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Keyboard Instruments

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This chapter is written primarily for the keyboard player who wishes to explore the rich traditions of the seventeenth century, but who has had little or no experience with the instruments and their repertory. Such a player will be confronted with a bewildering array of choices and problems, and it is hoped that this will serve as a starting point from which to conduct further research and experimentation. Early-music specialists who play other instruments and who wish to know more about the keyboard literature may find it informative, and it could also be a reference source for experienced organists and harpsichordists.

After an initial philosophical statement, the chapter is divided into three sections. The first answers questions about early keyboard performance practice, including technical issues. Section two offers an overview of the most common forms and genres, and section three covers the national schools of seventeenth-century keyboard composition.

Steps to Parnassus

All music is ultimately vocal. Instruments are essentially mechanical extensions of the human voice and almost every aspect of musical expression uses song as a model. Ever since the first aulos was made, what student has not been urged by his teacher to "make it sing"?

However, making an instrument "sing" involves more than producing a beautiful sound and a sustained line. The player of early keyboard repertory would be well advised to keep in mind that music has its roots in speech, in rhetoric, and in the differentiation between vowels and consonants. The harpsichord, perhaps the most vocal of all the keyboard instruments, is ideally suited for this purpose. This intentionally provocative statement is offered here to underscore an aesthetic. The modern piano can easily and idiomatically produce vowels in a seamless legato texture, but the harpsichord—and to varying degrees the organ and clavichord—can reproduce *both* vowels and consonants, and by extension the subtle inflections, dynamics, and phrasing that are natural to a vocal line.

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Performance Practice

Position of the Body and Hands

The first question for the player of an unfamiliar instrument is how physically to approach the hardware—in other words, hand and body position. The governing principles are relaxation and economy of motion; that is, the goal is to achieve the maximum musical result with the minimum of physical effort. This is of course true for all instruments, but it is particularly important for early keyboards.

The player should choose a chair that allows a straight line from the elbows to the knuckles when the hands are placed on the keyboard. The arms should hang loosely and naturally from the shoulders, assuming their normal position with elbows close to the body. Wrists should be neither lower nor higher than the hand. The body should remain erect, natural, quiet, and focused.

Simply stated, the harpsichord is played with the fingers. Contrary to the mechanics of modern piano playing, in which all parts of the body assume an important role in technique and sound production, playing the harpsichord only minimally involves the forearm, arm, and shoulders. The wrist is involved, but should always remain supple, flexible, and quiet. The fingers should be curved as much as possible without striking the keys with the nails, and should be poised at the edge of and also quite close to the surface of the keys. Little is achieved by striking the keys from a distance except inaccuracy, coarse articulation, and a harsh sound.

These principles are based on a large body of historical evidence, as well as this writer's extensive practical experience as a performer and teacher. They were clearly articulated by theorists and composers at the outset of this great period of keyboard composition. One of the first and most important sources is Girolamo Diruta's *Il Transilvano* (1593/1609), a most important and influential source of information on performance practice. Diruta's works are mentioned in the treatises of Costanzo Antegnati and Adriano Banchieri and received the recommendation of Claudio Merulo.

Regarding hand and body position, Diruta writes:

> To begin, the rules are founded on definite principles, the first of which demands that the organist seat himself so that he will be in the center of the keyboard; the second that he does not make bodily movements but should keep his head and body erect and graceful. Third, that he must remember

that the arm guides the hand, and that the hand always remains straight in respect to the arm, so that the hand shall not be higher than the arm. The wrist should be slightly raised, so that the hand and arm are on an even plane . . .[1]

The fingers should be placed evenly on the keys and somewhat curved; moreover, the hand must rest lightly on the keyboard, and in a relaxed manner; otherwise the fingers will not be able to move with agility. And finally, the fingers should press the key and not strike it . . .

This is probably more important than all else . . . You must keep the hand relaxed and light, as though you were caressing a child . . . And remember that the arm must guide the hand and must remain at the same angle as the key, and that the fingers must always articulate clearly, but never strike the keys; and lastly one finger should never be raised from the others. While one lowers the other must rise. As a final warning, do not lift the fingers too high, and above all, carry the hand lightly and with alertness.[2]

These principles, stated with such thoroughness and authority, became the standard for succeeding generations of keyboard players. Evidence of this can be found throughout the seventeenth and eighteenth centuries, and within every national style. For example, the French organist Nivers writes, "In order to play agreeably, you must play without effort. To play without effort, you must play comfortably. This is achieved by placing the fingers on the keyboard gracefully, comfortably, and evenly—curving the fingers, especially the longer ones, so their length is equal to the shorter ones."[3] In the next century F. Couperin, the sine qua non of harpsichord player/composers, writes in his *L'Art de Toucher le Clavecin,* "In order to be seated at the correct height, the underside of the elbows, wrists and the fingers must be all on one level: so one must choose a chair that agrees with this rule . . . Sweetness of touch depends, moreover, on holding the fingers as closely as possible to the keys."[4] Forkel, in recalling the playing style of J. S. Bach, has this to offer:

