played with sharpened fingernails, in contrast with the players of gut-strung harps who used the fleshy part of the finger. The strong, prolonged, and bell-like tone of the Irish harp demanded an elaborate system of damping by the fingers. The use of the Irish harp was confined mainly to the British Isles during the Renaissance, although Continental authors knew of its existence; Dante considered it to have been the ultimate prototype for the harp he knew. There is considerable evidence of the development of chromatic forms of the Irish harp near the end of the sixteenth century. These had some currency on the Continent, and they were known to both Vincenzo Galilei and to Praetorius.[11] The Irish harp was quite popular in England in the seventeenth century; recently a case has been made for the use of the chromatic Irish harp in the famous "harp consorts" of William Lawes, long thought to be the province of the gut-strung triple harp.[12]

It should be mentioned that the so-called Celtic and Troubadour harps offered by modern harp companies are a complete fiction as historical (or at least Renaissance) instruments. Having evolved from some nineteenth-century designs, they generally preserve in their smaller format the acoustical and playing characteristics of the modern concert harp. They are commonly provided with levers to change quickly by hand the pitch of individual strings by a semitone. These levers represent an improvement
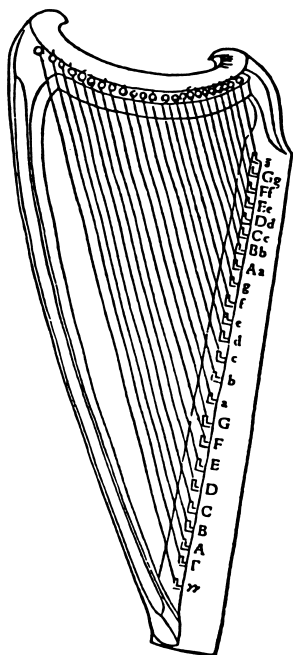
FIGURE 16.1 Glarean's diagram of a diatonic harp from *Dodecachordon,* 1547

over the so-called hooks invented in the late seventeenth century—bent wire devices set into the neck of the harp that can be turned to bear against the strings and thus raise their pitch. Such hooks are still to be found on the folk harps of some makers. Hook harps were an invention of the late seventeenth century and represent one of the first stages in the mechanical development leading to the modern pedal harp.

Specific information on the technique of playing the Renaissance harp is quite scanty. Iconography suggests the use primarily of the thumb and first two fingers; this is borne out in later written sources indicating that the use of the ring finger was then innovative. (The use of the little finger is still avoided in modern harp technique.) Depictions of Continental harps consistently show the right hand taking the treble and the left, the bass (as in modern playing); in traditional Irish (and Welsh triple) harping, the roles of the hands are reversed. Thus the harp was always a "two-handed" instrument; it would seem as improbable to restrict it to a single line as to so restrict a keyboard instrument (with the obvious exception of the organetto). In fifteenth-century pieces, therefore, the harp can easily handle two voices or even play an intabulation of the complete texture (*ficta* willing, of course—although one solution to the *ficta* problem is to ignore it!). The combination of harp and plectrum lute would seem particularly apt for this repertory, the lute's chromatic flexibility complementing the harp's limitations. Moving into the sixteenth century we are on more certain ground, with some keyboard collections suggesting the alternative use of harp (or vihuela). From early in the next century we even find repertory specifically designated for harp, some of it demonstrating idiomatic techniques.

For a discussion of this sixteenth- and seventeenth-century repertory, see Morrow, "Renaissance." A fine general work on the harp is Rensch, *Harps.* Also useful is the entry "Harp" in the *New Grove Dictionary of Instruments.*

Excellent performances of sixteenth- and seventeenth-century repertory for various chromatic harps are to be heard on two solo CDs by An-

drew Lawrence-King: *Harp Music of the Italian Renaissance* (Hyperion CDA66229, 1987) and *The Harp of Luduvico: Fantasias, Arias and Toccatas by Frescobaldi and his Predecessors* (Hyperion CDA66518, 1992). Lawrence-King has obviously opted for versions of the instruments that eschew brays. Recordings of bray harps are extremely rare; one of the few is to be found on the CD *Forse che sí, forse che no* by the Ferrara Ensemble, directed by Crawford Young (Fonti Musicali—Atelier Danse, fmd 182, 1989); it is track 11, "Giove" by Dominico da Piacenza, performed by Debra Gomez. A Gothic harp with working brays on just a few bass notes is to be heard on the *Harp Collection* (Amon Ra CD SAR36, 1989) by Frances Kelly, second piece on track 4. Andrew Lawrence-King has recently used both a Spanish double-harp and a Renaissance harp: *El arte de fantasia* (Harmonia Mundi 907316, 2004). In addition to a Spanish cross-strung harp, Becky Baxter performs on Italian and Flemish single-row harps, and uses the brays on a number of tracks (O Lux Beata, Dorian 93193, 2000).

NOTES

1. See Hadaway, "Re-creation."

2. I am grateful to Ray Nurse for pointing to this reference.

3. Virdung, *Musica:* B^v; Virdung-Bullard: 103.

4. See Neven, "L'Arpicordo."

5. Praetorius, *Syntagma II:* 59; Praetorius-Crookes: 64.

6. See "Pitch and Transposition," this volume, for a discussion of Praetorius's reference pitch.

7. See Brown, "Cook's"; Brown, *Sixteenth-Century;* and Weaver, "Sixteenth-Century."

8. See Bordas, "Double"; her illustration number 3 shows an interesting early-seventeenth-century variant in which the ranks diverge rather than cross. This harp already shows considerable enlargement of the soundchest.

9. See Hadaway, "Re-creation" concerning building a copy of an example in Brussels.

10. However, already in 1511 some form of triple harp was said to be in use in England, according to the theorist Cochlaeus, *Tetrachordum*. A two-rank harp (with parallel string planes) is shown in one Spanish illustration from the late fourteenth century. Adding extra strings is such an obvious invention it probably took place more often than it was documented. Nevertheless, the single harp remained standard until near the end of the sixteenth century.

11. See Hadaway, "Knot" and Billinge and Shaljean, "Dalway" for an examination of this evidence.

12. See Holman, "Harp."
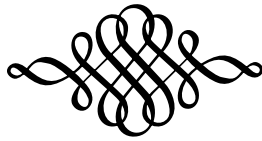
Early Percussion

BENJAMIN HARMS

The percussionist of today who wishes to play Renaissance music on the appropriate instruments faces two major difficulties: (1) few original instruments survive and (2) very little music survives, if in fact it was ever written down in the first place. The only instruments that are datable from about 1600 or before are three field drums (in the Musikinstrumentenmuseum of Basel, Switzerland), while the only music for percussion written before 1600 is contained in Thoinot Arbeau's *Orchésography* of 1589.

Despite this, things are not totally bleak for a percussionist wishing to play in a historically informed manner. A large number of visual depictions survive—statues, reliefs, paintings, etchings, drawings, woodcuts—that often show percussion instruments and their players in great detail. In addition, there are several treatises on music and instruments that discuss percussion instruments, often in detail: from the sixteenth century Virdung (1511), Agricola (1529 and later printings), and Merlin and Cellier (1575); from the early seventeenth century Praetorius (1619) and Mersenne (1636). On studying all of these sources one is struck by how little percussion instruments have changed in construction and playing technique in the centuries since their first appearance.

The kettledrum, consisting of a copper bowl over which a calfskin head is stretched (Virdung), has merely become larger, while the only change in the rope-tension field drum is that a few more snares have been added. The instruments of the pipe-and-tabor tradition remain unchanged, as does their primary function of playing for dancing. Frame drums (the tambourine and hand drum) from 1500 and from 2000 are virtually identical, and the technique for playing them, while altered in the West, remains

alive and basically unchanged in the Middle East, much of southern Asia, and Latin America.

A modern percussionist must use discretion about what rhythmic patterns to use when performing ensemble music from before 1650. African-influenced rhythms are clearly inappropriate when accompanying a medieval estampie, as is an Indian raga when performing a piece from Praetorius's monumental dance collection *Terpsichore*—this despite the fact that Praetorius himself depicts a mridangam and timila (Indian drums) in his *Syntagma Musicum II.*

This chapter is divided into two parts. The first part will describe the most important percussion instruments in use from the thirteenth through the seventeenth centuries. The second part will provide some practical advice on what instruments to use in a typical concert situation, how to play them, and what rhythms to play.

The Most Significant Percussion Instruments

Kettledrums

Kettledrums (timpani) were used as early as 1500 in conjunction with an ensemble of natural trumpets, providing the bass or fundamental notes—tonic and dominant—for the ensemble. They were well-established by the early 1500s, as evidenced by their mention in Virdung, their presence in the Maximilian woodcuts of Dürer (ca. 1515),[1] and engravings of Burgkmair (ca. 1508–1519). The drums were always used in pairs, with individual diameters ranging from about seventeen inches (40 cm) up to possibly twenty-six inches (60 cm) by 1800 (precise dating of antique kettledrums is virtually impossible because dates, makers' names, and other identifying marks are rare). The bowls were usually made of copper (occasionally of silver and brass), and the skins were from calf, goat, donkey, or other animals. The sticks were bare wood, though they might have been covered with leather or other material for funerals or solemn occasions, in lieu of placing a cloth on the skin for a muffled effect.

Nakers

Nakers (small kettledrums) are found in some illustrations before 1500; related instruments are found today in areas in and around India. Strapped to the player's waist or hung from the shoulders, they were played with sticks. Modern attempts at reproducing nakers with either ceramic or metal bowls have yielded instruments with a tone ranging somewhere between that of bongos and timbales.

Frame Drums: Tambourine and Hand Drum

The wooden frames are usually round (occasionally square or some other shape), two to five inches in depth, six to fourteen inches in diameter (sometimes larger), and covered on one side—occasionally both—with an animal skin. With a hand drum, a snare (strand of gut, silk, or hemp) might be stretched across the skin. With a tambourine, the frame itself was pierced with holes or slits into which metal disks (jingles) and/or pellet bells were placed.

Modern players of the frame drum from all parts of the world possess a technique on the frame drum similar to that encountered in the tabla and mridangam players of India. An amazing variety of sounds and rhythms can be produced on the instrument by using the fingers and various parts of the hand on both the skin and jingles, as well as by shaking it or rocking it back and forth. There seems little reason to doubt that similar techniques were used by the players depicted in European paintings of the medieval and Renaissance periods, who are shown playing similar or identical instruments held the same way, with the frame upright, skin facing away, and perpendicular to the ground.

There are some pictures from the sixteenth and seventeenth centuries showing ladies or nymphs dancing to the accompaniment of the tambourine and other instruments. These tambourines are often held in the more conventional "Western" way we know today. That style of playing, requiring little technical sophistication, will be described in Part II of this chapter.

The jingle ring, a tambourine without a head, is occasionally encountered before 1600.

The Arabic dumbek should be used sparingly (if at all) and only for monophonic medieval music.

Two-Headed Cylindrical Drums: Field Drum and Tabor

Although these instruments are constructed similarly, they function quite differently. The field drum is larger and is played with two sticks and is used for military or ceremonial purposes. The tabor is played only with one stick and is used for dance music or folk music tunes.

Both drums are made of wooden cylinders, or shells. The field drum diameter ranges from approximately twelve to twenty inches, with a height of nine to twenty-four inches, while the tabor diameter is five to sixteen inches, with a height of three to twenty-four inches. Across the open ends are stretched animal skins, usually calf or goat. By 1500, possibly even ear-

lier, these skins could be stretched or tightened by wooden hoops that were pulled down on them by means of ropes tightened by leather straps. A snare, made of gut, was stretched across one of the heads and often doubled back.

The field drum is suspended from the shoulder by a strap and is usually played on the skin without the snare(s). The technique employed on it by the beginning of the seventeenth century was formidable! Both Arbeau and Mersenne notate rhythms that can be played well by a modern professional only in top shape. As early as 1332 an account of a field drum played together with a transverse flute (i.e., a fife) appears in the Basel City Chronicles. This fife-and-drum duo appears to have been associated with armies of foot-soldiers—helping them march together as well as signaling maneuvers. By the seventeenth century, the field drum played with shawm ensembles, though how frequently this happened is not clear. A version of the shawm/drum ensemble survives today in the Basque region of Spain, where two shawms and a field drum are played outdoors and can be heard over long distances.

The tabor is played with only one stick, usually on the skin with the snare stretched across it. The tabor is suspended by means of a strap from an elbow, forearm, or wrist of the hand that is not holding the stick. That hand usually holds the pipe (see below), though Arbeau indicates that playing the tabor alone is also acceptable. The tambourin, found in the Provençe region of southern France, dates from the early seventeenth century, or possibly earlier.

Pipe-and-Tabor

This "one-man-band" is encountered as early as the thirteenth century in Spain and France; it spread in succeeding centuries to England, the Netherlands, Italy, and the New World. The tradition of pipe-and-tabor playing remains unbroken in today's southern France (Provençe region) and northern Spain (Basque area and Catalonia).

The pipe, also called the tabor-pipe, is a fipple flute like the recorder, but is played with only one hand, as there are merely three finger holes (two on top and one underneath). The playing range of the tabor-pipe is an octave plus a fourth or fifth, within the pitch range of the sopranino recorder. This large pitch range is achieved by blowing various overtones of the four fundamental pitches of the instrument, plus using half-holes.

A considerable amount of secular music from before 1600 is playable on the tabor-pipe. Since it was essentially a folk instrument, it is likely that its importance has not been fully appreciated by modern researchers. For

example, of the nine identifiable musical instruments found on the Mary Rose—Henry VIII's flagship, which sank fully-loaded and manned in 1545 and which has only recently been excavated—three are tabor-pipes (there are also two field drums, two fiddles, a bagpipe, and a still shawm). Mersenne praised the virtuosity of the Englishman Jean Price, who played the tabor-pipe as fast and eloquently as the best violinists of the time.

The Strawfiddle

The strawfiddle is a type of xylophone with only one row of wooden bars placed on a frame. Between the frame and bars is placed braided straw (to support the bars without damping their resonance), whence the name of the instrument. The largest bar is closest to the player's body, and the succeeding bars, laid parallel to the first, extend outward from the player, similar to the modern band bell lyre. Agricola shows an instrument of three octaves with a basic scale of F major, with an *H* (*B♮*) placed between *B♭* and *C*. This is an extremely difficult instrument to play, not only because of the added note but also because there is no exterior point of reference (such as the black keys on the piano) for a player to tell where he or she is.

The Triangle

This metallic instrument is occasionally found in a trapezoidal shape. Many triangles had metallic rings looped around the bottom. How the triangle functioned historically is not clear; it is probable that it had more of a rhythmic function than the modern triangle, which is more valued for its timbre.

Clappers/Castanets

These are pairs of wooden or possibly metal pieces struck together. They are seldom encountered in Renaissance depictions of musical events.

Handbells

Handbells are a dubious part of an instrumentarium for early music. The few historical depictions of this size bell appear to be in the context of describing Pythagorean proportions, not musical performance. In spite of the slim evidence, they are often used in modern attempts to recreate the ambience of a medieval religious setting.

Cymbals

Cymbals were small (six to ten inches in diameter) and appear to have been used either in processions or by singers who may have punctuated texts with them. They are infrequently encountered, and when they are, usually before 1500.

BASIC PERCUSSION FOR THE
EARLY MUSIC ENSEMBLE

What do the instruments described above have to do with modern performances of Renaissance music? Many of them are capable of providing excitement and variety in a concert. They are also rather strong in character as well as volume and require a certain minimum amount of study and practice in order to be used effectively. Unfortunately, this makes several of them of little practical value to many ensembles simply because of the group's instrumentation—usually consisting of only soft instruments—and personnel, which normally does not include a trained percussionist. Thus kettledrums, which generally accompany at least two trumpets, are impractical. The same is true of a field drum, which will overpower most ensembles, unless someone learns to play the fife (two or three sopranino recorders can be an acceptable substitute).

On the other hand, the pipe-and-tabor can be learned fairly easily. The player must first learn to play a tune on the pipe—this is relatively simple for a recorder player—and then add whatever drumbeats are possible, starting with downbeats. This can be a welcome addition to any concert.

The tambourine and hand drum are effective with soft or loud instruments, especially if played in the more authentic manner previously described in the description of frame drums. The basics are easily learned, either from a player or from an instructional video. Lacking this technique, the tambourine can be played in the more conventional manner (described later in this chapter).

The Renaissance strawfiddle is difficult to play and hard to find for purchase. It is possible, however, to compromise and use a modern xylophone without resonators. Solo recorder pieces can be quite effective when performed in combination with this instrument.

Cymbals seem out of place in most early music, although very small ones can be effective if used by a narrator or singer punctuating the text of a medieval drama. Clappers and castanets are also of limited use. Handbells,

as stated earlier, appear to have little or no relevance to the authentic per-
formance of Renaissance music.

In an ensemble where no trained percussionist is available, a performer
with a strong sense of rhythm should be chosen to play percussion parts. If
it comes down to a question of having an inner part of a dance piece played
impeccably or having a tempo remain steady, the steady tempo should take
precedence; in other words, don't relegate the percussion part to the weak-
est player in the group.

By contrast, a serious percussionist with professional aspirations in the
field of early music should acquire skills in at least two of the following
three categories: historical hand-drumming, pipe-and-tabor playing, and
early kettledrumming.

PERFORMANCE SUGGESTIONS

The recommendations that follow should form a point of departure for
percussion playing in an ensemble. They are based on historical considera-
tions as well as this writer's sense of taste.

Instruments

The first two percussion instruments an early music ensemble should ac-
quire are a tabor and a tambourine. To these can be added a high-pitched
hand drum to be played by the hand or with a stick.

Playing Technique

The basic playing technique for the tabor requires holding a stick in the
strong hand (for most people, the right), suspending the tabor from the op-
posite arm. The stick should be a small snare drum stick; a piece of mole-
skin—available in a drugstore—can be wrapped around the back (butt) end
of the stick, which can be used when a softer attack is desired. The stick is
held between the thumb and forefinger, thumb pointing toward the tip, the
forefinger opposite it and at a 90° angle to the thumb.

For historic playing style on the tambourine or hand drum, a special-
ist on hand drumming should be consulted. Complementing this style (or
in lieu of it), the modern Western way of playing the tambourine can be
used. The instrument should be held in the left hand (for the right-
handed person) at a 45°–60° angle to the ground, with the thumb press-

ing lightly on the skin, and the fingers curled around the frame. The first three fingers of the right hand should be bunched together with the thumb, and the pads of the fingers should tap on the skin opposite the left thumb, one to two inches from the rim. For louder playing the skin can be struck with the knuckles, a little closer to the middle. The shake, or roll, is made by holding the tambourine upright, at a 90° angle to the floor, with the left hand grasping it at the bottom. Rotate the tambourine on an axis with the hand and the wrist. Most shakes start and finish with a hit of the right palm or knuckles; they are often used at the ends of phrases or the end of a piece. A thumb roll, effected by sliding the thumb lightly around the periphery of the tambourine, is helped by applying beeswax to the skin.

Rhythms

With regard to the rhythms which should be played, the best policy is to es-tablish a basic pattern at the beginning of a piece and maintain it through-out, elaborating on it as the piece progresses. An effective point of departure is Thoinot Arbeau's *Orchésography* (1589), the only source of percussion music from before 1600. The two rhythms given specifically for *tambour ou tabourin* are:

EXAMPLE 17.1a–c   *Tambour ou tabourin* rhythms a. pavane b. basse danse c. galliarde/tordion

a. ¢ ♩   ♩   ♩ |♩   ♩   ♩   *etc.*   (pavane)

b. **3** ♩   ♩ ♩ ♩ ♩ |♩   ♩ ♩ ♩ ♩   *etc.*   (basse danse)

In the same section of the book, a few pages later, this rhythm is given:

c. **3** ♩ ♩ ♩ |♩ ▬ ♩ |♩ ♩ ♩ |♩ ▬ ♩ ‖   (galliarde/tordion)

Although a percussion instrument is not specified in this latter passage, it may be surmised from the context that this is an appropriate beat for a drummer to use.

From these basic rhythms we may extrapolate additional basic patterns and expand on them by varying them:

EXAMPLE 17.2   Basic rhythmic patterns and their variations

These rhythms are especially effective for sixteenth- and seventeenth-century dance music (Attaingnant, Susato, Praetorius, et al.). For other music, simpler patterns might even be more appropriate—for example, playing only on downbeats.

Variations in the rhythmic pattern should be made only after the original pattern has been established (sixteen, twenty-four, thirty-two times) or after the piece, if short, has been played once in its entirety. Additional notes can be used effectively at the end of a phrase, in the manner of a flourish leading to the next phrase.

Dynamics

For variety one may alter the dynamics of a piece within sections or, if the piece is short, when going from one repetition to another. For a typical sixteenth-century dance in which each of three sections (A, B, C) is repeated, the following dynamic scheme is effective:

EXAMPLE 17.3a–b   Suggested dynamic schemes (a. three part). Suggested dynamic schemes (b. two part)

a.
	A A	B B	C C ‖
	f *p*	*f* *p*	*p* *f* ‖

b.
	A A	B B ‖
	f *p*	*p* *f* ‖

A crescendo can be made in the final measure of a *piano* section (building to *forte*) or at the end of the piece. A decrescendo can be made in the final measure of a *forte* section (going to *piano*). (Please note that there is no mention of dynamics in any treatise. General musicianship, however, dictates a certain amount of flexibility in the application of dynamics to the music of any period.)

Starting and Finishing

There are two ways in which an ensemble piece can be started. The usual way is for all players to breathe together and follow a leader's sign or nod. The other way is for the percussionist to play one or two repetitions of the basic rhythmic pattern as a preparation for the ensemble's entrance.

To finish a piece the percussionist should played through the final written measure and conclude on the following downbeat. Thus, if the final note is a whole note, it should be played:

EXAMPLE 17.4a   Concluding a piece (a)

a.   (instrument)

          (percussion)   Drum:

If the final note is a dotted half, it should be played:

EXAMPLE 17.4b   Concluding a piece (b)

b.   (instrument)

          (percussion)
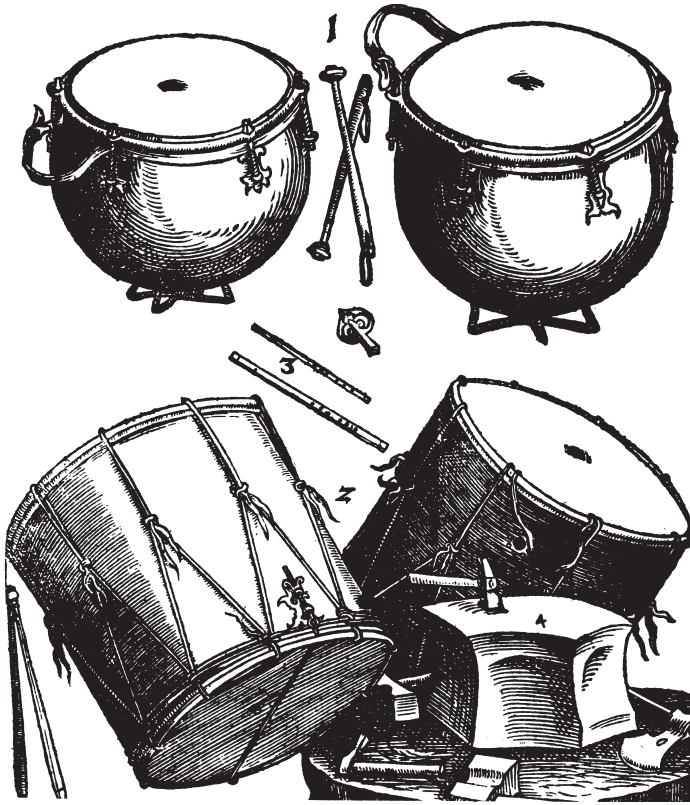
FIGURE 17.1   Percussion Instruments (from Plate XXIII of Praetorius's *Syntagma Musicum II*)

When to Play

Secular music that is either monophonic or homophonic/homorhythmic is the most appropriate type of music for using percussion instruments. Once the percussionist has started playing he or she should not stop (an exception is when one verse of a chanson is performed *a cappella*). Polyphonic music should generally be avoided, as it is difficult to give the parts equal justice.

NOTE

1. An excellent reproduction may be seen (and enlarged) at http://gallery.euroweb.hu/html/d/durer/2/12/8triumph/index.html

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Agricola, *Musica;* Arbeau, *Orchésography;* Blades, *Early;* Blades, *Percussion;* Blades and Montagu, "Capriol's"; Merlin and Cellier, *Recherche;* Mersenne, *Harmonie;* Montagu, *Early;* Montagu, *Making;* Montagu, *World;* Praetorius (Crookes trans.), *Syntagma;* Virdung, *Musica.*

Suggested Listening

Calliope Dances. Calliope Renaissance Band. Nonesuch 79039. 1982.
Calliope Festival. Calliope Renaissance Band. Nonesuch 79069. 1984.

Instructional Videotape

Harms, Ben. *Basic Technique for Hand Drum and Tambourine.* Harms Historical Percussion, 1997.

18

Keyboard Instruments

JACK ASHWORTH

Explanations of pitch reference, tuning, the short octave, and split keys are appropriate for all Renaissance keyboard instruments. These items are grouped together here, with an introduction to the topic of early fingerings and a list of general sources of keyboard music.

PITCH REFERENCE

On the organ an open flue pipe sounding *c′,* or "middle *c,*" is roughly two feet long. The pipe for the note one octave below it, *c,* is twice as long (four feet), and the pipe one octave further down, *C,* is twice as long again (eight feet). This eight-foot length has been used as a pitch reference standard since the Middle Ages. Eight-foot pitch means unison pitch: the pitch of middle *c* played on an eight-foot organ rank or harpsichord register is the same as that of the same key on a piano; *c′* in a four-foot rank will sound one octave higher; the same key in a sixteen-foot rank will sound one octave lower, and so on. This nomenclature is standard, even though pitches are sometimes produced by strings or pipes shorter than expected. Thus, the lowest pipe in an eight-foot stopped diapason is only four feet long; organ reeds of the *regal* family have very short resonators, or sometimes no resonators at all; and harpsichords and clavichords are scaled in such a way that their strings are not necessarily as long as the pitch would ordinarily seem to require (i.e., the string for *c* is not necessarily twice as long as that for *c′*).
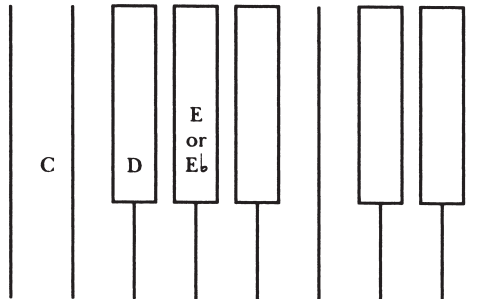
FIGURE 18.1   Short octave and split accidentals

Tuning

Although several systems for tuning the twelve chromatic notes of the octave relative to each other were documented in the sixteenth century, 1/4-*comma meantone* was probably the one most frequently used. A clear, concise, and not difficult method for tuning a harpsichord in this system appears in Ed Kottick's book, listed in the Bibliography. The tunings associated with Andreas Werckmeister and Philip Kirnberger were not in common use until long after 1600.

Short Octave and Split Accidentals

Certain notes in the lowest octave of keyboard instruments were rarely called for in Renaissance music, so builders assigned more useful pitches to these accidentals. This is the so-called "short octave" concept. Figure 18.1 shows the typical pattern, with the changes indicated.

Occasionally builders provided split accidentals, with the back and forward halves sounding different pitches. On the lowest two accidentals this was done to allow access to both the "proper" pitch and the short octave substitute; on others it was devised to offer a given note in either of two versions (e.g., as g♯ or a♭ in meantone tuning; see chapter 24).

Fingering

Keyboard players should experiment with early fingerings to get a sense of how the keys felt under the fingers of their sixteenth-century colleagues. These patterns can be used to create a melodic line that is connected but

nonlegato, acknowledging the uneven stress patterns of recorder tonguings and string bowings called for in various period treatises. Experimenting with the fingerings is useful even if they are not actually applied in practice.

The precise application of early keyboard fingerings is a complex matter, and dangerously prone to oversimplification. An even halfway systematic study well repays the effort, however, because it brings out interpretative possibilities and probabilities which are not readily sensed otherwise. Reduced to simplest terms, what we know of sixteenth-century fingering philosophy indicates that the thumb was not normally used in scale passages except at either end ("thumb under" scales were not used), and that diatonic passages were generally played by repeating patterns of 2–3 or 3–4, or occasionally 1–2, the choice depending on the hand (right or left), the direction of the scale (ascending or descending), the country, and any given author whose book you happen to be reading.

Further information can be found in works by Lindley, Schott, and Troeger listed in the Harpsichord Bibliography and Sandra Soderlund's book in the Organ Bibliography, both found in this chapter.

GENERAL KEYBOARD REPERTORY

Apel, Willi, ed. *Corpus of Early Keyboard Music.* Dallas: American Institute of Musicology, 1963–. About fifty volumes of European keyboard music, including many of fifteenth- and sixteenth-century repertory.

Ferguson, Howard. *Early French Keyboard Music.* 2 vols. Oxford University Press, 1966.

———. *Early Italian Keyboard Music.* 2 vols. Oxford University Press, 1968.

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———. *Style and Interpretation. An Anthology of 16th–19th Century Keyboard Music.* 4 vols. Oxford University Press, 1964.

THE ORGAN

Pipe Design

Organ pipes work in one of two ways. In *flue* pipes, vibrations are generated by directing a stream of air against a sharp edge, as in whistles, flutes, or recorders. In *reed* pipes, the generator is a small strip of metal anchored at one end and made to vibrate by the flow of air. In both cases the length and shape of the pipe determine pitch, timbre, and volume.

Type of Organs

During the fifteenth and sixteenth centuries there were four main types of organ: the regal, the positive, the portative, and the large church organ. The claviorganum combined an organ with a harpsichord in a single instrument.

The standard regal was a small, self-contained instrument with one keyboard and a rank of eight-foot reed pipes with either very short resonators or no resonators, producing something of a cordial snarl (see fig. 18.2). Later regals often included additional flue stops, and sometimes strings to be plucked (by means of keys) as well. The instrument was especially popular in Germany, where some late-sixteenth-century examples are found disguised as large books (bible-regal). The instrument retained its popularity, especially as a continuo instrument, into the seventeenth century; it was specified by Monteverdi in *Orfeo* (1607) to accompany the not-so-friendly snarling of Caronte, guardian of the ferry across the River Styx.

The portative, or organetto, was a small organ that could be carried and played simultaneously by one person, who played with one hand and pumped the bellows with the other. It had a short range (one to two octaves) and generally no more than one rank of pipes, the longest of which was about two feet (thereby producing its lowest note of c'). Portatives also occasionally had one or two *bourdons,* or larger pipes, which could be used as a drone. When simulating the sound of a portative on a larger organ, play no more than one melodic line; it is unrealistic to expect the possibility of chords on this instrument. Portatives appear frequently in the paintings of Hans Memling (ca. 1430–1495). They were in common use throughout the fifteenth century, although they seem to have passed out of use almost completely by around 1500.

The larger, self-standing positive is also a one-manual instrument, typically (though not exclusively) with a small number of flue pipes—sometimes only a single eight-foot flute (see fig. 18.2). Although stationary while played, it was designed to be moved to various locations in the church to accompany singing. It was also used in (larger) homes.

By the middle of the fifteenth century the large church organ had one or more keyboards. Its most typical sound was that of the *Blockwerk,* which is not an individual stop but rather an arrangement where any one key controls several pipes speaking at different spots in that pitch's overtone series. This conglomerate of sound lives on in the various mixture stops still found on organs of any size. By the sixteenth century, the *Blockwerk* had been engineered so that players could shut off (stop) individual ranks as desired; the name "stop" was eventually reversed to mean turning *on* a given set of pipes. Of particular importance was the *praestant,* a set of principal pipes placed in
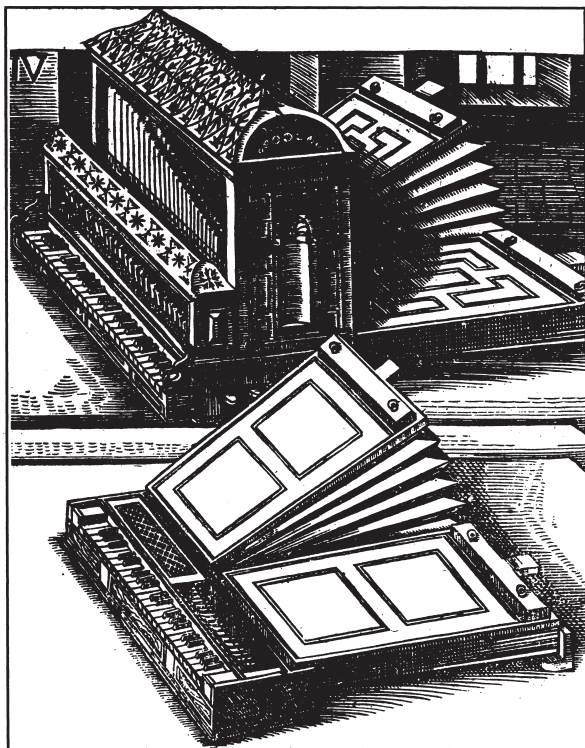
FIGURE 18.2   Positive and regal organs (from Plate IV
of Praetorius's *Syntagma Musicum II*)

the façade, usually at eight-foot pitch. When several lines are played together
on a properly voiced praestant, the sound is reminiscent of vocal polyphony.

Finally, the claviorganum was an instrument in which an organ and harp-
sichord were placed in/on the same case so that they could be played at the
same time. On some instruments they could actually be played in tandem
from the same keyboard, while on others the "combination" only meant that
the keyboards were placed close to each other while the instruments them-
selves remained independent. The term was also sometimes used to denote the
standard organ (i.e., without strings attached) especially as used in the home.

Development

The organ underwent one of its most dramatic periods of expansion and
development in the Renaissance period. These activities went on at differ-
ent rates and with different emphases in different geographic regions,
which makes any attempt at giving a brief, uniform account of the devel-

opment of the organ little short of futile. It is generally true that most builders sought to increase colorful effects, often by trying to copy, or at least to acknowledge, the sounds of other instruments. In most regions, both the regal and other reed stops with characteristic qualities were incorporated into the larger instruments. Indeed, the earliest known occurrence of the term *krummhorn* is as an organ stop (Dresden, 1489), although it must have been named for the wind instrument. The positive was also assimilated into the larger organ, where in many regions it was placed behind the player (hence, *Rückpositiv*).

Registration

A thorough introduction to the intricacies of organ design and registration practices in different countries is beyond the scope of a manual such as this; pertinent information can be found in various books cited in the Bibliography of this chapter. As general observations regarding the period from 1500 to 1600, note the following points:

A. Some sixteenth-century organs had pedal divisions comprised of solo stops at various pitches, used to emphasize a *cantus firmus.* Others did not have independent divisions, but had pedal keys that merely operated pipes in a manual division. On a modern organ, when registering sixteenth-century music that does not have a *cantus firmus* in the pedal, it is generally advisable just to couple the manual to the pedal with no separate pedal stops drawn—that is, do not draw a sixteen-foot stop in the pedal if there is not one drawn on the manual.

B. Single-manual instruments were often built so that the stops could be separately drawn in either the treble or bass, with the break coming somewhere in the vicinity of c'. Thus, even though many Renaissance instruments are known to have had only one keyboard, the possibility of solo-and-accompaniment effects should not necessarily be ruled out.

C. Many organs presently found in churches or college auditoria will have a very heavy sounding eight-foot diapason on the great. It is a sound unlike anything a sixteenth-century organist would ever have heard. When registering sixteenth-century music on such instruments, it is best to substitute a different eight-foot stop for the great principal. Sometimes a lighter eight-foot principal can be borrowed successfully from another division; sometimes an eight-foot flute (gedackt, etc.) will work; often an eight-foot gemshorn or viola works best. In general, sixteenth-century organ sound was fairly top-heavy by modern standards; late-nineteenth- and early-twentieth-century organs (meaning many instruments in the United States) are decidedly bottom-heavy, and compensation must be allowed for this. At

the same time, overly thin or harsh sounds must also be avoided. Take care to find sweet, rich, singing registrations.

D. Use of the swell pedal and combination pistons is anachronistic in sixteenth-century music, which should be played at one dynamic level on any given manual in any given passage. Stop and/or manual changes can be made at major divisions in the piece, but it is inappropriate to make them *en passant.* On some organs, a cluster of characteristic stops was found in the *Brustwerk,* a small division often sequestered behind doors which the player could open or close. But it hardly seems likely that these doors would be moved while a piece was actually being played.

Common Problems

VOLUME AND ARTICULATION

When accompanying, organists must be alerted constantly to problems of balance. In addition to selecting stops carefully, it is also helpful to play with a more detached touch, particularly when playing dance or dance-style music. This adds rhythmic verve and cuts down on the amount of sound. Solo polyphony should be rendered in a more connected style, although it should not be played completely legato, either. Organists should avoid the substitution fingerings taught as a matter of course in modern organ technique.

Exercises

With regard to the feet, sixteenth-century organists used only the toe and not the heel. Doing this virtually guarantees a detached line in the pedal, for obvious reasons. Use of the heel was not unknown, however; for instance, pieces published by Arnolt Schlick (1511) require four simultaneous voices from the pedals.

Repertory

England: *The Mulliner Book,* Thomas Preston, John Redford, William Byrd, John Bull

France: Jean Titelouze, Pierre Attaingnant

Germany: Hans Buchner, *The Buxheim Organ Book,* Conrad Paumann, Arnolt Schlick

Italy: Claudio Merulo, Giovanni Gabrieli, Girolamo Diruta, Marco Antonio Cavazzoni, Girolamo Cavazzoni

Spain: Tomás de Santa María, Antonio de Cabezón

Bibliography

Knighton and Fallows (Thomas), *Companion;* Mountney, "Regal"; Owen and Williams, *Organ;* Soderlund, *Organ;* Williams, "European"; Williams, *New.*

Suggested Listening

Die Baldachinorgel. Roland Götz, FSM 96 501 XVII (1987)——a copy of a sixteenth-century Baldachin Organ.

John Bull Organ & Keyboard Works. Siegbert Rampe, harpsichord, virginal, clavichord, and organ, various late-sixteenth-, early-seventeenth-century keyboard instruments (two organs, Andreas Ruckers harpsichord from 1637, Artus Gheerdinck virginals from 1605, two clavichords, one a copy of an Italian instrument from 1540) MDG 341 1258-2 (2005).

Froidebise, Pierre. *Music from the Chapel of Charles V.* One side includes organ pieces by Arnolt Schlick, including "Ascendo ad patrem meum" with four voices in the pedals. Nonesuch, H-71051, n.d.

Hogwood, Christopher. Pieces played on regal, positive, and large Spanish church organ (1562), on record set accompanying David Munrow's *Instruments of the Middle Ages and Renaissance.* Angel, SBZ-3810, 1976.

L'organo nella Venezia del XVI secolo. Massimiliano Raschietti, organ, Symphonia SY 00177 (2000)——two sixteenth-century Italian organs.

Tachezi, Herbert. *Renaissance and Baroque Organ* Music; works by Rossi, Gabrieli, Frescobaldi, Merula, Milan, Merulo, Cabezon, Praetorius. Hamburg: Teldec, P 1981 C 1995.

———. *Renaissance Organ Music.* Apez, 2564604462 (2003); works by: Frescobaldi / Rossi / Gabrieli / Merula / Cabezon / Valderrabano.

Tramnitz, Helmut. *Orgelmusik der Schütz-Zeit.* One side is devoted to repertory performed on the Compenius organ described by Praetorius in *Syntagma Musicum II* and now located in the Fredericksborg castle in Hillerød, Denmark, tuned in meantone. Deutsche Grammophon Gesellschaft/Archiv, 198 350, 1964.

Vogel, Harald. *Die Spätgotische Orgelkunst.* Includes selections by Buchner, Kleber, Kotter, Paumann, and Schlick, as well as pieces from Attaingnant and the *Buxheimer Orgelbuch.* Recorded on the organ in Rysum, originally from 1457 and now restored to its 1527 state, with tuning after Schlick. Organa, ORA 3001, 1981.

———. *The Fisk Organ at Wellesley College.* Includes pieces from the manuscript of Suzanne van Soldty, late sixteenth century; organ tuned in meantone. Organa, ORA 3005, 1982.

THE CLAVICHORD

The clavichord was developed in the late Middle Ages and remained popular, especially as a domestic instrument, through the sixteenth, seventeenth, and eighteenth centuries. The key of the clavichord has a small piece of brass, called a *tangent,* lodged in the back. Depressing the key brings this tangent into contact with the string, setting into vibration that portion of the string between the point of contact and the bridge. The remaining length of string is damped by strips of felt, called *listing,* which also damp the entire string when the key is released and the tangent falls away.

Clavichord design differed from south to north, with builders favoring

certain construction principles in line with those practiced on their harpsi-chords (e.g., inner/outer case design and thin case walls on Italian clavi-chords). On all instruments, notes were generally double strung.

One peculiarity of clavichords is the idea of *fretting,* whereby one string is made to serve for two or more pitches. This is possible because more than one tangent can be assigned to any given string since different pitches will be created by stopping it at different points. For example, the oldest extant clavichord has forty-five keys but only twenty-two strings. The German term *gebunden* is applied to a clavichord built in this way, as virtually all were until the eighteenth century. Of course, one string cannot produce two or more pitches simultaneously (see Common Problems, later in this chapter).

The clavichord is a venerable instrument; its direct ancestor is the monochord, which was used to demonstrate the translation of number into sound, the basis of medieval music theory. The instrument first appeared in the early fifteenth century; it is pictured in the same fifteenth-century trea-tise by Arnaut of Zwolle wherein are found harpsichord and organ designs. A clavichord is pictured in Sebastian Virdung's *Musica getutscht* of 1511, as well as in various other instrument treatises throughout the sixteenth cen-tury. An instrument by the Italian builder Domenico da Pesaro appears to be the oldest surviving example (1543). Clavichord cases could be plain or decorated; the inside of the lid often had a scene painted on it, or a Latin in-scription.

Range

Arnaut's fifteenth-century clavichord shows a nearly three-octave compass (*B–a″*); by 1618, Praetorius notes that a compass of *C* to *f‴* is standard.

Common Problems

The key action on a clavichord can be problematic at first to the uniniti-ated, since it so exactly mirrors the motion of the player's hand. It takes time to acclimate one's technique to the fact that the tone is both generated and held captive by the tangent, meaning that the finger must be "playing" at all times. Too light a touch produces an inadequate sound; one too heavy may result in an unpleasant brashness. Watchwords are firmness and strength of touch, the correct degree of which will vary from instrument to instru-ment.

On a fretted clavichord it is obviously impossible to play two pitches generated by the same string at the same time. Fretting was and is designed

to accommodate this responsibly; for example, no builder would make an instrument with both c' and the e' above it produced by the same string. Indeed, fretting is generally planned so that only pitches a major or minor second apart are played on the same string; if these are required as simultaneous notes, they must be rolled very slightly.

One problem in using a clavichord in performance is volume, or rather, the lack of it. The clavichord is simply a very soft instrument. Ideally a clavichord concert should not be given in a large hall; if it is, amplification will be a virtual necessity, but it must be done very carefully so that no distortion results. Clavichord concerts are often most successful when the audience is seated on the stage, a few feet from the player. If you are the player, this naturally takes some getting used to.

Similarities with Other Instruments

Clavichord technique is unlike that of any other keyboard instrument, but facility on the organ, harpsichord, or piano will naturally stand a clavichordist in good stead.

Repertory

There are no known pieces from the fifteenth or sixteenth centuries that are actually specified for the clavichord, but much keyboard repertory from that period works well. See "Repertory" in the Organ, Harpsichord, and Keyboard Introduction segments.

Bibliography

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Suggested Listening

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Clemencic, René. *Late Gothic & Renaissance Masterworks Clavichord 1* Arte Nova Classics, B000A2UBTS, 2005 (2 CDs).
John Bull Organ & Keyboard Works. Siegbert Rampe, harpsichord, virginal, clavichord & organ various late-sixteenth–, early-seventeenth-century keyboard instruments (two organs, Andreas Ruckers harpsichord from 1637, Artus Gheerdinck virginals from 1605, two clavichords, one a copy of an Italian instrument from 1540) MDG 341 1258-2 (2005).

THE HARPSICHORD

History

The word "clavicembalum" is found in an Italian source in 1397, while the first physical representation of a harpsichord followed about thirty years later (1425) in an altarpiece found in northern Germany (Minden). Many of the early pictorial representations show small instruments, probably built at four-foot pitch. The oldest dated harpsichord is an Italian instrument by Vincentius, begun in 1515. This instrument, currently in the Accademia Chigiana, Siena, is described in Wraight, "Vincentius." An undated clavicytherium (harpsichord with vertical soundboard) in London's Royal College of Music is thought to be from about 1480.

By the end of the sixteenth century most harpsichords were built according to one of two basic patterns, "Italian" or "Flemish." The Italian-style instrument was actually the representative European harpsichord for most of the century, with the Flemish design offering serious competition only after about 1580. The outer appearance of both types is superficially the same: a wing-shaped outline, with a single manual at one end. Otherwise, the instruments are quite different.

Italian Style

Sixteenth-century Italian harpsichords were generally built with one set of strings at eight-foot pitch, although some had two, generally at eight-foot and four-foot. The familiar Italian set-up of two eight-foot registers plucking in unison was known in the sixteenth century but not common until the seventeenth; many instruments were converted to this disposition from earlier ones that had been built with either a single eight-foot register, or registers at eight-foot and four-foot. Period instruments with the two × eight-foot disposition, which is the common one in "Italian copies" today, did not have stop levers that could be controlled from outside the case. Usually one of the two registers could be controlled individually by reaching underneath the jackrail, but this was only to make tuning easier; both registers were almost certainly intended to remain on at all times while playing. In the Italian design the relative lengths of the strings approximate what one would expect from their relative pitches; that is, the string for c'' is roughly half the length of that for c', which is itself about half the length of that for c. This just curve creates an elongated shape with a pronounced bentside. The case of an Italian harpsichord was very thin and light; for protection, it was gener-

ally placed in a second, outer case. The inner case was not painted, but rather left in natural wood (typically cypress). The outer case was generally decorated, usually with paint or sometimes a tooled leather cover; the underside of the lid was often decorated with a painting or Latin inscription. Under the soundboard the Italian instrument had a distinctive pattern of many right-angle knees joining the bottom with the sides, in addition to struts connecting the top of the bentside with the case bottom on the opposite side.

Flemish Style

The late-sixteenth-century Flemish-style harpsichord had the same basic outer design as the Italian. The stringing was not laid out according to the just curve which typifies Italian instruments, however, resulting in—among other things—a less pronounced bentside curve. The case walls of northern instruments were thicker and they were never placed in a separate, outer case; the interior bracing was also done differently. The outside was painted, frequently with a wide band of simulated marble finish on the cheek and bentside; the inside, around the keywell and on the case sides above the soundboard, was decorated with fanciful block-printed papers, often in a "seahorse" design; the inside of the lid was either covered in ash-grain paper with a Latin epigram in large block lettering, or displayed a painting; and soundboards were decorated in tempera paint with fruit, flowers, birds, and insects. These instruments had two registers, eight-foot and four-foot, with the register slides protruding through the right side of the case so that they could be controlled individually by the player. Flemish builders also provided a two-manual instrument, but it is not what you might be thinking: the keyboards were set up to sound a fourth apart, ruling out both manual coupling and solo-with-accompaniment effects. The reason for this design is not documented. Although the most obvious reason would be for downward transposition by a fourth, it may have been used for other reasons as well (see Shann, "Flemish").

In addition to these basic types, both Italian and Flemish workshops produced spinets or virginals, sometimes at eight-foot pitch and sometimes one octave higher (the *ottavino*). The typical Italian model was an irregular polygon, with the keyboard protruding from the center of the long side and the strings lying more or less perpendicular to the keys. This instrument was generally placed in a rectangular outer case. Early Flemish virginals were also polygonal, but later ones were most often rectangular, with a keyboard recessed into the long side; its position (right, left, or center) determined the timbre. Instruments with keyboards on the left or in the middle were

called spinets. Having the keyboard on the right moves the plucking point toward the center of the string, creating a distinctive "fluty" sound; instruments of this design were later called *muselars.* In one design, called "Mother and Child," the keyboard could be on either the right or left; a compartment is on the other side where a smaller octave virginal is stashed. This can be placed on top, and the two instruments played together as a two-manual instrument, with the keys of the lower instrument operating the jacks of the top one (after the lower jack rail has been removed). This was not a common model, however, and only appeared late in the sixteenth century.