Seb. Bach is said to have played with so easy and small a motion of the fingers that it was hardly perceptible. Only the first joints of the fingers were in motion; the hand retained even in the most difficult passages its rounded form; the fingers rose very little from the keys . . . and when one was employed, the other remained quietly in its position. Still less did the other parts of his body take any share in his play, as happens with many whose hand is not light enough.[5]

Fingering

In the field of historical performance, a discussion of fingering is guaranteed to raise the blood pressure of keyboard players. It is beyond the scope of this chapter to provide an exhaustive study of this large and

field by Lindley, Soderlund, Boxall, et al. However, an overview will prove useful.

The concept of "correct" fingering in the seventeenth century was derived from the theory of "good" and "bad" notes (indicating notes that were metrically strong and weak), which were to be played by "strong" and "weak" fingers respectively. However, there is a significant divergence of opinion even on this basic theory, and one can find a wide variety of applications of this principle.

In brief, right-hand scale passages were generally fingered 3434 . . . ascending and 2323 . . . descending; left-hand, 2323 . . . ascending, 3434 . . . or 2323 . . . descending. The thumb was usually avoided, but it would be a misrepresentation to assert that it was never used. For example, as early as 1555 the Spanish theorist Juan Bermudo offered as one possibility the fingering of right-hand ascending scales to be 1234 1234 and 4321 4321 descending.[6] His countryman Correa de Arauxo wrote in 1616 that it is better to use the right-hand fingering of 1234 1234 and in the left hand 4321 4321 for "extraordinary runs" ascending.[7]

Of primary importance is that the player should avoid falling into the trap of basing musical decisions on mechanical evidence. Certainly, important insights into the articulation and phrasing that might have been intended by the composers can be derived from a study of early fingering. To cite an obvious example, a skip of a fifth played with the same finger would preclude a legato interpretation. But a skilled player can just as easily play a passage fingered 3434 . . . legato as well as detached. The reader is firmly cautioned against deriving absolute and dogmatic rules of interpretation from historical evidence of finger placement. Use the fingering as an important guide, but as only one of many factors that determine musical interpretation.[8]

The problems of a simplistic and narrow approach were noted at the beginning of the century, even as the music was being written, and at its close. Praetorius wrote the following in *Syntagma musicum* II (1618):

Many think it is a matter of great importance and wish to despise such organists who are not accustomed to this or that particular fingering, but this in my opinion is not worth talking about. Let one run up and down the keyboard with his first, middle or last finger or even with his nose if that will help him, for as long as what he plays sounds fine and pure, and is correct and pleasant to the ear, it is not very important how one accomplishes it.[9]

In 1702 the admirable French theorist M. de Saint-Lambert wrote his excellent treatise on keyboard performance, *Les principes du clavecin.* Appearing at the midpoint of two centuries of keyboard music, Saint-Lambert shows both hindsight and foresight: "There is nothing in harpsichord playing that is more open to variations than fingering. The choice must depend entirely on 'commodité' [comfort] and 'bonne grace'

Articulation

Questions of articulation and touch are as complex and elusive as those for fingering, and François Couperin's reservations about commenting on the subject are still valid: "As it would require a volume filled with remarks and varied passages to illustrate what I think and what I make my pupils practice, I will give only a general idea here."[11]

Turning again to Diruta, it appears that a legato style is advocated. He criticizes those organists who "take their hands off the keyboard so that they make the organ remain without sound for the space of half a beat, and often a whole beat, which makes it seem that they are playing plucked instruments."[12] Nevertheless, Diruta also acknowledges that a more detached approach is called for in dance music, where one can use "leaping to give grace and air to the dances." He adds, "The fingers must always articulate clearly, but never strike the keys; and lastly, one finger should never be raised from the others, but while one lowers the other must rise."[13]

Frescobaldi's well-known admonition "not to leave the instrument empty" also seems to indicate a legato-based approach, although he was referring particularly to arpeggiating suspensions and dissonances.[14]

Nivers supports an emphasis on vocal models:

> A sign of good breeding in your performance is a distinct demarcation of all the notes and subtle slurring of some. This is learned best from singing. That is, for example, in playing a run of consecutive notes, lift each note promptly as you play the following one . . . To connect the notes, it is still necessary to distinguish them, but the notes are not released so promptly. This manner lies between confusion and distinction and partakes a little of each. It is generally practiced with the *ports de voix* . . . For all these matters consult the manner of singing, for the organ should imitate the voice in such things.[15]

It would therefore be difficult and potentially misleading to describe anything as a "basic" touch for seventeenth-century keyboard music. However, one can deduce a consensus for a "starting point" touch in which one releases the preceding note at the instant one strikes the next. From this "basic legato" emanate two ends of an infinite spectrum. In one, a variety of *detaché* or silences between the notes; on the other, a hyper-slurred "over-legato," in which many and occasionally all of the notes are sustained simultaneously (what I call a "digital damper pedal").[16] The subtle gradations in between are impossible to measure or catalogue. Their application is further modified by almost every possible variable: musical context, texture, harmonic and melodic implications, the instrument (i.e., organ, harpsichord, clavichord) and its national style, the vocal line (with real or imagined texts, and paying close attention to the natural rhythmic

rations), ornamental figures (e.g., *ports de voix*, acciaccaturas), rhetorical gestures, and so forth. Moreover, one must again be wary of seeking absolutes. Style is an organic and evolving phenomenon. What may have been suitable for a piece written in Naples in 1625 may no longer be appropriate for one written in the same city in 1692. Its fickle nature is succinctly descibed by J. Engramelle in 1775: "Lulli, Corelli, Couperin, and Rameau himself would be appalled if they could hear the way their music is performed today."[17]

Instruments: Organ, Harpsichord, or Clavichord

When we investigate the actual instruments of the seventeenth century, we are on firmer ground. Fortunately, a number of keyboard instruments from the period have survived, and many are still playable or have been restored to good condition. By nature and circumstance, keyboard instruments were built within the parameters of national and even local styles, and most (particularly organs) remained in the original location where they were used. We can therefore make reasonably certain connections between performer, composer, and instrument. These keyboards, then, provide invaluable and direct evidence about the actual sonorities for which the music was intended. Well-restored instruments from the period are valuable teachers. Playing them provides concrete, tactile information about the possibilities of touch, articulation, registration, pedal work, and other aspects of keyboard performance.

The question of which instrument to choose for a particular piece is not so easily answered. Many works of the seventeenth century were written to be played on any keyboard instrument, and today's performer should feel free to do just that. However, others indicate a particular instrument, or at least a preference. Title pages and prefaces are valuable sources of information. For example, Giovanni Trabaci writes that the works of his *Libro primo* (1603) might be performed on "any kind of instrument, but equally best on organ and harpsichord" ("sopra qualsivoglia stromento, ma piu proportionevolment ne gli Organi e ne i Cimbali"). The same remark is found in the second book, but here the cembalo is named first, perhaps implying the composer's preference. Trabaci further indicates his fondness for the harpsichord in his *Partite sopra Zefiro* (1615), where he advises that some variations are meant for harp, but the harpsichord could always play them because "the harpsichord is ruler of all the instruments in the world, and one can play everything on it with ease."[18]

Function is another important factor in deciding which instrument to use. Music intended for liturgical purposes indicates organ performance, and secular dance forms usually imply the harpsichord. For example, the Council of Trent outlawed dances, intabulations, variations, and other

would be the first, but not the only choice. The Council did permit versets, intonations, toccatas, ricercares, fantasias, capriccios, canzonas, and sonatas, thus supporting organ performance. The clavichord was a particularly useful practice instrument for organists, who could not always count on the availability of an organ blower, or who wished to avoid the uncomfortable conditions in churches. But it could also be a very expressive solo keyboard instrument, and many pieces were implicitly if not explicitly intended for it.[19]

Some composers were unambiguous and specific. Scheidt indicates in his *Tabulatura Nova* (1624) that these works were written for an organ "with two manuals and a pedal, the melody being in the soprano or tenor particularly on the *Ruckpositif* with a sharp stop so that one hears the chorale melody more clearly."[20]

Johann Speth specified an unfretted clavichord for his *Ars magna consoni et dissoni* (1693): "For the correct execution of these toccatas, praeambles, verses, etc., a good and well-tuned instrument or clavicordium is necessary, and that it should be prepared so that each *clavir* [key] has its own string, so that two, three or four *clavir* do not have to play on one string."[21] In the case of the French repertory the choice is unmistakable, since the titles of pieces intended for organ were the registrations themselves.

Inventories can also be a valuable guide. For example, composers in the employ of Don Cesare d'Este in 1600 would have had at their disposal ten organs of varying sizes, including an organ with paper pipes, and twelve harpsichords, many with two registers.

Tuning and Temperament

Early keyboard instruments need to be tuned and in the case of harpsichords and clavichords, tuned often. This was an accepted fact early on, as this charming understatement from the sixteenth-century English Leckenfeld proverbs attests: "A slac strynge in a virgynall soundithe not aright."[22] Pianists who are just becoming acquainted with early instruments might at first be surprised by the importance of tuning. Rather than seeing it as an obligation, however, they will realize that it provides a welcome opportunity to control two artistic variables: pitch and temperament. (See the chapter "Tuning and Temperament" in this volume.)