Lute Stop and Buff Stop

Confusion persists regarding two special effects available on some harpsichords, the buff stop and the lute stop. Most modern Flemish (and French) design instruments have the first, which is a bar with small pieces of felt attached that can be moved so that the felts are placed against one set of strings to dampen them so that they do not ring when plucked. It was also common on period Flemish instruments, where it was often divided into two halves so that the treble end of the keyboard could be played with a different timbre from the bass. Italian instruments did not generally have buff stops.

Today this is often mistakenly referred to as a "lute stop." In fact, the lute stop is an extra set of jacks positioned closer to the nut, producing a more nasal sound than the standard jacks operated by the same keys.

Until the mid-seventeenth century, the English generally called all plucked keyboard instruments by the name "virginals," with the term applied to wing-shaped and box-shaped instruments indiscriminately. The rectangular version was based on the spinet design, not that of the muselar.

Range

There was no absolute standard for keyboard compass on the sixteenth-century harpsichord. Hubbard (see Bibliography) gives ranges for many instruments from Italy and from the Ruckers workshop in Antwerp, which reveal an average range of about four octaves. Most harpsichords are tuned at "unison pitch"; that is, the keys govern pitch in the same octave as do the corresponding keys on a piano. Small virginals and spinets are tuned one octave higher. In the sixteenth century harpsichords were built in a variety of sizes, resulting in a variety of pitch ranges; for example, the key for *c′* might sound at what we would call *f′*.

Pitch

The issue of sixteenth-century harpsichord pitch is still a controversial one, there being at that time no standard pitch level in Europe either for music instruments or for anything else (see chapter 25). The choice of pitch for a harpsichord is a strong factor in determining its character, since the optimal sound for a given string is achieved by tightening it as closely as is practical to its breaking point. (Compare the injunction found in period instrument tutors such as Thomas Robinson's *Schoole of Musicke* for the lute: "First set up the Treble, so high as you dare venter [venture] for breaking. . . .")

Exactly what the pitch in use on any given instrument was (that is, its measurement in cycles per second) would depend on variables including the choice of string material (brass or iron) and the scale (a measurement related, at least nominally, to the proportional lengths of the strings relative to that of the longest unison pitch string at c''). Recent scholarship has suggested that the key lever for, say, a' on a sixteenth-century harpsichord could have sounded anywhere from "modern" $a' = 440$ to a minor sixth lower ($c\sharp'$), with most instruments speaking either at approximately modern pitch, or about one fourth lower.

Care and Precautions

A harpsichord is sensitive to variation in humidity and temperature. Increasing humidity will cause the action to stick and the soundboard to roll and buckle, while a change to dryer air may cause cracks to open up in the soundboard. Frequent changes in humidity will cause both of these effects *and* make the tuning extremely unstable, as the instrument tries to compensate for the various strains on its system. Harpsichords should be kept in stable climatic conditions.

Common Problems

THE SOUNDBOARD

A few small cracks in the soundboard are almost inevitable. They should not cause undue alarm, and ought only to be fixed if they cause buzzing, or show signs of extending out of control.

VOICING AND ACTION

Kottick's book, listed in the Bibliography, should be consulted about these two points. Here, it will suffice to say only two things. First, by far the vast

majority of instruments have plectra made of Delrin or a similar plastic. A curious idiosyncrasy of these plastics is that they set up (i.e., get harder) with age, meaning that a harpsichord will need at least one revoicing, after about a year of use, because the plectra have actually gotten harder. Revoicing is a tricky business, but people with the responsibility for keeping an instrument in shape must come to terms with either having it done or doing it themselves.

Second, at some point in your harpsichord's life, its action may stick and/or clatter and/or miss the string, depending on climate conditions and maturity of the instrument. Builders generally make allowance for this: for one thing, most register slides can be set at both ends to define the amount of bite the plectra will take out of the string. Keep the temperature and humidity in the harpsichord's room as stable as possible.

Similarities

Harpsichord technique bears a superficial resemblance to piano technique, although the harpsichordist must play with considerably less arm weight and depend more on suppleness and flexibility in the fingers. It is perhaps more similar to organ technique, especially that used on tracker (mechanical action) instruments, although harpsichordists playing music from the sixteenth century and before should not use the substitution fingerings taught as part of nineteenth-century organ technique.

Suggested Repertory

There is an abundance of printed music for the harpsichord. One series including a number of pieces from the Renaissance is the *Corpus of Early Keyboard Music,* for which full information is given at the end of the Keyboard Introduction.

BIBLIOGRAPHY

Boxall, *Harpsichord;* Ferguson, *Keyboard;* Hubbard, *Three;* Jorgensen, *Equal;* Klop, *Harpsichord;* Kottick, *Harpsichord;* O'Brien, *Ruckers;* Russell, *Harpsichord;* Sadie, *Early;* Schott, *Playing;* Shann, "Flemish"; Troeger, *Technique;* Wraight, "Vincentius."

Suggested Listening

There are many. Here I only list representative recordings on which each of the various types of harpsichords discussed above may be heard.

There is a copy of a fifteenth-century Italian clavicytherium, Codex Faenza, Ensemble Organum, Marcel Pérès, Harmonia mundi HMC 901354 (1991).

John Bull Organ & Keyboard Works, Siegbert Rampe, harpsichord, virginal, clavichord, and organ, various late-sixteenth-, early-seventeenth-century keyboard instruments (two organs, Andreas Ruckers harpsichord from 1637, Artus Gheerdinck virginals from 1605, two clavichords, one a copy of an Italian instrument from 1540) MDG 341 1258-2 (2005).

Recordings of an anonymous Italian seventeenth-century harpsichord and a modern copy of a virginals of 1611 by Andreas Ruckers, both played by Christopher Hogwood, are included among the recorded examples in David Munrow's *Instruments of the Middle Ages and Renaissance.* Angel, SBZ-3810, 1976.

Flemish harpsichord: Froberger, Johann Jacob. *The Sound of the Early Harpsichord*. Played by Gustav Leonhardt on a Jan Ruckers instrument (Antwerp, 1640). RCA Records, VICS-1494, 1970.

Double virginals: *Music for Virginal.* Played by Colin Tilney on a double virginal of 1580 by Martin van der Bist and a 1697 harpsichord by Carlo Grimaldi. Archiv, 2533 379, 1978.

Virginals and organ: Byrd, William. *My Ladye Nevells Booke.* Recording of the entire 1591 collection by Christopher Hogwood. L'Oiseau-Lyre, D29D 4, 1976.

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PART THREE

PRACTICAL CONSIDERATIONS/ INSTRUMENTATION

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19
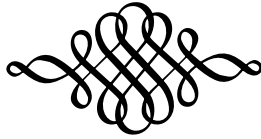
Proto-Continuo

JACK ASHWORTH AND
PAUL O'DETTE

OVERVIEW AND PRACTICAL APPLICATIONS

In most history books the *basso continuo* is said to be one of the musical in-
novations which distinguishes the Baroque era from the Renaissance. But
was the *basso continuo* such a new thing in 1600, and was it practiced in a
significantly different manner from the accompaniment styles of the six-
teenth century? In fact the *basso continuo* was nothing more than a new
method of notating a practice that had been in existence since at least the
late fifteenth century, the practice of providing a simple harmonic accom-
paniment to a solo singer or ensemble. What was new about the *basso con-
tinuo* was that instead of writing out the accompaniment in lute tablature or
organ score (*partitura*), only a bass line was provided, often with figures
added to indicate the chords to be realized above the bass. This saved the
player the trouble of intabulating all the parts, a lengthy and not altogether
artistically satisfying process. As Agostino Agazzari observed, "if [an organ-
ist] were to put into tablature or score all the works which are sung in the
course of a year in a single church in Rome . . . he would need to have a
larger library than a Doctor of Laws."[1] Indeed, one suspects that the better
musicians of the sixteenth century were able to accompany from a bass line
long before Viadana's coining of the term *basso continuo,* by applying their
knowledge of counterpoint and the standard harmonic progressions, much
as was done with the unfigured bass parts of the seventeenth century.

 Chordal accompaniment before 1600 is found in four main textures:
solo melody with accompaniment, accompaniment of larger ensembles,
English mixed consort music, and late-sixteenth-century organ scores.

Melody with Accompaniment

The recitation of poetry to music remained popular from the Middle Ages into the Renaissance. On the Italian peninsula it was especially popular to sing verses, such as *terze rime, ottave rime,* sonnets, and the like, to simple melodic patterns (e.g., *aria de Romanesca*) repeated over and over. Much of the time these would have been sung to improvised accompaniment, first on the lira da braccio and later on other instruments. An example occurs in Giambullari's printed account of the entertainments for the marriage of Cosimo I de' Medici and Eleonora of Toledo in 1539. At the wedding banquet, figures representing Apollo and the muses sang for the royal couple. Apollo entered carrying a lyre and a bow, performing several stanze in *ottava rima* during the ensuing interval. He is described as singing and playing, yet no music is given. Since music is given for all other parts of the production, including the canzone sung by the muses accompanying him, it seems clear that Apollo was expected to sing and accompany himself in the traditional formulaic manner. Examples of such formulas survive in some frottola collections and in the Bottegari *Lutebook* entitled, for example, "Aria per sonetti," "Aria da ottave rime." For an idea of how this might have sounded on the lira da braccio one may consult the single known sixteenth-century piece for the instrument, a setting of the *Romanesca* found in a manuscript source of lute music (Pesaro, Biblioteca Oliveriana 1144, *olim* 1193.) A transcription of the tablature is printed on pages 224–25 of Brown, *Sixteenth-Century.* An effective example of this recitation style with lute accompaniment is the lauda "Se mai per maraviglia," found in Franciscus Bossinensis's *Tenori e contrabassi*. While this stark declamatory style is well-suited to some kinds of texts, it has been suggested that poetry was also sung to the popular ground basses of the day—such as *Romanesca, Passemezzo antico, Folia*. This would not only be extremely easy to improvise, but would also be more appropriate for lively texts than the more serious declamatory style. Popular tunes also were accompanied by chordal instruments. Ciro Spontone reports (1589) that the "Girometta" tune was sung to lute, viol, and/or harpsichord accompaniment,[2] and another reference describes Orlande de Lassus accompanying himself on the lute—possibly strumming chords?—while singing Azzaiolo's popular "Chi passa per questa strada" during the wedding festivities of William V of Bavaria and Renée of Lorraine in 1568.

    Lutenists also participated in the performance of vocal polyphony, but here they actually played the vocal lines instead of fashioning any kind of separate "accompaniment" part. These performances could either be rendered as solos for individual voice(s) with the lute providing the remaining lines, or the lute could double the voices while the lines were all sung. (The pieces could also be performed as lute solos; see the discussion of intabulations in chapter 15.)

In the early sixteenth century, at least three books of frottole were published in arrangements for solo singer and lute, which played two of the four original polyphonic lines (the other voice was omitted). Similarly crafted arrangements of twenty-four chansons for solo voice and lute, based on preexisting polyphonic vocal chansons, were printed by Pierre Attaingnant in his *Très brève et familière introduction* (Paris, 1529); these pieces also appeared as lute solos. Later repertory was treated similarly, as in the case of Adrian Willaert's lute-song arrangements of Verdelot madrigals, and Willaert's own villanesche as arranged for singer and vihuela by Diego Pisador. Around 1570, Vincenzo Galilei wrote out several lute-song arrangements of madrigals and other works, with the bass line of the model taken as a solo and left in the bass range (see Palisca, "Vincenzo").

In his *Tratado de glosas* of 1553, Diego Ortiz gives written musical examples of various ways for the viol to play with harpsichord accompaniment. These accompaniments range from simple, repeated four-part chords as used in the examples of playing divisions on grounds to full polyphonic textures in examples of the suggested ornamentation design for madrigals and chansons.

Between 1580 and 1600 Simone Verovio published several collections of polyphonic vocal pieces in the format of score on one page and both keyboard and lute intabulations on the facing page. These intabulations could have been used as either solos or accompaniments. Victor Coehlo and others have written about manuscripts including intabulated accompaniments for several late-sixteenth-century Florentine songs by Caccini and others;[3] these no doubt give an idea of how a lutenist would have conceived *basso continuo* textures in at least the first few years of the practice.

In 1601 Verovio's firm published Luzzascho Luzzaschi's *Madrigali per cantare e sonare,* selections from the virtuosic repertory of the "Three Ladies of Ferrara" compiled some fifteen to twenty years after the three ladies had taken their final bow. The published format includes a written-out harpsichord part, often assumed to be indicative of what Luzzaschi would have played in performance. These parts consist of straightforward, four-part realizations of the harmonies; the right hand includes the notes of the vocal line(s) virtually all of the time. There are also many passages where the bass repeats a note several times in quick succession (quarter-note motion in the modern edition) and the right hand is given a chord for each one, resulting in the quick repetition of many identical chords—which comes across as somewhat jarring in practice. Although these accompaniments may hold true to Verovio's concept of what a good accompaniment should be, and possibly reflect what many musicians thought was proper in accompanying polyphony, one must bear in mind the difference between accompanying polyphonic pieces and virtuoso *solos* such as these. One suspects that when he was actually playing them, Luzzaschi provided a much more sensitive,

less repetitive accompaniment to his solo singers. And we must also keep in mind that the three ladies accompanied themselves on the lute, harp, and viol together with Luzzaschi, meaning that if everyone were to have played the published accompaniment the result would have been very thick and choppy indeed. Agostino Agazzari, writing in 1607, gives a detailed account of what was undoubtedly a common late-sixteenth-century accompanimental practice in northern Italy, if not elsewhere. He specifically cautions players to avoid "too frequent repercussions while the voice executes its passage, and expresses some kind of emotion, so as not to interrupt it" (trans. Arnold, *Art:* 70). For a substantial account of this work, see the section on chordal instruments later in this chapter.

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Suggested Performance

Solo singing of repeated, formulaic melodies was originally accompanied by a lira da braccio or lute playing simple chords, while solo performances

of frottole, villancicos, chansons, madrigals, and other similar repertory of that period were accompanied by a lute, vihuela, Renaissance guitar, or keyboard playing the lower two or three parts.

Larger Ensembles: The Intermedii

The musical *intermedii* written by Francesco Corteccia for Antonio Landi's *Il Commodo,* presented during the marriage festivities of Cosimo de' Medici and Eleonora of Toledo in 1539, document what was undoubtedly an already established practice of including instruments in the performance of texted polyphony. Although the exact arrangements are not specified, a published description of the event reports that Dawn sang the prelude (*Vattene almo riposo*) accompanied by *un gravecembalo a duoi registri sottovi organo, flauto, arpe, et voci di uccegli et con un violone.* Howard Brown suggests that this probably means the use of a rather elaborate claviorganum, complete with harp and nightingale stops—this is theater music, after all—with a bass viola da gamba playing the bass line (Brown, *Sixteenth-Century:* 89. For an alternate interpretation, see Minor and Mitchell, *Renaissance:* 229). The second *intermedio* (*Chi ne l'ha tolta ohyme?*) includes three lutes, and the third (*O begli Anni del Oro*) features an evidently solo performance by the main character (Silenus), who accompanies himself on a "violone" (probably a bass viol played lyra way, or perhaps a lira da gamba). A few years later (1543), Silvestro Ganassi published such a song-with-solo-viol-accompaniment in *Lettione seconda,* the second part of his viol treatise, which provides a good model for this style of playing (see pp. 80–81 in the Peters edition). Though playing chords on the viol "lyra way" is usually associated with English music, these references indicate that it was already practiced in Italy by the 1530s, if not earlier. Each of these pieces is printed as a polyphonic madrigal with text in each line, although nothing is said in either the first or third about more than one singer; the second example, scored in six voices, stipulates three female singers.

The practice is seen on an even grander scale in accounts of Florentine *intermedii* in 1565 and 1589, when harpsichords, lutes, harps, and viols are included in the performance forces for various texted pieces. It seems reasonable to assume that such instruments would spend at least part of the time playing chords or melodic figuration based on the harmonies, rather than limiting themselves strictly to the given polyphonic lines; such chordal playing would correspond nicely to the practice of accompaniment by "instruments of ornamentation" and "instruments of foundation" as described by Agazzari (see later).

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SUGGESTED LISTENING

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Una 'Stravaganza' dei Medici: Intermedi (1589) per 'La pellegrina.' Taverner Consort, Taverner Choir and Taverner Players, directed by Andrew Parrott. EMI Reflexe CDC 7 47998 2 (1988).

Suggested Performance

Chordal accompaniment of sixteenth-century Italian madrigals may be provided by lute, viol, harpsichord, organ, or harp, with harmonies derived from a short score of the parts.

English Mixed Consort Music

Music was performed on stage in sixteenth-century English theaters with groups of plucked instruments participating, suggesting a chordal texture. For instance, Gascoyne's *Jocasta* (1566) had a "dumb show" before each act featuring "viols, cythren, and bandores" in addition to various wind instruments and drums. These house bands were to coalesce into the famous "Morley Consort," or English mixed consort. This group does have a written repertory from as early as the 1580s, but there is evidence that it was used both for incidental theater music and to accompany stage jigs, which suggests at least an element of improvisation. The standard instrumentation for English mixed consort music includes treble viol or violin, flute or recorder, bass viol, cittern, bandora, and lute; such groups are depicted in some pictures, mostly Dutch and German, with the cittern and bandora replaced by a spinet. And later, when describing what "the English call . . . a 'consort'," Michael Praetorius provides a list that includes each of the above

instruments and also others, such as harp, trombone, and racket (*Syntagma Musicum* III: 5; Kite-Powell trans.: 19–20). Whatever the makeup of the group, the chordal instruments are used to provide a kind of late-sixteenth-century proto-continuo (see chapter 20).

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Joyne Hands: Music of Thomas Morley. The Musicians of Swanne Alley, dir. by Paul O'Dette and Lyle Nordstrom. Virgin Classics VC7 907168 (1992).

Organ Scores

In church music, scores used by an organist to accompany the choir appear in manuscript as early as 1587 and were printed from at least 1594. The early organ scores took three forms: the organ part could consist of the entire piece transcribed in full score (see Kite-Powell, "Notating"); a piece could be reduced to short score, either as the top and bottom voices or as a three-voice reduction of a bigger work; or, in a multichoir work, the organist's part could be a composite of the lowest sounding notes at any given time selected from all the choirs.

Lodovico Viadana's *Cento concerti ecclesiastici* (1602), an early source describing *basso continuo* realization, reflects an extension of this practice, but it is different in that the bass line and its figures represent harmonies not always otherwise present in the counterpoint. As such, it marks the first use of a true and independent *basso continuo* part—although Viadana suggests that organists write out the parts they will play, rather than improvise them. Soon after, of course, accompanists were expected to improvise from bass lines, with or without figures.

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The Use of Chordal Instruments

So how were chordal instruments used in the Renaissance and how did this change in the seventeenth century? The basic approach to accompaniment in the sixteenth century was to "intabulate" the piece of music—a process in which the bass, along with other selected parts of a polyphonic composition were set into tablature (for plucked and keyboard instruments), or into score (usually for keyboard instruments only). The number and distribution of the parts intabulated depended on the number of instruments involved, the practice of the specific repertory at hand, and the ranges of the accompanying instruments. In some cases the alto line was left out altogether and replaced with ornamentation; in other cases the lower voices were intabulated leaving the soprano line to a vocal or instrumental soloist, while at other times the soprano line was doubled in the intabulation.[4] Other practices included: the doubling of the bass line at the octave (particularly in the second half of the sixteenth century), the insertion of ornamentation in any or all of the parts (as in solo lute and keyboard intabulations), the addition of new contrapuntal lines (as in Diego Ortiz's "*quinta boz sobre el misma madrigal*"[5]), and the introduction of a style of ornamentation known as *alla bastarda*. This practice, which was performed on the viol, lute, harp, trombone, and bass voice (!), involved ornamenting each voice in turn, connecting the phrases with virtuoso scales to indicate the transition from one voice to the next.[6] *Alla bastarda* ornamentation was generally added only to pieces in which all of the lines were already covered, possibly by an organ, lute, vocal ensemble, or a larger group of voices and instruments.

Models for ensembles involving two to four lutes have been discussed in the chapter on plucked instruments.[7] It is generally not recognized (or perhaps just not practiced today) that large ensembles of Renaissance instruments, including numerous keyboard instruments and as many as twenty plucked instruments, appeared throughout the sixteenth century.[8] Although there are few models to guide us, what is known about lute ensemble practices combined with the descriptions by Agazzari in his *Del sonare sopra 'l basso* of 1607 (later borrowed by Michael Praetorius in Book III of his *Syntagma Musicum*) provide a good basis for getting the maximum contribution from the assembled forces.

First, a variety of sizes and pitches of each of the chordal instruments is essential. Five lutes of the same size and tuning will not produce nearly the effect of five lutes of three or four different sizes.[9] The same is true of keyboards, harps, and guitars.[10] Second, each instrument should have its own function. Not everyone should play four-part chords all of the time. Some instruments can be responsible for rhythm, others for sonority, and others

for texture and filigree. That is to say, the practices outlined earlier, along with those described by Agazzari (quoted below), may be divided up among the different instruments.

Third, experiment with different types of articulations. Lutes, harps, and guitars can be strummed as well as plucked, each instrument providing its own rich vocabulary of plucking, strumming, and arpeggio techniques, as well as the amazingly effective block chord. The sequence of block chords, arpeggios, and strums is essential to the character of Renaissance "continuo" playing. Harpsichordists steeped in the French Baroque tradition of rolling chords nearly all of the time will take a little time getting used to this approach, but it is simply part of a different sound-world.

Fourth, using the right kinds of keyboard instruments for Renaissance music is extremely important, if the right balance and timbres are to be achieved. Spinets, virginals, and Italian harpsichords combine with lutes, harps, and guitars much more effectively than do, say, eighteenth-century style double-manual French harpsichords. Similarly, sixteenth- and seventeenth-century chamber organs tend to be more focused and transparent than do many of the dark, woolly-sounding continuo organs made today. The latter tend to thicken the texture undesirably and obscure plucked instruments. Of course, a playing style which provides some space between the notes will also help in providing an appropriately transparent texture.

Finally, the total effect of ensembles with lutes and keyboards will be greatly enhanced if the instruments are very well in tune, and meantone temperament is employed.[11] Despite the highly publicized and exaggerated paranoia of a few late Renaissance and early Baroque theorists regarding unequal temperaments on fretted instruments, they were, in fact, widely used and are not at all difficult to achieve.[12] Experience has shown that even 1/4-comma meantone can be very effective once the frets have been properly set, and the players learn which fret produces which accidental.[13] Using split frets (as recommended by Christopher Simpson[14]), or just adding extra frets to provide the most critical accidentals (g♯–a♭, d♯–e♭) will take care of all but the most remote chords, which are undoubtedly meant to sound tense anyway.[15] A multitemperament tuner can be a great help in setting up an unequal temperament, since the open strings must be correctly tuned as well as the frets placed properly. The problem in the past with using meantone temperament on fretted instruments has been that players set up the frets appropriately, but persist in using their usual method of tuning the open strings. The open strings must also be tuned to meantone!

Although his famous treatise was published in 1607, Agazzari was writing about the performance of late-sixteenth-century concerted music. In it

he divides instruments into two classes, those "like a foundation" (including the organ, harpsichord, lute, theorbo, and harp) and those "like ornaments" (including lute, theorbo, harp, lirone, cittern, spinet, chitarrino, violin, pandora, etc.). The foundation instruments he called "perfect" in that they can provide a complete accompaniment consisting of the bass with harmonies. The lirone, cittern, and chitarrino are able to provide only an "imperfect harmony," since they do not have true bass strings and produce most chords in inversions, while the "viola," violin, and pandora have "little or no harmony," since they cannot play chords.[16] It is interesting to note that the lute, theorbo, and harp are placed in both categories, since they are able to play chords as well as ornament in various ways.

Agazzari continues:

> The instruments being divided into two classes, it follows that they have different functions and are differently used. An instrument that serves as foundation must be played with great judgment and due regard for the size of the chorus; if there are many voices one should play with full harmonies, increasing the registers; while if there are few one should use few consonances (i.e., thinner chords), decreasing the registers, and playing the work as purely and exactly as possible, using few runs and divisions, occasionally supporting the voices with low notes, and frequently avoiding the high ones which cover up the voices, especially the sopranos or falsettos. For this reason one should take the greatest possible care to avoid touching the note which the soprano sings, or ornamenting it with a division, in order not to duplicate it or obscure the excellence of the note itself or of the passage which the good singer executes upon it; for the same reason one does well to play within a rather small compass and in a lower register . . . [the foundation instruments] must maintain a solid, sonorous, sustained harmony, playing now *piano,* now *forte,* according to the quality and quantity of the voices, the place, and the work, while, to avoid interfering with the singer, they must not restrike the strings too often when he executes a passage or expresses a passion.
>
> The decorating instruments, which are combined with voices in various ways, are in my opinion so combined for no other purpose than to ornament and beautify, and indeed to season the consort. For this reason, these instruments should be used in a different way from those of the first class; while those maintained the tenor and a plain harmony, these must make the melody flourishing and graceful, each according to its quality, with a variety of beautiful counterpoints. But in this, the one class differs from the other; while the instruments of the first class, playing the bass before them as it stands, require no great knowledge of counterpoint in the player, those of the second class do require it, for the player must compose new parts above the bass and new and varied passages and counterpoints.
>
> For this reason, he who plays the lute (which is the noblest instrument of them all) must play it nobly, with much invention and variety, not as is done by those who, because they have a ready hand, do nothing but play runs and make divisions from beginning to end, especially when playing with other in-

struments which do the same, in all of which nothing is heard but babble and confusion, displeasing and disagreeable to the listener. Sometimes, therefore, he must use gentle strokes and repercussions, sometimes slow passages, sometimes rapid and repeated ones, sometimes something played on the bass strings, sometimes beautiful vyings and conceits, repeating and bringing out these figures at different pitches and in different places; he must, in short, so weave the voices together with long *groppi, trilli,* and *accenti,* each in its turn, that he gives grace to the consort and enjoyment and delight to the listeners, judiciously preventing when there are other similar instruments, a thing to be avoided, these embellishments from conflicting with one another and allowing time to each, especially in my opinion, unless they play at a great distance or are differently tuned or of different sizes.

And what I say of the lute, as the principal instrument, I wish understood of the others in their kind, for it would take a long time to discuss them all separately.

But since each instrument has its own peculiar limitations, the player must take advantage of them and be guided by them to produce a good result. The player of the lirone must bow with long, clear, sonorous strokes, bringing out the inner parts well. The theorbo, with its full and gentle consonances, reinforces the melody greatly, restriking and lightly passing over the bass strings, its special excellence, with *trilli* and *accenti muti* played with the left hand. The arpa doppia, which is everywhere useful, as much so in the soprano as in the bass, explores its entire range with gentle plucked notes, echoes of the two hands, *trilli,* etc.; in short, it aims at good counterpoint. The cittern, whether the common cittern or the ceterone, is used like the other instruments in a playful way, making counterpoints upon the part.[17]

It is clear from these passages that Agazzari's "ornamental" instruments do not simply add divisions and arpeggios (which would be impossible on the lirone, for instance). Rather, they embellish the music with color and character, however each instrument is best able to achieve that. It is striking that Agazzari's list of instruments corresponds closely to the forces used in the Florentine *Intermedii* of 1589.[18] It is also likely that his descriptions of the instruments' functions closely mirror the approach taken on that momentous occasion.

That is, of course, the same tradition which inspired Monteverdi's *Orfeo* of 1607, Praetorius's *Polyhymnia Caduceatrix et Panegyrica* of 1618/19, the fascinating scorings detailed in the same author's *Syntagma Musicum* III, the large lute bands of the English masque and French *ballet de cour,* the Roman "blank passage" practices described by André Maugars,[19] and the lavish forces convened for Luigi Rossi's magnificent *Orfeo* of 1647. The use of these large ensembles of plucked instruments, and the richness and beauty they provide, is one of the most exciting aspects of late Renaissance performance practices, one all-too-rarely experienced in today's concert halls.

NOTES

1. Agazzari, *Del sonare:* 71.

2. Palisca, "Vincenzo": 351.

3. Coehlo, "Players": www.sscm-jscm.org/jscm/v9/no1/Coelho.html.

4. See discussion in O'Dette, "Plucked."

5. Ortiz, *Trattado:* 83–85 and 103–106.

6. Gutmann, "Viola bastarda": 178–209; Paras, "Music": 1–49. See also the "in concerto" pieces by Giovanni Antonio Terzi from his *Intavolatura di Liutto . . . Libro Primo* (1593) and *Libro secondo* (1599), facsimile edition (Florence, 1981).

7. O'Dette, "Plucked."

8. Elsner, *Untersuchung* is full of references to sixteenth-century ensembles, many of which have large complements of chordal instruments. See also Brown, *Sixteenth-Century;* Newcomb, *Madrigal:* 32–46 and 264; and Praetorius, *Syntagma III:* 168 (Kite-Powell trans.: 171).

9. O'Dette, "Plucked."

10. Some seventeenth-century treatises recommend the use of several sizes of guitars in guitar consorts. See O'Dette, "Plucked." Thus the four guitars used to accompany Euridice in the Ciaconna "Al imperio d'amore" in Act 2 of Luigi Rossi's *Orfeo* in 1647 were undoubtedly of at least two, if not three different sizes and tunings.

11. See Duffin, "Tuning."

12. Most surviving metal-fretted instruments of the time (citterns, orpharions, chitarre battente, etc.) are in unequal temperaments, usually a modified meantone of some sort. Also, the numerous mixed consorts involving fretted instruments, such as the Elizabethan broken consort, must have employed a type of meantone temperament, since virtually all surviving transverse flutes are tuned unequally as were the citterns and bandoras. The warnings of Ercole Bottrigari and G. B. Doni against combining keyboard instruments, which they said were in meantone tuning, and fretted instruments, which they claimed could not be, just does not correspond to the numerous documented situations in which the two were combined. Modern experience shows it is not that hard to do successfully.

13. Recordings of fretted instruments in 1/4 comma meantone include: *Capritio.* Tragicomedia (Harmonia Mundi CD HMU 907294), in 1/5 comma meantone; *John Jenkins Late Consort Music,* The Parley of Instruments (Hyperion CDA 66604), in 1/6 comma meantone; *William Lawes Consort setts for 5 & 6 viols and organ,* Fretwork (Virgin Classics VC 7 91187–2).

14. Simpson, *Division;* See also the discussion in Crum, *Play:* 155–163.

15. Lindley, *Lutes:* 18; James Bailey, "Regular Meantone Temperaments Applied to Francesco da Milano," *Journal of the Lute Society of America,* XXVI–XXVII (1993–1994): 71–95.

16. In this case "viola" is probably a generic term referring to "bowed strings." What the "pandora" refers to here is something of a mystery. It probably has nothing to do with the Elizabethan pandora, which was primarily a chordal instrument.

17. Agazzari, *Del sonare:* 67–69.

18. Walker, *Les Fêtes.* This work has been recorded as *Una stravaganza dei Medici,* The Taverner Consort and Choir conducted by Andrew Parrott (EMI CDC 7 47998 2).

19. MacClintock, *Readings:* 116–126.

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The Age of Extravagance. Virtuoso Music from Iberia and Italy. Jeremy West, cornett; Timothy Roberts, organ, harpsichord; Paula Chateauneuf, chitarrone; Frances Kelly, double harp. Hyperion No. CDA66997.

Cosimo Bottegari (1554–1620): Il Libro di canto e liuto. Santina Tomasello, voice; Gian Luca Lastraioli, lute, cetra, and guitar; with Amerigo Bernardi, voice; Bettina Hoffmann, viola da gamba; Federico Maria Sardelli, flutes and bombards, Daniele Poli, guitar; Paolo Maccartini, percussion. Tactus TC 552701 (2001).

Dangerous Graces: Music by Cipriano de Rore and His Pupils. Musica Secreta. Linn CKD 169 (2002).

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20

Mixed Ensembles

JAMES TYLER

An abundance of instrumental ensemble music survives from the sixteenth century. Some of it was composed expressly for the lushly scored, magnificently splashy court and civic entertainments of the period—the festivals, funerals, coronations, and wedding celebrations—about which extensive eyewitness coverage exists and, thus, several excellent studies have been written (see Brown, *Sixteenth-Century;* Bowles, *Musical;* and Saslow, *Medici* for listings). The majority, however, was intended for ordinary, everyday courtly and domestic use—about which relatively little information from the period survives and, thus, no comprehensive study has been undertaken.

Because modern writers have tended to concentrate on the extraordinary and exceptional, it is easy to assume that the well-documented practices that applied to the extraordinary and exceptional also applied to everyday music making. The aim of this chapter is to present whatever shreds of practical information are included in the writings of contemporary theorists, the few scattered references to specific instrumentations found in the original music sources, and the evidence provided in contemporary iconography, so that decisions on the performance of sixteenth-century "chamber" and dance music can be made that are both practical and appropriate.

In the recent past, our perception of the sounds of sixteenth-century music has often been distorted by the recordings of well-meaning but misguided early music ensembles, recordings that present some repertories, especially dance music, replete with a whole range of exotic and inappropriate wind instruments and percussion. Intended to charm and evoke "olde" times, this toy shop approach, which was first adopted forty or so years ago (and to a certain extent persists to this day), has resulted in the trivialization

of much fine music and, ironically, was probably inspired by one of the most important theorists of the late Renaissance, Michael Praetorius. Volume II of his famous treatise, *Syntagma Musicum* (1619), with its abundance of information, some misinformation, and scale drawings of instruments has been available for many years in a facsimile edition and translation. Widely read, it has inspired many an ensemble director to create what amounts to an organological fantasyland.

Let me explain: Praetorius's *Syntagma Musicum* is encyclopedic; systematically and for the sake of completeness, he has included everything—that which is contemporary, that which is historical, that which is theoretical, and that which is mere guess-work and hearsay. Accordingly, before using this work, ensemble directors must be able to distinguish between what was normal instrumental usage in the early seventeenth century and what was theoretical (or rarely ever used). Unfortunately, many directors have not always been able to make those distinctions, which has resulted in there being many more greatbass, soprano, and sopranino recorders, rackets, bassanelli, soprano curtals, cornamuses, and the like in the world today than ever existed in Praetorius's day.

Moreover, directors of ensembles performing sixteenth-century repertories must realize that some of the instruments discussed by Praetorius for use in seventeenth-century music were not yet in common use in the sixteenth century. These include the sopranino recorder, the soprano recorder in c'', and the various sizes of greatbass recorder—instruments routinely used in today's performances of sixteenth-century music. Although it may be difficult for some players to accept, all known sources throughout the sixteenth century (Virdung, 1511; Agricola, 1529 and 1545; Ganassi, 1535; Cardan, 1546; Jambe de Fer, 1556; Zacconi, 1592; and Virgiliano, ca. 1600) confirm that the recorders in common use were the bass in f, the tenor in c' (used for playing both tenor and alto lines in part music), and the alto recorder in g', which played the top line (in historical terminology, the "*discantus,*" "*cantus,*" etc.) of a recorder ensemble. All three sizes of recorders read part music at written pitch, but actually sounded an octave higher. Thus, the recorder in g' was the "soprano" recorder of the sixteenth century and covered much of the actual sound range of today's soprano recorder (Hettrick, "Sebastian": 104; Hettrick, "Martin": 80/109 and 82/145). Although commonly heard in today's recorder consorts, a soprano recorder was referred to in only one source in the entire sixteenth century (Cardan, 1546), and that was a soprano in d'', not c''. For this reason, I have decided to concentrate exclusively on the information available to us from the sixteenth century (Brown and Sadie, *Performance*), and to use only the instruments (and sizes of instruments) that were commonly used in the per-

formance of part music of that century. Instruments that did not exist in the sixteenth century (and were not even mentioned by Praetorius), yet are commonly used in today's performances of sixteenth-century music include alto recorders in *f,* soprano flutes in *g,* and alto crumhorns in *f.*

The most common wind instruments were recorders, flutes, shawms, cornetts, trombones, crumhorns, and curtals. Other winds, such as sorduns, cornamuses, doppioni, rackets, and Schreierpfeifen were very rare or were used only in certain regions. Instruments such as the trumpet (used only for military and ceremonial purposes during this period), bagpipe, gemshorn, hurdy-gurdy, and jew's harp (used mainly for folk and popular music which was not written down), lira da braccio, and lirone (highly specialized use mainly in recitations of humanistic poetry and in experimental "new" music), are not employed in the examples below. As for percussion instruments, although contemporary iconography sometimes depicts either a pipe and tabor player or a fife and military drum combination in the same picture as a "dance band," these were regarded as separate units. The pipe and tabor player (or the fife and military drum players) did not perform as members of the dance band, but apparently alternated with it.) As there is no compelling evidence that percussion instruments were used in chamber or even in dance music ensembles during the sixteenth century (see Neumann, "Kompt"), they, too, are not used in the examples later in this chapter.

Although few standard conventions for instrumental combinations can be drawn from contemporary sources, what does emerge helps to establish some guidelines. One early convention, which carries over from the late fifteenth century into the early sixteenth, is the combination of two shawms and one trombone for a dance ensemble playing the *basse danse* repertory. This was apparently an improvisatory tradition with little or no surviving written-out part-music; however, the convention can be applied to similar "art" versions of the *basse danse,* such as the various "La Spagna" settings that survive in some of the earliest sixteenth-century prints. The pairing of these instruments probably came about for the very obvious reason that the shawm and trombone could match each other in volume. (Also see chapter 8.)

Another convention was that of three different-size members of the same family of instruments playing four-part music. Thus, a recorder quartet would consist of an "alto" in *g′,* two tenors in *c′,* and a bass in *f* to play SATB part-music. A crumhorn quartet would consist of one alto in *g,* two tenors in *c,* and a bass in *f* (Hettrick, "Martin": 80/109 82/145). Due perhaps to their basic range of only a ninth, other sizes of crumhorn were also known, including a soprano crumhorn in *c′* and various additional bass sizes, though these seem to have been less common.

The most widespread configuration for a viol quartet throughout the sixteenth century was the "low consort" consisting of a tenor (top string *a′*), two basses (top strings *d′*), and a large bass (top string *a* or *g*). Of course, these are modern designations; in the sixteenth century an instrument was named according to the line it played in part-music, not its size or specific pitch. Thus, the three sizes of instruments playing four-part music described above would have been called (in English) treble, alto, tenor, and bass, respectively.

Although the low consort may be a difficult concept for modern viol players to accept, the following sources all confirm low consort tunings: Florence, Biblioteca Nazionale Centrale, MSS Magl. XIX, 165, the bass part-book to the set 164–167, ca. 1520 (Woodfield, *Early:* 240, fn. 8), the Weltzell manuscript of 1524 (Woodfield, *Early:* 108), Agricola (1529 and 1545), Gerle (1532 and 1546), Ganassi (1542, *quarta regola*), Zacconi (1592), and Virgiliano (ca. 1600). The Weltzell and Gerle books contain four-part French chansons and German Lieder intabulated for three sizes of viols (side by side with staff notation in some cases). The precise nature of tablature notation coupled with the tuning information given in these sources shows unequivocally that the discant part was played on a tenor viol (modern terminology) with a top string tuned to *a′*, the *altus* and tenor parts on two basses (top strings *d′*), and the *bassus* on a large bass viol (top string *a*).

A "high consort" using the familiar configuration of treble viol (top string *d″*), two tenor viols (top strings *a′* or *g′*), and a bass viol (top string *d′*) was also known (Lanfranco, 1533; Della Viola, ca. 1560; and Marinati 1587), but seems to have been less common. Ganassi, the great exponent of the viol, advocated the high consort, yet acknowledged that most players used the larger (lower) instruments. The illustration on the title page of his 1542 publication shows large instruments, as do most contemporary pictures (Woodfield, *Early:* 151). This pictorial evidence combined with all of the tuning information given above and the rarity of surviving treble viols from the sixteenth century (there is one), as compared to the great number of large viols, supports the idea that the low consort prevailed during this period.

The large bass viol (in *a* or *g*) was known even earlier than 1523. (Slatford, "Double," *New Grove,* includes a German drawing from 1518 and Slatford, "Double," *New Grove Inst,* has a Tyrolean painting of ca. 1570 copied after a German painting of 1516.) It played at eight-foot pitch, as did the higher members of the family. Probably only toward the end of the sixteenth century was a true, six-string, double bass viol (*contrabasso, violone in contrabasso*) developed that was large enough to have strings capable of sounding at sixteen-foot pitch throughout its range. (A surviving example is an instrument by Linarol dated 1585.) Banchieri (1609) seems to have

been the first writer to give a tuning for a *violone in contrabasso* with a top string of *d,* an octave lower than today's bass viol. His *violone da gamba* was an ordinary large bass viol tuned to *g* and played at eight-foot pitch.

Another important convention was that of transposition. The most basic and essential information given by writers on instruments of this period (e.g., Agricola, Jambe de Fer, Ganassi, Virgiliano, et al.) includes either transposition charts, verbal instructions, or a choice of clef for the same line of music. Although the ranges of much of the part-music from the first three-quarters of the century are such that they can be played by the three-size instrument combinations described above without having to resort to the transposition techniques of the time, if parts were too high for the instruments, contemporary wind and string players were expected to transpose the music down (often by a fourth) so that it fit the instruments better. (For an invaluable discussion of transposition practices, see Brown, "Notes Viol" and Brown, "Notes Flute," and chapter 25.)

Yet another convention is the combination of a cornett and three tenor trombones, which became so established by about 1600, that Virgiliano could give a chart and tablature for playing trombones in "concerto," illustrating a consort of three tenor trombones and a cornett without need of further comment (see chapter 12 for the facsimile of this chart). The tenor and bass of the trombone family were employed regularly during this period; the alto did not come into general use until the next century. The cornett and trombones combination, like that of viols or viols with a violin, is appropriate for huge quantities of sixteenth-century chamber and dance music.

The violin was used primarily as an instrument for dance music during this period (Jambe de Fer, 1556). Indeed, because one of its chief characteristics was the ability to execute the crisp, clear rhythmic articulations so essential to the performance of practical dance music, it was regarded as the preeminent instrument for professional dance music ensembles.

A final convention was the use of viols or trombones for music of a dignified or somber nature. For such music, trombones and viols sometimes were used in combination. Of course, for players of the early trombone to perform chamber music with stringed instruments effectively, it is essential that reproductions of the relatively lighter, original instruments are used and not modern instruments with sawn-off bells and modern mouthpieces, which tend to produce a loud, opaque sound that is not appropriate for this type of music.

Before making decisions on instrumentation, ensemble directors should first answer the following questions about each piece: (1) What is its country or region of origin? (2) What is its date? (3) Who is likely to have

performed it (amateurs or professionals), and under what circumstances? (4) What is its genre? (5) What are the ranges of each part?

These questions must be answered for the following reasons: some instruments were known in some countries or regions and not in others; some instruments either were not used at all in the sixteenth century, or were not introduced until the middle or the end of the century; if a performance of music by amateur musicians is being recreated, then certain instruments, such as the violin, cornett, crumhorn, trombone, and curtal, should be avoided, since they were the instruments of professionals; if an ensemble of professional musicians is being recreated, the choice is far wider. Certain instruments, such as viols, recorders, flutes, lutes, and other plucked instruments were used by professionals and amateurs alike.

We are now ready to decide on suitable and effective instrumentations for specific pieces. The first is a four-part dance published in Paris in 1530 by the printer, Pierre Attaingnant, entitled "La Scarpa" (LPM, *The Attaingnant Dance Prints,* AD1, p. 4). As is the case with most dance music prints, this was probably intended for the amateur market. With its typically narrow ranges for each of the four parts (first line *d′* to *c″;* second line *g* to *g′;* third line *f* to *g′;* fourth line *G* to *g*), "La Scarpa" could be played as it stands by a viol consort consisting of tenor, two basses and a large bass. (A third bass viol could play the bottom line, but as it would have to stay mainly on its lower strings, its sound might lack the strength and brilliance required to balance the other viols.)

A whole consort of recorders—*g′* alto, two tenors, and bass—could also play the piece as it stands, all parts, of course, sounding an octave higher; or the recorders could all double the viols on repeats; or just the top line, the tune, could be doubled by a *g′* recorder which could also embellish the line. Alternatively, a tenor flute at the octave could double the tenor viol on the top line. Flutes have more dynamic control than recorders and can play high notes softly. This dynamic flexibility, coupled with a tonal character that enables it to blend and balance well with other kinds of instruments, makes the flute a good choice in an ensemble with viols. For rhythm, a lute could play the appropriate chords from the bass line, divide up dotted half notes into three quarter notes, play through all rests, and fill in the final notes of phrases. Citterns and guitars were not widely known yet in France in 1530 (Tyler, *Guitar*).

A professional French ensemble would have had many more possibilities for instrumentation, although, as the violin family apparently was not widely known in Paris until the 1540s, viols would still have been the first choice for indoor performances, with one or more lutes to help out rhythmically. Alternatively, a soprano rebec could be used on the top line (sound-

ing an octave higher) with viols beneath, or a whole consort of rebecs: a so-prano, two tenors, and a bass. The sharp, penetrating sound of the rebecs makes them ideal for dance music ensembles, and since Gerle (1532 and 1545) gave a clear illustration of this archaic instrument, as well as some four-part music for three different-sized rebecs, we can assume that they were used in ensembles at least through the first half of the sixteenth century. To judge by the numerous French literary sources that mention the rebec and the payment records for rebec players in France at this time (Downie, "Rebecs" and Dobbins, "Music"), the instrument was popular in France as well as Germany, and it is conceivable that some French rebec players, like the Germans, might have played in whole consorts.

Agricola (1529 and 1545) gave the tunings—entirely in fifths—for the three rebecs: the three-stringed discant (tuned to *a′, d′, g*), the three-stringed *alt* and tenor (the same instrument played both part ranges, tuned to *d′, g, c*), and the four-stringed *bassus* (tuned to *a, d, G, F* in the 1545 edition). The tablature for rebec ensemble given by Gerle confirms this tuning. Taken literally these pitches in these octaves seem impossible on what were, to judge by pictorial evidence and surviving examples, inherently small instruments. The *bassus* pitch would seem especially unlikely; the rebec tuned to that pitch would have to have been the size of a modern cello in order to derive any musical sound from its gut strings. Such a large instrument could hardly have been carved from one piece, played on the shoulder, and called a *kleingeige!*

My theory is that Agricola's charts show the notes as they would be read in staff notation, not the actual pitches, and that the actual pitches are an octave higher. In fact, Agricola uses this very same method in his charts for wind instruments (Brown, "Notes Flute"). If the rebecs read at one pitch level, but actually sounded an octave higher than written, just as recorders commonly did, then the bass rebec would have only needed to be the size of a viola.

To recreate an outdoor performance by a professional French ensemble, such as the musicians at the Parisian court of François I, the top line of the piece could be played as written on a *g* alto shawm or a cornett. The second line could use a *g* alto shawm (assuming a good instrument and a good player), or a tenor cornett, or a trombone. The third line could employ a *g* alto shawm, tenor cornett, or trombone. The bass line could be played on a trombone. Because the music would have to be repeated several times to fit the choreography, and since the wind players probably would need to rest their embouchures, it is conceivable (though not documented) that the wind band could alternate with another dance unit, such as a pipe and tabor or a fife-and-drum. If the ball were held indoors, the wind band

could still be employed, and, for the same reasons, could alternate with a string band. It was not unusual for an ensemble of eight or more musicians to be employed at a royal court.

We have been discussing "La Scarpa" and the ways in which it might have been performed in France, but as it was originally an Italian dance, it could also be performed in ways that reflect north Italian practice. For example, crumhorns, not used in France, were common in Italy. Hence, a soprano in *c′* could play the top line, a *g* alto the second line, and a bass the fourth line. The third line could also employ a *g* alto if the one note that goes below its range is changed. Although no sixteenth-century writers discuss this practice, there are indications that musicians did occasionally resort to altering notes. Compare, for example, Morley's printed parts from 1599, marked for flute in some of the pieces for English mixed consort, with the same parts in the manuscripts from the 1580s containing these same pieces that are marked for recorder. Not only are single notes changed in the recorder parts as found in the manuscript, but often entire passages are put into another octave in order to fit the range of the recorder.

The violin family, though not widely used in France until the 1540s, was developed in Italy in the 1520s and thus is appropriate for an Italian-style performance of this piece. A viola could be used effectively for the top line as written, or, transposing the piece up a fifth, a violin and two violas could be used for the top three lines, as could a mixture of viols for the lower lines and a violin on top.

In 1530 there was a greater variety of plucked instruments in use in Italy than in France, including a small diatonic harp with a single row of strings and L-shaped "bray pins" (used both to secure each string to the soundboard and, when carefully adjusted, to produce a softly buzzing, semi-sustained sound). Because no chromatic changes are required, such a harp could be used to double another instrument on the second line. Additionally, one or more four-course guitars could provide a rhythmic, even strummed, accompaniment. Strumming was a fundamental and unique feature of the guitar from its earliest history. Normally all of the courses were struck in rhythmic patterns that were probably similar to the ones that guitarists eventually notated in the late sixteenth century. (For further details, see Tyler, *Early:* 25–34, 82–86.)

The cittern, too, could serve a rhythmic function in this piece, or it could play the melody line with chords beneath it. In the latter role it has several advantages: its range is just about the same as the violin's; with its plectrum technique it can play virtuoso embellishments to melody lines with relative ease; and, whether playing single-line fashion or chordally, it has a very wide dynamic range from soft, warm, and shimmering to ex-

tremely bright, pungent, and robust. The range and "key" of "La Scarpa" are perfect for an arrangement with a cittern as the melody instrument, and such a practice is justified by the many similar dance pieces that later were published as cittern solos (Tyler, "Cittern," *New Grove* II).

A second musical example is from the late sixteenth century. This is an Intrada by Alexander Orologio, published in northern Germany in 1597 (LPM, *German Instrumental Music,* GM4, no. 3). An intrada is a formal, entrance piece, often written in a solemn style, in part homophonic and in part cautious, carefully controlled, polyphonic movement. It is likely that it served a ceremonial or theatrical function at court. Given this background information, a wind band capable of making a richly sonorous sound is a natural performance choice.

The piece is in five parts (*cantus g′* to *g″, quintus g′* to *g″, altus e′* to *c″,* tenor *g* to *a′,* and *bassus A* to *c′*). With these ranges and the reputation of German wind players in mind, a first choice for instrumentation is three cornetts and two trombones, as the editor of the modern edition suggests. These instruments certainly would produce the desired sonority in perfect balance; but there are other valid choices. A string band consisting of two violins, viola (or tenor viol), bass viol, and large bass viol was commonplace at the north German courts. The bass violin probably would have been less common there than in Italy or France at this time. To produce as grand a sound as that of the cornett and trombone ensemble, it might be advisable to assign more than one string player to a part, and to have the bass line doubled by a trombone or bass curtal. The curtal's dynamic range makes it equally suitable for chamber music with strings as for wind band music.

Yet another possibility would be to transpose the piece down a fifth and use crumhorns: two *c′* sopranos, an alto in *g,* and a tenor, with a curtal on the bass line. This combination could be used effectively alternating (or combined) with a string ensemble. As a ceremonial entry piece, it probably would have been repeated several times in order to accommodate the exact length of the procession. Though not documented, the practice of alternating (or combining) ensembles, provides wind players with opportunities to rest their lips. And finally, for a piece of this nature, an organ doubling most of the parts would contribute greatly to the sonority. This use of an organ bass is documented in Williams, "Continuo" (*New Grove Inst*).

By way of contrast the third musical example is real chamber music and from the very beginning of the sixteenth century. "La Guercia" (LPM, *Art of the Netherlanders,* AN2, no.4) is from a manuscript copied in the Netherlands for a north Italian patron around 1508. In Franco-Flemish style, the four-part piece appears to be an early example of purely instrumental part-writing. Imitation is used throughout and is distributed equally

among the parts. This suggests that no one part should stand out, and the balance between instruments should be carefully maintained. Doubling of parts in this context would be out of the question.

Taking into account the genre, style, and the instruments that would most likely have been used in the home of an Italian connoisseur around 1508, a viol quartet composed of a tenor, two basses, and a large bass is the obvious first choice. Although the date is early for the large bass viol, the fact that viols as we know them were developed in Italy in the late fifteenth century (Woodfield, *Early:* 119), and that we have the previously mentioned visual evidence of a large bass viol from a 1516 German source, it is reasonable to assume that this instrument was known in Italy in around 1508. Of course, the fourth line is also within the range of an ordinary bass viol; however, viols typically had only five strings during this period, hence, in order to play the bass line, a bass viol would have to remain in its weakest, least resonant register (the low *G* being its bottom, open string—a gut string at that), while the other viols would be playing in their best registers. Clearly, the balance between the instruments that we are striving to maintain would suffer. The sixteenth-century practice of viols playing in their best registers (i.e., on their upper strings) is important to remember when scoring for viols.

Another possible instrumentation is a lute quartet playing in the old-fashioned, but still-employed, plectrum style. The ranges of the four parts (first line, *b* to *d″; * second line, *A* to *g′; * third line, *c* to *g′; * and fourth line, *G* to *d′*) would present no problems even on lutes with the same tuning. Another instrumentation that could be used is a recorder consort consisting of *g′* alto, two tenors, and a bass, though the second part has one note below the tenor range, which would have to be altered.

The final musical example is Anthony Holborne's almaine "The Honie-suckle," published in London in 1599 (LPM, AH1, no. 60). This piece is from his famous collection entitled *Pavans Galliards, Almains and other short Aeirs both grave and light in five parts, for Viols, Violins, or other Musicall Winde Instruments,* a publication probably intended for both the cultivated amateur market and the municipal musical organizations of several cities (hence the reference to violins and wind instruments). Elizabethan ensemble music often had quite colorful instrumentations, such as the well-known combination of violin (treble viol for publications intended for the amateur market), flute (or sometimes recorder), bass viol, lute, cittern, and bandora, as exemplified by Thomas Morley's *Consort Lessons* of the same year (Beck, *First*). Since Holborne, himself, was an excellent player of all three of the plucked instruments in this combination, it seems appropriate to suggest a similar type of instrumentation for "The Honie-suckle." The

ranges of the parts are: first line, *a′* to *g″;* second line, *d′* to *d″;* third line, *g* to *a′;* fourth line, *c* to *g′;* and fifth line, *G* to *a*. The two top lines and the bass contain the essential musical material, whereas the third and fourth lines are less important. Indeed, if one wished to make a Morley-type arrangement of the piece, as was done at the time to several items in Holborne's collection, those parts, if necessary, could be eliminated.

If one thinks of this almaine as practical dance music, a violin for the top line is certainly appropriate. The second line could be played by a viola or a tenor viol, the third and fourth by bass viols, and the fifth by a large bass viol, a bass violin, or a curtal. If the melody line played by a single violin is overbalanced by the four lower instruments, it could be doubled by a *g′* alto recorder (which, you will remember, sounds an octave higher and, if historically constructed, has a written range *g–g″* or *a″*). Doubling need not inhibit ornamentation, provided the players agree not to ornament simultaneously and are sufficiently skilled in doubling and improvising. Although the period offers little written discussion of this facet of performance, attention should be paid to similar techniques that are regarded today as "traditional," since they could point to the survival of an older practice. For example, to this day players of traditional dance music from Dublin to Palermo manage to double and to improvise brilliantly while doing so (as can be heard on the many available recordings of so-called ethnic music).

Plucked instruments are not mentioned on Holborne's title page; however, it was common practice in Elizabethan England to arrange five-part ensemble music to include plucked instruments. Morley's five-part "Sacred End Pavan" and "Southerne's Pavan" also were arranged and published by Philip Rosseter for a mixed consort that included lute, cittern, and bandora. In the same Rosseter publication is found an arrangement for mixed consort of a piece ("Infernum") from the Holborne publication that contains "The Honie-suckle."

A bandora would add a rich and sonorous bass- and baritone-range chordal accompaniment to the dance music ensemble performing this piece. According to extant tablature parts, it functions almost like a proto-continuo instrument, doubling the composed bass line mainly at the lower octave, while also playing low chords above its own bass line. (If a bandora is not available, a bass lute in *d′* could also perform this continuo-like role.) For rhythm, a cittern could play a continuous series of chords, making certain that it never duplicates the treble or bass rhythms, and that it breaks every half note into two quarters. A lute in *g′* could be employed as another rhythm instrument and, more importantly, to provide embellishment (divisions) based on the second line and fill-ins for the final bars of each section, while also incorporating as much as possible of the bass line. These

techniques can be learned by studying the scores of some of the English mixed consorts (Beck, *First* and Edwards, *Music*).

If the forces are available, a wind ensemble consisting of cornetts on the first two lines and three trombones on the remaining lines could alternate with the string ensemble or be used in its stead. Another wind option is an ensemble consisting of a *g′* alto recorder on the first line, a *g′* alto recorder or flute (sounding an octave higher) on the second, a flute (sounding an octave higher) on the third, and tenor and bass recorders on the fourth and fifth lines. For this instrumentation, the bass could be reinforced by an instrument at 8-foot pitch. This combination is particularly effective in conjunction with the plucked instruments described above.

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Large Ensembles

JEFFERY KITE-POWELL

Performances by a large group of recorder or viol players (or any other group of like-sounding instruments for that matter) are not what is meant here by "large ensemble." In a large recorder ensemble, for instance, players are often required to play a line that is being played by at least one other player. This is rarely very rewarding for anyone involved, except perhaps for the pedagogical assistance a lesser player may receive by doubling a more accomplished player. Tuning problems are inevitable, articulation is difficult to coordinate, and the playing of rapid passages is often unclean—and these are areas that are difficult enough when there is only *one* player on a part! Doubling a player at the same octave by the same instrument in a performance situation just is not a sound idea and should be avoided at all costs. It is highly unlikely that parts would have been doubled in this manner in the Renaissance, and it is not necessary that it be done now either. If you have four recorders, play a four-part piece that fits the range of the instruments you have; if there are five recorders, then find a five-part piece—and so on until you are playing pieces (by Gabrieli, for example) for eight, ten, or twelve instruments. Your group will find this much more enjoyable and challenging, as each player is responsible for his or her own part.

A large ensemble may be constructed in a variety of ways. In fact, there is no set instrumentation for a large ensemble. Generally, this kind of group involves either a mixture of instruments that are well suited to each other or a combination of two or more consorts of instruments and voices (if appropriate). In the latter case, polychoral compositions in which two to possibly six four-part choirs alternate and combine with each other work well.

These large, polychoral compositions require a large and diverse col-

lection of instruments, and only the wealthiest courts and churches of the sixteenth and early seventeenth centuries could have come close to having an instrumentarium such as this:

- consorts of recorders, flutes, crumhorns, curtals, shawms, schreyerpfeifen, violas da gamba, violins
- an assortment of cornetts and sackbuts
- variety of plucked strings: lute, theorbo, cittern, guitar, vihuela, bandora
- several kinds of keyboard instruments: small organ, harpsichord, clavichord, virginal, regal
- possibly even kortholts, cornamuses, sorduns, and rackets

It goes without saying that not many twenty-first-century early music groups can afford such a large collection of instruments either.

When considering which instruments are going to play a polychoral work together, great care must be taken not to mix loud and soft ensembles. The two predominately loud consorts listed above are the shawms and schreyerpfeifen, but the cornett and sackbut ensemble can sometimes be used as a loud consort as well (see chapter 8). There is a great deal of freedom in working with soft ensembles, as almost anything goes well with anything else (including voices). Just remember that an SATB recorder consort sounds at four-foot pitch; in this regard, it is often quite effective to use a low recorder consort (TTBGb or TBBGb—assuming there is no pitch lower than *c*) when covering one of several choirs in a polychoral work precisely because it is playing at eight-foot pitch. Another point to remember is that the greater the distance (within reason) between each consort, the more striking and impressive the contrast in sound will be. This is the Renaissance equivalent of the modern-day stereophonic (or quadraphonic) sound system. One drawback to having widely spaced ensembles is the difficulty of coordinating them all. Praetorius suggests:

> . . . songs [hymns & *Sonaten*] should be arranged so that five, six, or seven trumpeters, together with an optional timpanist, can be positioned at a special location in the nave of the church. This is to prevent their sound and its reverberation from overpowering the music, which would happen if they were placed in the choir [the part of the church where the service is performed]. In this way each part may be heard properly. With the help of the thoroughbass part, the choirmaster, or whoever is responsible for keeping the beat, must lead the group of musicians in the choir and the trumpeters in the nave, especially the person playing the *Quint* or, as it is usually called, the *Principal*. All members must be able to see him and follow his lead. (Praetorius, *Syntagma Musicum III:* 170; Kite-Powell trans.: 173)

In the large-scale, multichoir vocal/instrumental works of Venetian and other late Renaissance, transitional composers (in particular, Germany's

Michael Praetorius, among others), you might try placing one or two singers in some (or all, if you like) of the instrumental consorts. They may double instruments in the consort in which they are singing, or they may take the place of instruments on those lines. A variation on this idea might be to assign solo singers to one whole consort, a keyboard instrument to another, and winds and strings to the remaining consorts. As you can see, there is a great deal of latitude here, and the only limitations in orchestrating these pieces are those of imagination and instrumentarium. There was generally more money allocated for instrumentalists and singers to perform on feast days than on regular days of the week, and it may be that your performance is supposed to reflect just such a festive occasion.

Just because Renaissance instruments come in all sizes does not mean you have to play all three-, four-, five-, six-, seven-part (etc.) compositions on like-sounding instruments. Yes, it is effective, and it certainly has its hallowed place in the scheme of things, but a mixed consort can also produce highly satisfactory results. Many of the *quodlibets* and *ensaladas*—medleys of popular tunes of the time—by Ludwig Senfl and Mateo Flecha, among others, provide a wonderful opportunity to use a mixed consort. Also quite effective are the multipart works (four parts and more; sacred, secular, and instrumental) by the Flemish composers, as they frequently divide into groupings of $2+2, 3+2, 3+3$ or $2+2+2$, or some similar arrangement of voices. This is often the case with the late Italian madrigal as well. In these situations it is appropriate to arrange contrasting instrumental sounds for each grouping. Generally, it is the provenance and character of the piece, and the ranges of the parts, together with the meaning of the text (if any) that will provide the clues on instrumentation. The preceding chapter by James Tyler provides specific suggestions for orchestrating a few select pieces, and much more advice on what to do and what to avoid.

Another type of music that lends itself well to instrumental contrast is that which is based on a *cantus firmus* or a popular "tune" that remains in an inner voice. These works are substantially enhanced when the "tune" is played by a contrasting instrument. Along the same line, a simple frottola, chanson, or villancico is very effective when the top part is sung and the others are played on like-sounding instruments. And, finally, large ensembles may be employed in the performance of compositions that are divided into sections (Isaac's *A la Bataglia* comes to mind here). These kinds of composition almost cry out for variety and contrast, which may be provided at each change of section (e.g., Section A on viols, Section B on recorders, and Section C *tutti*—viols and recorders together).

This kind of alternation has been employed in recent years in performances of Renaissance dances, although there is no iconographical or other evidence that this was originally practiced. Loud consorts performed these

dances at court, generally employing only small groups of performers. Later, dances were played in chambers—in some instances by professional players, in others by nonprofessionals—by mixed or closed consorts of diverse players on soft instruments.

The repeats of sections in dances are best varied by improvisation and ornamentation, techniques known to have been used. The top line should receive the most adornment, but other parts may also substitute appropriate figurations for long notes and fill their skips with divisions. A Spanish document from 1586 cautions, however, that:

> They [the two shawm players] must carefully observe some order when they improvise passages both as to places and times. When the one player adds passages to his part, the other must yield to him and play simply the written notes, for when both together embellish at the same time, they produce absurdities that stop one's ears. [. . .] for both [cornettists] simultaneously to add improvised passages creates insufferable dissonance. (Atlas, "Renaissance": 616; Weiss and Taruskin, *Music*: 160–161)

Another possibility could be reducing the number of lines actually sounded by the consort instruments, while having the other lines covered harmonically by a continuo instrument. The full consort then plays on the repeats. A historical clue to this technique is the *quinta pars* terminology used in the printed editions. It is known that whole lines were added to works by composers, each complementary to the bass and other lines. There is room for much inquiry and experimentation here (see chapter 28).

There are many ways to achieve variety, but one must be careful to strike a good balance and not attempt to do too much; employ only one or two techniques on any given work—they are, after all, quite short pieces. Utilize other techniques with different instrumentation on the next dance so that each work can display a truly different character. Certainly avoid any sectional changes that involve quick passes of an instrument from one person to another, or even one person covering a part with a quick change of instruments at a repeat. Alternation works only when done in great moderation, as it may be quite distracting to the audience; and if the switch of instrument(s) is done clumsily, it could be disastrous to the work being played and to the composure of the audience. The document cited in the previous paragraph provides insight here, too:

> At Salves one of the three verses that are played shall be on shawms, one on cornets and the other on recorders; because always hearing the same instruments always wearies the listener. (Atlas, "Renaissance": 616; Weiss and Taruskin, *Music*: 160–161.)

Taken a step further, this suggests that changing instrument consorts from one section of a dance to the next might not have been an uncommon practice, in order not (and I paraphrase) to weary the dancers!

Finally, the great experimenter, Michael Praetorius, suggested that a bass line doubled by one or a variety of instruments at sixteen-foot pitch can add a great deal of excitement to polychoral works, as can the addition of a soprano or even a sopranino recorder (in the hands of a master) at the upper octave on repeats of sections (Praetorius, *Syntagma* III: 173; Kite-Powell trans.: 176).

There is an enormous quantity of music appropriate for the large ensemble available both commercially and in library sets and collections (see chapter 23).

Remember, there is no single, correct instrumentation for the individual parts of most compositions written in the sixteenth century. Indeed, as the years go by you may well have to rethink the instrumentation of pieces you have done in the past, due to the comings and goings of your players, or simply because you want a change—the same reasons used by players and ensemble leaders in the Renaissance!

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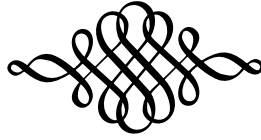
Rehearsal Tips for Directors

ADAM KNIGHT GILBERT

Collegium directors, ensemble instructors, and performers of early music typically face the daunting job of bringing together people of disparate ages, backgrounds, level of training, technical ability, all in a short amount of time and without the advantage of spending hours mastering the most basic technical skills. Individual players arrive with widely differing ideas about how a piece, a phrase, or even a single cadence should be played. Add this to the common discrepancy between advanced modern players experiencing new instruments and repertory for the first time. To top it off, your seasoned quartet of sackbut players has graduated, and a new semester begins with two recorder players, one viola da gamba, a sackbut, and someone who wants to play crumhorn. There is hope.

This chapter presents a few basic exercises that can be integrated into a rehearsal regimen for amateur and professional ensembles. The thoughts below represent less a method than a collection of tips derived from two decades performing in and coaching early ensembles. They include basic exercises usable as warm-ups and clinical tools for solving technical problems, practical tips for collegium programming, and musical suggestions that can help in approaching the performance of early music. Although some are classifiable as personal opinion, they are intended not as a prescription of style, but as an aid to help bring out the innate musicality in individual players while bringing them together as an ensemble.

Because there are no quick fixes for some technical issues, I mention some resources for more in-depth methods and technical exercises, and list some major books on instrumental technique. Some of the suggestions here can be found elsewhere, and will be cited accordingly. Others are taken

from the collective wisdom of various teachers and colleagues.[1] Although my bias as a wind player may show, these exercises work in other consorts and mixed ensembles.

I adopt two premises about the relationship between technique and music. First, I have yet to meet a student or performer who is not musical. More often than not, problems arise out of confusion about what they are doing to achieve a desired result. The best way to help them find their musical voice is to work on the music through a series of technical exercises that isolate their problems, allowing them to correct them and, in the process, create the musical gestures they hear and wish to sing or play on an instrument.

Second, experience has proven time and again that many musical disagreements could be forestalled by spending less time discussing specific details they want in a piece, and more on approaching a piece of music technically together. Players who go about articulation in the same technical manner may disagree about specific passages, but will create less disparity if they approach the music from a similar "school" of playing. Of course details are important, but achieving a sense of singing gesture first can go a long way to making real music, and decisions about long, short, slow, or fast won't get very far without basic togetherness.

Warming Up

Most vocal ensembles start with an extensive warm-up. Unfortunately, this is often the first thing abandoned in instrumental rehearsals. It is difficult to overestimate the role of a good warm-up for sounding good and playing together on the same musical page. A good warm-up should create a relaxed sound, a solid basis for intonation, and an ensemble approach to articulation. I usually follow a battery of exercises that gradually leads into the music being rehearsed.

On wind and string instruments, a relaxed long tone is essential to a good warm-up. The exercises below are designed for wind instruments, but adapt well to other ensembles. The starting point of any long tone begins with the inhalation. Blowing out can be seen as a release of potential energy within the body. How one inhales or prepares determines the quality and character of a long tone.

Kenneth Wollitz teaches an excellent recorder exercise (one he learned from Kees von Otten) in which one begins blowing a sigh through the recorder. Learning to just blow or release air through an instrument without "trying" can be tricky, and often a sigh of frustration is just the one that would have worked perfectly for a long tone. The sigh is used as a starting

point, and it is gradually trained into a note of two elided sighs, then four, then six, each time becoming smaller and more controlled. Finally, six waves release into a relaxed straight tone. This exercise offers an excellent means for playing both a straight tone and a relaxed vibrato.[2]

Double-Reed Warm-Ups

Shawms and other double reeds need special attention in getting beyond technical concerns to make music. Problems originate in not knowing how relaxed one can be when blowing through a reed. Many players mistake blowing hard for support, when the best results can be reached by playing in an easy and relaxed manner.[3] The following exercise aims at supported but relaxed blowing and embouchure.

Starting with embouchure but *no* articulation, gradually blow air through the reed until the sound activates. Notice a knot or light tightening in your diaphragm. You don't have to push your diaphragm; you need more *attention* than *tension,* and this is a good way to find that support and explore where your reed naturally engages. Players often use too much force and muscle, when a little knowledge can save a lot of effort.[4] If the tone you create is flatter than the expected pitch, blow a little harder the next time. The point of the exercise is to find a naturally engaged, relaxed blowing pressure.

Once comfortable with the concept of this exercise, set it to a metric beat: blow four beats of air, then a long tone (four to eight beats). Use no articulation yet.

Next, blow four beats of air, then close the reed with your tongue for four beats without releasing pressure. Release your tongue and allow the natural built-up pressure to sound your pitch for a long tone (four to eight beats). Be careful not to spit the sound out by attacking with your tongue. Don't push the sound out; let it come as the result of natural support. Think of the tongue as a switch for the air current, rather than as a means for pushing out sound.

A Pitch-Dropping Exercise

The next exercise addresses a common tendency to pinch the reed for control. The real job of blowing a reed is to let it vibrate freely.

1. While playing a long tone, drop the jaw, creating a drop in pitch up to a half-tone, or even to the point where the tone "buckles under." Next, raise the pitch back to its original position with diaphragm support, but *not* with the jaw.

2. Once you have the hang of this exercise, do it in rhythm: four beats of a pitch, four beats of a lower pitch with dropped jaw, then four beats of the pitch raised through support. With this technique, notice how a pure sound can be created with a relaxed embouchure and good diaphragm support. This exercise helps achieve a feeling of "pulling the reed blades apart," rather than closing and controlling them.

This exercise can help with unstable or bifocal notes and cross fingerings, which often go out of tune or buckle from too much pressure. This exercise helps find the right pressure for each note. Bifocal or unstable notes offer a good place for special focus. After learning to play bifocal notes, unstable notes, or cross fingerings on shawms, flutes, and other woodwinds, the other notes will fall into place with greater ease.

Tuning

The following woodwind tuning exercise can be played on straight tones on shawms in combination with the dropping pitch exercise, and on recorders with a relaxed vibrato exercise.

On woodwind instruments, start with everyone covering fingerholes 1-2-3.[5] On a consort of recorders, this creates intervals at the fifth and octave (C and G), a good median place for finding the central pitch on an instrument. The player of a *g* alto recorder can cover fingerholes 1-2 (E, the third of a C major triad). The same fingerings work for *C* and *F* shawms. With treble and alto shawms pitched in *d* and *g,* the tenor and bass instrument should play only fingers 1-2. (The result will sound with fifths and octaves on *d* and *a*). Once the octaves and fifth ring true, try the same intervals a step higher, a step lower, a third higher, and a third lower. Other instruments can join, preferably on a comfortable note.

Next, contextualize the tuning. If a piece is in G, play a series of related chord progressions. Begin with a I–V–I progression. Have the top voice play the soprano function (1–7♯–1), the tenor play (1–2–1 or 3–2–1), bass play (1–5–1), and the alto hold the fifth (5–5–5) or drop to the third (5–5–3) (see ex. 22.la). Then play a I–IV–I–V–I progression, as in example 22.1b.[6]

Next, tune a series of V–I progressions traveling through the circle of fifths, linking each resolution through repetition (see ex. 22.1c). N.B. This offers a valuable lesson: in a well-tuned ensemble, the player holding a note over a chord change should never have to change his pitch to be in tune. Now, skip the step of repeating each note, and simply play a progression of fifths, as in example 22.1d. Choose chord progressions from within a composition to be played; with a little bit of thought, players will become familiar with their function in the progression.

EXAMPLE 22.1a–d   Tuning exercises a. I–V–I progression b. I–IV–I–V progression c. "linked" circle of fifths d. circle of fifths

When tuning major chords, try to use just intonation, aiming for pure fifths and thirds. This means that the fifths are often higher (wider) than modern players expect, major thirds lower (smaller), and minor thirds higher (wider). Focusing on the difference tones (sometimes called "residual tones") offers an indispensable tuning device. When playing a major third between two instruments, the lower note of the interval will sound between the two players' ears [for more of difference tones, see Chapter 5). If it sounds flat, the interval is too narrow, if it sounds sharp, the interval is too wide. Be patient with your players: they may have difficulty being convinced that a major third should be played so low or narrow. And it can be hard getting fifths played sharp or wide enough at first.

Tune minor thirds in several ways. First, tune the major third of the triad (i.e., in a G minor chord, play the B♭ and D), listening for the residual B♭ (in parentheses in the first measure of ex. 22.2a) before playing the

EXAMPLE 22.2a–d   Tuning exercises involving minor triads

minor triad. This emphasizes the importance of the stable major third in the chord. Second, when playing the minor third, listen for the residual tone caused by the two pitches played together, sounding a major third below the lower note of the interval (in parenthesis in the first measure of ex. 22.2b) before playing the minor triad. Thus, the G and B♭ in a G minor chord create a residual E♭, in a chord that has a D in it! This may seem counterintuitive, but works like a charm and audibly illustrates why a minor third is an "imperfect" consonance. There is no way to play the B♭ low enough to resonate with the D of the G minor chord, but if the E♭ residual tone is in tune, the chord will ring nicely with a soft effect. Third, for a striking illustration of this phenomenon, alternate between a major and minor third, listening for the changing residual tone (in parentheses in ex. 22.2 c). Finally, play a B♭ chord next to a G minor chord (ex. 22.2d), listening for the related pitches. Be patient with players who are shocked that a minor third should be played so high (wide).

These exercises give a good sense of the pivotal notes in a mode and their significance. Arcadelt's e-mode madrigal *Donna, quando pietosa,* dresses suffering and death with B♭ or E♭ sonorities (see m. 3 and mm. 32–33 in ex. 22.3). When sensitized to these chords in a warm-up, performers will hear the musical impact of their modal distance.

ADDING ARTICULATION

Finally, add articulation to warm-ups. First, start with a long tone and, without stopping, begin articulating a common or problematic rhythmic pattern in the music. Isolating a rhythm as an exercise pattern can help internalize it and dispel its role in difficult rhythmic and melodic combinations. When the passage is encountered in the context of a composition, it will have become part of the players' gestural repertory.

EXAMPLE 22.3   Arcadelt's *Donna, quando pietosa,* mm 1–5 and 30–35

Articulation and Togetherness in the "Land of Tedium"

Many players have never heard about the concept of double tonguing or historical articulations. Several good methods address articulation, and anyone serious about the topic will want to read and practice exercises like Walter Van Hauwe's "cheap cheddar" exercise[7] and Kees Boeke's endless patterns.[8] In masterclasses and rehearsals where the issue must be addressed in a quick and concise way, I tell the parable about a mythical land of Tedium, where the language has only two consonants: T and D. Despite these verbal limitations, people manage to be expressive.[9] Playing an instrument is the same. Articulation can make or break a musical performance. Therefore, if I had time for only one ensemble exercise, it would be this one:

1. With your voice, sing your melody with the syllables Tee and Dee. Whatever the rules on historical articulation, chances are the way you choose will be natural and musical.

2. Now sing the melody with Tee and Dee, but this time, don't voice the melody, but create a sound as wind blowing in a storm, like light whistling.

3. Place the instrument in your mouth and play the same articulations on the first or last note of a passage, or on a note that presents no technical difficulties. Playing a chord differentiates your articulation from other players' sounds.

4. Finally, add the pitches, almost as an afterthought.

You will probably notice how hard it can be to play a straight tone with articulations and will hear wobbling from either lack of support or too much tension; giving the articulation extra help with unnecessary bursts of air can also cause problems. This exercise is an eye-opener to players who have little or no experience with more than one articulation. A few minutes of this exercise can achieve more than hours of argument over which articulation to use. Getting the swing of the articulations as an aspect of singing style on an instrument is crucial to good ensemble playing.

This exercise can also be used by string players, with up and down bows in place of Tee and Dee. The concept of bowing a phrase without having to worry about specific pitches can get groups past awkward passages. Singers also can use this approach to good effect. A choir may sing a passage with its words on a single note or chord, or with a single syllable. Different ones have been suggested, including "du" or "bu." The syllable "zi" has been suggested as a good way to get the face vibrating.[10] Finally, this exercise brings mixed ensembles more closely together in their approach. Modern performers often equate expression with loud and soft and strength of attack; they tend to do too many things at once, such as blowing, stopping their air, articulating, and puffing. The regimen described in this exercise shows how expressive one can be with less; after all, the best definition of technique is efficient laziness.

N.B. At first glance, this exercise would seem less useful on a crumhorn, which has only "on" and "off" for its sound, as the tongue touches the opening to the reed in essentially the same place each time. On the contrary, the approach advocated in this exercise is even more crucial to gesture and musical playing, as a little experimentation will prove.

Text and Articulation

Articulation also can be used effectively in an instrumental performance of a texted composition. Although most Renaissance methods give simple paired articulations like "dere" and "lere," (the equivalent of T and D) they

also speak of imitating the human voice. I believe one of the best ways to capture the spirit of a work is to use articulation to express the cadence of its text. For example, according to the rule book, an instrument opening Arcadelt's *Donna, quando pietosa* (see ex. 22.3) would play "te, te re te re te re." But one may wish to capture the spirit of the opening using a slight "turn around" between the opening words by tonguing "te re, tere te re re"—just one of many possibilities. One need not adhere doggedly to the text, but it is easy to imagine that players steeped in the vocal gestures of a piece would have used such devices at hand to turn a phrase.

Short Notes for Precision and Rushing

Below is a favorite short-note exercise that never fails to raise eyebrows and helps with at least three vital aspects of ensemble playing. First, it focuses attention on the attacks of notes. Second, it brings home brutally the degree to which an ensemble *is not* playing together and offers means for obtaining real precision. Finally, it addresses problems of rushing.

Play a piece or passage with *every* note as short as possible. Wind players should remember to keep their support regular and to use a clean "T" for articulation, perhaps the syllable "dit" or "deht." The first time through this exercise, someone will invariably play whole notes longer. Remember to play even the longest notes "digitally" short. Players will notice where and to what extent they are not together. Because being together is a group job, this exercise humbles everyone, but brings tangible improvement and a sense of reward to the most difficult passages.

While playing all notes short, notice and draw attention to fingers that arrive early, before the next note sounds. This tendency, although occurring naturally in the space between short notes, also happens in regular playing and lies at the heart of rushing. Ironically, when people complain that a difficult passage is too fast, they are often actually rushing. So this is crucial: remind players to watch that their fingers only move with each articulation and at the last possible moment. This can be done by looking in the mirror, and it requires constant attention.[11]

After playing the passage several times with short notes, return to playing in full values, perhaps in "hymnlike style," but with the continued focus on the articulation. The improvement should be noticeable and rewarding. This exercise will doubtless require repetition, since it often runs counter to years of instrumental training.

Also, notice that after returning to full note values, the ensemble will sound better for the first page or so covered in the short-note exercise, but the hard-earned togetherness will often deteriorate at the point in the

music where the exercise ended. Therefore, use the exercise from different starting places in the piece, either as a warm-up, or as a relief from difficult sections—a kind of technical "ice-breaker."[12]

Added Focus on Rushing

Short-note playing reveals rushing problems that often coincide with playing difficult fast passages. Because these are made harder by rushing fingers, several extra techniques can help focus a workout session. The exercise here is just one of many ways to isolate difficult passages.

1. In passages with notes of the same rhythmic value (i.e., extended passages of sixteenth notes) finger all the notes, but sound only the *first* and *third* note of each group. Notice and correct speedy fingers. It may take a few times to get the hang of this exercise, but is worth the effort.
2. Next, while fingering all the notes of a passage, sound only the *second* and *fourth* note of each group, an even trickier undertaking.
3. Finally, finger all the notes, sounding only the *first* and *fourth* note of each group.

For extra focus, play every note as short as possible and *remember,* only move the fingers at the last possible minute.[13]

Simplify and Isolate Aspects of Difficult Passages

There is no reason to let a single difficult passage bring an otherwise easy piece to a grinding halt. Because many difficult passages are little more than diminutions over simple contrapuntal motion, a Schenkerian look at the underlying simplicity of a composition can profoundly inform a rehearsal session. For example, behind the fast notes in the third section of Engelmann's *Paduana* are the first four notes of a slow-moving *romanesca* pattern[14] (ex. 22.4a). Playing the simpler version not only offers a practical solution, it illuminates the nature of its ornamentation and makes its difficulty recede. Players may gradually add the fast notes according to their ability. The simplified version in example 22.4b can be used for a good long-tone exercise. Gradually add first the embellished rhythms of Engelmann's composition, then the pitches.

Isolating difficult passages as part of a larger sequential exercise results in improvement more quickly than mere repetition within the piece and makes it technically and psychological less daunting. Use Engelmann's fast notes to create a sequential warm-up (see ex. 22.4c). Once part of a player's

EXAMPLE 22.4a–c   a. Engelmann, *Paduana* (mm. 25–31) b. Engelmann, *Paduana* (simplified) c. sequential pattern derived from Engelmann's *Paduana*

motivic repertory, such passages seem less like insurmountable obstacles when encountered in context.[15]

Isolate problematic rhythmic patterns as sequential exercises. This can demystify passages like those in fifteenth-century songs that suffer from our modern concept of the bar line. Passages that seem difficult at first turn out to be little more than a limited repertory of long- and short-note patterns. One common rhythmic pitfall, the *cursus tardus* (long-short-long-long-

EXAMPLE 22.5   Common Rhythmic Pitfall: the *Cursus tardus*

short-long) that occurs at the end of phrases, can be turned into a sequence (see ex. 22.5).

Metronome and *Tactus*

Use a metronome, preferably as loud and obnoxious as possible.[16] You know the scenario: "that metronome must be broken; it keeps changing its tempo." The moment people start fighting about who rushed and who dragged or who thinks it is too fast or too slow, bring out the metronome; it seldom lies.

When counting or conducting, avoid the modern practice of counting all the beats of a measure. Try conducting the *tactus* according to Renaissance practice. The actual note value of the *tactus* can vary widely according to original notation and modern editions. In general, however, the semibreve would be divided into two hand motions: downward on the beat ("*tactus*" or "*thesis*"), and upward ("half *tactus*" or "*arsis*"). In conducting duple mensuration, the upward and downward hand motions are of equal length.

When conducting triple mensuration, the upward motion of the hand occurs on what would be the third beat of the measure. As a result, you do *not* count "1-2-3, 1-2-3" but rather "1-3, 1-3." Counting this way offers insights into Renaissance musical style not easily felt with modern conducting. For example, in a triple mensuration passage of "long short, long short, short long, long short," you can really feel that the Renaissance "backbeat" in the reversed rhythmic pattern.

Of course, subdivision serves useful purposes, but keeping a strong *tactus* can actually make performing difficult proportions easier than furious subdividing. Even in difficult proportional relationships, voices tend to land on the *tactus* together.

Variety

One common pitfall for directors of early music ensembles is the desire for variety. Often a player may fail on one instrument simply because of playing too many others. Be willing to play a dance many times. Too many groups play a Pavane and Galliard once, going on to another piece just as the players have warmed up. A Susato or Attaingnant dance offers an opportunity to develop skills in diminution, a naturally expanding repertory.

Another related problem is the apparent need of some directors to orchestrate many different types of pieces on a concert and for players to switch instruments frequently. There is no shame in focusing on one instrument to reach a level of comfort and ability. If one style of ensemble instrumentation works, try more pieces of the same type. If they sound good, they will be less monotonous than a variety of pieces played poorly, simply for the sake of variety. Try to program an entire set of pieces with the same instrumentation and mode.

Beware of Performing Difficult Pieces

I know an artist who keeps two sketch books: one is for showing, and the other he saves for his dirty work. Musicians would do well to follow his model. Working on hard music is admirable and builds technical muscles. But concerts are the time to perform pieces easy enough for players to perform well comfortably. Save chop-busters for rehearsals and audiences known to be sympathetic. Better a shorter program of pleasant music than a concert that is one piece too long.

Starting a Piece

When starting a piece, one of the surest ways to kill a sense of gesture is to "count off" a measure. More useful is to think of the piece beginning with a breath in the mood of the music. Just as actors inhale quickly for happiness or anger, and more slowly for a sad feeling, so musicians can start a piece. If you must count beats with your head, try to think of lifting the beats rather than counting downward.

A strong leader is an asset to any ensemble, but encourage ensemble players to breathe their beginnings together. Have players take turns starting pieces in rehearsal as an exercise in ensemble leadership.

In pieces with a hard to grasp opening gesture, pick an inner passage that somehow captures the mood of the music and keep it in mind when

starting the piece. In works built on a ground bass or recurring pattern, imagine the composition playing as part of an eternal circle, and try to "step into" the music. In this sense, leading a piece successfully relies on following the music. In fact, the best leaders don't force their colleagues; they share the waves on which they are riding.

Phrase Endings and Elision

A common ensemble mistake is to mark a phrase ending in too many ways. Frequently, players ritard at the end of a phrase, take a breath, and then start the next phrase. Less is more. My personal taste lies in creating the expectation of an ending in a cadence, perhaps with a ritard, then leading onward in the new phrase. This is based in part on the major role elision plays in Renaissance rhetoric and musical composition. Often, as a phrase ends, one voice picks up the new phrase.[17]

The Renaissance Ritard?

It is common to think of a ritard as a gradual slowing of tempo, which to my mind fits a "Romantic" sensibility. I would suggest three ways of approaching a ritard in Renaissance music.

1. While playing in tempo, a player can make others wait for the next *tactus.* This device can build a sense of expectation, and then lead forward with grace. This is one of the great technical methods for achieving that nirvana of Renaissance music, *sprezzatura.*[18] One Jazz drummer refers to this as "finding one."[19] Experiment with delaying the *tactus* on which a suspension occurs.
2. Ritards are often written into the music. A phrase of text may be repeated in slower rhythmic values. This feature in a composition can inform where you might broaden and take time, but sometimes just recognizing it is often enough to make it happen.
3. Text serves as a useful device for creating a ritard based on gesture rather than by "slowing down." In this light, codas after a final cadence present a variety of possible approaches. One may ritard into the final cadence and pick up the original tempo for the closing coda, or slow the coda toward the end. Or one may slow the tag down toward the end. A piece may end with the repeat of a single word or phrase that can be used to place the final two notes. In Arcadelt's *Donna, quando pietosa,* the text can help set the gesture and pace of the coda (see ex. 22.3 above).

Renaissance Gestures

Several musical issues that confront players of Renaissance music might be addressed under the category of gesture. These include reminding players to think about leading lines toward the suspension at the end of a phrase, in lieu of the modern concept of stressing high notes as climactic. Or remembering to think in terms of accent instead of stress.[20] But even an accented word need not always be stronger than its surrounding notes. I like to think of the motion between the notes, rather than accents on the *tactus.* Bar lines can trick musicians into stressing a note. Frequently, players will play a dotted rhythm in one way, but stress the same rhythm when it is tied over a bar.[21]

The hemiola—most often illustrated by the rhythm of Bernstein's famous "I like to be in America"—is a favorite device for the ends of phrases in both texted song and dance music. One may wish to avoid the temptation to make the rhythmic switch obvious from the beginning and leave a bit of ambiguity. Rather than stressing each of the three notes, try thinking of an accent on the last note of the hemiola group. No Renaissance term describes this subtlety, but at least one modern early musician refers to the concept as a "half hemiola."[22] In fifteenth-century compositions, the hemiola is often marked by colored notation, indicated in editions by open brackets around the notes of the ligature. In these cases, try gliding over the *tactus,* rather than stressing each note.

Books and Methods for Further Use

Boeke, *Complete:* the introduction is obligatory; the second part of the book is less daunting for beginners; Hauwe, *Modern,* volume 1 is especially helpful for basic fingering, breathing and articulation, that are applicable to other instruments; Spanhove, Lasocki, and Flanders, *Finishing;* Wollitz, *Recorder.*

NOTES

1. Among those too numerous to mention, I owe special mention to Ken Wollitz, Matthias Weilenmann, Paul Leenhouts, members of the Case Western Reserve University collegium, the Stanford Early Music Singers, and my colleagues in Piffaro and Ciaramella.

2. For an excellent set of breathing and blowing exercises, see Hauwe, *Modern:* 38 *passim.*

3. I concur with Bruce Haynes, who maintains that many players and makers have a distorted sense of tuning on reed instruments because they are blowing too hard and pushing too sharp. I like to blow as open and as flat as possible, allowing some flexibility in using the embouchure for expressive playing.

4. Oboe students have been taught to support by imagining someone is trying to

pick them up from their seat, and, less fortunately, to imagine a difficult bowel movement.

5. [I am told that] Aldo Abreu calls this the perfect starting point for tuning recorders.

6. Incidentally, this is the basis of the *passamezzo moderno* pattern.

7. Hauwe, *Modern:* 56.

8. Boeke, *Complete.*

9. In this land of Tedium, those who only say Tee are considered boorish, whereas those who only say Dee are considered spineless or easy to push around. Those with range and flexibility are considered the most convincing and pleasing conversationalists.

10. Thanks to Bill Mahrt and Steven Plank.

11. Many clarinet players are taught to prepare for the next note early.

12. Although this exercise counters the idea of using paired articulations, it can be used in complementary fashion, and players can always return to the land of Tedium.

13. Other combinations of notes can be tried. For more on this technique, see Kenneth Wollitz, *Recorder:* 46–50.

14. The bass progression of *Greensleeves.*

15. For similar excercises, see Wollitz, *Recorder:* 60–65.

16. Currently, Dr. Beat holds the claim on the market as loudest and most obnoxious.

17. This is as common a device in *Orlando furioso* as in modern soap operas: just as something climactic is about to happen, the scene changes. It is also a stock device of Renaissance counterpoint.

18. This studied "nonchalance" of Caccini is defined by Castiglione in *The Courtier.* The late Paul Echols used to illustrate this by walking across a room at a steady pace, pause briefly with one foot in the air as if remembering something he wanted to say, then turn and continue onward as if to say, "never mind." For an interesting discussion of the term *sprezzatura,* see Saccone, *Grazia.*

19. Alas, the source remains anonymous to me.

20. A nice discussion of this concept can be found in Boone, *Patterns,* especially 31–33 and 47–57.

21. Mark van Scheeuwijk suggests performing from original notation to avoid the issue of bar lines altogether.

22. This has been mentioned by Pedro Memellsdorf.

23

Performance Editions

FREDERICK GABLE

[Amended and with Internet addresses provided by the editor]

Internet search engines have become so powerful and fast since the first edition of this *Guide* appeared—and Web-browsing so commonplace—that when seeking a specific item, whatever its nature, the first thing we do is go to the computer and throw a few well-chosen keywords into cyberspace. Near instant gratification is the result, and in the case of early music, we are often able to locate the exact piece of music in a specific set or series within minutes. Even more remarkable, it has come to the point that some publishers will, for a fee, allow you to download a specific composition in multiple copies for your own personal use. The discussion that follows is divided into two main categories: "commercially" available music and "scholarly" collections, which also can be purchased. Internet sites are given at the conclusion of the chapter; works mentioned in the course of the chapter that are on that list will be identified by an asterisk. Keep in mind that Internet Web sites are subject to change, so if a particular site doesn't work, try a keyword search.

COMMERCIAL

The amount of Renaissance music published in commercial performing editions continues to increase steadily, so that only a small sample of the kinds of music available can be given here.

Vocal music of the Renaissance forms a significant part of standard choral repertory and is well represented in many commercial choral collections or single octavo editions. Keep in mind that the works will often be

rather heavily edited, transposed, and translated. Both McGee and Phillips and Jackson discuss the problems of editions and offer guidelines for choosing good editions. The most reliable and accurate versions of vocal music are best found in the scholarly editions dealt with later in this chapter, but *Das Chorwerk*★ (Möseler Verlag) is an authoritative large series devoted to a wide range of early choral music, as is Doblinger Verlag's *Thesauri Musici*★ series. The old *Antiqua Chorbuch*★ (Schott) is a gold mine of German secular and sacred music from the fifteenth through eighteenth centuries. The *Oxford Book of Tudor Anthems*★ contains many famous English sacred works in a high-quality paperback edition. Also highly recommended are *The Oxford Book of English Madrigals*★ and *The Oxford Book of Italian Madrigals,*★ which make a large number of these works available in convenient and authoritative paperback editions. A varied collection of vocal works from the New York Pro Musica repertory can be found in *An Anthology of Early Renaissance Music,* edited by Noah Greenburg and Paul Maynard. Galaxy Music's series of *Invitation to the Madrigal* collections offers a wide range of secular vocal music for various ensembles in a handy-size format.

For the Renaissance instrumental repertory the editions of one publisher will give you many years of music to perform: London Pro Musica Editions. LPM puts out many series, each devoted to a specific type of music: The Attaingnant Dance Prints, Early Dance Music, German Instrumental Music ca. 1600, Music for Crumhorns, Renaissance Chansons, Venetian Music ca. 1600, The Italian Madrigal, Keyboard Repertory, the miscellaneous series Thesaurus Musicus, Dolce Editions, and others. A complete catalog is probably available from your local music dealer or from Magnamusic★ in Sharon, Connecticut, The Early Music Shop of New England,★ Brookline, Massachusetts, and the Boulder Early Music Shop,★ in Boulder, Colorado. Most of the early music specialty shops will have a good selection of LPM's music in stock. The editions normally include introductory notes and authoritative advice on performance, as well as separate parts in many cases. Editorial policies can be trusted to give you accurate music texts.

Schott★ (London) has long published a good series of English and Italian instrumental music, mainly edited for recorders. The age of the series may make copies hard to obtain, but many libraries will have some selections. Holborne dances, Byrd and Gibbons fantasias, Morley canzonets, some arrangements from English keyboard music, and anonymous Italian dances form some of the repertory in this series.

Two old but continuing series of chamber music contain some Renaissance music: *Hortus musicus*★ (Bärenreiter) and *Nagels Musik Archiv*★ (Nagel), although both emphasize Baroque instrumental music. Several

other European publishers issue reputable series devoted largely to early instrumental music: Moeck in Germany issues the *Zeitschrift für Spielmusik*⋆ and the series *Der Bläserchor;*⋆ Musikhaus Pan in Zurich has recently begun a series of ensemble music from the late sixteenth and seventeenth centuries; *Die Tabulatur* (Hoffmeister) contains music for lute and other plucked string instruments; the *Consortium*⋆ series of Heinrichshofen in Wilhelmshaven offers music from the collections of Phalèse and Mainerio, and music by Brade, Gabrieli, Schultz, Simpson, Ferrabosco, and others. A few choice keyword Internet searches will bring you to outlets where most of these titles can still be ordered.