The choice of temperament can have a significant effect on the realization of the expressive potential of a composition and its affect. For example, the diminished fourths of Frescobaldi sound poignant in unequal temperament, but lose that effect and become indistiguishable from major thirds in a homogenous equal temperament. Likewise, certain keys take on individual characters in nonequal tunings. This is not to say that equal temperaments were unknown in the seventeenth century. Suggestions to divide the octave into twelve equal parts can be found as far back as

gradations in tuning, and of the effect of temperament on musical style. The final choice will depend on historical evidence, the nature of the instrument, the affect of the work, and the player's own ear.

Forms and Genres

The seventeenth-century keyboard repertory is rich in the number and variety of forms and genres. The antecedents of many can be found in the sixteenth century or earlier, but others were newly invented or represent transformations or combinations of older forms. Since these works often carry specific implications of tempo, character, and performance practice, it is important that the player be familiar with the nature and history of each. The following brief descriptions of some of the more commonly used terms will help the player get started.

Canzona

The roots of the canzona can be traced to the sixteenth-century French chanson, but it gradually became independent of vocal models or used them in elaborate transcription. The opening was usually in imitation, often with the characteristic rhythm ♩ ♩♩. Connections to the fugue are evident, and Praetorius in fact describes the canzona as a series of short fugues for ensembles of four or more parts. The canzona principle was carried to Germany by Froberger, and the emphasis on imitation and variation was adopted by Buxtehude, Muffat, and Kerll. It is in Germany where we find the closest relationship between the canzona and the fugue.

Ricercare

The term *ricercare* comes from the Latin "to seek" or "to find." The early ricercares were used as preludes for lute or keyboard (i.e., *ricercare le corde*—to try out the strings), and the most common texture was imitative. Further development of the ricercare in Germany placed emphasis on the variation principle, but the form gradually fell into disuse by the end of the century. J. S. Bach's eighteenth-century revival of the ricercare in the *Musical Offering* utilizes many of its stylistic characteristics, including the open-score format.

Fantasia

From the outset the term *fantasia* could appear interchangeably with ricercare, praeambulum, voluntary, capriccio, and canzona. Its origins

as an instrumental composition whose form and invention spring "solely from the fantasy and skill of the author who created it"; fantasias were also good for "exercising the hands."[23] Independence from a written text is a hallmark of the genre.

The fantasia became highly imitative throughout the century, however, and Italian fantasias in particular featured a kaleidoscope of contrapuntal techniques. English composers also wrote contrapuntal fantasias but they soon placed greater emphasis on freedom and creativity. Thomas Morley wrote in 1597 that the fantasy is "the chiefest kind of musicke which is made without a dittie . . . when a musician taketh a point at his pleasure, and wresteth and turneth it as he list, making either much or little of it as shall seeme best in is own conceit.[24]

Toccata

Performers who have spent any time improvising at the keyboard will understand the impetus that created the toccata. The name is derived from *toccare* (to touch), and it is exactly this act that defines its nature. The most idiomatic and flexible of the early genres, it is found within all national schools and could appear as praeambulum, prelude, fancy, or intonation. A wide range of stylistic traits is evident. Some toccatas alternate fugal and chordal sections with brilliant passagework, while others might be full of rhapsodic figuration, and some are highly structured and monothematic.

Tiento

The term is Spanish and was used for several different types of compositions. The title comes from *tentar*—to try out or experiment—but from its original prelude-like character the *tiento* soon encompassed fantasias and ricercares as well. For example, the twenty-nine *tientos* written by the sixteenth-century master Antonio Cabezón include short pieces, rhapsodic works, and highly contrapuntal compositions.

Dances

Seventeenth-century keyboard repertory includes a large number of dance pieces. It is therefore incumbent on the player to understand the steps and movements of each dance in order to interpret properly its particular tempo, character, and style, and also to realize the subtle rhythmic inflections and articulations inherent in each dance movement. Better still, keyboard players are urged to learn and physically dance the dances themselves! The most common dances used by keyboard composers include *allemande*, *courante* and *corrente*, *sarabande*, *gigue*, *passacaglia*

on dance in this volume for more information about this large and fascinating subject.

Repertory

Italy

Italy produced some of the most important keyboard literature in the seventeenth century. This is not surprising if one considers its rich Renaissance heritage, the central role of the church and its need for liturgical music, and the traditional support of music by noble families. The early keyboard player will find here an almost inexhaustible source of canzonas, ricercares, fantasias, toccatas, and variations.

One of the earliest major composers of ricercares was Giovanni Gabrieli; he streamlined the form, using fewer sections than his predecessors and expanding the role of augmentation, diminution, and conterpoint. Adriano Banchieri continued this tradition: his publications contain sonatas, capriccios, ricercares, canzonas, fantasias, and toccatas. Ercole Pasquini was Frescobaldi's predecessor as organist at St. Peter's in Rome until 1608. He and composers such as Giovanni de Macque used a bold, expressive harmonic language not unlike the madrigals of Gesualdo. Pieces in *durezze e ligatura* style were solemn compositions, distinguished by four- or five-part texture, slow harmonic rhythm, poignant suspensions, cross-relations, and dramatic dissonances. Regarding this practice, de Macque's student Ascanio Mayone explained in the preface to his *Secondo libro di diversi capricci per sonare* (1609) that some passages contained "wrong" notes, against the rules of counterpoint ("contra la regola del contrapunto"), but one should not be scandalized by them or think the author does not know the rules, since they are well observed in his ricercares. Pasquini's works include the earliest examples of the corrente in Italy, and de Macque was the first to use the *ruggiero* theme in his partitas. Trabaci was an important figure in the development of the ricercare and canzona, creating greater thematic unity in the ricercare form by using fewer subjects (e.g., ricercare *con una fughe, con due fughe,* etc.), which were then varied.

The Italian who towers above the rest is Girolamo Frescobaldi. A keyboard virtuoso and inspired composer, Frescobaldi became organist at St. Peter's at the age of twenty-five. It was said that his art was "at the ends of his fingers" and there is no doubt that as a keyboard player he was the greatest and most influential in Italy.[25] Frescobaldi's works represent some of the best ricercares, canzonas, variations, and toccatas in the literature, and the performer will do no better than to play and study them all.

One of the most important and enduring legacies that Frescobaldi has

new and daring style, or perhaps because no one could play quite like himself, Frescobaldi wrote extensively about the performance of his music. We are therefore fortunate to have explicit and detailed information about the realization of Frescobaldi's music as well as his aesthetic. By extension this information can serve as a general guide for seventeenth-century Italian keyboard music. The writings are found throughout his prefaces and in other sources. One of the most complete versions appears in the third edition of toccatas (1637). It is written in clear and practical terms, and the performer would be well advised to study and refer to them frequently when playing this repertory. Let the composer here speak for himself (italics are added by the author for emphasis):

> To the reader:
>
> 1. This manner of playing must not follow the same meter; in this respect it is *similar to the performance of modern madrigals,* whose difficulty is eased by taking the beat slowly at times and fast at others, even by pausing . . . in accordance with the mood or the meaning of the words.
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> 2. In the toccatas . . . one may play each section separately, so that the player can stop wherever he wishes . . .
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> 3. *The beginning of the toccatas must be played slowly and arpeggiando . . .*
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> 4. In trills as well as in runs, whether they move by skips or by steps, one must pause on the last note, even when it is an eighth or sixteenth note, or different from the next note [of the trill or run].
>
> 5. Cadenzas [i.e., cadential passages], even when notated as fast, must be well sustained, and *when one approaches the end of a run or* [cadential passage] *the tempo must be taken even more slowly.*
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> 6. *Where a trill in one hand is played simultaneously with a running passage in the other, one must not play note against note, but try to play the trill fast and the run in a more sustained and expressive manner . . .*
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> 7. When there is *a section with eighth notes in one hand and sixteenth notes in the other, it should not be executed too rapidly; and the hand that plays the sixteenth notes should dot them somewhat, not the first note, however, but the second one,* and so on throughout, not the first, but the second.[26]
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> 8. Before executing parallel runs of sixteenth notes in both hands, one must pause on the preceding note, even when it is a black one; then one should attack the passage with determination, in order to exhibit the agility of the hands all the more.
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> 9. In the variations that include both runs and expressive passages, it will be good to choose a broad tempo; one may well observe this in the toccatas also. Those variations that do not include runs one may play quite fast, and *it is left to the good taste and judgment of the players to choose the tempo correctly. Herein lie the spirit and perfection of this manner of playing and of this style.*[27]

Other Italian composers wrote about performance practice, and there is valuable information to be found in the works of Diruta, Banchieri, Antegnati, Trabaci, Mayone, Bottazzi, Grassi, Fasolo, Scipione Giovanni, and Bonini, and in the treatises on basso continuo practice by Viadana,

zonas were taken "in haste" and had "vivacity and *motivi allegri.*"[29] A slower tempo was preferred for ricercares. Banchieri wrote that repeated sections of *canzoni alla francese* "must be played adagio the first time *as in a ricercare* [italics mine], and in the repeat quickly."[30] Durante agreed with Frescobaldi that toccatas should begin *arpeggiando,* "with gravity and without *passaggi,* but not without *affetti.*"[31] Trabaci affirms that "the tempo is gradually slowed in approaching the end of *passaggi* or cadences."[32]