Performing from original notation in a facsimile edition is an instructive challenge for any performer. *Ogni Sorte Editions* published Renaissance music in facsimile notation and modern score with instructions for performing from the original notation. One issue may contain various settings of the same chanson tune, or works by one composer. Although no longer available for purchase, these fine editions are accessible in libraries throughout the country, and it may be possible to interlibrary loan them. Many other facsimile editions of sixteenth-century music prints are becoming more easily obtainable. Minkoff Editions⋆ of Geneva, Switzerland, has an especially large catalog of music facsimiles, as does Old Manuscripts and Incunabula⋆ (OMI) in New York. Garland Publishing of New York (now no longer in business) published a series called *Renaissance Music in Facsimile,* a multivolume set of late-fifteenth- and sixteenth-century music manuscripts. Other facsimile series are *English Lute Songs in Facsimile,*⋆ *Corpus of Early Music*⋆ (in facsimile), some volumes of *Monuments of Music and Music Literature in Facsimile,* and the extensive series of facsimile lute books, *Musical Sources* (check the online lute societies for links to these sources).

Scholarly

More unusual repertory, specific compositions, or less-often performed Renaissance music can be found in the scholarly editions or monuments of music literature. Sets devoted to the complete works of a composer are the most important of these editions. Complete editions exist for DuFay, Josquin, Obrecht, Gombert, Byrd, Hassler, Gabrieli, Gesualdo, Goudimel, de Monte, Palestrina, Lassus, and many other Renaissance composers. The American Institute of Musicology dominates the publication of complete works of Renaissance composers via its elegant series *Corpus Mensurabilis Musicæ;*⋆ visit their excellent Web site for a complete description of what is available, including the contents of each volume along with a sample page from each; volumes of anthologies and anonymous works are also searchable.

In the extensive national sets may be found music associated with a single European country: Austria, Germany, England, Spain, France, Italy, Poland, Portugal, Sweden, and others. These and smaller national collections may be found listed by country in McGee's section on Repertory, pp. 227–233. Individual volumes of a set may be devoted to Renaissance music, such as "Music of John Dunstable" or "Dowland Ayres" in *Musica Britannica;*★ the "Glogauer Liederbuch" and works of Senfl in *Das Erbe deutscher Musik;*★ secular music of Heinrich Isaac and vocal works of Jacob Handl and Jacobus Vaet in *Denkmäler der Tonkunst in österreich*★ (DTÖ); chansons of Claude le Jeune and others in *Les Maîtres Musiciens de la Renaissance Francais;*★ motets of Morales and organ works by Cabezón in *Monumentos de la Musica Española.*★ University Music Editions★ in New York offers microfiche of entire historical anthologies (see later in this chapter).

Many miscellaneous series—some no longer active—provide a wealth of Renaissance music: *Recent Researches in the Music of the Renaissance*★ (which also provides excellent detail), *Early English Church Music*★*, Corpus of Early Keyboard Music,*★ 4 vols. of *Smith College Music Archives, Anthology of Music (Das Musikwerk),*★ *The English Madrigalists,*★ and *Music of the Florentine Renaissance.* For a time Garland published an ambitious Renaissance music series that include *The 16th-Century Chanson, Italian Instrumental Music of the 16th- and early 17th-Centuries, The 16th-Century Madrigal,* and *The 16th-Century Motet;* many libraries will have complete sets of these volumes.

Prior to the blossoming of the Internet era, the main problem with scholarly editions was gaining access to specific works within a set. H. Heyer's, *Historical Sets, Collected Editions, and Monuments of Music* (Chicago: American Library Association, 1980) and Sidney Charles's, *A Handbook of Music and Music Literature in Sets and Series,* (New York: Free Press, 1972) are dated and do not often cite specific pieces but only types of pieces. Although not indexed and primarily a retail dealer's catalog, *Broude Brothers' Musicological Publications: a Reference Catalogue* is a detailed, volume-by-volume listing of all the important collected editions and historical sets and therefore yet another reference source. *New Grove* articles on individual composers contain works lists with citations leading to published scholarly editions. For the instrumental music repertory the most comprehensive guide to original prints and scholarly editions is Howard M. Brown's *Instrumental Music Printed Before 1600* (Cambridge, Mass.: Harvard University Press, 1965). At the end of the last century, the book publishing company W.W. Norton brought out two long-awaited books on music in the Renaissance: Allan Atlas, *Renaissance Music: Music in Western Europe, 1400–1600* (1997) and Leeman Perkins, *Music in the Age of the* Renaissance (1998). An older, yet still valuable bibliographic source is Gustave Reese, *Music of the*

Renaissance, revised edition (New York: W. W. Norton, 1958). A composer or title entry in the index can direct you to a footnote reference to works published in an older scholarly series, article, or monograph. Often, obscure settings of melodies can be tracked down in this way.

General anthologies of early music form an often overlooked source of music for concert performances and much of the music is not often heard in live or recorded performances. The most standard anthologies are Davidson and Apel, *Historical Anthology of Music,* Vol. 1 (Cambridge, Mass.: Harvard University Press, 1949); Schering, *Geschichte der Musik in Beispielen* (Leipzig: Breitkopf & Härtel, 1931); Parrish and Ohl, *Masterpieces of Music before 1750* (New York: W. W. Norton, 1951); Parrish, *A Treasury of Early Music* (New York: W. W. Norton, 1958); and Palisca and Burkholder, *The Norton Anthology of Western Music,* Vol. 1, fifth edition (New York: W. W. Norton, 2005); Fuller, *The Western Tradition—Anthology Antiquity to Baroque* (New York: McGraw-Hill, 2007).

SELECT INTERNET WEB SITES

Commercial

Antiqua Chorbuch (Schott Music International) (http://www.schott-music.com/shop/products/search) Type "Antiqua Chorbuch" (no quotes) in the "title" entry window.
Boulder Early Music Shop (http://www.bems.com/)
Das Chorwerk (Möseler Verlag) (http://www.moeseler-verlag.de/php/index.php?xId=f7R4o1h6n2e7Z6f2i0R1P6O7V3&aktion=start)
Consortium (Heinrichshofen) (http://www.heinrichshofen.de/kategorien/kat_37/?search term=consortium)
The Early Music Shop of New England (http://www.vonhuene.com/)
The English Madrigalists (http://www.stainer.co.uk/chormad1.html#top)
Magnamusic—http://www.magnamusic.com/RCintroduction.html
Das Musikwerk (http://www.laaber-verlag.wslv.de/index.php?m=5&n=5&ID_Liste=37)
Oxford Book of Tudor Anthems / The Oxford Book of English Madrigals / The Oxford Book of Italian Madrigals (http://www.oup.com)
Thesauri Musici (Doblinger Verlag) (http://www.doblinger.at/download.asp)

Scholarly Editions, Historical Sets, Collections, Monuments, and Series

Corpus of Early Keyboard Music (http://www.corpusmusicae.com/cekm.htm)
Corpus Mensurabilis Musicæ (http://www.corpusmusicae.com/cmm.htm)
Denkmäler der Tonkunst in Österreich (DTÖ) (http://www.dtoe.at/)
Early English Church Music (http://www.eecm.net/)
English Lute Songs in Facsimile (http://www.lutesoc.co.uk/publist.htm)
Das Erbe deutscher Musik (http://www.baerenreiter.com/html/completeedi/edm.htm)
Monumentos de la Musica Española (http://www.imf.csic.es/Musicologia/paginas/monumentos.htm)
Musica Britannica (http://www.stainer.co.uk/acatalog/musica.html)
Recent Researches in the Music of the Renaissance (http://www.areditions.com/rr/)

Facsimiles

Corpus of Early Music (in facsimile) (http://www.omifacsimiles.com/cats/alamire.html)
Minkoff Editions (http://www.minkoff-editions.com/intro/intro.htm)
Old Manuscripts and Incunabula (OMI) in New York (www.omifacsimiles.com)

Microfiche

Denkmäler Deutscher Tonkunst (DDT), *L'arte Musicale In Italia; Les Maîtres Musiciens de la Renaissance Française, Publikationen Älterer Praktischer Und Theoretischer Musik-Werke,* and the DTÖ may all be had in microfiche from University Music Edition (http://www.universitymusicedition.com/index.html)

PART FOUR

PERFORMANCE PRACTICE

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Tuning and Temperament

ROSS DUFFIN

Sensitivity to tuning and awareness of historical tuning systems is a vitally important part of Renaissance performance style. Perhaps the single most important facet of the Renaissance approach to tuning over that of more recent eras is the primacy of the pure major third: the preference for a major third which is narrower than an equal-tempered major third by about ⅐ of a semitone. Such a major third is called "pure" because it produces no "beats" (audible pulsations produced when two slightly out-of-tune notes are sounded together). Unfortunately, modern musicians are generally so used to equal-tempered major thirds that they initially hear a pure major third as dolefully narrow or flat. This is something which most listeners will quickly overcome once they have the purity of the interval pointed out to them and get used to hearing it. The really insurmountable problem related to tuning in the Renaissance, as should be evident from the discussion later in this chapter, has to do with the basic incompatibility of the nature of sound with our instruments and our system of notes. But this is a problem that applies equally to music of any era, so don't be discouraged. There is still much that can be done with tuning to enhance the performance of Renaissance music, and it is not as difficult as it might seem at first.

KEYBOARD

We speak of the "circle of fifths," that procedure whereby, starting on any note and going up or down in series by the interval of a fifth, eventually we arrive at a note with the same name as the one we started on. The problem is that if we tune fifths that are acoustically pure, the note we arrive at after

a circle of twelve fifths will be about one quarter of a semitone sharp to the starting note. Similarly, we think of an octave as made up of a series of three major thirds, like C to E, E to G♯ and G♯ (or A♭) to C. But again, if we tune acoustically pure major thirds, we arrive at a note that is almost half a semitone flat to the starting note.

So, although acoustically pure fifths and acoustically pure major thirds would seem to be desirable sonorities to have in performance, there is no way that either one of them can be completely reconciled to the twelve available pitches of the keyboard octave. Either we tune eleven perfect fifths and leave the last one dissonant and unusable, or we compromise the perfection of the fifths and create what is known as a temperament.

PYTHAGOREAN TUNING

Until about the middle of the fifteenth century, practically the only system described or recommended by theorists was one involving the use of pure fifths. It had historical preeminence, since the mathematical ratio for pure fifths, 3:2, had first been expounded by the Greek philosopher Pythagoras and continued to be cited by theorists throughout the medieval period. It also made sense musically, since in so much of the music of the time, the interval of the open fifth was the predominant sonority. And few enough accidentals were used that it was usually possible to avoid the dissonant "fifth"—the "wolf fifth" as it was called—without too much difficulty. We know this system now as Pythagorean Tuning or Pythagorean Intonation.

Equal temperament is actually not a bad approximation of Pythagorean Intonation. The dissonance of the Pythagorean "wolf" is averaged out over the circle of twelve fifths, so that each interval is only slightly narrower than pure, a difference of only about 1/50 of a semitone.

The real shortcoming of Pythagorean Tuning (and also of equal temperament, for that matter) is the imperfection of the major thirds. Pythagorean thirds are very wide—not at all pleasant, so as composers began to use more thirds in their harmonic writing in the fifteenth century, performers must have found the system to be increasingly unsatisfactory. As we shall see, one solution was to "transpose" the system so that it had more usable major thirds.

The standard Pythagorean Tuning is represented in table 24.1 using a

Table 24.1. Pythagorean tuning expressed in cents.

C	C♯	D	E♭	E	F	F♯	G	G♯	A	B♭	B	C
0	114	204	294	408	498	612	702	816	906	996	1110	1200
	M	m	m	M	m	M	m	M	m	m	M	m

system of "cents" in which 100 cents is equal to an equal tempered semi-tone. The tuning is created by tuning pure fifths (702c) down to E♭ and up to G♯, leaving the "wolf" between those two notes.

You will notice that there are two sizes of semitone, termed major (M) and minor (m). The major third that appears commonly in the system (C-E, D-F♯, etc.) is more properly known as the Pythagorean ditone and consists of two major and two minor semitones (2M + 2m). This is the interval that is extremely sharp, at 408c (the *pure* major third is only 386c). But it can also be seen that a *good* major third (384c) occurs in four places in this system as a diminished fourth (M + 3m): B-E♭ (D♯), F♯-B♭, C♯-F, G♯-C. Henri Arnaut (ca. 1440) introduced or, at least, transmitted a transposed Pythagorean system in which good major thirds occurred in more useful places: B-D♯ (as in Pythagorean), D-F♯, E-G♯, A-C♯ (see table 24.2). While these may not seem at first glance to be so useful, they occur often at approaches to cadences, whereas cadential resolutions are still, in the early to mid-fifteenth century, likely to be open fifths and therefore less in need of good major thirds. Arnaut's system is created by tuning perfect fifths down to G♭ (which Arnaut still calls F♯) and up to B. This leaves the wolf fifth at the interval B-F♯ which, of course, may need to be adjusted for a particular piece if it occurs prominently.

Table 24.2. Arnaut's transposed Pythagorean tuning expressed in cents.

C	C♯	D	E♭	E	F	F♯	G	G♯	A	B♭	B	C
0	90	204	294	408	498	588	702	792	906	996	1110	1200
	m	M	m	M	m	m	M	m	M	m	M	m

MEANTONE TEMPERAMENTS

Pythagorean Tuning works fairly well into the second half of the fifteenth century, giving good realizations of many of the works in the *Buxheim Organ Book,* for example, particularly those based on early fifteenth-century chansons. But by the late fifteenth century, according to indications in *Musica practica* of Ramos de Pareja (1482), keyboard players seem to have arrived at a new solution—one that made extensive use of the ratio for the pure major third, 5:4, first formally revived from classical theory by Gafurius in 1518. In the classic temperament of this type, 1/4 comma meantone (among the many varieties of meantone temperaments—I once heard Bob Marvin refer to this one as "God's Meantone"), there are eight pure major thirds (2M + 2m), and four excruciating ones (3M + m). The real cost of the pure major thirds is not these four unusable ones, however, but rather that

Table 24.3. 1/4 comma meantone: usual notes expressed in cents.

C	C♯	D	E♭	E	F	F♯	G	G♯/A♭	A	B♭	B	C
0	75.5	193	310.5	386	503.5	579	696.5	772/814	889.5	1007	1082.5	1200
	m	M	M	m	M	m	M	m/M M/m	M		m	M

in order to achieve the pure major thirds, it is necessary to temper (narrow) the fifths more than 2½ times the amount necessary for equal temperament, rendering them noticeably narrow and dissonant compared to those of the Pythagorean or even the equal tempered system. Most Renaissance music has lots of thirds, however, and the bitterness of the fifths tends to get lost in the overwhelming sweetness of the thirds. *It is impossible to overemphasize the positive and colorful effect of 1/4 comma meantone on keyboard music of the Renaissance.*

The name 1/4 comma meantone (table 24.3) comes from two different characteristics of the temperament: if you were to tune four pure fifths up from C (C up to G, to D, to A, then to E), the note E that you arrive at would be sharper than a pure major third above C by 22c (about 1/5 of a semitone), an amount known as a *syntonic comma.* But if, in order to tune that E as a pure major third, you divide up the discrepancy among the four fifths, each interval of a fifth would be tempered (narrowed) by 1/4 of that amount, hence "quarter-comma." The term "meantone" comes from the fact that, in this system, the whole tone is exactly half of the pure major third. (Note that, as in Pythagorean Tuning, there are two different sizes of semitone; in meantone, however, the chromatic semitone is minor and the diatonic semitone is major.)

To set 1/4 comma meantone on the keyboard, tune C-E in the tenor octave as a pure major third, then, using a flashing metronome, narrow the C-G fifth to beat at about 74 beats/minute at $a' = 440$ (70/min. at $a' = 415$); widen the D-G fourth to beat at 110 (104)/min.; narrow the D-A fifth to beat at 82 (77)/min.; check that the E-A fourth is beating about 123 (116)/min.; if it is not, check the above intervals again. (If you are using an A fork, tune A-D-G-C, then C-E pure, checking it with the A.) The rest of the temperament can be set entirely by tuning pure major thirds above and below those notes. The usual question is G♯/A♭, which can be set as a pure major third either to E or to C depending on which note is needed for the music.

In practice, 1/4 comma meantone works beautifully as long as a note is not used in more than one of its enharmonic forms throughout a piece of music. This can include some fairly chromatic works, such as Giles Farnaby's "His Humour" from the *Fitzwilliam Virginal Book* and Sweelinck's *Fantasia chromatica.* However, once a note is used in more than one enharmonic form,

as happens more frequently in music after 1600 (e.g., Frescobaldi's *Cento Par-tite*), it is necessary either to have split keys on the keyboard, to tolerate one or more pungent surprises, to set the pitch of the note halfway between the two pure major third positions, or to choose a different temperament.

Other meantone systems advocated in the Renaissance include 2/7 comma (Zarlino, 1558) and 1/3 comma (Salinas, 1577)—temperaments in which the fifths and the major thirds are even smaller than in 1/4 comma meantone. (1/3 comma meantone was actually intended for an instrument with many split keys and, as such, results in a useful system of nineteen equal notes to the octave, pure minor thirds, and no wolf fifth.) It is also possible that less extreme forms of meantone, such as 2/9, 1/5, and 1/6 comma as well as some irregular temperaments (having many different sizes of fifth and major third) might have evolved in practice in a search for bet-ter fifths than 1/4 comma's, even though the improving fifths result in worsening major thirds. These temperaments, especially the less extreme forms of regular meantone systems, may be useful as a compromise, if the keyboard instrument must play with fretted instruments.

FRETTED INSTRUMENTS

And more than once I have felt like laughing when I saw musicians struggling to put a lute or viol into proper tune with a keyboard instrument . . .

—Giovanni de' Bardi to Giulio Caccini (ca. 1580)
(quoted in Strunk, *Source Readings,* p. 297)

The nature of fretted instruments, with strings tuned in fourths and a major third, yet needing the frets to serve for all the strings and produce pure octaves and unisons across the compass, does not easily allow the use of unequal fretting. To cite some examples, if the one major third between open strings is tuned pure, it becomes more difficult to tune octaves from one side to the other of that interval. If the fourth fret of an A lute is tuned as a pure major third to the open string to accommodate all the sharp notes there, it ruins the tuning if the fourth fret E♭ is used extensively in a piece. So while adjustments in the fretting can be made (and were made during the Renaissance), and while good players can vary the pitch of a note against the frets by pulling and pushing the stopped string (*intensione* and *re-missione* according to Aaron, 1545) to raise and lower, respectively, the pitch, fretted instruments like to play in equal temperament. After 1550, this was clearly a prevalent system, which is why the conflict with keyboard instru-ments arose. However, some writers were advocating Pythagorean Tuning

into the middle of the sixteenth century (!), and there is some musical and theoretical evidence for the use of meantone temperaments right through the century. Thus, shadings one way or the other from equal temperament are possible and, indeed, when fretted instruments are played with keyboards, we assume that some sort of compromise was made which enabled them to sound in tune with each other.

PYTHAGOREAN TUNING

Pythagorean Tuning would not seem to be very appropriate for music as late as it was still recommended (Bermudo, 1555). Probably, the sixteenth-century theorists advocating it were not in close touch with the practical aspects of lute and viol playing. Still, instructions such as those provided for Pythagorean Tuning by Oronce Fine in 1530 result in a workable system for the fifteenth century at least, corresponding to Arnaut's transposed system for keyboard (see table 24.5). Along a single string, the arrangement of major and minor semitones is the same as in Arnaut's scale with the exception of the last two intervals, which are reversed, as Fine tunes the eleventh fret as a pure fourth to the sixth fret rather than as a pure fifth to the fourth fret. (In cents, the value would be 1086 rather than 1110.)

EQUAL TEMPERAMENT

A Pythagorean whole tone has the ratio 9:8. In attempting to divide that into semitones and still use simple ratios, some Renaissance writers advocated that 9:8 (18:16) be divided into 18:17 (minor semitone) and 17:16 (major semitone). Interestingly, in practice, musicians found only 18:17 to be useful in fretting. According to Martin Agricola in 1545, many lutenists and gambists made all their frets equal and used only the minor semitone. In fact, 18:17 as a ratio from one fret to the next results in a very satisfying equal temperament comparable to one using the more correct scientific method (see table 24.5). It is possible that the discrepancies are made negligible by such variables as the increased tension of the string when it is depressed to the fingerboard. It is also likely that any temperament such as this was shaded by ear by a good player, with frets 1, 4 (especially), and 6 being the obvious candidates for slight adjustment toward a meantone scheme.

MEANTONE TEMPERAMENTS

It seems clear that some music for fretted instruments, particularly before 1550, is better served by a meantone system than an equal-tempered one.

Table 24.4. Chart of notes for fretted instruments in G, A, and D.

Fret		Fret		Fret	
G C F A D G		A D G B E A		D G C E A D	
1. G♯ C♯ F♯ B♭ E♭ G♯		1. B♭ E♭ G♯ C F B♭		1. E♭ G♯ C♯ F B♭ E♭	
2. A D G B E A		2. B E A C♯ F♯ B		2. E A D F♯ B E	
3. B♭ E♭ G♯ C F B♭		3. C F B♭ D G C		3. F B♭ E♭ G C F	
4. B E A C♯ F♯ B		4. C♯ F♯ B E♭ G♯C♯		4. F♯ B E G♯ C♯ F♯	
5. C F B♭ D G C		5. D G C E A D		5. G C F A D G	
6. C♯ F♯ B E♭ G♯ C♯		6. E♭ G♯ C♯ F B♭ E♭		6. G♯ C♯ F♯ B♭ E♭ G♯	
7. D G C E A D		7. E A D F♯ B E		7. A D G B E A	
8. E♭ G♯ C♯ F B♭ E♭		8. F B♭ E♭ G C F		8. B♭ E♭ G♯ C F B♭	
9. E A D F♯ B E		9. F♯ B E G♯ C♯F♯		9. B E A C♯ F♯ B	
10. F B♭ E♭ G C F		10. G C F A D G		10. C F B♭ D G C	
11. F♯ B E G♯ C♯ F♯		11. G♯ C♯ F♯ B♭ E♭ G♯		11. C♯ F♯ B E♭ G♯C♯	
12. G C F A D G		12. A D G B E A		12. D G C E A D	

Certain tablature choices of string and fret in situations where there is more than one possibility lead to that conclusion. Also, although no one has yet done a thorough study of them, surviving sixteenth-century instruments with fixed frets (including citterns, bandoras, and orpharions) show a tendency toward meantone schemes. In addition, some fretting instructions from the period speak of major and minor semitones in places that would correspond to meantone rather than to Pythagorean Tuning. Obviously, players could not have tuned their open fourths so wide and the major third so narrow, or adjusted their frets to the extent that they were unable to push or pull the unisons and octaves into tune. But they may have preferred the coloristic effect of a meantone approximation, and they must have done something to make it possible to play with keyboard instruments. In fact, it *is* possible to approximate meantone tuning on a fretted instrument, but it requires two things: the setting of the frets according to the interval ratios in meantone, and the tuning of the open strings to the intervals created by the fretting (this may be checked against a meantone-tuned keyboard). Table 24.4 is a reference chart showing the notes for open strings and frets of three common tunings for Renaissance lutes and viols. Table 24.5 gives fretting ratios for Pythagorean Tuning, equal temperament, 1/6, 1/5, and 1/4 comma meantone temperaments. In order to use the information in table 24.5, measure the distance from the nut to the bridge on the instrument in question and multiply that amount by the ratios to give the correct theoretical placement of the frets in each system. It should be noted that while professional players may start with formulas for placing the frets, they

Table 24.5. Fretting ratios for Pythagorean tuning, equal temperament, 1/6 comma meantone, 1/5 comma meantone, and 1/4 comma meantone.

	Pythagorean	Equal	1/6 Comma	1/5 Comma	1/4 Comma
Fret					
1.	.0508	.0561	.0499(.0605 Fa)	.0471(.06525 Fa)	.0429(.0654 Fa)
2.	.1112	.1091	.1074	.1067	.1056
3.	.1563	.1591	.1615	.1625	.1641
4.	.2100	.2063	.2033(.2133 Fa)	.2020(.2148 Fa)	.2000(.2183 Fa)
5.	.2500	.2508	.2515	.2518	.2523
6.	.2881	.2929	.2889(.2969 Fa)	.2871(.2986 Fa)	.2845(.3012 Fa)
7.	.3333	.3326	.3320	.3317	.3309
8.	.3672	.3700	.3724	.3735	.3750
9.	.4075	.4054	.4037	.4030	.4018
10.	.4375	.4388	.4398	.4403	.4410
11.	.4661	.4703	.4678	.4667	.4650
12.	.5000	.5000	.5000	.5000	.5000

always make minute adjustments based on checking octaves and unisons across the strings.

Finally, in attempting to achieve a flexible meantone system, some modern players have had success with "split frets" or taped-on partial frets to accommodate both *mi* and *fa* possibilities. For a bass viol of average string length, this would require separation of the strands of the fret by just over half an inch for the first fret, proportionately less for the fourth and sixth frets. In practice, the first fret is the one most in need of "splitting" and the one where the separation is large enough to allow even lutenists to make the necessary distinction in difficult situations such as bar chords. This is a good compromise, but if you are using single frets, try working with *fa* on the first fret and *mi* on the fourth and sixth frets. There is also the possibility that the tied frets on lutes and viols were sometimes slanted. The first fret of a *g'* lute, for example, might be slanted to give a longer string length in the bass in view of the sharped notes there, and a shorter string length in the treble in view of the flatted notes there, although the top string's first fret note would be unusable as a *g#'* in such an arrangement.

VOICES, VIOLINS, AND OTHER MUSICAL WIND INSTRUMENTS

Performance media such as these with greater "real-time" tuning flexibility than keyboard and fretted instruments may aspire to the perfection of Just

Intonation, a system in which all fifths and major thirds are tuned pure. This is not to say that they cannot use other systems as well. Many woodwind makers, for example, use a 1/4 comma meantone basis for their instruments even though there may still be a tendency for players to want to play the fifths as pure as possible. On the other hand, I have found that singers will quite easily accommodate themselves to singing with an organ tuned in 1/4 comma meantone in spite of the discomfort of singing the narrow meantone fifths *a cappella*. Thus, it is clear that performers with tuning flexibility can and should adjust to instruments with fixed systems.

But what of Just Intonation? Is it a chimera? Performances by vocal groups such as The Hilliard Ensemble, The Tallis Scholars, and Gothic Voices have made it apparent that approaching perfection in tuning is not an impossible dream. Although a good part of their tuning precision is due to good ears, outstanding musicianship, and intuition, there are a few conscious adjustments that can be made that will begin to "justify" the tuning of any ensemble.

The Just scale contains some characteristics of both the Pythagorean and 1/4 comma meantone systems. However, many of the notes in the system must maintain the flexibility to adjust depending on the context. Some notes are fairly stable and others need only a couple of different positions. Of the notes in the C diatonic scale, A is the most likely to need adjustment; its sharper form makes a pure fifth with the regular D, and its flatter form makes a pure fifth with E and a pure major third with F. D itself may occasionally need adjustment if the A is already prevailing in its flatter form. Similarly, F or B♭ will need to be adjusted when those two notes sound together. The other accidentals are tuned as pure major thirds and fifths to the diatonic notes, the most common flip-flop being at the G♯/A♭ level. Table 24.6 gives a cents chart of the most commonly used pitch relationships in Just Intonation.

Table 24.6. Just Intonation: most common cents values and frequent alternates.

C	C♯	D	E♭	E	F	F♯	G	G♯/A♭	A/A	B♭	B	C
0	70	204	316	386	498	590	702	772/814	884/906	1018	1088	1200
	(92)	(182)			(520)					(996)		

NOTE

enced that part of the chapter. Finally, Rogers Covey-Crump of The Hilliard Ensemble and Gothic Voices showed me many years ago that it was, indeed, possible and useful for singers to take an analytical look at tuning in unaccompanied vocal ensembles.

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Agricola, *Musica;* Arnaut de Zwolle, "Manuscript"; Aaron, *Toscanello;* Aaron, *Lucidario;* Bermudo, *Declaración;* Fine, *Epithoma;* Gafurius, *Practica;* Gafurius, *De harmonia;* Ramos de Pareja, *Musica;* Salinas, *De musica;* Zarlino, *Istitutione.*

Secondary Sources

Perhaps the best introduction to the subject is Mark Lindley's "Temperaments" article in *The New Grove.*

For keyboard tunings, the following may be useful:

Barbour, *Tuning;* Jorgenson, *Tuning;* Leedy, "Personal"; Lindley, "Early"; Lindley, "Instructions"; Pepe, "Pythagorean"; Reply: Marvin, *Courant.*

For fretted instrument tunings, the most thorough source is Lindley, *Lutes.*

For Just Intonation, a useful discussion with scrutiny of many tuning systems is found in Blackwood, *Structure.*

See also Knighton and Fallows (Covey-Crump), *Companion.*

Suggested Listening

Keyboard

PYTHAGOREAN

A Dance in the Garden of Mirth. Dufay Collective. Peter Skuce, Pythagorean-tuned organ. Chandos CHAN 9320 (1994).

MEANTONE

16th Century English Harpsichord and Virginals Music. Trevor Pinnock. CRD 3350 (1978, reissued 1994).

Buxheimer Orgelbuch. Ton Koopman, at the Triforium organ, Cathedral of Metz. Meantone temperament on intabulations of late medieval works. Astrée Auvidis, E7743 (1983, reissued 1988).

Consonanze Stravagante. Christopher Stembridge. Chromatic Neapolitan works for split-key meantone organ and harpsichord. Ars Musici AM 1207-2 (1997).

Fretted Instruments

John Dowland: Musicke for the Lute. Paul O'Dette (1/6 comma approximation with split first fret). Astrée E 7715 (1986).

Luys de Narvaez: Los seys líbros del Delphin de música. Hopkinson Smith, vihuela (1/4 comma approximation with split frets). Astrée E 8706 (1989).

Ottaviano dei Petrucci: Harmonice Musices Odhecaton. Fretwork (1/6 comma approximation with split first frets). Harmonia Mundi HMU 907291 (2001).

Seventeenth-Century English Music for Viols and Organ. Les Filles de Sainte-Colombe with Frances Fitch, organ (Titanic Ti-95) (1/4 comma with split keys and split frets). This recording has not yet been reissued on CD.

Alla Venetiana: Early 16th-Century Venetian Lute Music. Paul O'Dette, lute (1/5 comma approximation with split frets). Harmonia Mundi HMU 907215 (1999).

Voices

pythagorean and just intonation

The Service of Venus and Mars. Gothic Voices. Hyperion CDA 66238 (1987).

just intonation

Thomas Tallis: Lamentations of Jeremiah. The Hilliard Ensemble. ECM 1341 833308-2 (1987).

Victoria: Requiem. The Tallis Scholars. Gimell CDGIM-012 (1987).

(N.B. There are many other recordings by these ensembles that would serve as admirable examples of fine tuning.)

25

Pitch and Transposition

HERBERT MYERS

PITCH

One well-known "fact" is that pitch in olden times was lower than our present international standard of $a' = 440$. This "fact" (often repeated in the popular press, usually in connection with the danger it poses for our priceless heritage of Stradivarius violins, and invariably calling for an invidious comparison of our "high-strung" era with a supposedly more relaxed past) is, of course, only half correct, since the truth is that pitch in earlier times was also *higher* than modern pitch. In fact, recorded standards of pitch have varied over a range of at least a fifth, from about a major third below modern to about a minor third above. Attempts to achieve an international standard—only a fond hope for musicians writing in the eighteenth century—were first begun in earnest in the nineteenth century; they first became a reality in 1939. Although we are all aware that adherence to this modern standard varies and that it is thus absolute only on paper, we still depend on it as a fixed point of reference from which the departures tend to be (on a grand scale) rather minute. Its establishment strongly colors our perception of the meaning of musical notation from earlier times, when composers may have had a much different standard—or none at all—in mind.

The advantages of a universal pitch standard (particularly for the traveling musician—and who among us doesn't travel, nowadays?) are obvious. Perhaps less obvious, however, are some of the advantages of having different standards for different media, for which the musicians of earlier eras seem to have had some appreciation. Various reasons for these differing standards are mentioned by Michael Praetorius in his chapter concerning

pitch (*Syntagma Musicum II,* 1619: 14–18). First, pitch affects timbre: "for the higher-pitched an instrument (within its class and type) is made, as with cornetts, shawms, and descant fiddles, the fresher they sound; conversely, the lower the trombones, curtals, bassanelli, bombards, and bass fiddles are tuned, the more solemnly and majestically they present themselves." A second consideration is convenience: a low pitch is more comfortable for voices and stringed instruments, and a high one (although he does not mention this) may be better for certain wind instruments, since it eases finger stretches. A final consideration, implicit in his discussion of organ pitch, is economic: the smaller the instrument, the lower the cost (accounting, at least in part, for the trend in his day towards higher organ pitches).

These advantages pale, of course, in the face of the difficulties when instruments try to play together. As Praetorius explains, the mixing of all sorts of instruments together was a comparatively recent development, to which the disparity of instrumental pitch still represented a common and severe impediment. It is precisely because it was such a problem that he felt the need to explain this rather complex situation to his contemporaries. We are indebted to his explanation for much of what we know about pitch in the Renaissance and early Baroque.

Praetorius applauds the comparative standardization of organ pitch that has taken place in the princely chapels of (North) Germany. This pitch, known as *Chorton* (choir pitch), has risen over the years a whole step from its former level, and is now equivalent to those of Italy and England (although English pitch is just a fraction lower, as evidenced by the cornetts and shawms manufactured there). Some, he says, would like to raise the pitch yet another semitone; this is not a good idea, in his opinion, as the current pitch is already too high for voices and stringed instruments. Indeed, players commonly tune down a whole tone in order to avoid breaking strings, causing some inconvenience for other instrumentalists (who must then transpose) but making life easier for singers.

For this reason, Praetorius likes the distinction, made in Prague and some other Catholic choirs, between *Chorton* and *Kammerton* (chamber pitch). These pitches are a whole tone apart; the higher one—*Kammerton*—is equivalent to his North German standard *Chorton* and is used only at table and for convivial and joyous occasions, being the most convenient for instruments; the lower one is called *Chorton* and is used only in churches, primarily for the sake of singers, who both strain less and sound better at the lower pitch. (Students of Baroque practice will notice that this usage of *Chorton* and *Kammerton* is the exact reverse of that of Bach's day, when the *higher* pitches of church organs were called *Chorton* and *lower* pitches were called *Kammerton;* see Haynes, "Johann" for a detailed examination of pitch in Bach's day.) It would

be good, he says, if organs could be tuned to this low version of *Chorton,* but he considers this to be impractical now that the high version (which he evidently intends to call *Kammerton* and to use as his reference pitch throughout his book) has become so well established in his German lands.

  One other pitch standard figures in Praetorius's discussion, one a minor third below his *Kammerton* (and thus a semitone below the Prague *Chorton*). This, he says, is the pitch used in England formerly and in the Netherlands still for most wind instruments, and is the one used by the celebrated Antwerp maker Johannes Bossus for his harpsichords, spinets, and organs. While there is no denying that this is an advantageous pitch for harpsichords, flutes, and other instruments due to the lovely timbre it imparts, he says, it is nevertheless impractical to include instruments built at this pitch in concerted music, and one must stick by the aforementioned pitches, *Chorton* and *Kammerton.* However, the very low pitch (that is, the one a minor third lower than *Kammerton*) is much in use in Italy and in various Catholic choirs of Germany because of its suitability for voices. For this reason, music is often sung at this pitch through transposition down a minor third, solely for the sake of the voices; to instrumentalists such a transposition may seem offensive at first but is worth the trouble to learn to make.

  The foregoing discussion treats pitch standards in relative terms. However, Praetorius was not content to leave it at that, and he attempted to specify pitch in absolute terms as well. Unfortunately, however, there is still some disagreement among scholars as to its exact level. This essay is certainly not the proper forum for an extensive continuation of the debate. Suffice it to say that there is a discrepancy of about a semitone between the two methods Praetorius chose to communicate his pitch standard: reconstructions of a set of little organ pipes according to dimensions he provided have generally produced a pitch just a little below $a' = 440$, whereas the pitch of a typical sackbut of Nuremberg make (with the slide extended by the width of two fingers, as he suggests) is just below a modern B♭, or about $a' = 460$. The latter pitch, it should be mentioned, is in better accord with the dimensions of most of the other wind instruments in his plates, which are carefully rendered to scale (see Myers, "Praetorius's Pitch"). Adding to the confusion are Praetorius's occasional lapses in consistency; despite his best intentions he sometimes reverts to local usage in calling his reference pitch *Chorton,* and he sometimes reports the pitch-names of instruments according to lower standards instead of their "actual" pitches according to *Kammerton* as promised. One must sometimes take him for what he means rather than what he says, but getting two people to agree on the interpretation can be difficult. Still, however, the argument over a semitone represents real progress; fifty years ago the interval at issue was a major third!

The broad outlines of Praetorius's assessment are confirmed by surviving instruments, although various scholars have chosen to "connect the dots" in different ways, arriving at somewhat differing pictures. Most German organs from the period are from one to two semitones above modern pitch. From later sources we know that Venetian pitch was high and Roman was low, accounting for Praetorius's two somewhat conflicting references to Italian pitch. Recorders of Venetian manufacture (or the sort he illustrates) are generally compatible with a pitch of about $a' = 460$, but not always at the intervals we have come to regard as standard. (A much smaller number are compatible with $a' = 440$.) Curved ("ordinary") cornetts, many of which are also from Venice, range in pitch from $a' = 440$ to a tone above (with a very few even higher), with the majority again at about $a' = 460$. Mute cornetts, on the other hand, are more often at lower pitches (from $a' = 440$ downward). Flutes range in pitch from about a major third below modern pitch to about a semitone above, with strong representations at $a' = 410$ and $a' = 435$. Surviving shawms and curtals appear to be at pitches above $a' = 440$ (although the reed and player can have a huge influence here, and determining the exact pitch often remains a matter of argument).

The question of English pitch is a little more complicated than Praetorius realized, since his source of information seems to have been limited to woodwind instruments imported from England. We are indebted for what we know of English choral pitch to what we can glean from remnants of English organs, which in the Tudor and Jacobean periods were based on a nominal five-foot pipe length (in contrast with the more familiar eight-foot length usual for Continental organs). The early English organ was, in addition, a "transposing" instrument, producing the choir's *F* by sounding what was to the organist a *C.* It was long assumed that the five-foot pipe length referred to in documents was a precise, actual length, leading to the commonly held belief among many experts of the twentieth century that the English choir pitch had been about a minor third above modern. More recent research, however, has shown that the five-foot length was, in fact, merely a nominal length (just as the eight-foot length is for other organs), and that the earlier estimates had been high by about a whole tone. It thus seems that English choir pitch before the Interregnum was about $a' = 475$, or about a quarter-tone higher than Praetorius's reference pitch. Praetorius also fails to mention French pitch standards; we can only surmise from extant organs that the choir pitch there was quite low (often a tone below modern; some later sources equate French pitch with Roman). French instrumental pitches may not have been so low, however, before it became the practice there to combine instruments with voices in church—a practice

that came later to France than to Italy and Germany. Certainly Mersenne's dimensions for Renaissance-type woodwinds do not differ significantly from those of surviving examples from elsewhere.

Concerning pitches before Praetorius the information is much less certain. Arnolt Schlick (1511) discusses the pitch of organs used to accompany choirs; he provides a measurement (a line in the margin, to be multiplied by sixteen) for the length of the bottom pipe, which is to sound F. Calculations of the pitch of this pipe suggest a tuning standard a little more than a tone below $a' = 440$—on the low end of later standards, as we have seen, but not impossible. However, the suitability of such a low pitch for voices has been challenged, and thus the accuracy of transmission of the pipe measurement has been called into question. To add to the complexity of the issue, Schlick mentions building organs a fifth lower, using his suggested measurement instead for C rather than F (although the resultant pitch would be less convenient for singers, in his opinion). In discussing the pitch of surviving old organs, Praetorius mentions ones that are commonly a minor third or more higher than his *Kammerton,* as well as a good many that were a fourth higher (or a fifth lower—the same thing, to an organist) than that current standard. In light of all this diversity, it would seem silly even to speak of standardization of sixteenth-century organ pitches.

Attempts have been made to divine pitch standards for the fifteenth century and earlier. These have relied almost wholly upon examination of part ranges, comparing them with the ranges of voices of the type thought to have been singing a particular repertory. (See the bibliography to this chapter for some specific examples.) Here we are in the realm of pure speculation, of course, but in the absence of more objective data this is the best we can do.

Transposition

It should be clear by now that closely bound up with the question of pitch is that of transposition: transposition, of course, is what you do if you don't like the pitch! With unaccompanied vocal music there is obviously no problem; the pitch can be set at any convenient level to accommodate the ranges of the parts to the singers at hand. As it became more and more the practice to accompany voices, first with organ and then with other instruments, transposition became a problem for instrumentalists and thus a topic of discussion by theorists.

The great majority of vocal polyphony of the sixteenth and early seventeenth centuries was written using only two combinations of clefs, one the "high clefs" (treble, mezzo-soprano, alto, and baritone clefs—that is, G2,

C2, C3, and F3) and the other the "low clefs" (soprano, alto, tenor, and bass clefs—C1, C3, C4, and F4). (Since the bass part in each case can have a larger range than the other parts, it is sometimes represented by a higher clef: tenor clef—C4—in the high set, or baritone clef—F3—in the low one.) In the eighteenth century, long after the distinction had gone out of fashion, the high clefs were dubbed the *chiavette* (literally "little clefs" in Italian) by writers who correctly understood that earlier music written in these clefs needed to be transposed downward to fit vocal ranges; the low clefs were called the *chiavi naturali* ("natural clefs"). Theorists and composers from the period itself commonly call for transposition downward by either a fourth or a fifth, although other intervals are also mentioned. The exact interval might depend on various factors: the particular vocal ranges of the parts, the skill of instrumentalists in coping with additional sharps or flats occasioned by the transposition, and the temperament of keyboard instruments (which may demand retuning or leaving out certain notes in the more remote keys). Among the theorists the only holdout seems to be Thomas Morley, who recommends *against* transposing downward pieces in the "high keys" lest they lose the quality of liveliness that for him is their true nature.

There were conventions of transposition for instruments as well, which seem to have changed somewhat during the course of the sixteenth century as the families of instruments themselves grew and developed. A set of recorders from about 1500, for instance, would have been made up of three sizes, separated by fifths: *bass* in *F,* tenor (sometimes called *alt-tenor*) in *c,* and *discant* in *g* (sounding an octave higher, of course). A *soprano* (in the modern sense) seems not to have appeared until about the middle of the century. Although much of the contemporary literature fits on the *F-c-g* set as written, a number of pieces (usually in high clefs, including several in the *Glogauer Liederbuch* and the *Odhecaton,* and some favorites by Isaac) need to be transposed downwards; down a fourth usually works best. By the time of Praetorius the family had expanded to eight sizes: *F-B♭-f-c′-g′-c″-d″-g″* (sounding pitch); the *f-c′-g′* instruments are the original set, the first and last now renamed *basset* and *alt* in order to allow for an expanded terminology (see chapter 5). It will be noticed that most of the members of the set are still separated by fifths (except at the "outer edges" of the set). Praetorius mentions the advantage of this arrangement: a quartet may be made up of any three adjacent sizes; for example, using a *bass* in *B♭*, two *bassets* in *F,* and a *tenor* in *c′,* players could pretend they were using the original set discussed above but produce a completely different timbre at the lower pitch. When a fourth size is mixed in, however, he suggests transposing either up a tone or down a fourth, as appropriate, in order to accommodate the bias of the higher instruments toward "sharp" keys. The real disadvantage of the sys-

tem, he points out, comes when one combines instruments of five sizes, as the tonalities of the outer instruments are then separated by a major third (B♭ *bass* and *d″ discant,* for instance), causing severe tuning difficulties. Thus, he suggests, makers should produce alternate versions of the upper members, built a tone lower. We see the beginnings of this practice in the *discant* in *c″* which he lists as an alternative to the one in *d″;* it was later carried out in full in the "C and F" alignment of Baroque woodwind families.

This discussion of the Renaissance woodwind system is found, in fact, in Praetorius's chapter on shawms, which, like the recorders, had come to be built in a multitude of sizes. A century earlier the shawm family, too, had consisted of but three members, but only the upper two were in common use (as the bass part was usually played on the sackbut). These are the sizes Praetorius calls the *discant Schalmey* and *Altpommer;* they had, however, served as treble and *tenor* to the shawm band throughout the fifteenth century and much of the sixteenth. Praetorius reports their pitchs as *d′* and *g,* respectively, reckoned according to *Kammerton;* formerly, however, the pitch-names assigned to these two instruments were a fifth lower: *g* and *c* (the same ones given for the early *discant* and *alt-tenor* recorders, as we have seen). This means, then, that pitch standard for shawms had originally been a fifth *higher* than Praetorius's standard, and that shawms had in effect transposed the music up a fifth or more from what we might now consider its written pitch (much in the same way that recorders and flutes transpose it up an octave). It was only when shawms came to be combined with other instruments and with voices (as Praetorius explains how to do) that it became necessary to think in terms of their "real" pitch as defined by the organ. In the meantime, development of the larger members of the family had made it practical to play at that pitch.

If the pitch standard of the shawms in the sixteenth century was very high, that of the viols was very low. This is suggested by the physical size of surviving Renaissance viols, which are considerably bigger than those in common use today. In fact, they are about a half-size larger than standard modern viols, the treble having the dimensions of a smallish modern tenor, and the bass representing a size intermediate between a modern bass and an orchestra contrabass. Iconography corroborates this view of Renaissance viols and the late appearance of the "true" treble (which was certainly not yet known to Praetorius); the one extant sixteenth-century example (in the Ashmolean Museum, Oxford) must have been a rarity in its day and was probably considered a "sopranino" or "*kleiner discant*"—a size mentioned in a few late sixteenth-century sources (Woodfield, *Early:* 186–193).

Written sources from the period offer a multiplicity of viol tunings, but these break down into two basic groups, "high" and "low." In addition

to the standard modern *D-G-d* consort alignment, the high group includes *D-A-d, E-A-d, D-G-c,* and other variants. The low tunings are a fourth or fifth lower; they include A_1-*D-A*, G_1-*D-G*, and G_1-*D-A*. Modern scholars have usually taken these pitches literally, assuming that there were viols available capable of actually playing at both tessituras. In light of the physical evidence, however, it seems more likely that the high and low tunings were merely different nominal pitches for instruments whose "actual" pitch (from the modern point of view) was closer to that represented by the lower pitch names; taken as alternative, the high and low tunings thus constituted a system of transposition. Indeed, Ganassi—one of several authors who provided both high and low tuning as alternatives—explains (*Regola rubertina,* 1542) that his low (A_1-*D-A*) system does not really differ in tuning from his *D-G-d* high system, but merely in the placement of clefs. He recommends the use of the high system, although he says most players "play a fourth higher" using the low one. (Once again, by the seemingly perverse logic we have come to expect in dealing with transposition, conceiving a lower pitch for the instrument results in an upward shift in sounding pitch.) The advantage in imagining the high tunings is that the written notes are then placed lower on the instrument and are less likely to demand playing above the frets, especially with pieces in high clefs. The advantage in using the low tunings, on the other hand, would have been that the notes would then have sounded at "normal" (or eight-foot) pitch, useful when viols were combined with voices and most other instruments.

The majority of later Italian and German sources (Zacconi, Virgiliano, Banchieri, Cerone, and Praetorius) give low tunings, once again reflecting the growing tendency to report tunings in terms of a common pitch standard. Nevertheless, transposition (particularly in a downward direction) was still a practical necessity. Virgiliano, for instance, provides a chart for his A_1-*D-A* set of viols that, like his chart for cornett and sackbuts (see fig. 12.1), details transpositions over the range of an octave, from a second above written pitch to a seventh below. In both charts, playing a tone up, at pitch, a tone down and a third down is associated with music in the low clefs, while playing down a fourth, fifth, sixth, and seventh is associated with the high clefs. Praetorius, too, makes reference to downward transposition when he says (*Syntagma II:* 44) that the English, when playing viols alone, play down a fourth or fifth by imagining that their instruments are at higher pitches than the "actual" ones reckoned according to *Kammerton.*

However, authors from the mid-century (such as Lanfranco, Ganassi, and Ortiz) give standard modern tunings: *soprano* in *d, alto-tenor* in *G* (or sometimes a tone higher, in *A*), and *basso* in *D.* These are, of course, impossibly high at anything approaching modern pitch, or even at the lowest es-

timates of Renaissance choir pitches. They must thus represent nominal pitches for instruments which sounded about a fourth or fifth lower. This is confirmed by writers ca. 1600 (Zacconi, Virgiliano, Banchieri, Praetorius, and Cerone) who report the tunings in relation to the pitch of other instruments. Although their names for the various members of the viol family resemble those given by the earlier authors, the tunings themselves are now a fourth or fifth lower than before; thus, a *soprano* is now in G or A, an *alto-tenor* (like the modern bass) is in D_1 and the *basso* is in G_1 or A_1. As in the case of the shawms, the need to combine all sorts of instruments has clearly forced a reassessment of the tunings. The transition must have taken place in Italy and Germany well in advance of 1600; Praetorius seems to regard the playing of viols at the old nominal pitches as peculiarly English.

In Volume III of the *Syntagma Musicum* (152–168; Kite-Powell trans.: 156–170) Praetorius offers many suggestions for instrumentation of motets and other concerted pieces according to clef combinations. Several of his solutions involve transpositions of the kind we have met in Volume II (discussed earlier). A few new ones come to the surface here and there, however; for instance, he suggests that pieces in dorian, hypodorian, and hypoaeolian modes should be transposed down by a tone when played on flutes, for reasons of both range and tonality. (For earlier information regarding transposition on flutes, see chapter 6.) Although many of his recommendations are quite practical, they can be applied only with caution to music of earlier generations, particularly when they involve types and sizes and instruments that had only recently become available. The development and use of such instruments reflect an extravagance of expression more appropriate to early Baroque than to Renaissance sensibilities.

We have seen in the foregoing discussion that there was a multitude of instrumental pitch standards in the Renaissance, as well as a number of ways to relate to those standards in practice—and these are only the ones we know about! Each standard had its advantages and disadvantages as perceived at the time. Replicating all of them in the name of authenticity, even to the extent that might be possible, would be an extremely expensive proposition. Still, a well-funded early music ensemble, starting from scratch, might do well to acquire copies of recorders, curved cornetts, shawms, curtals, and crumhorns at a semitone above $a' = 440$, and flutes, mute cornetts, and perhaps some soft reeds at a semitone below $a' = 440$; although such a choice still represents an oversimplification of Renaissance practice, it does follow one defensible interpretation of Praetorius's *Chorton-Kammerton* plan and helps emphasize the difference in timbre between classes of instruments. (It has the further advantage of allowing the Renaissance winds to combine with Baroque strings, whose players often prefer to play at low

pitch; copies of Renaissance strings are still very rare.) This being the real world, however, most of us will have to content ourselves with following the spirit rather than the letter of Renaissance practice, finding the best compromise using the equipment at hand (which will usually be at $a' = 440$). Flexibility and skill in transposing are required in any case, regardless of the instrumental pitch standard. Above all, performance pitch was not considered a moral issue in the Renaissance, and it should not become one now (as it has among some practitioners of Baroque music). There is no particular virtue in adherence to any one standard at the expense of other musical values.

FOR FURTHER READING

The most thorough examinations of the history of pitch have been made by Bruce Haynes, first in a dissertation and more recently in a book (Haynes, *History*). The work of the two pioneers in the field, Alexander J. Ellis and Arthur Mendel, is still of some historical interest but has been largely superseded by Haynes's studies. Ellis, "History," led ultimately to the adoption of $a' = 440$ as the international standard. Mendel's researches, beginning in 1948, challenged many of Ellis's conclusions; his articles "Pitch" and Mendel, "On the Pitches" were reprinted (with corrections) along with Ellis's as Ellis and Mendel, *Studies*. Mendel's conclusions, in turn, were challenged by Thomas and Rhodes, "Schlick," the principal authors of the article "Pitch" in *The New Grove*. Mendel's final reconsideration (Mendel, "Western") appeared a year before his death. More recent controversy regarding Praetorius's pitch has appeared in *Early Music* (see the Myers, "Observations" and a rebuttal by Ephraim Segerman ("Re-examination") and in *The Galpin Society Journal* (see Segerman, "Praetorius's"; Myers, "Praetorius's"; Segerman, "On Praetorius's"; Segerman, "Survey"; Myers, "Editor"; Koster, "Editor"; Haynes, "Editor"; and Segerman, "Editor"). Haynes' "Johann" carries the question further into the Baroque period, arriving at conclusions which differ from Thomas and Rhodes as well as from Mendel.

Pitches of surviving recorders are reported by Bob Marvin ("Recorders") and Adrian Brown ("Overview"); of flutes, by Filadelfio Puglisi ("Survey"), Allain-Dupré ("Renaissance"), and Myers ("Renaissance"); of cornetts, by Edward H. Tarr ("Katalog"); of sackbuts, by Henry George Fischer (*Renaissance*); and of curtals, by Barbara Stanley and Graham Lyndon-Jones (*Curtal*).

Information concerning *chiavette* is discussed by Mendel (in Part III, "Pitch": 336–357) and by Siegfried Hermelink ("Chiavette," *New Grove*). This and related information as it concerns the performance of one particular work is presented by Andrew Parrott ("Transposition"). [Editor's note: see the recent article on chiavette by Johnstone, "High".] Transposition on viols is discussed by Brown, "Notes"; Spencer and Brown, "How"; and Myers, "Sizes." Information on English choir and organ pitch in the sixteenth and seventeenth centuries is given by Bray, "More," and Johnstone, "As It Was." The question of fifteenth-century vocal pitch is examined by Bowers, "Performing," with further discussion by Page, Parrott, and Bowers in "False Voices," and Fallows in "Specific Information."

Ornamentation in Sixteenth-Century Music

BRUCE DICKEY

Of all the performance practice issues which must be taken into account in performing music of earlier times, perhaps the one with the most potential to radically affect the sound of the music is improvised ornamentation. Sixteenth-century musicians needed not only to be able to play the music as notated, but also to improvise new material: inventing contrapuntal lines over a plainchant or an existing melody such as a dance tune, improvising florid passages over ostinato basses, freely creating preludes, toccatas or ricercare, and so on.[1] In addition to these more or less free improvisations, musicians (both singers and instrumentalists) were expected to ornament the written lines of most of the music they played, through both the addition of graces (small standard ornamental figures) and divisions.

Divisions also were known as *passaggi, diminutioni* (or simply *minute*) or, in singing, *gorgie,* since they were articulated in the throat (*gorgia* = throat, in Italian). The art of division consisted of substituting the long notes of a written melody with passages of rapidly moving ones, maintaining more or less intact the contour of the original line by touching on the main notes of the melody at their beginnings (and usually at their ends). Just as with modern jazz improvisation, the art of division was learned first by memorizing patterns and then combining and recombining them in countless ways. These patterns were normally applied to intervals and cadences. While playing, the performer needed to mentally ignore any passing notes and instead reduce the melody to a series of basic intervals which might then be replaced by the memorized patterns. Just as in jazz, the "improvised" material would thus partly consist of memorized patterns and partly be spontaneously created, according to the ability and experience of the musician.

Just how much improvisation was judged appropriate, of course, depended on the listener, the kind of music being played, the venue, and above all, the taste and skill of the performer. Treatises of the period abound in conflicting evidence on this subject, and good taste is always invoked as the ultimate arbiter. A modern performer, however, can feel ill at ease with the apparent discrepancy between word and deed in the sources. Dalla Casa is an excellent case in point. In his preface he warns us to *far poca roba ma buona* ("make few things but make them good"), but he follows up this comment with some forty-five pages of the most elaborate divisions of the sixteenth century. What are we to make of this contradiction? Is his warning merely a conventional call for restraint with no real meaning? Are the written-out divisions exaggerated from a desire to impress colleagues and students? Or is *our* taste radically out of touch with sixteenth century taste?

In reality, each of these factors probably plays a role, but there is no doubt that a great cultural gulf separates us from the sixteenth century in matters of ornamentation. We are tempted to disdain fussiness and to value simplicity and functionality, and though we may admire well-crafted embellishment, we would rather view it as unessential, optional. To the Renaissance musician, ornamentation was considered indispensable to musical expression since it was tied to the concept of "grace."

Castiglione, in his celebrated book on courtly manners,[2] reflects at length on grace, where it comes from, and how it can be achieved. To him, the most important thing in all human actions is, "to flee as much as one can—as from a jagged and dangerous rock—affectation, and (perhaps to coin a new word) use in every action a certain *sprezzatura* which hides art and demonstrates that that which one does and says is done without effort and almost without thought." *Sprezzatura* involves using art to conceal the difficulty of our actions, but it also implies using art to hide the effort of hiding, for "one can say that true art is that which does not appear to be art." *Sprezzatura* is thus a kind of studied carelessness, carefully calculated to make it seem that one's actions are done with supreme ease. But the calculation must not be perceptible for then we are guilty of affectation. Castiglione uses the example of a courtier named Roberto, who, in dancing, tries to display the carelessness of *sprezzatura* by letting the cape fall from his shoulders and the slippers from his feet, thus falling into affectation. Graceful human action is like walking on a sort of tightrope between ugliness and affectation. If we show the difficulty of our actions, we will fall off the tightrope onto the side of ugliness; if we attempt to make them appear easy, we will fall into affectation.

In discussions of music, the term *sprezzatura* only appears in Giulio Caccini's preface to his 1602 collection of monodies, *Le nuove musiche.* Cac-

cini uses it to refer to a kind of rhythmic freedom which neglects the no-
tated rhythm in favor of text declamation. Other writers, though, describe
the same concept by simply using the term "grace," and here we can make
the connection to ornamentation. In his *Prattica di musica* (1592), Lodovico
Zacconi, Venetian theorist and singing teacher, takes pains to demonstrate
the relationship between ornamentation and "grace":

> In all human actions, of whatever sort they may be or by whomever they may
> be executed, grace and aptitude are needed. By grace I do not mean that sort
> of privilege which is granted to certain subjects under kings and emperors,
> but rather that grace possessed by men who, in performing an action, show
> that they do it effortlessly, supplementing agility with beauty and charm.
>
> In this one realizes how different it is to see on horseback a cavalier, a
> captain, a farmer, or a porter; and one notes with what poise the expert and
> skillful standard-bearer holds, unfurls, and moves his banner, while upon see-
> ing it in the hands of a cobbler it is clear that he not only does not know how
> to unfold and move it, but not even how to hold it [. . .]
>
> Now, the singer accompanies the actions with grace when, while
> singing, [. . .], he accompanies the voice with delightful *accenti*.[3]

It is by moving from one note to the next with delightful ornaments
that a singer or instrumentalist demonstrates *sprezzatura;* it is through orna-
mentation that he reveals the facility with which he sings or plays. With a
small ornament, beautifully executed, he gives a brief glimpse of the vast
technique he possesses. If he should fail either to execute the ornament well
or to arrive correctly at the next note, he shows his effort and falls into af-
fectation. Understood in this way, ornaments are essential to musical ex-
pression. Tasteful singing was conceivable without divisions (in fact, it was
sometimes preferable), but never without ornaments.

DIVISIONS

Information about the art of division is contained in division manuals, the-
oretical works of broader focus, and letters. The manuals from the sixteenth
century are those of Sylvestro Ganassi (1535), Diego Ortiz (1553), Girolamo
Dalla Casa (1584), Giovanni Bassano (1585), Riccardo Rognoni (1592),
Giovanni Luca Conforto (1593), Giovanni Battista Bovicelli (1594), and
Aurelio Virgiliano (ca. 1600).[4] In addition, some backward-looking manuals
published in the first decades of the seventeenth century are essential for
completing our view of late sixteenth-century ornamentation, including
those by Antonio Brunelli (1611), Francesco Rognoni (1620), and Giovanni
Battista Spadi (1624).

Larger theoretical works of particular interest are those of Adrian Petit
Coclico (1552), Juan Bermudo (1555), Hermann Finck (1556), and espe-

cially Lodovico Zacconi (1592). Of these, the first three primarily confirm the ideas contained in the manuals. Zacconi, however, provides an enormous amount of valuable additional information presented in an engaging manner and is essential reading for anyone wishing to master the art of division.

Two letters to noblemen from sixteenth-century musicians amount to virtual treatises on musical practice and ornamentation. The first, written in 1562 to his patron by the physician, lutenist, and singer, Giovanni Camillo Maffei, discusses *passaggi* as well as vocal physiology and technique. The other, written around 1600 by the virtuoso cornettist Luigi Zenobi, deals with all the qualities required of a "perfect musician," including, above all, ornamentation.

Zenobi's "Perfect Musician"

Luigi Zenobi, from Ancona, was cornettist at the Imperial court in Vienna before moving to the ducal court in Ferrara, where he was highly regarded as both a cornettist and as an expert on singing; sometimes his duties involved traveling to audition prospective singers for the Duke. Near the end of his life he wrote a letter laying forth his ideas on what constitutes a perfect musician. This virtual treatise addresses, among other things, singing and what is required of each type of voice. His discussion of the soprano provides us with a remarkable description of the range of improvisatory skills sought after in a singer or instrumentalist.

> There remains the soprano, which is truly the ornament of all other parts, just as the bass is the foundation. The soprano, then, has the obligation and complete freedom to improvise diminutions, to indulge in playfulness, and, in a word, to ornament a musical body . . .
>
> . . . the soprano must have an undulating movement (*ondeggiamento*), he must know when to make *esclamationi* and not apply them indiscriminately nor crudely, as many do. He must know how to ascend with the voice and how to descend with grace, at times holding over part of the preceding note and sounding it anew if the consonance requires and admits it; he must know how to give rise to dissonances (*durezze* and *false*) where the composer has not touched or made them, but left them to the singer's judgment. He must blend and accord with the other voices; he must at times render the notes with a certain neglect, sometimes so as to drag them, sometimes with sprightly motion; he must have a rich repertoire of *passaggi* and good judgment as to how to use them; he must know which are the good ones, starting with those that are made with the greatest artifice of one note, of two, three, four, five, six, seven, and eight. He must know how to use them ascending or descending, he must know how to intertwine, connect, and double them; he must know how to emphasize and how to avoid a cadence, he must know how playfully to

sing detached and legato crotchets; he must know how to begin a *passaggio* with quavers and finish it with semiquavers and begin it with semiquavers and end it with quavers. He must use different *passaggi* in the same songs, he must know how to improvise them in every kind of vocal music, whether fast, or chromatic, or slow; he must know which works require them and which do not; when repeating the same thing he must always sing new ones. He must know how to sing the piece in its simple form, that is, without any *passaggio,* but only with grace, *trillo, tremolo, ondeggiamento,* and *esclamatione;* he must understand the meaning of the words, whether they be secular or spiritual; and where the text speaks of flying, trembling, weeping, laughing, leaping, shouting, falsehood, and similar things, he must know how to accompany them with the voice; he must use echo passages, now immediate, now separated; he must know how at times to begin loudly and then to let the voice die gradually; he must know how to improvise *passaggi* in skips, in syncopation, and in *sesquialtera;* he must know thoroughly which places demand them; he must start with discrimination and finish in time with those who sing or play with him; he must sing in one style in church, in another one in the chamber, and in a third one in the open air, whether it be daytime or at night; he must perform a motet in one manner, a villanella in another, a lamentation differently from a cheerful song, and a mass in another style than a falsobordone, an air differently again; he must bring to each of these pieces a motif, *passaggi,* and a style of its own, so that the artfulness and the understanding of the singer may become manifest.[5]

Modern singers and instrumentalists can only feel awe at such a repertory of skills: improvised *passaggi* of every conceivable type, including echoes, leaps, syncopation, and triple time; the creation of dissonance through rhythmic neglect (a clear reference to *sprezzatura,* though Zenobi does not use the word); a multitude of graces (*ondeggiamento, trillo, tremolo, esclamatione*); and all of this combined with a passionate respect for the words. This unique document by one of the most respected virtuosi of his day should serve as a lifetime course of study for anyone wishing to master sixteenth-century ornamentation.

Nuts and Bolts

By the middle of the sixteenth century, the method of teaching divisions had become standardized. Division manuals invariably present each melodic interval in turn, normally in the value of semibreves, followed by a series of divisions which can be substituted for it. Example 26.1, taken from Bassano, illustrates the standard procedure.

Musicians undoubtedly played these figures over and over, committing them to memory so that they became building blocks for improvisation.

Even aided by a repertory of figures for intervals and cadences, improvisation can be daunting to the beginner, who may easily feel over-

EXAMPLE 26.1   Bassano's divisions on the ascending second

whelmed by the available choices. Fortunately, Virgiliano has left us a set of rules that go a long way toward reducing these choices, eliminating those which would lead to difficulties. Of the ten rules given, the most useful are the first six:[6]

1. The diminutions should move by step as much as possible.
2. The notes of the division will be alternately "good" and "bad" notes.
3. All the division notes which leap must be "good" (i.e., consonant).
4. The original note must be sounded at the beginning, in the middle, and at the end of the measure, and if it is not convenient to return to the original note in the middle, then at least a consonance and never a dissonance (except for the upper fourth) must be sounded.
5. When the subject goes up, the last note of the division must also go up; the contrary is also true.
6. It makes a nice effect to run to the octave either above or below, when it is convenient.

Virgiliano's rules describe quite accurately the division practice seen in division examples between 1580 and 1620. To be sure, stepwise motion is more consistently observed in vocal divisions than in instrumental ones. Yet even in the latter, where triadic figuration is more frequently employed, the predominant melodic movement is stepwise, and leaps are always to consonant notes. Virgiliano's fourth rule lays down the cardinal principle of divisions, which serves to maintain contrapuntal integrity and proper voice leading. The original note must be sounded at the beginning of the division, exactly in the middle and again just before moving to the next note (with the possible substitution of another consonance in the middle).[7] This rule gives a two-part structure to the division: a formula for departing from and returning to the original note, and a formula for moving to the next one. Awareness of this bipartite structure can be extremely helpful to the beginning improviser, since it aids both in remembering division formulas and in constructing them. A few basic beginning figures can be combined and recombined with ending formulas for each of the different intervals to create a virtual infinity of complete divisions.

FIGURE 26.1   Facsimile of Conforto's divisions on the ascending second

Nearly all the divisions in the manuals demonstrate this bipartite struc-
ture. Conforto even uses a notational method in which alternative figures
are superimposed so that a single page, as in figure 26.1, provides a vast
number of possible divisions (further increased by changing clefs).[8]

Cadences are normally presented as variations of the typical 4-3 sus-
pension pattern with resolution to the leading tone—the most common
cadence in music of the period (see ex. 26.2). Nearly always, as in Con-
forto's example in figure 26.2, when divisions are applied to the entire pat-
tern, the suspension is removed, with the division notes moving directly to
the leading tone (or instead to the fifth) above the dominant harmony (see
ex. 26.2 and fig. 26.2).

EXAMPLE 26.2   Removal of the 4-3 suspension in the standard cadence

(4   3)

becomes:
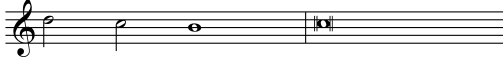
which is ornamented as:
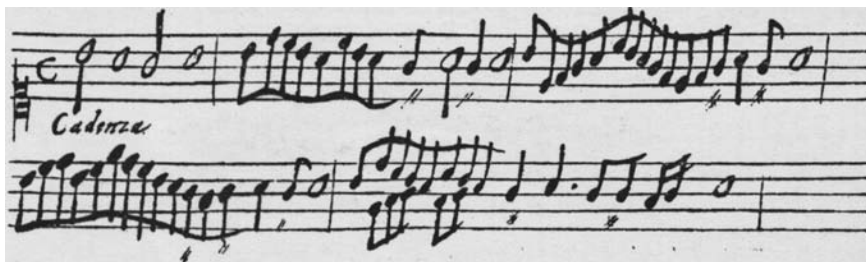
FIGURE 26.2   Facsimile of Conforto's cadences

Like Virgiliano's rule of returning to the main note, this unwritten rule of removing cadential suspensions is of enormous help in simplifying the ornamentation of cadences. The cadential division is thus separated into a series of approaching seconds followed by a cadential figure, usually some variation of the *groppo,* as we shall see.[9]

Bizzarie and Banality:
Historical Style and Freedom of Expression

The task of reconstructing a historical improvisation style based on eight division manuals is akin to that of a twenty-fourth-century musicologist trying to understand jazz by reading eight random, transcribed jazz improvisations. What is more, although we can imagine how bizarre this hypothetical musicologist's pronouncements about jazz might be, imagine how much harder it would be for a twenty-fourth-century musician (playing an exact replica saxophone with historical reed) to improvise a new chorus with the same freedom of today's jazz players. To a jazz musician, style is a given, assimilated by constant listening and imitation. With this innate sense of style, the performer is free to push the limits, be innovative or even shocking sometimes, in order to define his or her own personality.

Like these eight random jazz improvisations, our division manuals represent eight points in a constellation whose boundaries we do not know. Studying these manuals alone will never allow us to recreate the improvisatory practice behind them. The only possible strategy is to play them over and over, making them our own, and digesting the differences among them, not through analysis alone, but by getting them into our fingers, tongues, and throats. In this way we can gradually come to possess an innate, albeit imperfect, sense of historical style.

How, then, do the division manuals differ and what are their individual characteristics?

The first two manuals, Ganassi and Ortiz, provide a stark contrast: Ganassi's divisions are the most complex of any to be found, and Ortiz's are the simplest. Ganassi was a versatile musician who played both the recorder and the viola da gamba at a high level, and probably the cornetto as well. His division manual, *La Fontegara,* is also a highly detailed method for the recorder in which he constantly emphasizes the importance of imitating the human voice.

The divisions themselves have been somewhat overlooked by musicians, largely because Ganassi's is the only division manual without a complete set of divisions, but also perhaps because his emphasis on complicated proportions and lengthy and pedantic explanations can be bewildering (especially since no reliable English translation exists of Ganassi's difficult Italian). This neglect is regrettable because his divisions show an inventive and original musical intellect.

Ganassi's treatise presents a complex (and perplexing) analysis of the "characteristics" and the "orders" of divisions. The characteristics consist of: (1) the proportions (the number of quarter notes to each semibreve); (2) the specific rhythms which comprise the division; and (3) their melodic shapes [*vie*]. A division can be either "simple" or "compound" depending on whether these characteristics remain the same or change as the division progresses. Moreover, divisions are divided into "orders," determined by how many of their characteristics are simple or compound. Fortunately, Ganassi's divisions can be understood and appreciated without delving into the arcane pedantry of his explanations. Though following the normal intervallic progression, the principal novelty here lies in Ganassi's presenting the intervals not as leaps but rather as melodic figures. In addition, he indicates that the figures can be used in triple proportion as well, though he leaves their metric modification up to the student. Figure 26.3 shows Ganassi's first five divisions on the ascending fifth.

The divisions in figure 26.3 are from Ganassi's "Prima Regola," the first of four sections or "Regole" each presenting a different proportion—that is, a different number of quarter notes to the semibreve. The first Regola has four quarter notes to the semibreve, the second has five, the third has six, and the fourth has seven. Such proportions are not found in any other division manuals nor, to my knowledge, in any examples of notated divisions from the sixteenth century. Moreover, Ganassi frequently makes use of complicated syncopations, sometimes involving unusual repeated-note figures and interjected rests (see ex. 26.3).

This repeated-note style, which cannot be described as anything but jazzy, is highly original, and together with his use of proportions, shows Ganassi to have been an extraordinarily inventive and skillful musician. Yet

FIGURE 26.3   Facsimile of Ganassi's divisions on the ascending fifth

his style may have been only a personal one, for no students or disciples seem to have followed in his footsteps in the Venetian division manuals of the 1580s. Although a probable lack of academic training lies behind the apparent impenetrability of some of his text, the originality of the music behooves us to look beyond the difficulties and come to grips with his musical ideas.

If the keynote of Ganassi's divisions is originality bordering on the bizarre, then that of Ortiz's is elegant simplicity. Here no proportions are to be found. The divisions flow in placid streams of eighth notes, at times interrupted by gentle syncopations and dotted rhythms and only occasionally by groups of sixteenths.

Ortiz's treatise is divided into two books, the first of which is a traditional division manual with cadences and intervals. The second presents *recercade,* both freely written and based on *bassi ostinati,* madrigals, and chan-

EXAMPLE 26.3   Examples from Ganassi's "repeated-note style" applied to the ascending second

sons. While the divisions of Book One could easily be used in singing, the *recercade* are clearly intended for the viola da gamba and are thoroughly instrumental, with wide-ranging tessituras and a tendency to bridge over the phrases of the madrigals and chansons on which they are based.

Ortiz's manual raises an interesting point regarding the distinction between ornamentation and improvisation. Indeed, ornamentation is not necessarily always improvised. Ortiz suggests that the musician select from divisions he has given and write them into the music to be played! This suggestion, of course, raises the issue of whom his book was intended for. Perhaps, but not necessarily, it was intended for amateurs. Surprisingly, the practice of writing out the divisions of other players does appear to have had a certain currency. Bassano, as we shall see, invites players to *perform* his division pieces as well as use them as models, and the early-seventeenth-century monodist Bartolomeo Bismantova provides ornamented and unornamented versions of his pieces side by side for use by (1) singers who have no *disposizione* (vocal agility) and may be content to sing the plain versions; (2) singers who have *disposizione* but no knowledge of counterpoint, and can thus sing the divisions as written out; and (3) singers who have both *disposizione* and a knowledge of counterpoint, for they can sing from the unornamented versions, improvising their own divisions.

In the 1580s, a spate of division manuals appears, two by cornettists in the service of St. Mark's, two by singers, and one by a string player. Girolamo Dalla Casa was cornettist at St. Mark's in Venice and was appointed *maestro de' concerti* in 1568. His *Il vero modo di diminuir* of 1584 was widely influential among Italian musicians—parts of it are quoted and paraphrased in a number of other tutors and treatises. Unlike standard division manuals, it lacks a systematic presentation of intervals and cadences; it consists principally of phrases taken from motets, madrigals, and chansons of the day, presented unornamented and with divisions. The second volume contains complete ornamented pieces including a four-voice *sestina* with divisions in all the parts.

Dalla Casa's divisions confirm his reputation as one of the greatest virtuosi of the cornetto. They move predominantly in sixteenth notes, with frequent incursions of *treplicate* (six sixteenths to the quarter note) and *quadruplicate* (thirty-second notes). These bursts of extremely rapid notes are set beside unornamented passages, making transitions appear abrupt and the flow of divisions unbalanced (particularly when compared with divisions of Ortiz, Bassano, and others). This alternation between long notes and very fast ones was a feature of ornamentation style in the decades around the turn of the century. Similar passages in the later works of Luzzasco Luzzaschi and Giovanni Battista Fontana clearly reveal their derivation from this

sort of division style. Undoubtedly, the supreme artistry of the musicians and the liquid articulations which they employed helped to smooth over the extreme changes of velocity.

Giovanni Bassano was both a cornettist and a composer of some importance. He published both a division manual in 1585 and, in 1591, a collection of *Motetti, madrigali et canzone francese,* all with diminutions intended to be sung or played. The difference between his vocal and instrumental divisions is instructive. The vocal *passaggi* employ fewer sixteenth notes, leaps, and syncopations, although Bassano states that they may also be played on instruments. All of the pieces are sufficiently polished to be performed as written, as well as serving as models for improvisation, and they show more the mark of an experienced composer than that of a virtuoso instrumentalist. In his preface, Bassano speaks of his divisions as compositions and makes no reference to a pedagogical purpose. He suggests that they be played or sung with an instrumental ensemble or with a plucked instrument and one doubling the bass. Several of the vocal divisions present parts for both the soprano and bass, intended to be sung together: inserted in alternation, there is a slight preponderance of *passaggi* in the top part, with the bass divisions nearly always yielding to the soprano at cadences. When the bass does ornament a semibreve on a cadential dominant, it never fills in the interval but rather returns to the dominant before leaping to the tonic.

Like Dalla Casa, Riccardo Rognoni was a famous virtuoso, in this case a player of the viola bastarda. He is described by a contemporary as an "excellent player of the violin and of other instruments of string and wind, he was an Orfeo of his times."[10] His division manual, published in 1592, is divided into two parts. The first, called *Passaggi per potersi essercitare nel diminuire,* contains practice exercises for instruments and for the voice, with sequential division patterns of progressive difficulty on long scales. The second book, *Il vero modo di diminuire,* is more strictly a division manual, including cadences, intervals (again, presented in chains of intervals rather than in isolation), and complete division pieces for the voice, the viola bastarda, and other instruments. Interestingly, Rognoni claims to have constructed his division pieces entirely from the examples in his manual, and he recommends that the student do likewise, writing in the divisions and committing them to memory. They are all characterized by the frequent use of sequences, octave leaps (especially in the bastarda divisions), long, running scales (often in sequences with octave leaps), and the moderate use of dotting and of triplets in duple sections. The vocal *passaggi* have a smaller tessitura, fewer leaps in general and no octave leaps, though they often run to the octave above, particularly at the ends of phrases, as seen in example 26.4.

Rognoni's book is particularly rich in cadence patterns, ranging from the

EXAMPLE 26.4   Excerpt from Riccardo Rognoni's divisions on Palestrina's *Domine quando veneris*

simple addition of a couple of notes to extraordinarily florid examples spanning over two octaves in sweeping cascades of thirty-second notes. An elaborate cadence such as the one in example 26.5 is almost certainly intended to conclude a piece. Notice the movement to the leading tone in the middle of the suspended G, the free substitution of octaves, and the use of a standard *groppo* figure at the end. One of the most common mistakes of beginning improvisers is to try to be too creative at cadences. Despite the extravagant nature of this division, it ends, as in almost every case, with a standard cadential *groppo*.

Particularly interesting is Rognoni's separation of cadences (see ex. 26.6) into *cadentie maggior* (on the longest note values), *cadentie mezane* (twice as fast), and *cadentie minor* (twice as fast again). This distinction makes his book one of the most useful for studying cadences, for his cadences can be applied in a wide range of musical settings.

The division manuals of the singers Conforto and Bovicelli, published a year apart in 1593 and 1594, respectively, are as different from each other as are those by Ganassi and Ortiz. Of all such manuals, Conforto's *Breve e facile maniera* is the one most clearly intended to teach improvisation, for the author boasts that by studying it any singer can learn to make *passaggi* in less

EXAMPLE 26.5   An elaborate Riccardo Rognoni cadential division

EXAMPLE 26.6   Cadential ornaments from Riccardo Rognoni's *Passaggi* . . .

Cadentie maggior.

Cadentie mezane

Cadentie minor

than two months. Perhaps Conforto's claim is not so far off the mark since his examples include some of the most singable, rhythmically engaging, and approachable divisions. Next to Bassano, they should be, in my opinion, the starting place for any study of the art of diminution. They represent the classic style of sixteenth-century *passaggi:* moving predominantly by step in flowing rhythms; nearly always respecting Virgiliano's rules, frequently running to the octave above; sometimes surprising with dotted rhythms or groups of an eighth note and two sixteenths, but invariably applied in a regular, flowing way. In such divisions, according to Zacconi, "a small number of figures can be used over and over in the manner of a circle or crown, because the listener hears with great delight that sweet and rapid movement of the voice, and, because of its sweetness and speed, does not notice the continuous repetition of a few figures."[11]

If Conforto represents the classic form of divisions, Bovicelli heralds the coming Baroque upheaval. In Bovicelli we see all of the forces that are at work turning the sweet and rapid undulations of *passaggi* into expressive, rhetorical Baroque ornamentation. In his divisions, dotting is applied in a constantly changing manner. Smoothly flowing rhythms appear only sporadically and division figures begin to take on the appearance of specific ornaments, some of which were a legacy of the sixteenth-century graces discussed later in this chapter, and others entirely new—the invention of audacious young singers such as Giulio Caccini. We will return to examine a division by Bovicelli after the discussion of graces.

Passaggiare in Compagnia

Divisions like those of Bovicelli and Rognoni, but also the complete divisions of Bassano and Dalla Casa, were clearly intended as solo perfor-

mances—improvised or not—accompanied by a chordal instrument or a small instrumental ensemble. But embellishment of all the parts of a composition in ensemble is clearly documented in the sources. Not only do two writers provide rules for this practice, with the aim of preventing chaos, but a number of surviving examples exists which show exactly how it was to be done.[12]

Zacconi gives an amusing inside look at the practice of improvising in ensemble, suggesting that a singer avoid embarrassment by first checking out the skills of any unknown colleagues:

> What is more, that singer who, when singing for the first time with singers he does not know, lets loose with all his *gorgie,* not only is worthy of scorn for trying too hard to show his skill, but also risks bringing shame and dishonor to himself. For if it turns out that in this group there is someone better than he [at divisions], in the middle of his effort, [this other singer] may enter in a new manner and take away everything which he has earned up to this point. For this reason, those singers do well and wisely who, when they must sing [in ensemble] never show at the beginning what they can do, but rather with prudence and art listen little by little to the others in order to hear what they can do, because in every place at every time a man can learn. But he should listen a while and when he has listened, begin to come forth little by little with his beautiful [ornaments], for in this way he will arouse new delight in the listeners and acquire immortal fame.[13]

Clearly ensemble *passaggi* had to be far simpler than those of the great solo improvisers, and they were subject to certain rules to avoid anarchy. Both Maffei and Zacconi agree in most respects. Zacconi tells us not ornament the beginnings of contrapuntal pieces and to spread the divisions throughout the piece in an even way. Maffei even suggests that four or five divisions per voice would be appropriate in a madrigal, and, indeed, the examples mostly bear this out. Zacconi again advises us to make most divisions on long notes and fewest on short ones, especially when these have text syllables. Maffei is also concerned with text setting and recommends that *passaggi* be applied only to the penultimate syllables of words. Both writers warn singers to take care to make *passaggi* on the most appropriate vowels. Maffei is more severe, claiming that divisions sung on *i* and *u* will resemble respectively a lost baby crying for its mother and the howling of a wolf. Zacconi more helpfully writes that all the vowels may be used, though some will require greater practice. Divisions, he says, are possible in all parts, but preference should be given to the soprano and special care should be taken with the bass. The bass singer must use special divisions appropriate to his line and not make too many ornaments.

Graces

In addition to divisions, singers and instrumentalists used a number of small ornaments with fixed forms and more or less standard names. These ornaments were the ones to be used when *passaggi* were considered inappropriate—that is, in the imitative beginnings of contrapuntal works or at moments of strong affect.

Tremolo, trillo, and tremoletto

In the sixteenth century, the term *tremolo* was used indiscriminately for any kind of fluctuation on a note.[14] It could be a fluctuation of pitch (from a major third to tiny microtones), or of intensity. The kind of fluctuation employed depended upon the instrument and the musical context. Presumably all of these devices were meant in some way to imitate the *tremoli* used by singers, but these are also the most difficult to understand.

Clearly, sometimes a vocal *tremolo* was a quivering or trembling of the voice, described as desirable in boys' voices by Michael Praetorius.[15] Zacconi presumably uses the word in this way in the following passage:

> [. . .] I say in addition that the *tremolo*—that is, the trembling voice—is the true door for entering into the *passaggi* and for mastering the *gorgie,* because a ship sails more easily when it is already moving than when it is first set into motion, and a jumper jumps better if before he jumps he takes a running start.
>
> This *tremolo* must be brief and graceful, because the overwrought and the forced become tedious and wearying, and it is of such a nature that in using it, one must always use it, so that its use becomes a habit, for that continuous moving of the voice aids and readily propels the movement of the *gorgie* and admirably facilitates the beginnings of *passaggi.* This movement about which I speak must not be without the proper speed, but lively and sharp.[16]

Thus, Zacconi seems to be describing a kind of continuous "vibrato" which presumably aids in *passaggi* by keeping the larynx free and relaxed, thus facilitating the production of the throat articulations required for the *gorgie.* Perhaps this *tremolo* is also what Zenobi means when he speaks of *ondeggiamento,* but he lists it separately from the *tremolo,* so at least one of these devices must be a grace to be applied discretionally.

Other writers clearly give the vocal *tremolo* a precisely notated rhythm. Example 26.7 shows the *tremolo* of Francesco Rognoni (1620).

EXAMPLE 26.7   The *tremolo in due modi* from Francesco Rognoni (1620)

Rognoni does not explain the technique used to produce this vocal *tremolo,* but he does distinguish it from the *trillo,* saying that the latter is "beaten with the throat." Thus his *tremolo* is apparently a smooth, regular, and rhythmic fluctuation of intensity and/or pitch.

These rhythmic *tremoli* resemble those used by string and wind instruments in imitation of the *tremolo* stop on Italian organs. The stop consists of a flap provided with a weighted spring covering a small opening in the wind supply. The opposition of the wind pressure and the spring causes the flap to open and close alternately about four to six times a second, producing a fluctuation in the strength of the note. Early-seventeenth-century sonatas frequently employ this stop in slow-moving chromatic sections where string instruments are instructed to pulse rhythmically with the bow on the strings. Presumably cornetto players (and trombonists as well) imitated this effect with the breath, though no description exists.

Recorder players clearly used trills to make *tremoli,* at least from the time of Ganassi, who gives fingerings for *tremoli suavi* and *tremoli vivaci,* varying in interval from microtones for the sweet ones to major thirds for lively ones. On the violin, Francesco Rognoni pleads that the true *tremolo* is one done with two fingers, the second finger placed very close to the one stopping the string. This *tremolo* only rises in pitch, as opposed to the one-finger *tremolo,* similar to a modern violinist's vibrato, which he denigrates, thus revealing the existence of both types in the early seventeenth century (and probably earlier). On keyboards, apart from the *tremolo* stop, this grace was generally a trill with the upper (and sometimes the lower) neighbor.

The *trillo,*[17] first mentioned by Conforto, was nearly always a rapid reiteration of a note using a "beating" of the throat similar to the articulation of the *gorgie.* The fact that both *tremolo* and *trillo* were sometimes abbreviated in music by "t" or "tr" can lead to confusion between the two devices which can only be resolved by examining the musical context. Generally, *tremoli* occur in slower-moving passages and *trilli* in quicker ones. The issue is further complicated, however, by the *tremoletto.*

Literally a "little *tremolo,*" the *tremoletto* was an abbreviated *tremolo* often used in ascending and descending scale patterns. Diruta gives the *tremoletti* shown in example 26.8 for the organ, claiming that they were particularly loved by Claudio Merulo.

EXAMPLE 26.8   Example of *tremoletti* from Diruta (1593)

In Germany and Spain, versions of the *tremoletto* appear where the finger playing the main note depresses the key while the second finger quickly strokes the upper or lower note. This more percussive grace was called the *quiebros* in Spain[18] and the *Mordant* in Germany.[19] In singing, Francesco Rognoni tells us that a "*tremolino*" gives spirit and liveliness to the voice when performing the *esclamatione*. This dynamic ornament, which became popular around the turn of the seventeenth century, was applied to descending dotted figures in long notes, diminishing the voice on the dotted note in order to increase it again just before moving to the next note. Rognoni's precise examples of this *tremolino* appear to blur the distinction between *tremolo* and *trillo.* Can the rapidly moving and rhythmically exact *tremolini* shown in example 26.9 truly have been performed without articulation?

EXAMPLE 26.9   *Tremolini* used for making *esclamationi* (from Francesco Rognoni)
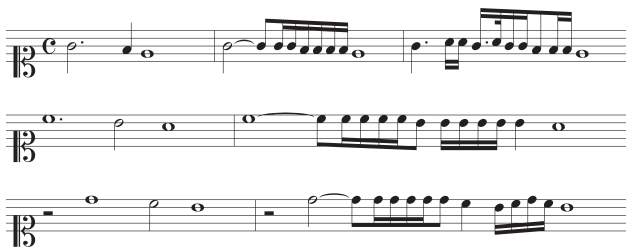
GROPPO

The *groppo* was a special type of division involving the alternation of two notes followed by a termination. It is normally a cadential ornament with a four-note turn approaching the tonic from the leading tone, though occasionally it was applied to a cadence from the upper semitone, as in example 26.10 from Conforto.

Conforto distinguishes these ornaments as the *groppo di sopra* and the *groppo di sotto.* The terminology appears to be his own, but the figures represent common usage. The cadence approached from above was frequently ornamented (at least at the end of the sixteenth century and into the seventeenth) with a *trillo,* either alone or combined with a small division.

EXAMPLE 26.10   Conforto's *groppo di sopra* and g*roppo di sotto*

Groppo di sopra   Groppo di sotto

Conforto gives special forms of the *trillo* to substitute for both the *groppo di sopra* and the *groppo di sotto,* which combine the repeated notes of the *trillo* with the *groppo* termination (see ex. 26.11).

EXAMPLE 26.11   Conforto's *trilli* with *groppo* termination

Conforto's ornament is clearly related to one from Dalla Casa called the *tremolo groppizato* (see ex. 26.12).

EXAMPLE 26.12   Dalla Casa's *tremolo groppizato*

Dalla Casa says nothing about the execution of the *tremolo groppizato,* but the two repeated notes most likely stand for a *tremolo* (or *trillo*) and thus would either be executed on the cornetto by a trill or by a rapid articulation replacing the two sixteenth notes with more notes of shorter duration. Conforto's use of the number 3 below the repeated notes in his examples has exactly this function: the "3" indicates that three rather than two beams should connect them, resulting in an unspecified but faster series of repeated notes.

ACCENTO

The *accento* is a passing-note ornament with various forms in the sixteenth century, but it is usually a variation of two basic types—one for ascending intervals (especially thirds) and another for descending seconds. Both are seen in examples 26.13a and 26.13b, taken from Zacconi and Diruta, respectively.

EXAMPLE 26.13a–b   *Accenti* from Zacconi (a) and Diruta (b)

Zacconi makes it clear that the value of his *accento* is taken from the second note, and thus the ornament falls on a strong beat where it sometimes creates dissonance. It is always described as having a lazy quality, almost of neglect. The descending form eventually eclipses the ascending one in popularity; indeed, Francesco Rognoni in 1620 calls it the only "true *accento.*" It also appears in a highly elaborated form in Bovicelli's preface (see ex. 26.14) and in numerous division pieces at the turn of the century.

EXAMPLE 26.14   Bovicelli's elaborated *accenti*
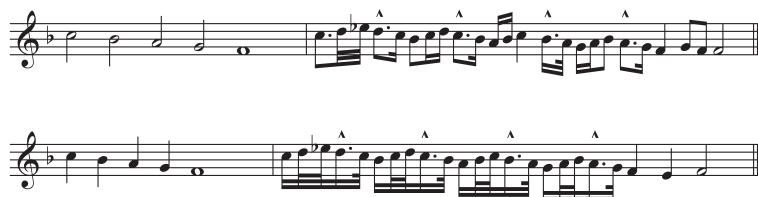
Bovicelli explains that the form of *accento* for ornamenting descending half notes differs from that for quarter notes. In the first case, the rhythm must change on each *accento,* and a *tremolo formato* must be executed on the upper neighbor (marked with a carrot). On quarter notes, there is no time to change rhythms or to make a *tremolo formato,* so a *tremolo non formato* is done instead. Although this explanation is far from clear, it seems likely that the former is an articulated *trillo* and the latter an unarticulated *tremolo* (a sort of quick "vibrato").

INTRECCIARE, AGGROPPARE, RADDOPPIARE

While Dalla Casa, Bassano, and Conforto were setting down the classical division style, other forces were at work moving divisions in new directions. We can now return to Bovicelli and examine some phrases in one of his division pieces, based on Palestrina's madrigal *Io son ferito* (ex. 26.15).

Note that nearly all of Bovicelli's divisions are composed of graces. There are very few smoothly flowing *passaggi,* and even these have been given a more incisive character by the application of dotting (see end of first line and beginning of second) or the use of *raddoppiate* (doubling the speed of short passages, as in the beginning of line four). In addition, many of the *accenti* create dissonances on strong beats by holding onto a note into the change of harmony (see the first *accento* of line three). Such divisions are no longer intended simply to please the listener through the sweet and rapid movement of the voice; they make their own dramatic and rhetorical statement. They do not merely ornament the original madrigal; they assume their own affective character.

EXAMPLE 26.15   Excerpts from Bovicelli's divisions on *Io son ferito*

The little burst of fast notes in the Bovicelli example, called *raddoppiate* by some, were a feature of many late-sixteenth-century divisions. Zenobi, as well as Giulio Caccini, and Jacopo Peri, describe them with phrases so striking in their similarity that we must assume they are referring to a single, specific practice. They refer to an allegedly new style characterized by long "windings," interwoven with *groppi* and *raddoppiate* (redoublings). Just such a winding, "redoubled" style with a striking use of *groppi* can be discerned in the divisions sung by Vittoria Archilei in the first of the Florentine *Intermedi* of 1589 (ex. 26.16).

Groppi are here used not only at cadences, but are mixed freely into the divisions to create an irregular serpentine structure—probably what Zenobi refers to as an "intertwining" of the divisions. The unusual melodic shapes, the non-cadential use of *groppi,* and the sudden bursts of *raddoppiate* distinguish this style from the classical divisions of Dalla Casa, Bassano, and Conforto. Similar features can be seen in the ornamented madrigals of Luzzasco Luzzaschi (ex. 26.17). Whether or not Caccini invented them (as he claimed), he may well have been responsible for bringing them to Luzzaschi's Ferrara, for he allegedly instructed the famous singing ladies there in his style of ornamentation. Here, Zenobi would certainly have encountered this manner of singing divisions as well.

To be sure, Luzzaschi's divisions were not improvised. It is well documented that the singing ladies at the Ferrarese court sang their ornaments

EXAMPLE 26.16   Ornaments sung by Vittoria Archilei in the Florentine *Intermedi* of 1589

EXAMPLE 26.17   Excerpt from the Luzzaschi madrigal *Ch'io non t'ami cor mio,* 1601

exactly as written. Clearly the hyper-expressive divisions of Caccini, Luzzaschi, Bovicelli, and Francesco Rognoni were moving away from the sphere of improvisation and toward the world of florid composition. They are no longer an expression of *sprezzatura* but, rather, of unbridled virtuosity.

NOTES

1. For a more thoroughgoing discussion of these improvisatory practices, see Brown, *Embellishing.*

2. Castiglione, *Il libro*, chapters 26–27. Available online at http://www.filosofico .net/illibrodelcortegiano.htm.

3. Zacconi, *Prattica*, cap. LXIII, p. 55*v*.

4. For modern and facsimile editions and translations, see the primary sources bibliography that follows these notes.

5. English translation by Bonnie Blackburn and Leofranc Holford-Strevens (see Zenobi in the bibliography at the end of the book); see also the Blackburn and Lowinsky entry for their translation.

6. Virgiliano, *Il dolcimelo*: 3.

7. Virgiliano's fifth rule is really a corollary to the fourth. If the model moves by an interval larger than a second, it may be filled in with division notes, but they must approach the next note of the model from the same direction as the original interval.

8. Conforto, *Breve*: 3.

9. Ibid.: 28.

10. Filippo Picinelli, *Ateneo dei letterati milanesi*, Milano, 1670, p. 482. Cited from G. Barblan's preface to the facsimile edition of F. Rognoni, *Selva*.

11. Zacconi, *Libro primo*, ch. LXVI, p. 75.

12. Maffei gives a setting of a madrigal by Layolle with *passaggi* in all the voices; Hermann Finck includes an embellished four-part motet of his own; and Dalla Casa includes an ornamented version of a Rore setting of the Petrarch sestina, "Alla dolc' ombra."

13. Zacconi, *Libro primo*, ch. LXVI, p. 60*r*.

14. The term "vibrato" did not come into use until the nineteenth century, and the concept of vibrato as distinct from other kinds of fluctuations was foreign to seventeenth-century musicians. Some of the devices called "tremoli" in the sixteenth century would fall under our idea of vibrato, but others would be considered trills. Emilio de'Cavalieri, *Rappresentatione di anima e di corpo.* Rome. Facsimile ed., Farnborough, 1967.