Composers of the generation after Frescobaldi do not reach his high artistic and technical level. Bernardo Pasquini was primarily a harpsichord composer. His suites consist of allemande, courante, and gigue, and their sweet, simple melodies presage the eighteenth-century galant style. Pasquini still felt the influence of Frescobaldi. He purchased *Il Primo Libro* (1628) in 1662, often quoted from it, and recommended Frescobaldi as a teacher. The music of Frescobaldi's students is not well known and deserves further study. They include Alessandro Costantini, who succeeded him at St. Peter's, and Francesco Mutii, his assistant and a recognized virtuoso himself ("in pulsandis organis in Romano solo nulli secundus"). Michelangelo Rossi is often claimed as a student of Frescobaldi, and his highly chromatic works are attractive, but records show that he was known primarily as a violinist. Alessandro Scarlatti wrote brilliant, if somewhat empty toccatas, and his harmonic language occasionally features surprising acciaccaturas that would later become a trademark in the works of his son Domenico.

Spain and Portugal

Because of geographical isolation, political history, and other factors, artistic developments in Spain and Portugal have always been somewhat set apart from the rest of Europe. The Spanish and Portuguese keyboard style also remained relatively constant throughout the seventeenth century, unlike the diverse schools of composition one would find in Naples, Rome, and Venice. Its roots lie deep in the sixteenth century, especially in the music of Antonio Cabezón; general characteristics are conservative contrapuntal textures, elaborate keyboard embellishment, and variation technique. The *tiento* was the predominant form.

There were several types of *tientos,* usually distinguished by organ registration. For example, the *tiento lleno* was to be played on one manual, full instrument. *Medio registro* implied a divided registration, and in a *tiento de medio registro de bajo* the left hand played solo figurations and the right hand played chords. The *ensalada* (lit., salad) consisted of four or five sections alternating duple and triple meters, in the style of the Neapolitan quilt canzona. A *tiento de falsas* would be written in slow quarter-note or half-note motion, relatively free of figuration, with a harmonic language reminiscent of the Italian *durezze e ligatura* style.

who would not hesitate to sound together e-natural and e♭, or c-natural and c♯. He described this type of intense dissonance as a *punto intenso contra remiso.*

Early composers of the period include Bernardo Clavijo, Francisco Peraza, and Sebastian Aguilera de Heredia, whose fame lasted into the eighteenth century. Aguilera's compositions are representative of the seventeenth-century keyboard style in Spain, including the use of uneven folklike rhythmic patterns such as 3+3+2 (𝅗𝅥. ♪♩ ♪♩), and *falsas.* Echo passages recalling Sweelinck are frequently used.

Manuel Rodriguez Coelho's *Flores de Musica* (1620) contains a huge repertory of over 133 works, among them *tientos, versos,* and kyries. Coelho's *tientos* are the longest of the century, some containing as many as 300 measures. He suggests in his versets that each is "for singing to the organ; this voice must not be played, the four below it must be played." This practice is also found in Italian sources. The use of the generic term *tecla* for keyboard in titles implies that the player in this period had a choice of instruments.

Correa de Arauxo is an important figure. Included with sixty-three masterful *tientos* in his *Libro de Tientos* (1626) is the *Facultad Organica,* a valuable source for seventeenth-century Spanish theory and performance practice. Correa advocates the use of inequality in triplets by suggesting that there are two ways to play them. The first is to play the three notes evenly, as written. In the second, the player dots the first of each group of three, creating the pattern ♩ ♪♩ (*como haziendo una semiminima y dos corcheas*). Correa shared with his Spanish contemporaries the love of complicated and uneven rhythms. In his works one not only finds the very Spanish 3 + 3 + 2 pattern but also groups of 5 and 7 against 2 or 3. He would describe such *tientos* as *muy dificultoso.*

Juan Cabanilles was the major figure in the second half of the seventeenth century. His fame reached France, and his student Joseph Elias wrote in 1722 that "the world may vanish before a second Cabanilles comes."[33] The output was enormous, and a projected complete edition of Cabanilles edition has been estimated to require 1,200 pages. His are some of the finest works in the seventeenth-century Spanish repertory, and they are unjustly neglected. Cabanilles wrote in every genre, including *tientos* and toccatas, and he was a master of variation technique. Prime examples are the *passacalles* and *paseos,* such as his magnificent ground-bass variations titled *Xácara.*

The Netherlands and Northern Germany

When we turn to the north, the climate changes dramatically. Here the Reformation and the Protestant church were the dominant forces behind musical expression and practice. Instead of the rhapsodic keyboard writing and wide range of affect in the South, northern composers used the

Protestant chorale and English variation technique as unifying principles. Fantasias tended to be tightly structured and monothematic. The keyboard writing in the toccatas usually featured sequential patterns over conservative harmonies, recalling the style of the early Venetian school rather than the emotional intensity of the composers of Rome and Naples.

The major early figure in the north was Jan Pieterszoon Sweelinck. Almost every genre that would be used in Germany throughout the century was established by Sweelinck, and his contributions to each reveal a masterful composer. Some of his most important works are based on the Protestant chorale. These assumed several styles, such as the *bicinium* (cantus firmus in one hand accompanied by left-hand figures), the *tricinium* (cantus firmus in inner voice with figuration in two outer voices), and the chorale motet. His ornamented chorale settings, in which the cantus firmus serves as the foundation for extensive melodic embellishment, were highly influential. From these works developed the great German organ tradition of chorale prelude and chorale variation. Much of Sweelinck's music was intended for organ performance, but there is also an excellent body of harpsichord music. His keyboard variations clearly fall under the sphere of the English virginalists. Sweelinck knew Peter Phillips and was a good friend of John Bull, who lived in the Netherlands for much of his life. Sweelinck's variations such as *Est-ce Mars* and *Mein junges Leben hat ein End'* are masterpieces in the literature.

Sweelinck had other Dutch contemporaries, such as Pieter Cornet and Henderick Speuy, but the true followers of Sweelinck were German. Sweelinck was in fact called "the teacher of German organists," and his students included such composers as Jacob Praetorius, Heinrich Scheidemann, and Samuel Scheidt. This generation of organist/composers continued the work of their Dutch master and firmly established the North German organ school—that is, a conservative style based on the Protestant chorale, but one of grandeur and power that expanded and exploited the full resources of the organ (e.g., virtuoso pedal technique and echo effects). Scheidt shared his teacher's penchant for variation technique, and also wrote partitas on popular secular melodies like *Est-ce Mars* and *Fortuna.* Scheidemann established Hamburg as the center of organ music from 1620 to 1645, and made major contributions to the setting of the chorale. Especially significant are his chorale preludes, chorale fantasias, and chorale variations or partitas. The next generation in northern Germany included composers such as Franz Tunder, Mathias Weckmann, George Böhm, and of course Dietrich Buxtehude. Tunder began to soften the severity of the style with displays of keyboard virtuosity. Works would often begin and end with dramatic sixteenth-note runs, and double-pedal writing and other virtuoso footwork was not uncommon. Interesting contributions were made by the others, but the major figure in this group was Buxtehude. His work represents the culmination

of seventeenth-century German organ music. The chorale fantasias are rich in idiomatic keyboard effects, independent and virtuosic pedal parts, and the music can range from the strictly countrapuntal to giguelike. Buxtehude would gradually abandon the chorale-based compositional style in favor of freer forms, such as the praeambulum, in which he could use a wider range of tonalities and forms and have greater freedom for technical display. The influence of Italian opera and the French style was already being felt in Germany, and this is strongly reflected in the music of Böhm. His contributions to the organ chorale repertory are significant, but it his harpsichord music that commands greater interest. French characteristics, such as the use of *style brisé* (broken style) and French ornamentation, permeate these works.

Central and Southern Germany

Not surprisingly, the influence of Italy and France was more strongly felt in the central and southern parts of Germany, where there was less dependence on the Protestant chorale. To be sure, central German composers such as Johannes Kindermann and Johann Pachelbel wrote a large number of chorale settings, but their preludes and toccatas could resemble the rhapsodic style of Frescobaldi. Pachelbel contributed six variations based on secular and original themes in the *Hexachordum Apollinis* (1699), and three of his six chaconnes are for the harpsichord; the other three require organ pedals, although the pedal writing of these composers rarely approaches the virtuosity of the North. In the South we find early masters such as Johann Ulrich Steigleder, Christian Erbach, and in particular Hans Leo Hassler. Hassler studied with Andrea Gabrieli in Venice and became organist for the fabulously wealthy Fugger family. His ricercares are of great interest, and considerable length. Later generations include the francophile Georg Muffat, who studied with Lully in Paris. His *Apparatus musico-organisticus* (1690) contains twelve toccatas, a passacaglia, and a chaconne. The adventurous keyboard player with a sense of humor might well investigate the music of Alessandro Poglietti. He wrote some of the most bizarre and individual program music of the century, primarily for harpsichord. One such piece, the *Aria Allemagna* (1677), attempts to depict a "Bohemian Bagpipe," "French Hand-Kisses," and a "Polish Saber Joke."