15. "The singer must not only be endowed by nature with an excellent voice, but he must be experienced and posses a good intellect and an extensive knowledge of music. It is important for him to have good judgment to place accents skillfully and to incorporate an appropriate number of runs or coloraturas (called *passaggi* by the Italians) at the right time and in suitable places so that in addition to the loveliness of the voice, the overall artistry can also be properly appreciated. Yet those singers who are equipped by God and nature with an especially lovely, vibrant, buoyant, or pulsating voice and a well-developed neck and throat suitable for diminutions are not to be praised if they disregard the rules of music by exceeding the recommended limits through the use of far too much ornamentation and thereby disfigure the piece so much that no one has any idea what they are singing." Praetorius (Kite-Powell, trans.) *Syntagma III:* 214 [229–230 in original].

16. Zacconi, *Libro primo*, ch. LXVI.

17. In certain seventeenth-century sources such as Cavalieri (1600) and Bartolomeo Bismantova (1677), "*trillo*" refers to a trill.

18. See Santa María, *Libro*: ch. 20, pp. 122–128.

19. See the discussion of Buchner's ornaments in Paesler, "Fundamentbuch":1–192; see also *Das Erbe deutscher Music*, vols. 54–55.

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Pronunciation Guides

ROSS DUFFIN

This is not the place to give more than the briefest recommendations on the historical pronunciation of languages commonly used in early music. Historical pronunciation is a gargantuan subject—witness the volume on the subject edited by Timothy McGee and coauthored by several scholars: *Singing Early Music: An Introductory Guide to the Pronunciation of European Languages in the Middle Ages and Renaissance,* published by Indiana University Press. It is nonetheless an important subject and one demanding the attention of the early music director in order to get the most natural sonorous effect out of each work. Composers set texts with the ambient pronunciation in mind and that includes Latin texts, too. Accentuation, rhyme, and the sheer tone color of a vocal work can be radically transformed by the use of historically appropriate pronunciations.

My own predilection to obsession in this area was tempered several years ago. I was coaching a student medieval ensemble in the performance of one of the two mid-fifteenth-century English songs discussed and edited by David Fallows in a then recent *Early Music Magazine* (1977, pp. 38–43, musical supplement EM 28). I had invited a specialist in late-medieval English to attend a rehearsal and coach the group on pronunciation. She listened to the work, asked the date (ca. 1450), gave a few pronunciations, frowned, and asked if the date was really accurate. I told her that the musical setting was from ca. 1450 but that the text was from John Lydgate's Temple of Glas (ca. 1420). "Well," she said, "Which do you want, 1420 or 1450?"

Pronunciations change rapidly, as the PBS series *The Story of English* illustrated so well in the segment on "received" pronunciation at English public schools over the last generation. Furthermore, contemporary re-

gional differences are often more striking than generational—one thinks of American accents such as those of Maine, Brooklyn, Georgia. Do we really have much hope of nailing down exactly what Renaissance composers had in mind, removed as we are by several centuries and thousands of miles from the point of origin? The answer is, probably not, but we have to try. Even if this means that we approach some kind of standardization within a country and within, say, a century, it is better than not paying any attention to proper pronunciation at all.

Now that we have a central source on historical pronunciation for singers, it should no longer be necessary to search through tomes on history, pronunciation, and orthography of the language in question except to answer the most detailed questions. But for those without *Singing Early Music,* and for those who wish to pursue some questions in more detail, the information that follows may be useful.

First of all, it must be said that historical pronunciations cannot replace good diction as a way of putting texts across to an audience. And it also is true that many aspects of modern pronunciation and inflection for these languages carry over to their Renaissance forms as well. Still, the differences between the current and historical pronunciations are sometimes an important key to an overall change in sound or effect.

In **French**, for example, the vowel combination *oi* was pronounced [ɯɛ], as in the modern English *west*; *au* was [ao] up to the early sixteenth century and [o] thereafter; *r* was dental rather than uvular as it is in modern French; *o* was frequently pronounced [u], especially in situations where the spelling eventually changed to that, as in *joissance=jouissance*; the final *s* was silent except at the end of a poetic line; and up to around 1500, nasalizing consonants were pronounced in addition to the nasalized vowels.

In **German**, one of the main differences was that *sp* and *st* were frequently pronounced as they are in English, not [ʃp] and [ʃt] as they are in modern German. This was especially true in the northwest part of Germany.

In **Italian**, many of the regional differences of today existed in the Renaissance as well. These include the soft *c* which besides its usual [tʃ], was also heard as [ts], [s], and [ʃ] in various regions. Soft *g* was frequently pronounced [dz] or even [z] in the north.

In **Spanish**, perhaps the most obvious differences are in the pronunciation of soft *c* or *ç* which was either [ts] or [s], the *z* which was probably [ds], and the *x*, the *j* and the soft *g*, all of which were [ʒ] like the modern French *j*, or a cross between that and [ʃ].

In **English**, the period of the Renaissance corresponds to what linguistic historians call the "Great Vowel Shift." The long *i*, for example,

changed throughout this period from the diphthong [ɪi] to [əi] (eventually becoming the modern [ai] by the eighteenth century). The long *a* moved from [a] to [æ] as in modern English *bad*, or [ɛ] as in *bed*, not [ei] as it is heard in modern English. The vowel combination *ea* in the sixteenth century was usually [ɛ], as preserved in the modern English pronunciation of *head* and *pleasure*. The pattern *ti* as occurring frequently in the ending *–tion* was probably [si] up to around 1600 when it began shifting to [ʃi] and [ʃ] as it is in modern English. Again, the regional variants were numerous, compounding the difficulty of dealing with the chronological changes.

After *Singing Early Music,* perhaps the most convenient source for pronunciation guides to English (1100–1450, Elizabethan), French (1100–1600), German (1050–1500) is Phillips and Jackson, *Performing.* The French language portion is taken from Alton and Jeffery, *Bele* (it also covers Provençal, Picard, and Norman). For even more detail on French texts, you might consult texts such as Bourciez, *Phonetique;* Brunot, *Histoire;* Fouche, *Phonetique.*

A fourth linguistic text also contains information on Provençal, Spanish, Portuguese, Italian, and Romanian is Bourciez, *Elements.* Another source for Portuguese is Williams, *From Latin.*

A volume specializing in the Italian language is Grandgent, *From Latin.*

There are not many studies of historical German pronunciation. Two useful sources are Bithell, *German* and Penzl, *Vom Urgermanischen.*

Three linguistic texts on the English language, including information on the early Renaissance (omitted in Phillips and Jackson) are Dobson, *English;* Ellis, *On Early* (this is old but encyclopedic); and Pyles, *Origins.*

Because Latin was essentially pronounced like the vernacular languages during the period covered by this study, the pronunciation guides for those languages are fundamentally the same as for regional Latin pronunciations. There are some variants from vernacular practice, however, as well as specific information about Latin pronunciations, and these are discussed in the following: Copeman, *Singing* (Harold Copeman also collaborated with George Rigg on Latin pronunciation in *Singing Early Music*); Duffin, "National"; and Scherr, *Aufführungspraxis* (German Latin pronunciations only).

See also Knighton and Fallows (Wray, Hillier), *Companion.*

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PART FIVE

ASPECTS OF THEORY

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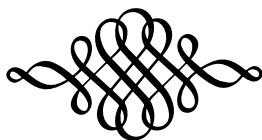
Eight Brief Rules for Composing a
Si Placet Altus, ca. 1470–1510

A D A M   K N I G H T   G I L B E R T

Composers and performers throughout much of the fifteenth and sixteenth centuries added *si placet* voices to existing polyphonic songs, subtly or dramatically altering their original texture. This polite term, meaning "if you please,"[1] takes its name from the rubric placed next to these voices in manuscripts and prints. The technique inspired delight and praise, at least according to its practitioners, like the trombonist Giovanni Alvise who, in 1495, boasted of his expanded versions of motets, "in fact, all Venice does not want to hear anything else!"[2]

Others were less enthusiastic. In 1547, the theorist Heinrich Glarean complained, "It is truly astonishing that some take it as an occasion of pleasure to attach their own trifles so rashly to other works. Surely one would not want that to happen in his own works, so why not have a care for another? But I labor in vain."[3]

And labor in vain he did. Numerous altered and expanded compositions testify to the extent of added voices in songs and motets.[4] The *si placet* repertory ranges from the addition of *altus* or *bassus* voices, to the substitution of an original contratenor with a new *altus* and *bassus*,[5] to *fuga ad minimam* parts like those added to chansons by Josquin Desprez and Johannes Martini.[6] The impact of these additions on musical performance and perception cannot easily be overstated.[7]

Of special significance is the repertory of *si placet* voices composed between 1470 and 1510, most famously manifested in Petrucci's landmark 1501 print *Harmonice Musices Odhecaton A*.[8] Most common was the addition of an *altus* to three-voice compositions, presumably to update the sonority to the new four-voice style. The lowering of the contratenor range and

function to that of a *bassus* in the second half of the fifteenth century left room for a new alto voice between the tenor and *superius* ranges.[9]

This chapter presents eight brief rules for the composition of a *si placet altus*. Though other voices were rewritten and added, I have focused on this voice because of its common appearance, and because of the degree to which it writes itself; it serves as an excellent starting point for beginners.[10] These rules are offered as complementary guidelines to the eight rules of composition provided by Tinctoris and Gaffurius.[11] They are based on patterns derived from the wealth of *si placet* voices and *altus* voice parts from numerous four-voice compositions, many exhaustively collected by Stephen Daniel Self.[12] I provide each rule with an example from the historical repertory, or from one of my own efforts at adding a *si placet altus*.

Rule 1. Fulfill Standard *Altus* Cadential Function

Beginning and ending the composition with a fifth above the final, pay attention to the cadential motion of the *bassus*. The application of this rule can extend far beyond obvious phrase endings, because most chansons include extensive cadential motion. For example, most opening themes are little more than cadential motives.[13]

Authentic Cadences

a. When the *bassus* resolves on the cadence tone, the *altus* proceeds from a fourth above the tenor to a fifth above the final. (Resolution to a third above the final is possible, but less common (ex. 28.1a).

b. When the *bassus* leaps an octave, the *altus* proceeds from a fourth above the tenor to a third above the cadence tone (ex. 28.1b).

c. When the *bassus* resolves to a third below the cadence tone (an imperfect "deceptive" cadence), the *altus* proceeds from a fourth above the tenor to a third above the cadence tone (ex. 28.1c).

d. Depending on context, one may avoid standard cadential resolution, including the typical avoided arrival at the final perfect sonority through a minor sixth (ex. 28.1d).[14]

Phrygian Cadences

e. When the *bassus* resolves to a fifth (or third) below the cadence tone, the *altus* may proceed from a third above the tenor to a fourth above the cadence tone (ex. 28.1e).

f. When the *bassus* resolves to a fifth (or third) below the cadence tone,

EXAMPLE 28.1a–d   Rule 1: standard *altus* cadential function

the *altus* may proceed, through an upper neighbor, from a third and fourth above the tenor to a fourth above the cadence tone (ex. 28.1f).

　　g. When the *bassus* resolves to a fifth (or third) below the cadence tone, the *altus* may proceed through passing motion from a third above the tenor to a sixth above the cadence tone (ex. 28.1g).

　　h. When the *bassus* resolves a third below the cadence tone, the impres-

EXAMPLE 28.1e–h   Rule 1: phrygian cadences

sion of an authentic cadence between *bassus* and *altus* can be enhanced through rhythmic suspension (ex. 28.1h).

Range

The *altus* voice usually fills the same range as the tenor but tends to sit higher because of its cadential function and its contrapuntal place between the *superius* and tenor, although it may also proceed below the tenor. It also may cross voices with a *superius,* especially when the *superius* descends to its low range or trades cadential function with the tenor.

Corollaries to Rule 1

1. Whenever the *bassus* descends stepwise to the penultimate note of a cadence, the *altus* can create a "subsidiary" plagal cadence against the *bassus,* as in measures 12–15 of *De tous biens plaine* (ex. 28.1i). Because this kind of cadential figuration plays a major technical role in early compositions built on imitation at the fifth in four-voice works of Josquin's generation,[15] it offers a glimpse at the development of pervasive imitation. The same logic can be applied to the less obvious cadential motion in *Vive madame par amours* (ex. 28.1j).

EXAMPLE 28.1i   Corollary to Rule 1: Hayne van Ghizeghem, *De tous biens plaine*

EXAMPLE 28.1j   Corollary to Rule 1: Robert Morton, *Vive madame par amours*

EXAMPLE 28.1k   Corollary to Rule 1: Mureau-Busnois(?), *Je ne fays plus* and Compère, *Royne du ciel*

2. When the original work proceeds in two-part counterpoint, the *altus* may perform the function and range of any missing voice, often the *bassus,* as in the *si placet altus* of Mureau's *Je ne fays plus* (ex. 28.1k). In parallel passages with two voices, the *si placet altus* may join the existing duo to create a passage of *fauxbourdon,* as in Compère's *Royne du ciel* (ex. 28.1k).[16]

Rule 2. Avoid Parallel Unisons, Fifths, or Octaves

This rule corresponds to Gaffurius's second rule of composition. Parallel fourths with the tenor or *superius are* allowed, as in measure 52 of *Pour ung jamais* (ex. 28.2). Though contrary motion is a goal of counterpoint,[17] motives in the *superius* or tenor offer opportunities for attractive parallel motion in thirds or sixths, as in measures 54–55 (ex. 28.2). In some cases, the avoidance of perfect intervals may be produced through leaps or through the addition of extra notes, creating "hidden" perfect intervals.

EXAMPLE 28.2   Rule 2: Pierre de la Rue, *Pour ung jamais*

EXAMPLE 28.3   Rule 3: Hayne van Ghizeghem, *De tous biens plaine*

Rule 3. When in Doubt, Leave It Out

When problems cannot be avoided, the best solution may be to rest. When rests occur in contemporary *si placet* voices, chances are a contrapuntal problem is being avoided. The *altus* in example 28.3 rests at a cadence where there is little room to move, but enters at its resolution.

Rule 4. Engage in Imitation When Possible

Si placet voices frequently echo the existing counterpoint. This may occur at opening points of imitation (ex. 28.4a), in internal passages, or as fore-imitation,[18] in which an added voice anticipates an existing motive or point of imitation (ex. 28.4b). Applying this rule gives a sense of how imitation can work on a practical level. One may appreciate how readily in Morton's *Vive madame par amours* imitation at the octave can yield a new voice at the fifth (bracketed in ex. 28.4b). Passages of motivic allusion may arise as a natural result of contrapuntal concerns or from compositional intent (dotted brackets in ex. 28.4b).

EXAMPLE 28.4a   Rule 4: Anon., *Nos espantes*

EXAMPLE 28.4b   Rule 4: Robert Morton, *Vive madame par amours*

Rule 5. Rewrite the *Bassus* When Necessary

The *superius* and tenor remain the essence of most chansons, but composers were more cavalier with contratenor voices. Rewriting may be limited to the *bassus* voice in a cadential progression, as in the expanded version of Caron's *Helas pourra que devenir.* It may extend to the substitution of entirely new *altus* and *bassus* voices to the existing tenor/*superius* duo, as in the *Odhecaton* four-voice setting of DuFay's *Le serviteur.*[19] In my addition to Agricola's *J'ay bien et haver,* the added imitative voice creates an unsupported fourth below the original *bassus.* This can be fixed by resolving the *bassus* to an octave below the tenor (ex. 28.5). (Of course, one might choose to begin the piece with an *altus* statement of the theme.[20])

EXAMPLE 28.5   Rule 5: Alexander Agricola, *J'ay bien et haver*

*Changing G to Bb avoids unsupported 4th

Rule 6. Use the "Famous Progression" when Possible

This phrase refers to Gaffurius's description of parallel tenths in outer voices around a long note, a device favored by "eminently sweet composers" (5-6-5-6 in the *superius* or *altus* above a tone, and 6-5-6-5 in the *bassus* below the tone).[21] It may complement an existing *bassus,* as in *De tous biens plaine* (ex. 28.6a) and *Vive madame* (ex. 28.6b), where the composers of the new voice could not resist the opportunity to proceed in tenths above the *bassus.* This technique also provides a gratuitous but nonetheless satisfying flourish at final cadences (ex. 28.6c).

EXAMPLE 28.6a   Rule 6: Hayne van Ghizeghem, *De tous biens plaine*

EXAMPLE 28.6b   Rule 6: Robert Morton, *Vive madame par amours*

EXAMPLE 28.6c   Rule 6: Coda in parallel tenths

Rule 7. Choose an Idiomatic Style or Approach

Added voices may range from a simple filling-in of the existing texture to florid voices that might seem especially suited for instruments (ex. 28.7a). One may also adopt an ostinato pattern like those found in the manuscript BolQ18. In the opening phrase of an anonymous *De tous biens plaine* (*Canti C,* fol. 89), the *altus* repeats a cadential motive a fifth above the final (ex. 28.7b). In similar fashion, Heinrich Isaac juxtaposes a florid reworking of *Fortuna desperata* with an antiphonal Litany of the Saints adopting an *altus* contrapuntal function throughout. Although these voices likely originated as an integral part of the setting, each offers a brilliant study in potential *altus* treatments.[22]

EXAMPLE 28.7a   Rule 7: Anon., *Vostre rigueur*

EXAMPLE 28.7b   Rule 7: Anon., *De tous biens plaine*

EXAMPLE 28.8   Rule 8: Mureau, *Je ne fays plus*

Rule 8. Break the Rules

Si placet compositions from the fifteenth and sixteenth centuries are rife with "mistakes," such as parallel fifths (see ex. 28.8). Not all added voices show evidence of perfect integration with all the original counterpoint, and brief clashes may occur against passing notes. According to Stephen Daniel Self, "obvious polyphonic clashes may suggest that an added voice was designed for a slightly different set of original voices than that with which it appears."[23] Perfect precision was not always achieved in added voices and may suggest the degree to which a particular existing voice may have influenced the shape of the added part. One may choose to ignore a cadence in the existing composition, for example, in order to achieve a musical effect.

A Final Exercise

For those who would like to practice or teach this technique, I suggest the following exercise: choose a three-voice composition to which a *si placet altus* has been added. Without referring to that voice, compose your own, following the above rules. Afterward, compare your results with the original *si placet* voice. The degree to which your results duplicate or differ with the original voice can be quite illuminating. For example, Hayne's *De tous biens plaine* follows fairly predictable procedures but contains some surprising florid passages.[24] Especially useful are works with multiple *si placet* voices. Often, one of the voices will have chosen the path you take. Because Busnois's *Fortuna desperata* contains some contrapuntal problems in all of its added voices, it provides an excellent opportunity to explore the boundaries between conventional and individual treatments.

These rules can be used as a model in analysis of already composed *altus* voices. One may follow each measure of a *si placet* composition, label-

ing which techniques are employed, and noticing where unexpected treatment occurs.

Conclusion

The addition of voices represents a viable approach to the performance practice of Renaissance song, both in the addition of voices and in the inevitable mixed emotions that will follow from the audience. Self goes so far as to suggest that these added voices represent "some of the few extant instances of 'frozen' instrumental improvisations."[25] The same way we now expect Baroque music to be ornamented, why not recreate a similar practice from an earlier time in order to enrich performance of fifteenth- and sixteenth-century music? I therefore include myself among those who would "add their own trifles." At the very least, one may use these rules to engage in the kind of "experimental archeology" advocated by Randall Rosenfeld.[26]

Although the development of simultaneous composition has been considered a hallmark of Renaissance style,[27] the hierarchical structure of successive composition lasted well into the sixteenth century. Consider Ludwig Senfl's seven-voice setting of *Was wird es doch,* which functions as a complete four-voice composition.[28] Whether or not present at the time of conception or added later, three of the voices effectively serve as *si placet* parts.

Moreover, *si placet* voices teach much about the art of composition during a time of transition from a three- to four-voice compositional paradigm. Just as it is often impossible to discern between a Renaissance *si placet* voice and an *altus* composed as part of the original contrapuntal texture,[29] the same can be true of a part skillfully added today. Because of the rules of counterpoint, it can be virtually impossible to tell the difference between an added voice written five years or five hundred years ago. It is thus possible, if only fleetingly, to capture the pleasure a Renaissance musician must have felt in revealing the notes of a silent voice hidden within a polyphonic song.[30]

NOTES

1. More literally, "if it pleases."
2. Hewitt, *Ottaviano:* 44.
3. Glareanus, *Dodecachordon:* 2:252.
4. Self, *Si Placet.*
5. Compare DuFay's original three-voice *Urbs beata Jerusalem* and *Se la face ay pale* with their later four-voice versions. See DuFay, *Opera:* 5:54, 141–142 and 6:36,105.

6. For examples, see Cyrus, "Polyphonic": 23, 27; Martini, *Secular:* Vol. 1: 35; Meconi, *Fortuna:* 28.

7. On the influence of added voices on the performance and reception of Josquin's music in the sixteenth century, see Schlagel, "Josquin."

8. Petrucci and Hewitt, *Harmonice:* 83.

9. Kirkman, *Three-Voice*.

10. On adding voices to later imitative compositions, see Zarlino, *Art:* 221.

11. Gaffurius/Young, *Practica:* 124; Tinctoris, *Liber:* 132.

12. Space does not allow an extensive vocabulary of motives. Any serious student will refer to the extensive examples of *si placet* compositions in Self, *Si Placet*. This is an indispensable resource.

13. The examples given here represent the most common. For further discussion of cadential writing, see Gaffurius/Young, 149–153.

14. As in the final cadence of Obrecht's *Laet u ghenoughen, liever Johan*. See Smijers, *Van Ockeghem:* 70.

15. This progression serves as the basis for his canonic chanson *Baisés moy*. See Josquin, *Werken:* 1:51–53.

16. For an extended discussion of this technique, see Trumble, *Fauxbourdon*.

17. Gaffurius's sixth rule. Gaffurius/Young, 135.

18. In cadences of fifteenth-century chansons, the contratenor bridge motive often foreshadows a structural duo between the *superius* and tenor. Also referred to as preview imitation, as in Schubert, *Modal*: 155.

19. Discussed in Self, *Si Placet:* 418–429.

20. As in Agricola's own *Je n'ay dueil*, which begins with an *altus* voice. See Petrucci and Hewitt, *Harmonice:* 302. On the possible implication of this procedure in the *si placet altus* of Johannes Martini's *Des biens amours*, see Atlas, *Cappella:* 1:102; Self, *Si Placet:* 321.

21. Gaffurius/Young, 155.

22. Cyrus, *De Tous:* 36:40–43; Meconi, *Fortuna:* 37:5–21, 32–35; Self, *Si Placet:* 29–33.

23. Self, *Si Placet*: ix.

24. Cyrus, *De Tous:* 6.

25. Self, *Si Placet*: x.

26. Rosenfeld, "Performance": 85.

27. Blackburn, "On Compositional": 210.

28. Senfl, *Sämtliche:* 44, 148. William Mahrt plausibly conjectures a *si placet* voice in Senfl's five-voice motet *Nisi dominus*.

29. A point noted by Self, *Si Placet:* viii.

30. Thanks to Stephanie Schlagel for looking over this chapter.

29

Renaissance Theory

SARAH MEAD

Despite the common division between the academic and applied aspects of music, most teachers of performance also find themselves teaching the structure and historical context of the music.[1] Whereas someone coaching a Haydn string quartet can rely on the students having a basic understanding of the language of tonal music, those who teach the music of other cultures or periods need to give their students more detailed guidance in understanding the music in its own context. Thus, the director of an early music ensemble is called upon not only to have a familiarity with several families of instruments, vocal production, repertory, and performance practice, but with the theory of the music as well, and effective and concise ways to teach its applications in a nonlecture setting.

Although there has been a growing interest in atonal music in the last several decades, the people of Western cultures are most commonly exposed to tonal sounds in the media, and most would have no problem recognizing a tonal cadence. This inherent bias can make it difficult for us to hear pretonal music except in tonal terms. Yet, although we recognize the music of the European Renaissance as an ancestor of our modern tonality, those who lived in sixteenth-century Europe might have difficulty recognizing its distant progeny today. We can better understand Beethoven when we have studied Mozart, and Wagner when we have studied Beethoven, but if we tried to reverse this and understand Mozart in terms of late-nineteenth-century thinking, we would be missing much of the point. For the same reason, today's students of early music need some way to approach the music of the Renaissance from its own perspective and not through hindsight.

This chapter is not intended to be a complete or in-depth resource for pretonal theory, but a practical introduction for performers. Just as it is not necessary for a performer of contemporary music to understand all the complexities of set-theory to create a sensitive performance, so it is not a prerequisite for the intelligent and musical performance of sixteenth-century music for the performers to have pursued advanced studies in musicology. But there are aspects of Renaissance theory that are directly applicable to performance, and an understanding of their derivation and use will enhance the quality of any performing, reading, or listening experience. These condensed descriptions encapsulate the material that I have found useful to introduce into my own coaching and can serve either as a refresher to the ensemble director, or as a direct resource for the students.

The Gamut, Hexachords, and Solmization

In the sixteenth century, children of the educated classes began their music instruction almost as early as they learned to read and write. Music, considered one of the seven basic subjects necessary to a well-rounded education, had its place in daily lessons along with such fields as philosophy, theology, and astronomy. Not only was an educated person expected to be able to sing and play an instrument but also to understand the basic theoretical rules of notation and composition, to sight-sing, and to provide counterpoint *ex tempore.* Just as the alphabet is the cornerstone of reading and writing, the Gamut was taught to children as the cornerstone of music.

The Gamut, like the alphabet, is a system used to organize and define a series of sounds. The Gamut, however, is used to name the notes of the scale, rather than the sounds of speech. Like most aspects of Renaissance music theory, it was first developed in the Middle Ages; in this case, as an aid in teaching sight-singing to monks. Guido d'Arezzo, an eleventh-century Italian monk, apparently first introduced the six syllables used in the Gamut as a way of memorizing intervals in the note sequence C–D–E–F–G–A. He used a chant known to most novices, *Ut queant laxis,* as the source of his syllable names. As seen in example 29.1, each phrase of this chant starts one step higher than the preceding one, starting with *c′* at the beginning of the first phrase, and ending with *a′* at the beginning of the last. The syllable that began each phrase of text in the original hymn was taken by Guido as the syllable to represent that pitch. Thus, the six syllables, *ut, re, mi, fa, sol, la,* were assigned to the six ascending notes:

You will recognize these syllables as the basis of our modern solfège in which "ut" has been changed to a more singable "do" and "ti" or "si" has been added as the seventh note of the scale. (The syllable "si," first added in

EXAMPLE 29.1   The hymn *Ut queant laxis*

the seventeenth century, was probably derived from the initials of "Sancte Ioannes," found at the end of the chant.)

In the sequence of six notes from *c′* to *a′,* the only semitone occurs between *e′* and *f′,* the third and fourth notes, to which the syllables *mi* and *fa* are assigned. This same pattern of whole and half-steps can be found by starting at *g* and ascending through *e′.* Once again, the semitone appears between the third and fourth notes, this time *b* to *c′.* This pattern of six notes, known as a "hexachord," can also be found by starting at *f,* if a *B♭* is added. The medieval notation for a *B♮* was ♮, a square or "hard" *B,* whereas the symbol for *B♭* was ♭, known as the round or "soft" *B.* (These distinctions are still seen in the German expressions "B *dur*" and "B *moll.*") The hexachord on G thus became known as the "hard" hexachord, the one on F as the "soft" hexachord, while the original one, on C, was called the "natural" hexachord. You can see the origin of our modern accidental signs in these early symbols for natural and flat.

By overlapping a series of hexachords—natural, soft, and hard—a whole range of notes could be produced, each with a particular syllable or set of syllables attached to it. Medieval theorists combined seven hexachords to make up a range of twenty notes, from *G* an octave and a fourth below our modern middle *c,* to *e″* an octave and a third above it. This range was adequate to accommodate the music of the Middle Ages, as the human voice (created by God) was considered to be the model for all the lesser instruments (created by man), and the twenty notes thus outlined covered the average range of an all male choir. As Thomas Morley put it in his *A Plaine and Easie Introduction to Practicall Musicke* of 1597, "that compass was the reach of most voices, so that under *Gam ut* (the lowest note) the voice seemed as a kind of humming, and above *E la* (the highest) a kind of constrained shrieking."[2] Even though by the fifteenth century both vocal and instrumental music had pushed beyond these bounds, these twenty notes continued to be the basic "alphabet" for music students through the sixteenth century. Example 29.2 shows how the seven hexachords are overlapped to create the full Gamut:

As you can see, most of the notes have more than one syllable associated

EXAMPLE 29.2   The complete hexachord system

with them. Thus, the entire name of a note, such as "C *sol fa ut*," could specify a particular pitch. In this case, we know that middle *c* has been named, not the octave below ("C *fa ut*"), or the octave above ("C *sol fa*"). Five notes have the same names in two different octaves starting with "E *la mi.*" These could be differentiated by register as Morley does by calling the upper of the two Es "E *la mi* in *alt.*" Often the various syllables belonging to a note were combined to make up a single word, as in "*delasol.*" At least one Renaissance musician took such a word as his *nom de plume;* the early sixteenth-century music scribe Peter von der Hove went by the name of "Petrus Alamire," not only in his musical career, but also as a spy for Henry VIII.

Octaves were further differentiated in most treatises by using different alphabets or letter-types, as shown in the above example. The bottom most *G* was represented by the Greek letter G, "Γ," or *Gamma.* Its full name, "*Gamma ut*" or "*Gam ut,*" came to represent not only the lowest note but the full range of notes. Our modern use of the word in such phrases as "it ran the full gamut of emotions" derives from its meaning of the complete scale or range as established in the late Middle Ages.

By the thirteenth century, the mnemonic aid known as the "Guidonian hand" was being used to train students in the notes of the Gamut. Named for the monk Guido d'Arezzo, it assigned each of the twenty notes to a different joint of the left hand (see fig. 29.1). The teacher could then hold up his open left hand and point to the various joints with his right index-finger, while the students sang the notes indicated. Nowadays we have hand signals which represent the solfège syllables, and a teacher can similarly lead a class through sight-singing exercises by hand. Pictures of the Guidonian Hand continue to be found in music textbooks throughout the sixteenth century, and the Hand was used by more conservative theorists as a ground for protesting against the avant-garde use of chromaticism. Chromatic notes such as *E♭*, were considered "outside the hand" (*extra manum*) and thus not justifiable.

Although most notes on the Guidonian hand are identified by more than one syllable, only one is actually used in singing, depending on the
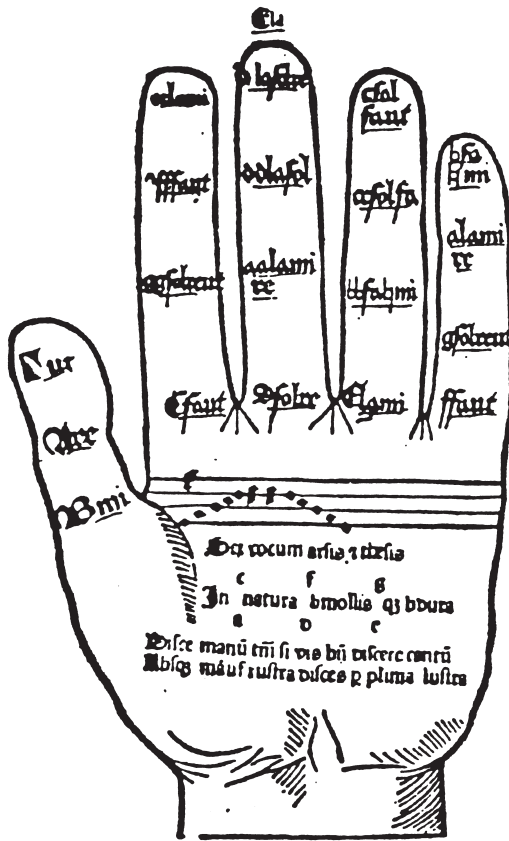
FIGURE 29.1   The Guidonian Hand

context in which the note appears. Within this system, most notes can take on several functions. In the natural hexachord, for example, D is called *re* and is the first whole step above *ut*. In the hard hexachord, the same note is called *sol* and functions as the fifth above *ut*. Because in modal as well as tonal music the fifth is a very strong interval, and the fifth note of a scale is second in importance only to the first note, D-*sol* functions differently, both musically and psychologically, from D-*re*. In the soft hexachord D is called *la,* and serves as the topmost note of the hexachord, a sixth above *ut,* yet another very different function. In the same way the note E can have two different functions, depending on which hexachord is considered. In the natural hexachord it is called *mi* and is the lower member of the *mi-fa* semitone. In the hard hexachord it is *la* and, as the top of the hexachord, has no relationship with the F above it.

Of all the notes only B and its flat have a single function. B is not found at all in the natural or soft hexachords, while in the hard hexachord it is a *mi,* related to the C above it as a half of the *mi-fa* semitone. Similarly, B♭ is only found once, in the soft hexachord, where it is called *fa,* and functions as the upper member of the *mi-fa* semitone. Because of these two very different roles for the two types of B, the term B♭ was not really necessary. In the Renaissance it was known instead as *befa,* while the natural B was called *bemi,* thus distinguishing the two Bs by their functions in the hexachord system.

With all the notes of the diatonic scale, as well as B♭, thus covered, it was possible for students to solmize most melodies. The term "solmization" means the assigning of syllables to individual notes as an aid to remembering pitch relationships. Such aids are found throughout music history, both in Western music and in Eastern cultures. Many systems of syllables have been tried in the past three hundred years, but the one that came from *ut-re-mi-fa-sol-la* has remained the most popular as our modern solfège.

The three hexachords appear to serve very nicely as solmization tools so long as a melody is confined to one of these sets of six notes. But what happens if a line of music goes beyond the boundaries of a given hexachord? Because the hexachords overlap, and most notes have more than one possible function, it is possible to move or "mutate" from one hexachord to another in order to encompass a larger range of notes. This idea seems simple enough in theory, but can at first seem confusing to apply in practice. How do we know which hexachord to begin with? When is it best to mutate?

In many instances each phrase of a melody will fall within the compass of one hexachord, particularly in music from the early part of the sixteenth century. In this case it is relatively easy to choose which hexachord will accommodate the phrase and mutate as necessary to fit the next one. In pieces with less simple melodic structures, more thought is necessary. It can help to consider first the mode of the melody and its range. If there is a *B♭* in the key-signature, then probably the soft and natural hexachords will be most often used, the hard hexachord only coming into use if a B♮ is introduced. The lowest and highest notes of the phrase will dictate in part which hexachords will be needed to encompass them.

Although many sixteenth-century theorists give examples of mutation, it becomes clear from the rules and examples that the choice of where to mutate was quite subjective. Still, it makes sense to base the solmization of a line on musical factors, and thus to use syllables that not only help in reading the intervals but also illustrate the shape of the line. In example 29.3, all but the last three notes fall within the compass of the natural hexachord.

EXAMPLE 29.3   The natural hexachord (plus three notes)

Mutation could then take place after A-*la* (which can also function as *re*), so that the last five notes could be solmized *sol-la-mi-mi-fa*. However, with this interpretation the last three notes appear simply to have been tacked on, not acting as part of the whole phrase. If you sing or play the melody, you may notice that the last five notes have the same configuration as the first five, and, if considered in the hard hexachord, they can be sung to the same syllables, *ut-re-mi-mi-fa*. Using the same syllables for the beginning and end of the phrase illustrates its symmetry and helps the singer to hear it. Some theorists state that *ut* can only be used on the lowest note of any given phrase, however. Since *g′* functions in this phrase as both *sol* and *ut* (as the note on which the mutation occurs), purists would say that it should be sung as *sol, c′* having already been defined as *ut*. The whole phrase would then be solmized thus: *ut-re-mi-mi-fa-re-mi-mi-sol-re-mi-mi-fa*. The repeated *re-mi-mi,* sung three times, also gives shape to the phrase.

It might appear that such a system requires so much intellectualization that it would be impossible to use it to sight-read without first working out and writing down the syllables. However, the system grew out of and, in turn, was the basis for, the music of the time. You will find that when the hexachord system of solmization is put into practice, it very quickly becomes second nature, since it fits the patterns of the music so well. Example 29.4 shows how a longer phrase of music might be solmized (from Thomas Morley's "La Caccia"):

This system continued to be useful in sight-singing until the introduction of real chromaticism. Individual sharps or flats, added at cadences or as word-painting, could be seen in their context, related in function to the notes around them. Thus, most sharpened notes served as the lower half of a semitone, and could be called *mi,* while flattened notes, whether or not they were Bs, were sung as *fa*. These *mi*s and *fa*s were therefore borrowed

EXAMPLE 29.4   Morley's "La Caccia" solmized

from fictitious hexachords. This system was particularly necessary in transposed modes, which will be discussed in the next section.

The term "hexachord" is actually a modern invention. Throughout the Middle Ages and Renaissance the six notes of the hexachord were known as the *sex voces* or *voces musicales,* the word *vox* in this case meaning "note" or "pitch." The term *voces musicales* can be found in the titles of many compositions. In Josquin's *Missa L'Homme Armé super voces musicales* the melody used as the *cantus firmus* is repeated at successively higher pitches, starting at *c* and going through *a.* In Ludwig Senfl's beautiful *Fortuna ad voces musicales,* there are two *cantus firmi,* the *Fortuna* melody and the hexachord, which is played in the way it was often taught to beginners, as a succession of building blocks, "*ut, ut-re, ut-re-mi, ut-re-mi-fa. . . .*"

Many works of the sixteenth and seventeenth centuries were based on the hexachord itself. Ferrabosco wrote at least three complex chromatic fantasies for viols in which one part plays eight successive descending hexachords as a *cantus firmus,* each starting a semitone below the previous one. Often the syllables of the hexachord were used in the title of a piece to illustrate its opening motive, as in Isaac's *La mi la sol*, which begins *a′-e′-a′-g′,* or Ockeghem's *Missa Mi–Mi*, which used the interval A–E throughout its movements [found at the beginning of each section of the Mass in the bass voice in the sequence e-A-e, suggesting the E–F half-step interval of the natural hexachord and the A–B♭ half-step interval of the soft hexachord—thus, *Mi–Mi.* (editor)] Syllables were also used as puns in Josquin's *Vive le Roy;* the vowels u-i-u-e-e-o-i found in the title (the letters v and u, as well as i and y, were interchangeable in the Renaissance) were translated by Josquin into the hexachord syllables with those same vowels, and *ut-mi-ut-re-re-sol-mi* became the *cantus firmus.*

Composers often could not resist the temptation in texted music to set the syllables of text that sounded like hexachord syllables to their appropriate pitches. The Italian words *Mi fa . . .* ("it makes me . . .") appear in a number of madrigal texts, and, as might be expected, are usually set to a rising semitone. Josquin's *Missa La Sol Fa Re Mi,* it is said, got its *cantus firmus* from a clerical in-joke: apparently a powerful man of the church habitually put off his responsibilities with the phrase *Lascia fare mi* ("leave it to me"). His catchphrase became the basis of more than one musical pun.

Students in the Renaissance learned the names and sounds of the pitches of the hexachord first and then the intervallic relationships between them. Their sung exercises would have been familiar to all educated people. As noted above several composers used these familiar exercises as thematic material or as the *cantus firmus* of a new composition. Singing these lines with their syllables can help a modern student to become familiar with the

syllables and to get a sense of some of the teaching devices of the sixteenth century. I have found it useful to have students practice the hexachord and the basic intervals by singing the second *cantus firmus* of Senfl's setting of *Fortuna* described earlier, first alone and then in the context of the piece. A useful example for practicing solmization and mutation is Ferrabosco I's *Ut re mi fa sol la* (*Musica Britannica* XLIV, *Elizabethan Consort Music,* p. 2), which uses the six notes of the natural and soft hexachord as the basis of all three parts.

Knowledge of the Gamut helps students to develop their skills in sight-reading through solmization and to hear more clearly the relationships between the voices. Familiarity with the Gamut also helps us to break away from our own tonal concepts of the scale and allows us to accept more easily the idea of the modes. An understanding of the hexachord can further help in making decisions about the use of *musica ficta,* which will be discussed in a later section.

The Modes and Modality in Polyphonic Music

Since the mid-seventeenth century the majority of Western music has been written in one of two modes: major or minor. Although in the twentieth century many composers abandoned tonality altogether, our popular music continues to be based on these two modes. We associate particular moods with the two modes; American children will be quick to tell you that a minor piece is sad or frightening, no matter what the text, while the major mode connotes contentment, joy, or celebration.

Actually, despite the strong associations, the difference between any of the modes is quite small when analyzed. A mode is defined by the pattern of whole-steps and half-steps which make up the scale whose notes are used in a given composition. In the major mode the half steps occur between the third and fourth and the seventh and eighth degrees of the scale, while in the minor they are found between the second and third and the fifth and sixth degrees. We thus distinguish the two modes by the inflection of the third and sixth above the tonic.

Before the late seventeenth century, many more modes were recognized by theorists and used in composition. The characteristics of eight modes had been set down in the Middle Ages to help codify chant melodies. Theorists found that the existing melodies could be categorized by the "final," or last note of the chant, by the "species" of fifth and fourth used in the melody (that is, the sequence of tones and semitones making up those intervals), the "ambitus" or range of the chant, and the types of leaps commonly used. Each of these modes was also associated with a particular

EXAMPLE 29.5   Modes, Species, Repercussions

repercussion or psalm-tone tenor, the pitch at which the psalm would be intoned.

The modes could be divided into four "authentic" and four related "plagal" modes (see ex. 29.5). Each of the four authentic modes was built from one of the four species of fifth, to which an ascending fourth (one of three species) was added to create the full octave. The bottom of the fifth served as the final. Their associated plagal modes were built by causing the same fourth to descend from the bottom of the fifth, thus making an ambitus one-fourth lower. The lowest note of the fifth remained the final. The plagal thus shared with its authentic the species of fourth and fifth, as well as the final, but had a different range and repercussion. The repercussion or reciting tone for the authentic falls one fifth above the final, except when this would be a B in which case it is raised to a C. The repercussion for the plagal falls one third below that of its related authentic, with the same exception. Thus, although we tend to view the eight modes today as scale patterns, they were seen at the time to be made up of smaller building blocks.

Still, a keyboard can help us in visualizing these modes. The authentic modes can be found by playing a scale of all white notes starting, respectively, on D (I), E (III), F (V) and G (VII). In these four modes the final is the note on which the scale begins. The four plagal modes are derived from the other four, each having a range one fourth below that of its related authentic, but sharing its final. For example, Mode I begins with the fifth from D to A, with the pattern TSTT (T = tone, S = semitone), and is completed by the fourth from A to D with the pattern TST. Mode II, its associated plagal, is based on the same species of fifth, but descends below it from D

down to A in the same pattern of tones and semitones. The final in both cases is D. If you continue this pattern, you will find that when you get to the eighth mode you are repeating the scale you had played for the first mode. What, then, is the difference? Actually, it is quite great, if viewed not as a scale but as a combination of smaller units. The species of fifth on which this mode is based can be heard in the interval from G to D with the pattern TTST. When the fourth from D to G (TST) is added below, you do get the same pitches as in Mode I, but with a different final (G), and a different species of fifth. In the first mode the principal degrees will be D and A. In the eighth they will be G and D (as well as C, its repercussion). As a result the compositions based on these two modes will be quite different.

With the advent of polyphony this form of analysis became more difficult. The types of intervallic leaps became determined by the simultaneities of multiple parts, and could no longer be seen as characteristics of a mode. The ranges of the individual voices differed and so could not easily help to identify the mode of the piece. Theorists struggled to adapt their analysis to the new challenges and developed ways of describing polyphony in modal terms. Because compositions were usually based on the tenor or tenor-soprano pair, with other parts added subsequently, the mode of the piece could usually be defined by those primary voices, their ranges, species of fifth and fourth, and the pitches used for points of imitation and cadences. The secondary voices (alto and bass) will usually fall in the associated plagal mode with its lower ambitus.

Renaissance scholars looked back to the writings of antiquity for models to support their theories. Although the music of ancient Greece must have differed enormously from their own, elaborate reconstructions of archaic theory were undertaken in order to create the sense of an unbroken tie to the past. Thus, the eight church modes became associated with Greek modes and were often referred to, respectively, as Dorian, Phrygian, Lydian, and Mixolydian for the four authentics and Hypodorian, Hypophrygian, and so on for their plagals.

The Greeks wrote of their modes as having emotional associations, sometimes so strong as to elicit changes in the behavior of the listener. Although Renaissance theorists supported this idea in their descriptions of the modes, they did not always agree on the affects of the modes. They also allowed for the fact that both the composer and the performer could have an effect on how the mood of the piece is perceived. Our current two-mode system does not allow for the subtleties of affect associated with a wider range of modes, and we are sometimes surprised today to find that those modes most closely related to our own major and minor did not always carry the same significance in the sixteenth century. For example,

Mode VI, despite its similarities to our C Major, was categorized as "mournful," "pious," and "lachrymose," while Mode VIII, with its melodic minor third was "gladdening," "agreeable," and "sweet" to the late medieval theorists who served as sources for Renaissance writers.

Because the modes were characterized by their species of fifth and fourth, they could be transposed with the aid of signature flats. Thus, a melody starting and ending on G, with a B♭ in the key signature, would still be called Mode I, rather than Mode VII. The final would now be G and the repercussion D, just as they are in the seventh mode, but the sound of the first mode would be unchanged, since the species of intervals had been retained.

Except when the modes were transposed, however, only one accidental was allowed by theorists into this system: B♭. You will notice that if B♭ is added to the Dorian mode, the resultant scale sounds identical to the minor scale defined earlier. If the B in the Lydian mode is flatted, the result is a major scale. Thus, already in the Middle Ages, both major and minor were possible modes. By the mid-sixteenth century, these modifications were so common that some theorists decided to define two more modes, one starting on C and one on A so that it would no longer be necessary to modify Lydian and Dorian to get those scalar configurations. The two new modes were called by some Ionian (on C) and Aeolian (on A). With their accompanying plagals they brought the total number of modes to twelve. Some confusion arises nowadays from the fact that theorists differed on the naming and numbering of the twelve modes, but the structure of the modes was consistent. It is interesting to note that although the possibility of a mode on B was sometimes discussed, its sound was so disturbing (since it is built from a diminished fifth and an augmented fourth) that it was never seriously considered beyond a theoretical standpoint.

The twelve modes continued to figure in theoretical treatises for another 100 years and were part of an educated child's basic foundation in music. Many composers wrote collections of pieces ordered according to the twelve modes in the sixteenth century, and a few such cycles are found as late as the nineteenth century, but as the years progressed, such works were increasingly regarded as curiosities or intellectual exercises.

In instructing my students I have found it helpful for them to experience the different sounds of the modes by having them sing or play the Kyrie from Ockeghem's *Missa Cuiusvis toni* in all four authentic modes. A very useful edition of this piece, edited by George Houle, with notes, examples, and modern and original notation, is now available from Indiana University Press. Because this piece was written to work in all four modes, however, it necessarily lacks some of the characteristics of modal writing

that can be seen more clearly in other works, most specifically the use of the repercussion as a primary degree in cadences and imitations, since the relationship of the repercussion to the final differs between Mode III and the other authentics. Also, since the text is the same in all four versions, it is more difficult to discuss the differences in affect.

Mid-sixteenth-century French chansons can be excellent examples for modal analysis, being quite short and free of chromaticism. The tenor usually serves as the primary voice, paired with the soprano, with which most cadences are made, and these two voices will generally share the same range, separated by an octave. Imitative opening motives will tend to outline the species of fifth and fourth, and cadences will take place on the primary degrees of the mode (the final, fifth, repercussion, and sometimes the third), going further afield into "irregular" cadences (outside the mode) toward the middle of the piece, and returning to the final at the end. The bass and alto with their lower ranges, added after the first two parts were written, usually fall within the range of the related plagal.

Such examples must be carefully chosen, as the application of modal theory is very complex and subject to discussion and disagreement both among modern theorists and their Renaissance counterparts. A form of analysis developed for chant falls short in describing polyphony, and it is clear from the range of solutions proposed by sixteenth-century theorists that modal theory was largely inadequate to describe the works of their contemporaries. Our students do not need to be able to carry out an in-depth analysis of the music they play, but they do need to understand that it was in these fundamentals that Renaissance musicians, both professional and amateur, were trained, and that the language of modality was the foundation for their music. It is all too easy for the modern performer to assume that major and minor tonality are natural phenomena that the Renaissance composer had failed to discover, and not simply the chosen modes of one recent culture.

Musica Ficta and Cadences

Students are often confused by the phenomenon of accidentals placed above the staff. Some have heard these accidentals called *musica ficta,* and will know that these can be a source of discussion and disagreement in rehearsals. But what are those accidentals doing there? Should they be played? How do they differ from accidentals written on the staff? And what governs where they appear?

One reason that the rules for *musica ficta* are not always clear to us as modern players is that it takes some familiarity with solmization as well as

modal theory to understand their application. The term *musica ficta* (or *musica falsa*) originated in the Middle Ages and referred to those notes falling outside the Guidonian Hand, the range of notes encompassed by the Gamut (or *musica recta*). Since they were not part of this system, such notes were considered false, or imaginary. Thus, soprano *f″,* one step above E-*la* (*e″*), the top of the Gamut, was called *fa ficta.* It was even sometimes notated with a flat before it, not to lower it, but to indicate that it was outside the system.

All accidentals, except for B-*fa,* were outside the Hand; however, they were sometimes necessary in order to avoid a dissonance or to reinforce a cadence. Instead of notating these changes in the music, composers assumed that performers would know where such accidentals would be called for, and that they would automatically raise or lower the appropriate notes as common usage dictated. We know relatively little about the common usage of the Middle Ages; it probably varied from region to region. But by the end of the fifteenth century certain rules had become generally accepted and were expounded in a number of treatises.

By the sixteenth century many accidentals were notated, not only in the form of signature flats (for transposition of modes) but in the music itself, also those governed by rules of *musica ficta* continued to be left to the performer's discretion. Toward the end of the century, as composers began to experiment with increased chromaticism, they began to find it necessary to notate all accidentals in order to clarify their intentions. By the beginning of the Baroque era, almost all accidentals were being notated.

When musicologists began to revive an interest in early music in the early 1900s, some editors went overboard in the use of *musica ficta.* In an attempt to make Renaissance music more accessible to modern ears, editors often used their license to obscure the original modality of a piece, rendering it either major or minor by the addition of accidentals. Since nothing was done to indicate which accidentals were original and which were editorial, this "modernization" was not readily detectable.

Nowadays editors try not to impose their subjective opinion on music that they publish. Anything not found in the original notation of a piece is marked, either with footnotes or parentheses, and it has become accepted custom to notate *ficta* accidentals above the staff in order to differentiate them from those given by the composer. Editors provide these notations on the assumption that not all players will know the rules of *ficta.* But the application of these rules is somewhat subjective, so it helps if you can familiarize yourself with them in order to make your own informed decisions about the use of *ficta.*

The most common rules for applying *ficta* accidentals are summed up

in two Latin phrases: *mi contra fa, diabolus in musica* and *una nota supra la semper est canendum fa*. Both of these rules require a knowledge of the hexachord.

The first phrase can be translated, "*mi* against *fa* is the devil in music." At first reading this appears to indicate that the intervals of the semitone and diminished octave are to be avoided, and it is true that these intervals were considered dissonant. But the semitone is not the demonic interval referred to in this axiom. The real problem arises when *mi* and *fa* from two different hexachords come together to create a tritone (so called because it is made up of three whole steps). You can hear why this interval was considered so unpleasant by playing together an F♮ (*fa* in the natural hexachord) and a B♮ (*mi* in the hard hexachord), or an E♮ (*mi,* natural hexachord) against a B♭ (*fa,* soft hexachord). This interval, either occurring vertically between two parts or melodically within one, was to be avoided whenever possible. Thomas Morley says, "it is against nature";[3] indeed, it is a naturally disturbing sound, as the two notes in a tritone share no basic harmonics. The interval is used today for sirens because it is so jarring. Tritones were almost always eliminated by flatting the *mi* rather than sharping the *fa*. Despite the seeming gravity of this rule, not all tritones need be omitted when conflicts arise; early theorists espoused a set of prioritized rules to deal with them. Because of the recent research in this area, the performer today often has to second-guess the editorial solutions offered in the music.

In solmization a flatted note is called *fa* and a sharped note *mi,* whenever they occur. The syllables serve as symbols of intervallic relationships. Because *mi-fa* is the only half step interval in the hexachord, these syllables can represent the lower and upper members of any half step. Thus, the *diabolus in musica* can be exorcised by changing a *mi contra fa* to *mi-mi* (for example, B♮ and F♯) or *fa-fa* (B♭ and E♭). However, there are occasions when a tritone clearly cannot be avoided. Correcting one dissonance may cause other dissonances. Sometimes an unavoidable tritone seems to have been intentional, expressive writing on the part of the composer, sometimes it is just poor counterpoint. (Some modern theorists have proposed that such writing is evidence of a hidden chromaticism, created by a chain of *ficta* notes set off by a tritone, the accidentals kept secret because of a religious establishment that disapproved of modernism! This idea of a secret chromatic art may have finally been laid to rest by Berger; see the bibliography.)

The second Latin phrase translates thus: "one note above *la* is always sung as *fa*." As we have already seen, there are only six notes in each hexachord. A melody covering a greater span than this can be accommodated by mutating from one hexachord to another. But if the melody falls primarily within the compass of one hexachord, traveling beyond it by just one step,

(for example, D–A–B–A), the uppermost note is sung as *fa.* In other words, the note should be flatted, making an interval of a semitone with its neighbor below. This example would then become D–A–B♭–A, solmized thus: *re-la-fa-la*. This rule helps to avoid a melodic tritone if there is a *fa* in the phrase (D–F–A–B–A). But in many cases there is no tritone to be avoided; the rule simply reflects common usage.

Various treatises give other rules for the use of *ficta,* but those rules are either variations on those already mentioned, are particular to cadential formulae (which will be dealt with below), or come under the elusive heading of *per causa pulchritudinis* "for the sake of beauty"). Interpretation of this phrase varied among the theorists and we can be sure that it was widely interpreted by performers. We can get some sense of what was considered appropriate from string and keyboard tablatures of the time. Since tablature indicates the position of the fingers rather than the pitches themselves, any accidentals intended by the composer are incorporated in the notation. Thus, intabulations can provide us with a picture of the performance practice of the time. However, we cannot assume that an intabulated German work can tell us anything about French vocal practices, or that late sixteenth-century lute tablature can tell us how *ficta* were applied to the same songs a generation earlier. The best we can do is to apply the rules of which we are sure, avoiding tritones wherever possible, and then letting our experience of Renaissance music and aesthetics help to dictate what we ourselves might consider the most beautiful.

Sometimes *ficta* accidentals are added to avoid unpleasant dissonances, as in the case of *mi contra fa,* while at other times they reflect aesthetic conventions. The following two rules apply in particular to cadences, or closes.

In brief, the first says that an imperfect consonance expanding to a perfect consonance should be major, and the same interval contracting to a perfect consonance should be minor. Second, we are told that the third in a final chord should be major (as Morley puts it, "no close may be flat"[4]). These rules are better understood once we have considered the concept of the cadence in the sixteenth century.

Our instruction in tonal music has accustomed us to thinking that a cadence is a harmonic event. However, the Renaissance composer approached music linearly, not as a sequence of vertical events. A tonal cadence is a harmonic phenomenon, described at its simplest by the formula V-I, or dominant-tonic; the motion of the individual parts, though dictated by voice leading, is less important than the function of the chord as a whole. The Renaissance cadence, like the modern one, was likened to the period in a sentence, but unlike the tonal cadence, it achieves this effect from the interaction of melodic lines, rather than by harmonic means.

EXAMPLE 29.6a–b   Intervals a. dissonant b. consonant
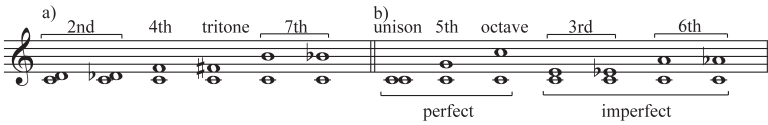
In the Renaissance, music students learned to compose by improvising counterpoint to a melody according to rules governing the intervals allowable between two parts. Additional voices could be added following those guidelines. The distance or interval between two notes could be either consonant or dissonant. Dissonances are those intervals which are considered disturbing to the ear, heard as incomplete and in need of resolution. In the Renaissance the dissonant intervals were the major and minor second, the perfect fourth, the major and minor seventh, and, worst of all, the tritone, or augmented fourth (ex. 29.6a). The consonant intervals were the perfect unison, fifth and octave, and the major and minor third and sixth (ex. 29.6b). The first three of these were called "perfect" consonances, because they conveyed a sense of completion or rest; the relationship of their frequencies makes these intervals the easiest to tune perfectly. The third or sixth consonances, which could be either major or minor, were known as the "imperfect" consonances. The cadence, or "close" as it was more commonly called, was arrived at by the motion of an imperfect consonance to the nearest perfect consonance (ex. 29.7).

EXAMPLE 29.7   The resolution of imperfect consonances
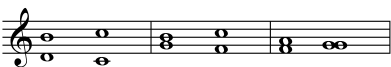
The rules of *musica ficta* indicate that when an imperfect interval expands to a perfect interval (ex. 29.8a), the imperfect interval should be major. When instead it contracts to the perfect interval it should be minor (ex. 29.8b). As you can see in these examples, this means that in a close one of the parts moves by the interval of a semitone, while the other moves by a tone. In most modes the voice which is ascending is given the half step motion, and for this reason it is sometimes necessary to add a *ficta* sharp to the penultimate note in the rising voice. However, in the Phrygian mode (either on E or in one of its transpositions) the half step naturally occurs in the descending voice (ex. 29.8c), between the second degree and the final.

As you can see the cadence is defined by the interaction of just two parts. The disposition of the other parts in a larger composition changed

EXAMPLE 29.8a–c   Interval motion a. expanding imperfect intervals b. contracting imperfect intervals c. cadential motion in the phrygian mode

over the course of the fifteenth and sixteenth centuries. By the fifteenth century the fifth, though a perfect interval, was no longer considered sufficiently final to make a full close, and cadences occurred only at the unison or octave. A third voice might be added between or below the two cadencing voices, and this resulted in different types of cadences. If the added voice was below the tenor, there was a difficulty in where it could move at the cadence and still form a perfect interval with the tenor (the third was not usually included in the final cadence until the following century). This problem was solved by having the added voice leap an octave to make a fifth with the tenor (ex. 29.9a. N.B.: in the following three examples the open notes represent the two cadencing voices, the black notes showing the added part). Another form of fifteenth-century close was the Burgundian, or double leading-tone cadence, in which the third voice occurred as an inner part, and rose by a half step to the fifth above the tenor, thus moving in parallel fourths with the *altus* (ex. 29.9b). Often in cadences of this time the upper voice moves down a step before rising to the cadence, a characteristic sound of the early Renaissance, a form of cadential embellishment that died out toward the beginning of the next century (ex. 29.9c).

EXAMPLE 29.9a–c   Cadences with three voices a. octave leap b. double leading tone c. under third

In the sixteenth century, the bass at final cadences took on the function we recognize as cadential in later music, leaping down a fifth to an octave with the tenor, or up a fourth to a unison (ex. 29.10a). Since this meant that three parts all had the same note, the fourth voice in a four-part composition supplied the fifth of the chord. If the composer wished to add a third (always major at final cadences) either this fifth would have to be sacrificed, or it would have to come from one of the two cadencing voices (ex. 29.10b). In this case the original two-voice form of the close becomes obscured.

This was not the only motion possible for the bass at closes, but was

EXAMPLE 29.10a–d   Four-voice cadences (a–d)

considered the most effective at important cadences, since it reiterated the cadential notes. At times the bass could be one of the two voices carrying the close (ex. 29.10c) or could move to an imperfect rather than a perfect consonance with the close, thus making what we now call a deceptive cadence (ex. 29.10d). Morley terms these "false closes, being devised to shun a final end and go on with some other purpose."[5] It is important to note that it is the motion of the two cadencing voices that defines the close, not what the other parts are doing. Certain types of motion in the other voices can make a close more or less final, but it is still considered to be a close so long as two voices are moving from an imperfect interval to a perfect one.

Sixteenth century closes commonly employ a suspension, or what Morley confusingly calls a "cadence," defining it thus: "A cadence we call that when, coming to a close, two notes are bound together and the following note descendeth thus"[6] (ex. 29.11).

This suspension creates a dissonance before the close, and contributes to a greater sense of finality. Example 29.12 shows the use of a suspension in closes of two, three, and four parts.

It is useful to be able to recognize cadences for several reasons. First of all, it helps in making decisions about the use of *ficta*. In 1517, the theorist Ornithoparcus said that the greater the number of closes a piece had, the

EXAMPLE 29.11   Morley's "cadence" (suspension)

EXAMPLE 29.12a–c   2-, 3-, and 4-part cadences with suspensions

greater was its beauty.[7] This implies that whenever we find two voices moving from an imperfect to a perfect interval we should treat it as a close, and add *ficta* to raise the leading tone, if necessary. But sources disagree on this, and tablatures of the time cast some light onto the subject. It appears that the love of closes increased as the century went on, and by the late 1500s it was probably common practice to raise the leading tone whenever two voices would make a cadence. But taste was and is still the final arbiter, and players must judge whether a final cadence is weakened by too many closes preceding it, or whether a phrase seems broken up by internal cadences.

When students can recognize and identify cadencing parts, it increases their understanding of how their lines interrelate. An awareness of cadencing lines helps students to tune their perfect intervals, as well as to recognize appropriate places to breathe or articulate. Another reason to identify cadences is to identify where ornamentation should be used. The majority of treatises on divisions concentrate on cadential formulae, and recognizing where closes occur makes it possible for the player to apply these appropriately.

Notation, Signs, and Symbols

In order to understand the music of the sixteenth century it is helpful to have some familiarity with the notation of the time, not necessarily in order to read it, but because it can give insight into the performance practice of the period. Seeing how the notation of early music differs from our own notation also serves as a reminder of how different the music of an earlier age is from the music of today, how it needs to be approached on its own terms, not ours.

Our music notation originated in the Middle Ages as a form of short-hand used by monks to help them remember the many chants they were called on to sing during the course of the liturgical year. These notations were often no more than scribbles, called "neumes," above the chant text to remind a singer already quite familiar with the music where the line rose or fell. As the chant melodies proliferated a more specific notation became necessary, and a couple of staff lines were added above the text to help notate exact intervals instead of simply the general outline of the tune. Similarly, distinctions began to be made between note lengths, although at first there was only a differentiation between long and short notes, with no fixed durations.

The development of polyphony required a further development in notation. In order to sing two or more different lines simultaneously, it was necessary to know the relative lengths of notes—particularly when the indi-

vidual parts began to be written on different parts of the page rather than one above the other. Rhythm began to be notated with a complex system of interdependent note values, some distinguished by the use of colored ink. The idea of musical notation was soon adopted in secular music as well, and by the late fourteenth century the possible permutations of notated music had become so complex that musicians sometimes challenged each other to play their convoluted writings.

But by the sixteenth century the style of composition had changed and, with it, notation. We find music of this period fairly easy to read from our modern perspective. Still, aspects of the notation harkening back to its more obscure origins remain unfamiliar to us. The first difference that we can see between the notation of the sixteenth century and our own is the shape of the notes themselves. Because musical notation developed at a time when broad pens were in common use, noteheads reflected the shapes most easily drawn with that instrument. Rather than being round like today's notes, they were square or diamond-shaped. Even after the introduction of the hollow noteheads of "white" notation, the rounded notes (which must have been easier to execute quickly than a hollow diamond) found in musicians' sketchbooks were recopied with corners in the final draft of a piece. This shape continued to be used after the introduction of music printing, and only died out as engraving and crow quills replaced movable type and broad pens in the seventeenth century.

Despite the angular shapes we can recognize the whole note, half note, quarter, and eighth, but there are also some Renaissance note shapes which are not so familiar: one shaped like a box, and one like a box with a tail. Occasionally the first of these appears in a modern score, where it is called a double whole note. In the Renaissance, it was known as a *breve* (brief or short note); with the addition of a tail it became a *longa* (or long note).

The names and shapes of the breve and long originated centuries before, when chant notation differentiated only between short and long notes. For many generations these represented the most common note values, and their durations were relatively quick—perhaps comparable with today's quarter and half notes. As music became more complex, and intricate rhythms began to be notated, these original note values became subdivided into smaller values, and the duration of the breve and long increased. The shapes and names of the various note values in use in the Renaissance are shown in figure 29.2, starting with the *maxima,* even greater than the long, and decreasing in length to the *fusa,* our modern eighth note. With the greater note values each note can equal either two or three of the next smallest notes, dictated by the time signature, while the smallest note values always have a duple subdivision.

| Maxima | Long | Breve | Semibreve | Minim | Semiminim | Fusa |

FIGURE 29.2   Renaissance note shapes and names

The shapes of rests in the Renaissance are easily recognized as fore-bears of our modern ones. They are shown in figure 29.3, paired with notes of comparable lengths. The difference in their shape from those we use today can be explained, as were the note shapes, by the style of pen used when they were developed. These shapes were adapted for printing at the beginning of the sixteenth century, and it was not until the seventeenth century, when engraving replaced moveable-type printing, that more flowing shapes appeared.
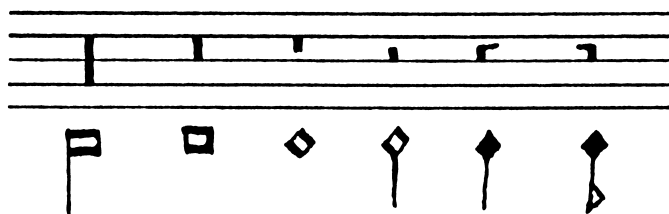
FIGURE 29.3   Note shapes related to their rests

A Renaissance piece transcribed literally from sixteenth-century notation to the notation of today can look very odd to us, as the note values appear to be so slow, due to the preponderance of whole notes and double whole notes. Nowadays such notes are performed very slowly, but in the Renaissance they moved more quickly. We know something about the relative durations of notes because of the phenomenon of *tactus.*

In 1490 Adam von Fulda gave the first detailed discussion of *tactus.* Musicians kept time together by having someone beat the *tactus,* either by lowering and raising his hand at a regular tempo, or, when the hands were occupied by instruments, with the foot. One downstroke plus one upstroke made one complete *tactus.* Contemporary accounts state that the speed of the *tactus* should be equal to the pulse of a man breathing normally—in other words, between 60 and 80 beats per minute (although some annotations indicate that late sixteenth-century composers expected a measure of flexibility and even rubato, at least in certain styles of music). The length of the *tactus* was one semibreve in normal time, one breve in diminution, or

one minim in augmentation. The time signature indicated which note value was to receive the pulse, and how that beat was to be subdivided. Thus the signature was an indication of both meter and tempo, and, because it related specific note values to the *tactus,* it could also serve within the piece to show proportional relationships between sections. For a discussion of proportions, consult the sections on tempo and proportion in chapters 2 and 3.

As was noted earlier, the larger note values could be subdivided either by two or by three, the duple division being called imperfect and the triple perfect (the mystic number "3" symbolized the Trinity, the ultimate perfection). The subdivision of breves into semibreves was called *tempus,* and the subdivision of semibreves into minims was called *prolation.* The perfect subdivision of the long occurred only rarely in the sixteenth century, most often in instructional manuals. (The long and maxima by this time were almost entirely confined to use at the end of pieces, where they signified a note to be held until all other parts were finished, akin to a *fermata.*) Tempus was indicated in the signature by a circle: a full circle represented perfection, or three subdivisions; an incomplete or half circle, in appearance like the letter C, represented imperfection, or a subdivision of two. Prolation was noted by the presence or absence of a dot in that circle, the dot signifying a triple subdivision. The combinations of perfection and imperfection give us the metrical equivalents of the modern signatures shown in figure 29.4 (assuming a reduction of note values, as discussed below):

FIGURE 29.4   Mensuration signs with their modern equivalents

A slash through a whole or half circle means that the breve receives the *tactus;* otherwise the semibreve receives the *tactus.* A slash through a half circle gives us our modern symbol for cut-time, also known to this day as *alla breve.*

If each breve was the length of one *tactus* in cut-time, then each semibreve equaled one downstroke or upstroke of the arm. Experiment with this by moving your hand down and back up at the rate of your pulse and you will get an idea of the speed at which the breve could move in this meter. As you can see, in cut-time the whole note (semibreve) of the Renaissance moved at about the speed we usually equate with the quarter note today, while in normal time it was twice as slow. For this reason many editors, fearing that modern players will be discouraged by the slow appearance of Renaissance music, halve or even quarter the note values when making modern editions.

This is just one example of the kind of changes modern editors some-times make in an attempt to make early music more accessible to the mod-ern player. But in actual fact these changes can obscure the way the original music was perceived. When note values are reduced we get a preponder-ance of eighth and sixteenth notes. Since it is modern practice to beam tailed notes together into rhythmic groups, these notes, heretofore separate, are beamed. This beaming can bias the player's perception of the music so that groups of notes are seen as rhythmic units and thus played with an em-phasis not implied in the original. Modernization of the notation can thus change how the music is played.

In the same way, when scores are made from music that, out of custom as well as financial necessity, was originally published in parts, we are likely to perceive it differently when we play it than we would if we were reading from individual parts. Modern scoring generally necessitates the insertion of bar lines in order to line up the parts. In music that was originally pub-lished in parts, bar lines were not necessary and rarely occurred except on occasion to mark where all the parts cadenced together. Renaissance rhythms did not always fall into the regular patterns dictated by modern bar lines, and the *tactus* was an unstressed beat indicating relative speed but not accent. Insertion of bar lines into sixteenth-century music thus adds a met-ric bias that did not exist in the original, giving modern players the impres-sion that certain beats should receive a greater stress than others and creat-ing syncopations where such accents were not originally intended. A section from the *altus* part of Josquin's *Bergerette Savoyenne,* reproduced in both its sixteenth-century and twentieth-century forms (fig. 29.5, ex. 29.13), illustrates this problem.

FIGURE 29.5   Josquin's *Bergerette Savoyenne* (*altus*) original (without bar lines)

EXAMPLE 29.13   Josquin's *Bergerette Savoyenne* (*altus*) transcription (with bar lines)

Although modern editors have produced various kinds of barless scores, the notes still have to be spaced at regular intervals across the page to allow the parts to coincide, which can obscure the shape of the line.

In looking at a piece of sixteenth-century music we see that each piece begins with a clef and key signature, if any, as well as a time signature, much as they do today, but the appearance of the clefs can differ from ours. A key signature was first used, like other notational conventions, as a space-saver so that a frequent accidental did not have to be written repeatedly. It is an indication of a transposed mode (except in the Lydian mode, where a B♭ was common). The phrase "key signature" is a modern one and obviously was not used before the concept of keys themselves was developed.

The common clefs were the C-clef, F-clef, and G-clef, although this last one occurs less often than the others. F-clefs were mostly used for bass- and baritone-range parts. All of these clefs could appear on any line of the staff in order to avoid the use of ledger lines, which were difficult to write or print; for this reason the clef sometimes changes within a piece. The forms of the clefs may be unfamiliar and can be mistaken for notes, bar lines, or rests on first encounter (fig. 29.6).
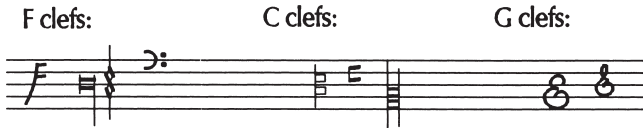
FIGURE 29.6   Common clefs

A number of less familiar symbols also appear in Renaissance music. These include the sign of congruence, the *custos,* and the ligature, none of which has an exact equivalent in modern notation. The sign of congruence (*signum congruentiæ*) takes on several forms in printed or manuscript sources, but is generally a decorative and symmetrical symbol, often looking like a backward question mark surrounded by four dots. The purpose of this sign is to indicate a place where all the parts come together. Often it marks a principal cadence. It is also one of the ways to indicate a repeat, or the point at which parts in a canon should enter.

The usefulness of such a sign becomes clear when reading from original parts. If the ensemble falls apart, it becomes necessary to return to the beginning, since without a score there is no easy way to find a place to start together. Modern parts avoid this problem by using rehearsal letters. The sign of congruence serves a similar function. Not only does it serve as a helpful place within a piece to start, but it can confirm that you are actually in the right place after negotiating a particularly difficult section.

A repeat can be indicated in a number of ways: the first is with a repeat sign similar to our modern one; in another the opening notes of the section to be repeated are given, and the player looks back in the music for that pattern of notes (this can only work when the repeat comes at the end of the piece); or in yet another way, with a sign of congruence, which usually appears twice—at the end of the piece, to show that the repeat is to take place, and during the piece, to mark the place to which the repeat returns. Once again this symbol is only effective when used at the end of a piece; otherwise there would be no way to distinguish it from its other function.

The *custos* is another unfamiliar symbol in early notation that is often mistaken for a note. Its name means "guardian" and is the root of our English word "custodian." The sign looks like a check mark with an extra turn, and it occurs at the end of the staff. Its purpose is to mark where the first note on the next staff will occur. It is an effective aid in sight-reading, since it prepares the eye for the next line, and is especially useful when reading in unfamiliar clefs, or in pieces where the clef changes frequently. This symbol can be a helpful addition to modern editions as well and has often been adopted by my own students to prepare them for unexpected leaps that occur between staves.

The ligature was a holdover into the Renaissance from the notation of much earlier music. As its name implies, the ligature ties several notes together in one symbol. Its use arose many centuries earlier in the notation of chant, for which the earliest symbols had been flowing squiggles representing several pitches with one gesture. As notation developed, groups of notes continued to be written as units; how these units were written and juxtaposed defined the "rhythmic mode" of the music. However, this "modal" notation was limited in the variety of rhythmic subdivisions which it could express. It was eventually replaced by "mensural" notation in which the meter was designated by a sign at the beginning of the piece. Although it was no longer necessary to group several notes within one symbol, ligatures continued to be used as a convenience, since they took up less room—hence wasting less paper—than separate notes. They are still found in the sixteenth century, side-by-side with more modern notation in passages of longer note values.

Because ligatures developed out of a very different form of notation, they may not seem logical to us. Although people have come up with a variety of mnemonic devices to aid in deciphering ligatures, there is no easy way to remember what note values each type of ligature represents. It is probably easiest just to keep a chart of them in a drawer somewhere and refer to it as needed, until you are familiar with the most common forms. Figure 29.7 is a diagram of ligatures and the note values they represent (L = long, B = breve, S = semibreve).

FIGURE 29.7   Common ligature formations

You will see that there is one type of ligature used for semibreves, while many forms are used for longs and breves. A ligature of two notes with a tail going up from the left represents two semibreves. The diagram shows only two-note ligatures, but they can also encompass many more pitches. Fortunately, any notes between the first and last in a long ligature are always breves (unless one is stemmed). If a longer ligature has a tail going up at the beginning, the first two notes are semibreves, and the remaining notes follow the regular rules: all the notes in the middle are breves, and the value of the final notes is decided by its shape, its tail (if any), and whether it is ascending or descending, as shown in the diagram above.

Some people find it difficult to figure out just what pitches are represented in a ligature. The square type of note is fairly easy to read, since it sits on a space or line just like a breve. The oblique ones are harder to interpret, since they look as though they cover a whole swathe of pitches. In reality, they actually represent only two notes, the one where the diagonal begins, and the one where it ends. Looked at in this way it is usually fairly easy to figure out the pitches.

But why is it necessary to know any of this? If there is no occasion to read from original notation, it is certainly pointless to memorize the types of ligatures. But it is useful to know that they existed, because they can tell us something about the performance of the music. First of all we can see that musicians and amateurs of the sixteenth century were sophisticated readers who felt comfortable with a complex system of notation. Second, we know that a line that contains ligatures must come from a partbook, because a single symbol representing many notes would not work in score-writing—it could not be lined up with other parts. Finally, we know from treatises of the time that in vocal music the syllable cannot change during a ligature. This makes good sense, since there would be no clear way to underlay the text. In modern editions any pitches that originally appeared as a ligature are marked by a bracket above the staff. For singers this indicates that the underlay should not be altered. For wind players it suggests that taking a breath within this group of notes is inappropriate.

As for the other signs and symbols that may be encountered in original notation, they are mostly what might be expected. In the sixteenth cen-

FIGURE 29.8   Three views of early notation

tury dots had the same significance as they do now: they lengthen the note by half again its value. Sharps and flats have a recognizable form (the sharp may appear as a single or double "X"), but are used slightly differently. An accidental applies only to the note which it precedes, although it can modify several repeated notes if no other note intervenes. When you consider that there were usually no bar lines, this usage is obvious. Also, the sharp and flat signs can serve the same function as our modern natural, by temporarily canceling out an earlier accidental or one in the key signature.

The appearance of early notation can vary widely, depending on the method of printing or the manuscript style, but all the same elements can be found in any example. With frequent use it becomes easier to recognize these elements. Figure 29.8 shows excerpts from three different pieces: the first in manuscript, the second printed with moveable type, and the third using two impressions—one for staves and one for notes. These illustrate some of the many differences in appearance to be found in music of this period.

Tablature is an alternate form of notation that unlike regular staff notation, does not indicate actual pitches. It was the usual form of notation for lute music in the Renaissance, and its symbols represented where the fingers should be placed on the fingerboard. It was also used for the viola da gamba played "lyra way"—that is, in chords. A form of tablature is used

today to indicate guitar chords in popular songs' sheet music. Lute and viol tablatures take the form of a large staff of six lines in which each line represents a string. Letters or numbers representing the frets ("a" or "0" for open string, "b" or "1" for first fret, and so on) are placed on the line standing for the appropriate string. Rhythm is indicated by note stems, without the heads, placed above the staff. There were keyboard tablatures, particularly in Germany, and wind tablatures as well.

The advantage of tablature is that it can be applied to any size instrument, without the necessity of transposition. Since the actual pitches are not given, but simply directions for how to produce them, the notation applies equally well to any instrument. Tablature also allows the player to use unusual tunings without having to learn a new technique. Some lyra-viol music is written for an instrument specially tuned to create a particular resonance (for example, all octaves and fifths). If the music for these strange tunings was written in regular notation, the player would have to relearn how to play the instrument. But with tablature, the player can follow the notations as though in a normal tuning.

In addition to the symbols of music notation, some instructions are occasionally given in the form of text. Verbal instructions for tempo or for instrumentation can occur in the sixteenth century, though they became far more common in the late Renaissance. One verbal instruction, however, was commonly used throughout the period, and that was the canon.

Nowadays we use "canon" interchangeably with "round." However, while a round is a kind of canon, a canon is not always a round. Canon means "rule," actually referring to the text at the beginning of the music that tells you how to derive the parts, but has also come to mean a piece using this compositional device. The canon, or rule, of a simple round is that each voice enters after a set interval of time, at the same pitch, using the same notes. But much more complex canons have been written, deriving many parts from one, or even one from nothing! There are canons that give not only the interval of time between entrances, but an interval of pitch. Some canons call for an inversion or reversal of the notes. Others are simply verbal puns from which a scholarly musician could discover his part from clues alone.

Many facsimile editions of Renaissance music are now available. Most university libraries will have the larger collections, such as Petrucci's *Odhecaton, Canti B,* and *Canti C,* which are very clear prints with few errors. Working through a short chanson from the original, and then comparing it to a modern edition of the same piece can point out to the student how the notation of the period reflected its music. A piece that takes up several pages of modern score can occupy a single page in parts. The close-set notation, uninterrupted by bar lines, makes imitations between the parts more appar-

ent, as do the clefs, which often allow imitating parts to appear similar on the page. The unbeamed notes allow the player or singer to detect melodic patterns more easily, and the lack of bar lines helps to promote a rhythmic flow unimpeded by the perception of syncopation. Although most directors of early music ensembles cannot afford the time to teach all their music from original notation, experiencing one piece from a particular period as it was seen at the time will have an effect on the students' perception of other pieces in that genre.

Further Study

The articles on modes, solmization, *ficta,* and notation in the *New Grove Dictionary of Music and Musicians* continue to be some of the most comprehensive on the subjects treated here and will afford a wealth of additional information. The Bibliography to this chapter contains original sources (in translation), textbooks, and articles (secondary sources). These will provide a greater sense of the issues of analysis as they were perceived by the theorists of the day. The textbooks are seminal works in the areas touched on in this chapter: the history of theory, the modes, *musica ficta,* and notation. The articles provide concrete examples of the application of these ideas to specific pieces. The article by Pat Carpenter, a lucid and engaging application of the writings of Tinctoris to DuFay's *Nuper rosarum flores,* is a particularly good introduction to this approach.

NOTES

1. This chapter draws on a series of articles originally published in *Boston Early Music News* (1984–1985), and reprinted subsequently as an instructional pamphlet entitled "Plain & Easy: A Practical Introduction to Renaissance Music."
2. Morley, *Plaine*: 16.
3. Morley, *Plaine*: 145.
4. Morley, *Plaine*: 145.
5. Morley, *Plaine*: 223.
6. Morley, *Plaine*: 145.
7. Ornithoparcis–Dowland, *Compendium,* Book 4, Chapter 5, Rule 10, which begins, "Every Song is so much the sweeter, by how much the fuller it is of formall [*sic*] Closes": 205.

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BOOKS

Apel, *Notation;* Bank, *Tactus;* Berger, *Musica-theories;* Caldwell, *Editing;* Carpenter, "Tonal"; Crocker, "Discant"; Dahlhaus, *Studies;* Godt, "Reading"; Knighton and Fallows (Curtis, Wegman, and Segerman), *Companion;* Meier, *Modes;* Perkins, "Mode"; Rastall, *Notation;* Riemann, *History;* Treitler, "Tone."

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PART SIX

INTRODUCTION
TO RENAISSANCE
DANCE

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30

Early Renaissance Dance, 1450–1520

Y V O N N E   K E N D A L L

Italy

Several dance manuals of this period explain the theory of dance as practiced in the late fifteenth century. Domenico da Piacenza, Guglielmo Ebreo (later known as Giovanni Ambrosio), and Antonio Cornazano each dealt with the two basic genres—the *bassadanza* and the *ballo.* Regardless of genre, however, certain characteristics were expected of early Renaissance dancers:

aire: undulating the body up and down with the steps, adding grace.[1]

diversità di cose: making distinct differences between step types and their performance in differing meters.[2]

maniera: adding adornments to the steps and shading them with body movement to avoid stiffness.[3]

memoria: remembering steps and making meter changes seamless.

misura: moving to the music with good timing, matching the accent patterns of the beats.

movimento corporeo: all the others plus having an attractive body.[4]

partir di terreno: using the available floor space wisely and well.

Finally all of the above are intended to be performed with *sprezzatura,* a certain sense of casual elegance and grace that is calculated, yet appears completely natural. Writers such as Castiglione and Boccaccio (see bibliography) stress this sense of style.[5]

The Steps and Dance Types

BASSADANZA

The *bassadanza* is a sedate dance that often moves forward and back-ward in a quasi-processional manner. It also can have floor patterns much like the *ballo,* but avoids vigorous jumps and leaps. Each of the eight steps used in the *bassadanza* takes one measure with the exception of the *volta tonda,* which takes two, and the *continenza,* which needs two to equal one measure.

continenza: the description given for this step is to perform it like "treading on organ bellows."[6] According to noted dance historian Barbara Sparti's survey of sources, they do not travel.[7] Performed in pairs, two of these steps equal one measure.[8]

doppio: the dancer lowers, then raises the body on the balls of the feet and takes three steps forward.

meza volta: a half turn.[9]

movimento: probably a foot shake, but the sources are unclear.[10]

ripresa: this seems to be a sideways step, similar to the sixteenth-century version of the same name.

riverenza: while moving the left foot to the rear, the body is lowered.

sempio: the typical simple walking step in any direction. Because steps have to alter-nate feet, the beginning foot would depend on the preceding steps.

volta tonda: a full turn.[11]

BALLO

The fifteenth-century *ballo* often includes steps from four dance types or-dered in sections that may differ in meter and tempo. With the exception of the *quaternaria,* which is only found in the *ballo,* each can be either a step or an independent dance. Measures of a particular dance type in a *ballo* are known as *tempi.* In addition to the steps listed under *bassadanza,* some or all of the following steps are used.

bassadanza: a compound duple, it is the slowest dance type. As a step pattern, *bas-sadanza* measures or *tempi* consist of a series of the steps listed above under *Bassadanza.*

quaternaria: a quadruple meter dance of moderate tempo. It is performed as three simple steps (*sempio*), followed on beat four by a beat on the floor to the rear, or by one *doppio.* A choreographic beat is tapping the foot on the floor.

saltarello: in simple triple or compound duple with quick tempo, the *saltarello* step

is composed of skipping steps alternating raising and lowering of the body. It begins on the upbeat, starting with whatever foot is free, depending on the preceding actions.

piva: in simple duple, the *piva* has the fastest tempo of the four *ballo* components. It is performed as running steps or fast *doppio* steps. Known as the daughter of the *quaternaria,* it may also have the *quaternaria's* signature beat on the floor.[12]

The Choreographies

The following *ballo* by Domenico da Piacenza is also found as Jove (also Giove or Iove) in a modified version in Cornazano and Guglielmo Ebreo.[13] The proportion and mensuration signs used for the four component dances of the *ballo* show some variations among the treatises, although they agree on the tempo relationships between the dance types.[14] I have therefore provided a workable solution that is as consistent as feasible with the varied theoretical premises. The music for each dance has certain meter and tempo associations. The steps for those dances have certain actions. The steps can be performed in any meter/tempo, however, so *saltarello* steps may occur in *quaternaria* meter. I have chosen "Juppiter" because it is one of the simplest of these complicated choreographies, and it contains all four dance types found in the *ballo.*

The dance is performed by two men and one woman moving forward in a single line, one behind the other (man, woman, man). During the first *volta tonda,* the first man turns to face the woman; in part II the dancers do

EXAMPLE 30.1   Jupiter's dance (from Domenico da Piacenza)

a hay by changing places and touching hands each time they meet.[15] In part III this figure continues at a faster tempo without the hand touches. Part IV's *saltarello* section has the men dancing to either side of the woman forming a straight line on the opposing axis.[16] The man who was originally in front must do his *saltarelli* in a letter "J" floor pattern in order to end facing forward. The woman then does the *volta tonda* alone—all three are now facing forward; they all hold hands and do the *riverenza*. See example 30.1 for the music and instructions.

The Music

Works by Joan Ambrosio Dalza and those found in Vincenzo Capirola's *Lute Book* of 1517 contain *pivas, saltarellos,* and the "La Spagna," a well-known *bassadanza*.

INSTRUMENTATION

Even though Guglielmo says that any instrument may be used, two shawms and a sackbut are a common instrumentation for the dance music of the period.[17] The visual arts of the period also show pipe and tabor, as well as *bas* (low or indoor) instruments such as harp and lute. Boccaccio's *Decameron* and other literary sources confirm this, referring also to the lute and the viola da gamba.[18]

FRANCE

The prominent dance of fifteenth-century France was the *basse danse*. A stately processional dance, it consisted of five steps ordered according to a highly refined theoretical system. The two sources in which the rules for this dance are found are MS 9085, simply known as "Brussels"—a gorgeous manuscript held in the Bibliothèque Royale—and a printed source, *S'ensuit l'art et instruction de bien dancer* (ca. 1488), by Michel Toulouze. Both contain instructions for the steps and choreographies, followed by several dances. Each dance is accompanied by a *basse danse* tenor line that would have provided the basis for improvisation. The alternation of lowering and raising the body produces a lovely undulating quality when performed by several couples. *Nota bene:* although it uses the same step names, the sixteenth-century *basse danse* differs significantly from this earlier version.

The Steps

The five steps used in the *basse danse* are the *reverence, branle, simple, double,* and *riprese* (also called the *desmarche*). In *basse danse* choreographies these names are abbreviated. Each step, with the exception of the *simple,* takes one triple meter measure to perform. Two *simples* are needed to fill one measure. Steps like the *branle* and the *simple* have two movements in three beats. There are no instructions in the sources concerning the specific timing of these steps. Given the intricate rhythms of the period, syncopation would not be inappropriate. An additional step, the *pas de brabant* is used in the lively counterpart called the *basse danse mineur.*

The *reverence* is a bow beginning with the left foot. The foot moves straight back and while bending the knees, the body is lowered without bending the waist. The step ends with the body rising as the left foot is placed beside the right. This step is performed with the music, but is more graceful if it maintains an unmeasured quality of movement.

The *branle,* not to be confused with the sixteenth-century dances of the same name, is true to its meaning as "A totter, swing . . . a shake."[19] Move the left foot sideways a slight distance from the right and swing (or totter, or shake) from left to right ending up back at center.

Simples in the fifteenth-century *basse danse* are always performed in pairs. The first is done stepping forward, lowering the body; the second is done stepping forward, while raising the body back to full upright position. The *simples* that appear before the *doubles* begin with the left foot; those after begin with the right.

The *double* always occurs in odd numbers (1, 3, 5). The instructions for the first *double* require a slight bending of the knees, then an immediate raising the body onto the balls of the feet, followed by taking three light steps forward, the first one beginning with the left foot. Subsequent *doubles* alternate feet.

Ripreses occur either singly or in sets of three. They are the same as the *reverence,* except the first is done with the right foot. Subsequent *ripreses* alternate feet.

The *pas de brabant* is a hopping step that, according to Cornazano, is like the *saltarello.*

The Choreographies

The theory governing the choreographies relegates them to major and minor status. The major (*majeur*) *basse danse* is the slow processional dance

described above. It is sometimes followed by a minor (*mineur*) that uses the *pas de brabant* (also *breban* or *barban*). The choreographies are also divided into phrases called *mesures,* that are then classified in degrees of perfection. The *mesures* come in three sizes—large, medium, and small (*grande, moyenne, petite*). The *mesure* size is determined by the number of *doubles* (5, 3, 1, respectively). Perfection (perfect, more perfect, imperfect) is determined by the placement of the *simples* and the number of *ripreses.*

parfait = *simples* before and after the *doubles* with three *ripreses plusque*
parfait = *simples* before and after *doubles* with one *riprese*
imparfait = *simples* before, but not after *doubles* with three *ripreses*

By learning the nine possible *mesures,* the choreographies for the major *basse danses* are easily memorized. The following diagram should help clarify the structure of a typical *basse danse* choreography (see fig. 30.1).
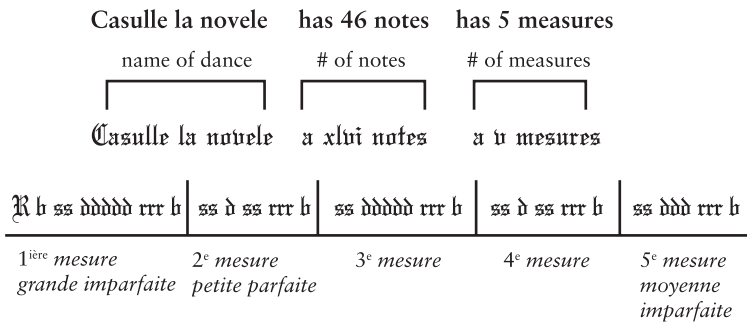
FIGURE 30.1   Typical *basse danse* choreography

Music Sources

For this dance Guglielmo's "Falla con misuras" (also known as "La Spagna") works perfectly. Many of the tenor lines of *basse danse* choreographies are concordant with popular chansons of the era, among them "Filles à marier," "Triste plaisir," and "Ma doulce amour." When performed outdoors or at large events, the ensemble of choice seems to have been two shawms and a sackbut (or slide trumpet). Considering that most of the secular chansons and the sacred vocal music of this period consisted of three voices—a slower-moving tenor line on the bottom and two more active lines above it—this seems quite appropriate. Literary and iconographic sources, however, also show the harp and lute or a combination of instruments and voices as appropriate dance accompaniment in more intimate, informal settings.

Bibliography

Major Sources

[Editor's note: I am listing several valuable Web sites concerning dance treatises (translations as well as facsimiles) and dance steps here unless they are directly related to an author in the Bibliography, in which case the links are listed there.]

http://tirannon.tky.hut.fi/dance/sca_mp3/

http://tirannon.tky.hut.fi/dance/sheet/

http://www.rendance.org/

http://www.rendance.org/rbib/ (online bibliography of sources)

http://www.dhds.org.uk/

http://www.pbm.com/~lindahl/del/

Anon, Brussels; Boccaccio, *Decameron;* Castiglione, *Il libro;* Cornazano, *Book;* Dalza, *Intabulatura;* Ebreo (Ambrosio), *De pratica;* Marrocco, *Inventory;* Nevile, *Eloquent;* Piacenza, *De arte;* Smith, *Fifteenth-Century;* Toulouze, *S'ensuit.*

Recordings

"*Alta Danza": Domenico da Piacenza, Guglielmo Ebreo da Pesaro: Dance Music from 15th-Century Italy.* Ensemble Les Haulz et Les Bas and Véronique Daniels. Christophorus CHR 77208.

The Diamond of Ferrara: Music from the Court of Ercole I, Ex Umbris. Dorian 93225. *Early Sixteenth Century Venetian Lute Music,* Paul O'Dette, lute. Harmonia Mundi 908215.

"*Forse che si, forse che no" Musique de danse du Quattrocento,* Ferrara Ensemble, Crawford Young, director. Fonti Musicali fmd182.

"*Mesura et Arte del Danzare" Balli Italiani del '400,* Accademia Viscontea I Musicanti. Ducale CDL 002.

Monarchus Guglielmus, "Falla con misuras," in *The Pleasures of the Royal Courts,* The Early Music Consort of London, David Munrow, director. Nonesuch 9 71326–2.

Late Renaissance Dance—(1520–1611)

All Countries: Pavane/Gagliarda

All choreographies for this period begin with the left foot. Most processionals are performed by lines of couples with the man to the woman's left, holding hands. Hands are held low in a relaxed position. Turnout of the feet

should be natural, not the more pronounced classic ballet stance. Dancers are encouraged to make eye contact with the onlookers as well as the partner and keep in good time to the music.

The *pavane* (also *paven, pavana, pabana*) is a simple processional dance composed of two single steps (also *passo* or *simple*) and one double (or *seguito*).[20] The pattern begins on the left foot and thereafter alternates feet. Dancers typically began a major dance event by circling the entire dance floor, paying honor to visiting guests. Presentations to said guests were also made using *pavane* steps.[21]

The *gagliarda* (also *galliard, gaillarde*) is much more complex, and yet as one of the most popular dances in the entire history of dancing, it is required knowledge for those interested in Renaissance dance. The *gagliarda* was considered appropriate for the average dancer as well as the virtuoso. Both were expected to improvise steps or to substitute planned variations, if possible.[22] Much the same occurred in the *gagliarda* music where simple homophonic versions and elaborate variation sets coincide chronologically.

The Music

The music for the basic *gagliarda* is in six-beat groupings, although in choreographies, the *gagliarda* step patterns are identified in odd numbers, the most basic being the *cinque passi* (five step, also *cinq pas* or *sinkapace*). Others include nine-, eleven-, and thirteen-step patterns. The basic step pattern begins with a hop onto the left foot, vigorously kicking the right foot forward. The dancer then leaps forward onto the right foot, kicking the left forward.[23] These two steps are repeated, leaving the left foot forward. These are the first four beats of the music. Hopping up in place from the right foot, the left foot swings around to the rear so that the landing (on beat six) results in the left foot slightly to the rear. This is the cadence (also *cadenza, posture,* or *planta natural*) position. To be even more precise, the left foot should land slightly before the right—on the middle of beat five. The music often has this exact rhythm (see ex. 30.2). The next *gagliarda* step then begins on the right foot.

EXAMPLE 30.2   Music for the *gagliarda*

There are several variants of this dance. The *tourdion* (also *tordiglione*) is a dance using the same steps but in a quicker tempo, keeping lower to the ground by omitting the great leaps found in the original dance. The *volta* (also *lavolta*) uses the same steps, but the woman dances toward the man who then hoists her into the air, spinning her around. She lands on the cadence of the musical phrase.

Music Source

Arbeau, the French dance master, supplies a four-part chanson "Belle qui tiens ma vie" that can be performed for the *pavane* by voices, instruments or both.[24] London Pro Musica editions of works published by Attaingnant and the modern edition of dances by Anthony Holborne (see bibliography) contain several four- and five-part *pavanes* and *gagliards.*

England

Much of English literature refers to dances that evolved on the continent. The *pavan, galliard, canaries* and others are all found in treatises, plays, and poems of the great English writers. Queen Elizabeth, whose fondness for Italian language and culture is well-documented, was known to have danced several *galliards* as her daily morning exercise. But England also produced a native product, the *measures.*[25] Performed in lines or circles, the *measures* are moderate in tempo and use a rather limited step vocabulary. Unfortunately, no published dance sources exist for Renaissance England, but several manuscript sources, each with a few choreographies, have survived. Most of these sources are affiliated with students at the Inns of Court, the training ground for England's barristers.

The Steps

None of the English manuscripts describes the steps, although other sources sometimes give indications. It is therefore necessary to use continental steps with the same, or similar names. The *double* takes four beats. Steps that are usually found in pairs such as the *reprynce, set, single, slip* need two steps to equal the *double.* The *reverence* is variable in time depending on whether it is performed with or without the music.

reverence (also *honour*)

Arbeau's *reverence* for men and the *riverenza* for men and women recounted by both Caroso and Negri (see bibliography) are concordant, so it is most

likely that this step was used during this period in England. This is also con-
firmed by period iconography. The left foot is moved forward, then swept
back so that the toe of the rear foot is parallel to the heel of the front foot.
The knees are then bent, lowering the body; as the left foot returns to place
beside the right foot, the body is raised.

DOUBLE

A late source by Randle Holme (see bibliography) describes the *double* in a
manner that matches Arbeau.[26] Take three steps forward, alternating feet,
then the last step is the joining found in the *single* step. The *almain double* is
performed in the same way, replacing the joining on beat four with a light
hop on the same foot that moved on beat three, kicking the other foot for-
ward at the same time.

REPRYNCE

This is most likely the *reprise* found in the French *basse danse* of the fifteenth
century, which is a quick bowing movement moving backwards (see *rever-
ence*), joining the front foot to the rear foot on beat two.

SET

This two-beat step seems to be the English version of the Italian *continenza*
or *ripresa,* pairs of sideways steps that most often immediately follow the *rev-
erence*. The first *continenza* is done taking a step sideways to the left, then on
beat two, bringing the heel of the right foot to the middle of left foot. This
is repeated in the other direction. See *slip* for a description of the *ripresa*.

SINGLE

Holme also describes this step as "two steps forward, closing both feet." This
conforms to Arbeau's description—one step forward on beat one, the rear
foot then comes forward to join the other on beat two. This is one single.
The same can be done sideways.

SLIP

This step is not described in any period source, but as currently performed
in the country dances of John Playford, seems similar to the *ripresa* found in
sixteenth-century Italian dance sources. The *ripresa* requires a step sideways
rising onto the ball of the foot, followed by the other foot joining the first
while the body is lowered (see also Italy *ripresa*).

The Choreographies

Measures choreographies often use floor patterns known as casting and arming. There are two possibilities for casting: releasing your partner's hand, facing him or her and performing movements that take you away from and then toward your partner; or, in long line dances, release your partner's hand, turn away from your partner and move down the outside of the line to last place. Arming is moving toward your partner and grasping each other by the right forearm.

THE LORAYNE ALLEMAINE

This dance is performed as follows: four *almain doubles* (see *double*) forward are followed by a regular *double* forward and one *reprynce.* Doing another *double* forward, cast off into two *doubles* in a circle. Repeat the entire sequence.

Music Sources

Phalèse's *Chorearum* contains a four-part version of this dance, followed by a *saltarello* using the same tune. He published a simpler version (without the *saltarello*) in his *Leviorum* twelve years earlier. The clear and easy to read facsimile edition of the *Chorearum* released by Alamire is a great way to begin playing from original notation.

FRANCE

French choreographies of this period, most prominently the *basse danse* and *branles,* are found in sources by Anthonius Arena, Jacques Moderne, and Thoinot Arbeau. Of these, only Arbeau includes music and choreographies other than the *basse danse.* Among Arena and Moderne choreographies, however, are several titles that are concordant with well-known chansons and canzonettas of the era. Titles from all three sources are found in Rabelais's *Pantagruel,* Book V.

Basse danse. All steps take four measures of triple meter (the exception is the *simples;* two *simples* equal four measures)

Reverence (R). Men: left foot back [according to Arena and Moderne] or right [Arbeau]; slightly bend at the waist. Women: feet in first position, bend knees (*plié*)

FIGURE 30.2   *Riverence (Révérence*) from *Orchésography*: 80. Mary Stewart Evans, trans., Dover Publications, Inc., New York.

Branle (b). Heels together, move upper body alternately left and right twice, glanc-
ing tenderly in opposite direction

Simples (*s*). In Arena, feet are side by side for the first measure; the left moves for-
ward on measure two; the right joins on measure three; and the right moves
forward in measure four. In Arbeau, the first simple has the left foot stepping
forward in the first measure; right foot then joins. The second simple is the
same, but beginning with the right foot.

Double (d). (done in odd numbers—1, 3, 5) three steps forward, join on last measure.

Riprese (r). The knees, feet, or toes move from side to side as if trembling (right,
right, left, right).[27]

Congé (c). Brief *reverence* done holding hands

Tourdion. See *gagliarda* earlier.

The Choreographies

The sixteenth-century *basse danse* choreographies are organized by the
number of *quaternions (*four-measure phrases). The two categories are:

1. The *basse danse commune* consisting of twenty *quaternions* in specific
   order (ex. *Jouyssance vous donneray*)
2. The *irreguliere* (also *incommune*) *basse danses,* generally longer or
   shorter than *commune,* although some have the same number of
   quaternions in differing orders:

   a. 20 *quaternions:* different step order (ex. Arena/Arbeau, "Pa-
      tience"[28])
   b. 21 *quaternions:* (ex. Moderne, "Le joly boys":)
   c. 18 *quaternions:* (ex. Moderne, "Le belle francoyse")

Two additional sections are added to the end of *basse danses,* whether
commune or *irreguliere.* Those sections are the *retour* (also *recoupé* or *reprise*)
which creates a second part of *basse danse* consisting of twelve *quaternions;*
and the *tourdion,* a third part, which is a *gaillarde* variant danced more
quickly and without the leaps.

1. *commune*   *retour*

   R b ss d r d r b / ss ddd r d r b / ss d r b c   b d r b ss ddd r d r b c

2. *irreguliere (incommune)*

   "Patience": a.R b ss d r d ss r b / ss ddd r b / ss d ss r b c

   "Le joly boys": b. R b ss d r d r b / ss d ss r b / ss ddd r d r b

   "La belle francoyse": c. R b ss d ss r b / ss ddd r b / ss d ff r b

Music Sources

Arbeau's pipe and tabor version of "Jouissance" is intended for the *basse danse commune.* The tune was taken from the tenor line of a four-voice chanson by Claudin de Sermisy. As one of the "greatest hits" of the period, there are vocal versions of this chanson by Willaert, Gombert, and Gardano, as well as lute song versions and virtuoso variations for lute, recorder, and viola da gamba. Attaingnant published a keyboard transcription of the original chanson, as well as several other *basse danses,* including one for "Patience." Arbeau cites keyboard instruments among the instruments that are appropriate for dance accompaniment, which would explain Attaingnant's publication of an entire volume of keyboard dance music.

Four-part instrumental versions of several *basse danses* can be found in Tielman Susato's *Danceryes.* Both Susato and Phalèse (*Leviorum*) have four-part versions of "Joly boys," which was published as a chanson by Le Roy and Ballard; a lute version of "Belle francoyse" appeared in a book of chanson transcriptions published by Phalèse in 1526.

Branles

Like England's law students, Arbeau's student *Capriol* (a fancy dance step) has returned from his legal training desiring greater social skills. He turns to his former tutor, Monsieur Arbeau (an anagram for French cleric Jehan Tabouret) for help. Found only in Arbeau, the basic *branles* are performed in a set of four dances: *double, simple, gay,* and *bourgogne.* There are also *branles coupé* and *branles morgué,* dances with mimetic features. Arbeau suggests that the *branles double* and *simple* are for older dancers, while the *gay* and *bourgogne* are for the younger set. Because all steps can be done forward or sideways and the forward steps have been described for the *basse danse,* sideways steps are described later in this chapter.

In a circle, the *branle double* is performed beginning with a sideways *double* to the left; a *double* to the right with smaller steps follows, producing a leftward progression. Each *double* step takes four beats.

Branle simple. Sideways *double* to the left followed by *simple* step to the right (see English "single").

Branle gay. This triple-meter dance is begun hopping on the left foot while kicking the right one forward. Three more kicks are done alternating feet. This produces four beats of the six necessary beats. Leaving the left foot in the air for the remaining two beats, the dancer quickly moves leftwards hopping onto the left foot, beginning the sequence once more. Each sequence begins hopping onto the left foot; there is no alternation.

Branle de Bourgogne (also *Branle de Champaigne*). This is performed like the *branle double,* ending the step with a kick, like the *almain double.* This dance is much faster than the *double* and can be performed with hops for each step. The result is like the exercise known as "jumping jacks" moving sideways.

Branle des lavandières. This *branle coupé* begins with a pattern consisting of two *doubles* (one to the left, one to the right) performed twice. Then turning to face their partners, the women shake their right forefingers (in a nagging manner) at the men three times (taking two beats), during which two *simples* are done (left, right). They then shake the left forefingers three times. The men repeat this sequence. All clap four times (one clap per beat), then quickly re-form the circle and do a *double* to the left. Clap four more times and then each turns left in a circle, hopping and doing three kicks, joining feet on the last hop. The turn with joining takes four beats.

Music Sources

The basic *branles* (*double, simple, gay,* and *bourgogne/champaigne*) are ubiquitous in the French keyboard, lute, and ensemble music of Attaingnant, Gervaise, Le Roy, Phalèse, and many others. As with all the *branle coupés,* the *Branle des lavandières,* is less common. It does, however, appear in Phalèse's *Leviorum.*

Italy

The most complex dances of the Renaissance come from Italy. Fortunately the most detailed and theoretically comprehensive dance manuals also come from the same place—two by Fabritio Caroso and one by the Milanese dance master Cesare Negri. These three major dance manuals provide some of the most fascinating information for a variety of dance genres, such as the *bassa,* a low dance that probably evolved from the *bassadanza;* the *brando,* a complex, multimetered dance that ends major theatrical productions; and the *cascarda,* found only in Caroso, a triple-metered, sectional dance. Italy produced dances for a small number of participants—couple dances with virtuosic steps—all the way up to dances for large groups similar to English country dances or American square dancing.

Between these two extremes is the *balletto,* a straightforward and charming dance within reach of most moderately competent dancers. A sectional dance, the *balletto* often features a refrain that coincides with a particular music phrase. For this reason, unlike English and French dances, the specific music composed for the dance must be used.

Additional dance sources by Lutio Compasso, Livio Lupi, and Prospero

Lutij (see bibliography) feature elaborate variations for the *canario, gagliarda, passamezzo,* and *tordiglione*—dances whose virtuosity places them, with the exception of the basic *gagliarda,* beyond the scope of this work.

The Steps

The tempo of steps varies with the dance, yet the standard is one half-note beat in duple meter equaling one dotted half beat in triple. Each step is intended to be performed in both meters with only minor adjustments of timing being required.

Passo (P). Often found in pairs this is a step forward (or backwards or sideways). The subsequent steps also move in the same direction without the joining found in French steps, unless a *cadenza* (cadence) is required. The *passo puntato* ("stopped step") is a variant also taking two beats in duple meter (two measures in triple). Step forward onto the ball of the foot, remaining in this position (thereby "stopping" the step) until the middle of the second beat. At that time, the front foot is lowered as the rear foot moves forward to begin the next step. Like the *passo,* this step is usually found in pairs, grouped with a *seguito.*

Seguito (S). There are several steps that fit this family category. In essence it is a more elaborate form of the *double* step (*doppio*) and, in fact, the *double* is easily substituted for the *seguito.* Like the *double,* it begins with three steps moving forward, however on the third step the heel of the foot is kept raised. On the middle of that third beat, the toe of the rear foot comes up parallel to the heel of the front foot, keeping both heels raised. On the fourth beat, the front foot's heel is lowered while the rear heel remains raised. In triple meter, each "beat" is a measure.

Ripresa (r). A sideways step similar to the *continenzia.* Normally done in pairs, the dancer steps to the left; the right foot then joins the left. For the second *ripresa,* the same actions are repeated to the right.

Sottopiede (sot). A sideways step usually found in threes, the *sottopiede* can also move forward (where it is called *in fuga*) or backwards (*riccacciate*). The dancer hops lightly sideways onto the ball of the foot (hopping left, for example, onto the left foot). On the middle of that first beat, the remaining foot comes up quickly behind the first foot, kicking it forward, which results in replacing it. The first foot is then ready to do the next *sottopiede.* This step does not, therefore, alternate. In triple meter the kick occurs on beat three of the measure.

Trabuchetto (T). Another sideways step, the *trabucchetto* is normally found in pairs. The dancer hops lightly sideways onto the ball of the foot, immediately joining the heel of the remaining foot to the raised heel of the initiating foot (the

following foot does not touch the floor). This is repeated to the other side. Each normally takes one beat (in duple meter) or one measure (in triple).

The Choreographies

SPAGNOLETTA (CAROSO, BALLARINO)

A charming aspect of this dance is the manner in which it matches the musical phrases. Each part of the choreography is in three parts (abc) that match the ternary form of the music (ABC). The "quick" *passo* (*passo presto*) in this dance takes one triple meter measure, as opposed to the standard "slow" *passo* (*passo grave*) that takes two. (N.B.: in the figures below the flat portions of the figures represent the fronts of the dancers, the rectangular, boxlike portions depict their backsides.)

Part I

a. The couple stands facing one another (the man is the solid color figure). Together they do a *riverenza (R).* In the shape of a wheel (the circumference of their circle, as shown), they turn left and do four *seguiti,* two quick *passi,* and a *cadenza* (cad), the feet side by side (this *2P & cad* pattern should look like the end of a *cinque passi* step pattern):

FIGURE 30.3   *Spagnoletta* dance step, Part I–a

b. Sideways to the left, they then do two *riprese* and two *trabuchetti,* followed by one *seguito* and a *cadenza,* turning in simultaneous solo circles to the left, returning to face each other. The same is done to the right.

c. They do two *passi puntati* straight backwards in a flirtatious manner (following the rear moving foot with the upper body), then do two quick *passi* forward and a *cadenza.* Repeat with the other foot.

Part II

a. In a wheel to the left, they do six *seguiti,* two quick *passi,* and a *cadenza.*

b. They then repeat the *ripresa* pattern (*2r, 2T, S, cad*) and

c. the *passi puntati* pattern (*2pp, 2P, cad*) both times each as in part I.
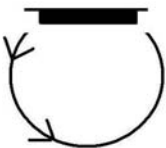
FIGURE 30.4   *Spagnoletta* dance step, Part I–b

Part III

(a) Alone, the man begins a solo circle to the left with two *sequiti.* He then does two quick *passi* and a *cadenza* forward (returning to place). He repeats this to the right. He then does the (b) section alone. They do the (c) section together.

Part IV

Part III is repeated, except the woman does the solo part.

Part V

(a) Turning to the left, they do two quick *passi* and a *cadenza* at the same time. Then facing one another, they do four *trabuchetti,* beginning with the right foot. This is repeated going in the opposite direction. They do the (b) pattern and the (c) pattern. They end with a *riverenza.*

Music Sources

Negri includes a lute and melody version, while Caroso offers one for lute solo. There are also ensemble versions in Gasparo Zanetti's *Il Scolaro* (1645) and Michael Praetorius's *Terpsichore* (1612).

SPAIN

To date, Spain has the fewest extant choreographies, all of which are in manuscript form. Among these are the *alta, baja,* and *entrata,* which are also found in Italian sources, especially in Negri, whose book was produced in Milan while that city was under Spanish rule. A dance limited to Spanish sources is *Las paradetas.* Several examples of Spanish music for these dances are extant. The choreographic sources are *Reglas de danzar,* an anonymous manuscript from Madrid, and Juan Antonio Jaque's *Libro de danzar.*

BALLO [ENTRATA] FOR SIX WOMEN (NEGRI)

Although found in an Italian manual, this simplest dance, the *entrata,* seems to be a Spanish import, a conclusion supported by its appearance in a Spanish source (Jaque) and the fact that the only two in Negri (Caroso has none), were performed for Spanish royalty. Additionally, the preponderance of music *entratas* are found in Spanish sources. Jaque's *entrata* is a bit too

complex for our purposes, using much more ornate steps, but is similar in essence to Negri's example.

Part I

FIGURE 30.5   *Ballo* (*Entrata*) for six women (Negri), Part I
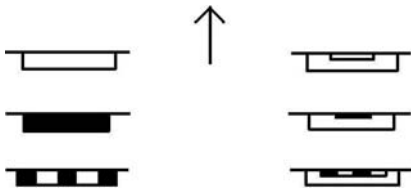
Dancers hold torches in outside hands and do one *seguito* forward, followed by two *passi puntati* (one forward, one backward). Repeat this, but in the *passi puntati,* turn to face partner.

Parts II and III

FIGURE   30.6   *Ballo* (*Entrata*) for six women (Negri), Parts II and III
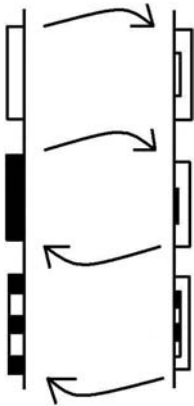
Do a pattern of two *passi* and one *seguito,* changing places (right shoulders should pass each other). Repeat this to return to place. They then do two hops (one left, one right) and four kicks, followed by two *seguiti* to change places with their partner.

Facing forward once more, dancers repeat part I.

Part IV

Lead dancers turn outwards (away from partners) and form a half moon shape ending with the two lead dancers standing side by side in the middle of the half moon. The half moon shape must be achieved in the time it takes to do a 2P and S pattern twice.

Once in place, the dancers do the hopping/ kicking sequence twice, ending by thrusting their torches forward.

FIGURE   30.7   *Ballo*   (*Entrata*)   for   six women (Negri), Part IV-a
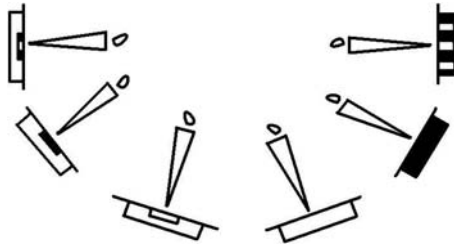
FIGURE 30.8   *Ballo* (*Entrata*) for six women (Negri), Part IV-b

Music Sources

Negri has a version for lute and melody instrument. The anonymous Gardano publication *Balletti moderni . . .* also has a solo lute version of this music called *L'entrata*. Several Spanish sources for lute, harp, and keyboard also contain *entratas*.

NOTES

1. There are no specific instructions for this, but avoiding flat footed steps and bending the knees in moving produces graceful body movement.

2. This seems to be the choreographic version of clear phrasing and articulation.

3. "Shading" seems to be the movement later known as "peacocking," which is moving the body forward with the chest prominent, moving it from side to side. This involves the entire body in the step movement.

4. Ebreo, *De Pratica,* 99. Guglielmo states, "the perfection of the art . . . of the dance is clearly demonstrated both in action and appearance." He later specifies the lame, crippled, hunchbacked, etc. as examples of those who should not dance in public.

5. Castiglione, *Il libro,* 135. A primary example comes in Section XI when Castiglione says that the courtier must "*usar diligenzia ed attillatura circa la principal intenzione della cosa in che mostra si vole, ed una certa sprezzatura circa quello che non importa . . .* [Use diligence and elegance concerning the principal item he wants to show, and a certain nonchalance concerning those things that are unimportant]." Boccaccio, *The Decameroni:* Boccaccio is infused with this sense of *sprezzatura* in his use of adjectives whenever discussing decoration, meals, singing, and dancing. Examples include: the young people "sing gay and carefree songs" (20); and in the introduction to the Third Day when "now even more merry . . . they turned once more to playing music, singing and dancing (164).

6. Brainard, "The Art," as cited in Guglielmo: 220.

7. Ebreo: 220.

8. The feet remain in essentially the same place but change positions; for example, the heel of the right foot pivots to touch the left foot's instep. "Traveling" basically means ending up in a place other than where you began on the floor. Steps that *should* travel but don't are called "false" steps.

9. No details are given on how they should be done. Probably a pirouette with one foot (most likely the left) remaining "stationary" as the pivot while the other is

used (pushing on the floor) to do the turn. It is also possible to do this turn with a *doppio* or two *ripresas.*

10. Ebreo: 223.

11. See note 7. If the *volta tonda* is performed as a pirouette, it would require two pushes. Like the *meza volta* this step can be done with other steps, for example, two *sempi* or a *doppio.*

12. Another interpretation of the *piva*'s role as "daughter" is that, like the *quaternaria* and unlike the *saltarello,* it begins on the beat, not on the upbeat.

13. All three choreographies are included by Sparti in Ebreo: 188; 153–154; 188–189.

14. The fifteenth century was a period of transition between proportional and mensural notation. My thanks go to Jennifer Nevile, author of *The Eloquent Body* (Bloomington: Indiana University Press, 110–116) for her detailed explication of this knotty problem. Any errors as a result of trying to produce a workable solution are mine alone.

15. A hay is an interweaving of dancers that may be done touching hands or not. The hay in this dance is performed with all dancers, except the first, facing the same direction. The first dancer and the woman he has tuned to face clasp right hands and exchange places. He then clasps left hands with the next dancer, exchanging places, as the first woman turns to face the remaining dancers. When the second man is available, the woman clasps his right hand and they exchange places. And so on as long as the dance requires.

16. All dancers are side by side at this point in an east-west line as opposed to the beginning where the dancers were one behind the other in a north-south line.

17. Ebreo: 235.

18. See Boccaccio for use of bagpipes in the conclusions of the Sixth (415) and Seventh (471) Days; lute song at the conclusion of the First Day (60); and lute and viola da gamba in the introduction to the First Day (19).

19. Cotgrave, "Bransle."

20. The performance of *simple* steps in the period varies by country. The Italian steps are as described in the fifteenth century, that is, walking steps; the French steps of the sixteenth century, however, include a closing where the foot remaining behind comes to "join" the first foot side by side. The foot that has just joined then moves forward for the second *simple.*

21. Steps may occasionally move backward, but period sources generally advise avoiding this, primarily because of the difficulty women may have in moving backward in the elaborate dresses of the time.

22. See author's article, as well as similar articles by Keith Polk, Barbara Sparti, and Jennifer Nevile, in McGee, *Improvisation in the Arts . . . :* 170–190, 98–114, 117–144, and 145–169 (respectively).

23. Arbeau: 86.

24. Arbeau: 60.

25. The *measures* possibly derive from the Italian *passamezzo,* but are more varied and contain characteristics not found in continental models.

26. Holme, *Academy.*

27. There is not much clarity about how this is done; Arbeau gives no illustrations. The dancer must decide, just as they probably did at the time. The *tremolante* (foot shake) found in Caroso may be helpful in making a decision.

28. Check the entries for Arena and Arbeau at this Web site: http://www.rendance.org/rbib/a.html

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PART SEVEN

FOR THE EARLY MUSIC DIRECTOR

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31

Starting from Scratch

JEFFERY KITE–POWELL

COURSE DESCRIPTION/JUSTIFICATION

So you have the bright idea you want to start an early music ensemble (also known as Collegium Musicum, though the sole use of this name today for "college" early music groups somewhat misrepresents the original, broader application) at your school, but you don't know how to go about it? Well, the first thing you have to do is write a course description, and then you have to come up with a justification for wanting to offer the course, as no administrator can approve a new course offering without these two items. It goes without saying, of course, that there is sufficient "room" in your teaching load to allow for this additional course, or that others are available to take up the slack without undue burden—another point of considerable interest to your administrator. Two other possibilities present themselves in case the boss balks at having to shuffle teaching loads and assignments: (1) you can offer to volunteer your services for the first semester or two, until the group has established a "track record"; or (2) you can offer the course through continuing education or some other area of your institution that is not directly related to credit offerings. But let us assume you have the administration's blessing to start an early music ensemble.

Depending on the school, the course description will have to contain much of the following information:

> course name, number of credits, meeting time and place, professor's name, room number and office hours, method of evaluation and testing, grading procedure, attendance requirements and penalties, and a general description of the course, outlining what will be required of the student and how he or she

will benefit from having taken the course. If texts or supplemental readings are involved, they should also be listed here.

Each student should receive a copy of this syllabus on the first day of class, so that it is clear from the outset what is expected. This also provides you with a certain amount of protection when a student complains about a grade at the end of the semester.

JUSTIFICATION

The justification is only for the administrators and need not be more than one or two paragraphs. It should contain a strong statement of need and a clear rationale for offering the course. Build your case around the students and how unfortunate it is for them to be getting an education at your institution without any "hands-on" experience with early instruments and early music. You might also refer to the increasing emphasis being placed on historically informed performances of music written before 1800 by professional and collegiate musicians and by recording artists and critics all across Europe and North America today. Examples of a course description (syllabus) and a justification (in this case, one supporting the need for applied instruction in early instruments) are located at the end of this chapter in figures 31.1 and 31.2.

RECRUITING

Once you have the authorization to start an early music ensemble you can begin recruiting for it. It is, of course, difficult to entice students into something that has not existed previously, as they simply don't know what to expect. Many of them will harbor the notion that they would not be permitted to join in the first place, as they neither own nor have proficiency on any of the instruments involved. So you have to wage a recruitment campaign in which you try to convince a few courageous souls that they should sign up for the new ensemble. Ideally, you should have a trio or quartet of fairly competent recorder players (faculty and/or student players) who could visit various classes and demonstrate the instruments and the consort. This group could also play in the student lounge or cafeteria, or anywhere that students congregate. Selecting upbeat, catchy Renaissance tunes (dances in particular) would be most appropriate; of course, they need to be played well. One or two selections played on a set of crumhorns (if available) would surely be the highlight of the show.

    If need be, however, you can do it all by yourself, demonstrating how

easy it is to learn to play the recorder. At each performance/demonstration you should announce the formation of the new, credit-generating ensemble, its meeting days, times, and place, and that a group for beginning recorder players is the first order of business. Parenthetically, this approach might be quite attractive to schools that offer teacher-training classes, as better than adequate recorder playing should be a must for elementary school teachers. Placing well-designed flyers and posters (see fig. 31.3) strategically around the music department also will help stimulate interest in the ensemble.

Another gimmick that often works well is to offer extra credit to anyone taking music literature or music history (or any other course you choose) who enrolls in the ensemble. You obviously have to obtain the professors' permission before you can offer the extra credit, but my experience has been that they are always willing to help out. It is also a good idea to contact the various applied-music teachers (flute, clarinet, oboe, bassoon, trumpet, trombone, etc.) and ask them to recommend your ensemble to their students, or have them give you the names of a few students with whom you could get in touch.

A further area of likely support is the choral department—specifically, the director of the madrigal singers. On most campuses, this group is generally required to stage a madrigal dinner (banquet, feast, or party) in early December. You might suggest to the director that you would be happy to involve a few of your early instrument consorts, which would in turn provide a great deal more variety visually as well as aurally to the event, if he or she would support your endeavors with the administration and the students. There might well be several more opportunities for you to team up with this group on future concerts (masses, motets, etc.), so it is always prudent to have a good rapport with these folks. You also may want to entice some of the singers from the choral department to actually join the early music ensemble so that you have your own vocal consort; the idea of one singer on a part is often most appealing to singers who all-too-frequently become lost in the sea of voices in the choral ensembles. Be on the lookout for ruffled feathers when rubbing elbows with choral directors—they may feel threatened by your ensemble.

One of the best recruitment maneuvers is to invite an early music ensemble from a nearby college or university, or a good amateur group (if there is one in your community) to come and play for your student body. This may cost you a small honorarium and a few lunches or dinners, but it would be well worth it. If you can get your hands on some *real* money, you can contract a professional group to present a concert for your students and the community at large.

These recruiting measures may be used until you have more students than you can handle. As your group becomes larger, you can be more selective by holding auditions and limiting the number of students allowed in the group. If everything continues to go well, you will eventually have an early music ensemble that is divided into several subensembles, which may also be divided into subensembles as follows:

The Early Music Ensemble

Recorders I
    Recorders II
    Recorders III
Crumhorns I
    Crumhorns II
Loud Band (Shawms and Sackbuts)
Cornett and Sackbut Ensemble
Viols I
    Viols II
    Viols III
Singers
Mixed Consort
(Consorts of curtals, Schreyerpfeifen, cornamuses, rackets, and lutes are additional
    possibilities for groups of players.)

There will be some occasions on which you will need to use all but your very beginning players together, and there will be times when you will want to present the various consorts of your ensemble separately. But if you are planning for the future (when your best players have graduated), you will always have a few beginner and even intermediate ensembles (recorders and viols in particular) working in the wings. This kind of depth allows you to field your up-and-coming players in emergencies, and it also keeps the top players on their toes, as they know that there are those who would love to replace them. It must be stressed at this point, however, that *big in no way means better.* Schools with small music departments and modest budgets can and do produce outstanding early music concerts; directors of these programs may never have multiple ensembles to work with, but that does not diminish the quality of their work in any way.

Leadership

But who is supposed to direct all of these ensembles, you ask? That is a tricky question, as each sub-ensemble should meet twice a week, and you

cannot be expected to be at every rehearsal. The best solution, if graduate assistants are not an option, is to let (encourage or assign) the best player in each ensemble lead the group. You should decide what repertory each group is to work on, and you should drop by the rehearsals periodically to make sure they are working seriously at mastering their instruments and the music. You may even be able to prevail upon the lead viol and recorder students to take on the beginning groups. It may be necessary for you to attend one of the rehearsals per week, while the designated student takes the other—it all depends on how much you want to be, need to be, and are able to be involved.

Scheduling

This can be a nightmare for an early music ensemble that has multiple subensembles. Initially, however, you should tell the administration that you want to meet your ensemble two (or three) days a week at a given time for between one and one-and-a-half hours each day. These will be your *official* meeting times, and you should plan it so that these times have the least important things going on with regard to other classes and ensembles. It would not be advisable, for example, to schedule your group during the time the band, orchestra, or chorus meets, as you automatically preclude those students from participation in your group. It is also good to avoid scheduling against theory, sight-singing/ear training, history, and large literature classes. You may even have to meet in the early evening in order to have access to the most students. Whatever you do, try not to change the rehearsal schedule every semester. Once the students know that the early music ensemble always meets at such-and-such a time, they will arrange their schedules so that they will be free at that time. The larger the group becomes, the more difficult it is to have them all rehearsing at the same time in the same room. Realistically, not many pieces work well with multiple players and timbres on a part. There will be times when you will want to rehearse the entire ensemble together (see chapter 21), but generally speaking, you are going to want to meet each subensemble (consort) by itself. In order to do this you will need additional rehearsal rooms or different meeting times.

Ensembles consisting of several consorts may find the following suggestions helpful in solving scheduling problems. During the first official class meeting, pass out a blank schedule sheet (see fig. 31.4) and ask the students to fill in their current class *and* work schedules; all times when they *cannot* meet should be entered on the schedule sheet. Make sure they answer the questions at the top of the sheet and on the back (fig. 31.5) so that

you know a little bit about them and their preferences. When this is completed announce that you will post the individual consort rehearsal times on the door the following day, so they should check to see when their consort will meet.

After the students have been dismissed, separate the schedule sheets into groups based on the students' entries under item number 1 (instruments they want to play or learn this semester). Go through each pile and separate each group into level of playing ability (beginner, intermediate, advanced). Next, take a blank schedule sheet and label it "Recorder I" or "Shawm Band" or whatever each stack represents. Go through each student's schedule and copy every entry onto the master schedule for that group (you don't actually have to enter each student's specific activity for each hour, just block that hour out on the master schedule). The remaining blocks of time are potential rehearsal times for that particular consort. Repeat this procedure for each stack of schedules so that when you are finished you have master schedules with available rehearsal times for all of the consorts. Now take one more blank schedule sheet (which will soon become the ensemble's overall master schedule) and enter two rehearsal times a week for each consort, based on the available times from each consort's master schedule. You should attempt, if at all possible, to keep the rehearsals at the same time of day on alternate days of the week (e.g., Recorders I: M/W 10:00, Crumhorns: T/Th 11:00, Viols II W/F 2:30, etc.). Keeping the same time of day will not always work out, as someone will invariably have a conflict with everyone else in the group, but it is easier for the students to remember when their rehearsal is, if the same time of day for each rehearsal can be arranged. Keep in mind that the ensemble's regularly scheduled rehearsal time can be used for one of the consorts if you are not going to need that block of time for massed rehearsals of several groups.

When this is completed you can post the final master schedule on the door and then hope the students don't have a lot of last-minute schedule changes. I have found it useful to make a list (in alphabetical and numerical order) of all the students enrolled in the ensemble along with their instrument(s) and phone numbers, which I then put on the back of the master schedule for distribution to the students and other interested parties.

Rehearsal Planning

In ensembles with enrollments of twenty or more students, any system or device that facilitates the planning and running of rehearsals is welcomed, and the following procedure is presented with this in mind. Once you have determined which compositions you are going to work on during the se-

mester and who is going to play which part in each piece, you should assign each work in the entire repertory a Roman numeral. You should then prepare a listing of the semester's repertory which should contain the following information:

> Roman numeral, title of work, composer of work, and the students' numbers (from the roster) who are playing in each work (see fig. 31.6).

This saves time and space by not having to list students' names and it prevents any confusion that might arise when there are three Johns or two Sallys. This list of works should be posted on the door of the room along with the schedule and the ensemble roster, and a copy should be given to each student.

When planning your rehearsals you can easily notify your students which pieces will be practiced during the week (or month) simply by posting their Roman numerals in a specially designated place on the door. In this way, the students will quickly be able to check to see if they are playing in those particular pieces, and when they will be rehearsed. As you can see, the door becomes the primary mode of communication between you and your students, and with all the proper information on it, there is little room for error. Passing by the door on a regular basis should become a habit of all enrolled students!

Financial Support

The question you are surely asking at this point is: "How do you get enough money for all the instruments that are needed for such a huge ensemble?" The answer lies to a certain extent on your salesmanship abilities. If you were able to sell the administration on the idea of creating an Early Music Ensemble in the first place, then they surely must have known that it would not be long before you would be coming to them for financial support for instruments, music, equipment (reeds, strings, etc), and publicity (flyers, programs, ads, etc.). You need to get a long-term commitment from them that they will provide you, as the new kid on the block, with sufficient money to build a well-rounded program, and you had better be prepared to show them your five-year plan, or where you want the ensemble to be at a certain time and how much it's going to cost. If you are starting from scratch, you are going to need a minimum of $2,000 for each of the five years. This is a drop in the bucket, however, when compared to the amount of money it takes to maintain a full-sized band or orchestra, and many smaller schools would be far better served by investing their limited resources in a first-rate early music program than spending thousands of

dollars on instruments and in scholarship money each year for string, horn, oboe, and bassoon players for a medium-sized, less-than-stunning orchestra.

Some states have Fine Arts Councils that provide grant money for such capital outlay expenditures, especially if you can convince them that their money will enable you to present concerts on an ongoing basis to the general public on instruments heretofore never seen in your community.

I have had a great deal of success over the years (a violone, regal, Baroque bassoon and oboe, and an entire curtal and shawm family, for instance) by tapping into our student government activities account. In the spring of each year the student senate accepts proposals for financial assistance for specific items, personnel, and/or projects being requested by groups and organizations from all across the university. Find out if your music department has a student representative in the senate and go to this person for advice on how to submit your grant request. When writing your proposal be sure to make the point that current as well as future students will benefit from this grant allocation—and not just those actively playing the requested instrument(s), but those in the audience as well! (See fig. 31.7.) One other note of advice: when requesting more than one instrument, place them in priority order and be prepared to have the last one or two items left unfunded. It gives the student representatives the feeling of being fair, yet fiscally sound. I have found, however, that asking for just one instrument, even if it is a substantial purchase, is a highly successful tactic, as you don't appear greedy to the committee, and because they often don't have the heart to reject your one-item request altogether.

Another way to obtain funding is to approach the various music and civic clubs in town and ask them if your early music ensemble could present a half-hour lecture-demonstration of Renaissance instruments and music for their noontime luncheon meeting for a donation to your instrument fund. Many times state, county, or local governmental agencies need entertainment for events they are sponsoring, and the same is true for large malls, particularly at Christmas. Weddings, parties, and Renaissance fairs are all potential money-makers and are often quite a lot of fun, too. You will have to be the judge on how much of a donation or fee to ask, but I would recommend starting at around $250–$300, and then coming down a bit if necessary. It takes a lot of time and energy to attain this level of performance, and you shouldn't give it away!

The School Board is another source for funding, if you can convince them of the need to expose third and fourth graders to the joys and benefits of playing the recorder, preparatory to learning a much more complicated band or orchestral instrument. Explain to them that by the time the children switch to modern instruments, they will already know how to read

the notes on the staff and rhythmic notation, and that they will have made great progress in controlling their breath, coordinating their fingers, and playing in an ensemble. It helps, of course, if the local music teachers use the recorder in their classes, but this might just be the way to introduce them to it if they don't. Design a thirty-minute lecture-demonstration by your best quartet of recorder players for eight- to ten-year-olds, and make sure that the show is highly entertaining, educational, and transportable. Even schools using the Orff instruments and method can benefit from such a program.

Charging admission to concerts on campus is generally frowned upon, but if you can present a full-length concert in a public hall or church there is no reason why you cannot sell tickets or at least ask for a donation at the door—either to defray expenses or for the instrument fund, whichever tack you wish to take.

A final suggestion regarding money matters concerns the identification of a wealthy patron (or patroness) in your community, whom you might approach with the proposal that you will name an entire set of instruments in his or her name, if he or she agrees to purchase the instruments. Part of the agreement can be your promise that the name of the collection will appear in each concert program for the next two (four, six, etc.) years. A university fund-raising specialist would be helpful in this endeavor.

Community Support

It is important to have the backing of the community (both the university community and the township) in which your ensemble is active. This can be achieved by your support of their activities and events to the extent you think is feasible. Volunteering a group of players for a worthy cause puts you in a good light, and the community sponsors and participants are not likely to forget your contribution too soon. Sending a group of players to old folks' homes, retirement centers, and homes for the mentally ill, retarded, or otherwise impaired individuals, as well as certain wards in hospitals, is a laudable endeavor any time of year and as often as time allows.

If your city has a large ethnic group with a European heritage, you could plan a concert around a theme or a group of composers representing this group. Many communities, for example, have a large Spanish- (or German-, Italian-, Polish-, French-, etc.) speaking population, who undoubtedly would be appreciative of a concert that not only focused on their background but which was performed in their community center as well.

Performances for the kinds of audiences mentioned above are not only important for humanitarian reasons, but they will eventually help increase

the size of your audience at your regularly scheduled concerts. Be sure to submit script and advertising copy in plenty of time to be included in the public service announcements on your local television and radio stations and in the newspapers. It also helps to have your students post flyers of up-coming concerts in the major supermarkets and other prominent locations in town and around campus.

The purpose of this discussion has been to convey to you the idea that establishing an early music ensemble on your campus or in your town is not an insurmountable task. There will surely be obstacles along the way, but they can generally be removed when approached with sufficient conviction and determination. If you are in dire straights, call a colleague or contact Early Music America for a reference person. Good luck!

BIBLIOGRAPHY

The following items offer a wealth of information to the early music ensemble director—beginner and old-timer alike. It is recommended that these sources become a part of your personal library.

Kottick, *Collegium;* McGee, *Medieval;* Petersen, *Guide;* Phillips–Jackson, *Performing*.

Course Numbers**:** MUN 2470, 4470, 5475 | Number of Credits: 1

Meeting Times**:** Tues/Thurs 4:00-5:15 | Rehearsal Room: HMU 229

Instructor**:** J. Kite-Powell | Room HMU 227 | Office Hours**:** Posted

Objectives**:** The purpose of the Early Music Ensemble is to study and perform original literature written for various consorts and combinations of instruments on replicas of instruments that were used prior to 1700. Emphasis will be placed on the musical styles and forms of the Middle Ages, Renaissance, and early Baroque. The students will develop their ability to perform in small ensembles and improve such aspects of playing as intonation, articulation, phrasing, balance, and interpretation. In addition, they will gain proficiency on the instruments of these periods. Further, the students will:

1. constructively evaluate and criticize their personal level of performance and the performance of others
3. prepare music outside of class (practice)
4. exhibit leadership and fellowship in the group effort
5. maintain a cooperative attitude and show mutual respect
6. learn and demonstrate professional stage presence
7. show responsibility for music and school-owned instruments and equipment
8. attempt to conform to group-designated standards—memorization (when applicable), dress, and attendance
9. demonstrate pride in membership in the group by recruiting for the organization and representing the organization willingly.

FIGURE 31.1   Sample Course Syllabus and Description

Attendance: Students are required to attend all classes (rehearsals) and performances.
The final grade will be lowered for unexcused absences as follows:

	Grade
One unexcused absence	B+
Two unexcused absences	B
Three unexcused absences	C+
Four unexcused absences	C
Five unexcused absences (withdrawal recommended)	F

Three unexcused tardinesses = one unexcused absence

Grading: Grades will be assigned on the following basis:

Level of Ability	Level of Accuracy	Grade
High	90 - 100	A
High-medium	80 - 89	B
Medium	70 - 79	C
Medium-low	60 - 69	D
Low	Below 59	F

Graduate students may be asked to compile concert program notes.

M E M O R A N D U M

Subject: Justification for Applied Music in Historical Instruments

Because of the increased interest in historically informed performances of
early music in general and the expanded growth of early music activities at The
Florida State University in particular, a real need to be in a position to offer
private instruction in historical instruments has presented itself. A school of
music with such comprehensive offerings as FSU should provide its students with
the opportunity to study early instruments at the applied level when the
appropriate instruments and expertise to teach them are available. Students
seeking the Certificate in Early Music, the BM in Music History and Literature,
the BA in Music, an MM or Ph.D. in musicology with an emphasis in early
music, or a graduate degree with an early instrument as a secondary instrument
should be extended the option of selecting an early instrument as their primary (or
secondary, as the case may be) instrument.

The College of Music already has in its possession a large assortment of
replicas of historical instruments, and the collection increases annually.

The Early Music Ensemble consists of several small consorts as well as
larger groups in which interested students may participate; the Baroque Ensemble
offers a variety of performance possibilities as well. Both groups perform several
concerts per year on the university campus and in and around Tallahassee.

FIGURE 31.2   Sample Justification

FIGURE 31.3   Sample Flyer

Year: Fr/So/Jr/Sr/Grd

_____
(name)

_____
Phones: (home) | (work)

_____
E-Mail address:

1.   **2.**   **3.**
Instrument(s) of Interest this Semester

Semester: Fall ____ Spring ____| Year 200__

HOUR	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:00- -8:50					
9:05- -9:55					
10:10- -11:00					
11:15- -12:05					
12:20- -1:10					
1:25- -2:15					
2:30- -3:30					
4:00- -5:15					
5:30- -6:45					
Evening (specify time)					

FIGURE 31.4   Blank Rehearsal Schedule

Strings:
  Cittern
  Harp
  Lute
  Psaltery
  Rebec
  Theorbo
  Vielle
  Viol (Tr T B)
  Violone

Brass:
  Cornettino (mute, straight, curved)
  Cornetto (mute, curved)
  Lysarden (*cornetto basso*)
  Serpent
  Sackbut (A T B)

Woodwinds:
  Crumhorn (S A T B)
  Curtal (S A T B)
  Flute (Renaissance tenor)
  Kortholt (S B)
  Pipe (& Tabor)
  Renaissance Rackett (T T B Gb Cb)
  Recorder (Renaissance: Ss S A T B Gb)
  Schreyerpfeif (S A T)
  Shawm/Pommer (S A T B)

Keyboard:
  Chamber Organ
  Clavichord
  Harpsichord
  Regal
  Portative Organ

Voice: (Please give your range on the reverse side under 1, 2, or 3 if you intend to sing this semester.) Soprano (type), Alto, Countertenor, Tenor, Baritone, Bass

* * * * * * *   **Please Answer the Following Questions**:   * * * * * * *

Do you read early notation? yes / no: Black Mensural / White Mensural / Tablature (type?)

Would you like to learn to play from early notation? yes / no

Would you like to learn Renaissance dances?   yes / no

Would you register for lessons on an early instrument if a teacher were available? yes / no   Which instrument(s)?

Would you participate in weekend or week-long early music workshops in other cities? yes / no

FIGURE 31.5   Sample Instrument List

Number	Group	Title	Composer	Instr (top-/-bot)
I	Mixed ens.	*Quodlibet à 7*	Maistre	1-Vo/6-ARec,12-Vo/17-trVl/ 16-Vo,24-Skb/13-BVl/ 29-BCur,/28-BVl,5-Vo
II	Mixed ens.	*Die Brünnlein à 6*	Senfl	1-Vo/17-trVl/12-Vo/ 5-Vo/13-BVl/28-BVl
III	Mixed ens.	*Benedicta Es Coelorum à 6*	Josquin	23-Cor,1-Vo,12-Vo/ 13-TCur/24-Skb/11-Skb, 5-Vo/28-BV/29-BCur
IV	Mixed ens.	*Tandernack Quinque à 5*	Senfl	6-TRec/17-trVl/13-ACur/ 11-Skb/28-BVl
V	Mixed ens.	*Nato Canunt Omnia à 5*	Brumel	6-TRec/17-trVl/13-ACur, all singers/24-Skb/28-BVl
VI	Mixed ens.	*Forti animo esto à 8*	J. Praetorius	Ch.I:17-TRec,1-Vo/23-Cor 12-Vo/24-Skb/11-Skb Ch.II:28-SSha/6-SCur, 16/13-ACur,5/29-BCur
VII	Mixed ens.	*Ave Maria à 6*	Senfl	6-TRec,1-Vo/17-TRec, 12-Vo/24-BRec,16-Vo/ 11-Skb/13-BVl,5-Vo/28-BVl

The numbers in the right-hand column are those assigned to the students in the ensemble; the part each student is to play or sing on each piece is abbreviated after the number (thus reflecting the instrumentation of the piece). Refer to the section on Rehearsal Planning above for an explanation of this chart

FIGURE 31.6   Sample Repertory List

MEMORANDUM

To: The Student Government Budget Committee

From: Jeffery Kite-Powell, Director
       FSU Early Music Ensemble

Date: January 25, 2006

      The FSU Early Music Ensemble (EME) specializes in music written between the years 1200-1650. The average enrollment is over 30 students per semester, divided equally between graduates and undergraduates. Every semester the ensemble performs two to three full-length public concerts at the College of Music, and we frequently perform off campus (in and around Tallahassee and South Georgia). During spring break each year a small component of the EME visits all of the elementary schools in Leon county as part of the Arts in the Public Schools program to demonstrate early instruments (the recorder in particular) to the students, and, for the last few years, the ensemble has participated in weekend early music workshops at Tulane University, Louisiana State University, and the University of Alabama at Birmingham. We have also performed at the regional meetings of the Southern Chapter of the American Musicological Society in Lafayette, La. and in Tuscaloosa, Al, as well as at the Appleton Museum of Art in Ocala, Fl. As you can see, the EME is a highly visible group.

      The EME is also an especially unique group, as the instruments the students learn to play are replicas of instruments commonly used in the Renaissance. While performing on these instruments certainly broadens the students' understanding of earlier instrumental music, the instruments are such specialty items—mostly still handcrafted and therefore prohibitively expensive—that the students are unable to purchase their own.

      The College of Music is simply unable to meet all of the budgetary needs of its many ensembles. The EME is able to purchase one or two instruments annually from funds provided by the College and with funds raised by the ensemble itself, but we are still in need of several very crucial instruments in order to reproduce the music of the Renaissance in a historically accurate manner. The instrument I am requesting this year will complete the basic family of shawms, the preeminent outdoor double reed instrument of the period. The Student Government has already helped us with two other instruments from this family, and the students of the EME would greatly appreciate the addition of the bass (lowest) instrument. You can be assured that over the next decades this instrument will be played by a large number of students and appreciated by many audiences in the years ahead.

      On behalf of the students of the EME I would like to thank you for your careful review and consideration of this proposal.

FIGURE 31.7   Student Government Memorandum

APPENDIX A.

A Performer's Guide to Medieval Music: Contents

APPENDIX B.

A Performer's Guide to Seventeenth-Century Music: Contents

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Anthony Rooley enjoys a multidisciplinary approach to life: music exploration comes in close second, while working to inspire others comes in close third. Writing on music as it

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