The dominant figure in the second half of the century was Johann Jakob Froberger. A student of Frescobaldi in 1641, he created an inspired synthesis of Italian and German styles, particularly in his toccatas. Although he did not make as strong a distinction between the ricercare, canzona, and fantasia, here, too, his treatment of thematic development and keyboard figuration is masterful. Froberger traveled widely, living in Vienna and visiting Dresden, Brussels, Paris, and London. His connec-

friends the lutentist Denis Gaultier and the *claveciniste* Louis Couperin. Froberger exerted a strong influence on the early French clavecin style, and he in turn was influenced by it. The musical bonds are nowhere more evident than in Louis Couperin's *Prélude à l'imitation de Mr. Froberger,* which pays homage to the German composer's free and expressive style (e.g., *Plainte faite à Londres . . .*). In a similar mood, each composer wrote a poignant *tombeau* on the death of their mutual friend Blancrocher. It is as a harpsichord composer that Froberger made his most significant contributions. Pieces such as his *Lamento sopra la dolorosa perdita della . . . Ferdinand IV* and the *Tombeau* plumb the depths of the expressive potential of the harpsichord. Froberger was responsible for the establishment of the harpsichord suite in Europe. His early works in this genre consisted of allemande, courante, and sarabande, but the gigue was soon included, appearing directly after the allemande.[34]

England

The great Elizabethan keyboard tradition as represented by composers such as Byrd, Gibbons, and Farnaby was not sustained during the first half of the seventeenth century. The establishment of the Commonwealth ultimately suppressed musical growth in England, particularly that of the organ, and this was admittedly not a rich period of keyboard composition. For example, Bull left his native country and ultimately settled in Antwerp in 1613, to the delight of Sweelinck but the detriment of the English. Some good keyboard pieces were written, including pavanes, galliards, variations, and especially the fantasia, which became a conservative, serious countrapuntal genre inspired by the English viol consort.

After the Restoration, keyboard music returned with thinner textures, simple melodies, and the inclusion of dances. For example, *Elizabeth Rogers' Virginal Book* (1656/7) contains no pavanes and galliards, but rather simple binary almans and corants. The French influence is now present. The music of the lutenist Denis Gaultier was well known and Jacques Gaultier and the renowned Richard family were in residence at the English court. Thus the suite begins to take prominence. Thomas Mace described the genre in 1676: "A Sett, or a Suit of Lessons, . . . may be of any Number. . . . The First always should begin (with) which we call a Praeludium or Praelude. . . . Then, Allmaine, Ayre, Coranto, Seraband, Toy, or what you please, provided They be all in the same Key. . . ."[35] A fine collection of suites by several different composers can be found in the publication *Melothesia* (1673).

The second part of *Musick's hand-maide* (1689) contains the first published keyboard music of John Blow and Henry Purcell. Blow, a major force in England as a composer and teacher, assimilated the German and French styles by copying music of Froberger, Fischer, Strungk, and oth-

Eight more suites and six miscellaneous pieces were published posthumously in 1696 as *A Choice Collection of Lessons*. Although Purcell's genius and melodic gift are in evidence, his contributions to the keyboard repertory do not represent him at his most inspired or profound.

The *Choice Collection* does contain important guidelines about Purcell's performance practice. His "Instructions for Learners" explains ornamentation with a comprehensive "Rules for Graces," and he offers his thoughts on tempo:

> Common time . . . is distinguish'd by . . . **C**, . . . ¢, . . . or ϕ, ye first is a very slow movement, ye next a little faster, and ye last a brisk & airry time, & each of them has allways to ye length of one Semibrief in a barr. . . . Triple time consists of either three or six Crotchets in a barr, and is to be known by . . . $\frac{3}{2}$, . . . $\frac{3}{1}$, . . . **3**, . . . or $\frac{6}{4}$. . . . To the first there is three Minums in a barr, and is commonly pay'd very slow, the second has three Crotchets in a barr, and they are to be play'd slow, the third has ye same as ye former but is play'd faster, ye last has six Crotchets in a barr & is Commonly to brisk tunes as Jiggs and Paspys [passepieds].[36]

John Playford's *A breefe introduction to the skill of musick* (1654) has details about tempo, meter, modal theory and affect, and *Melothesia* includes a list of English ornaments.

Players of English keyboard music are often confused by the choice of instrument, and in particular the term "virginals." Reference to "a pair of virginallis" appears as early as 1517 in English documents. The title page of *Parthenia* (1612) and *Parthenia in-violata* (1625) refers only to "the virginalls," but that of *Musick's hand-maide* advertises "lessons for the virginalls or harpsycon." Many other names can be found. We read of "Espinettes," "Clarycordes," "Harpsicon," and "Harpsicalls"; and "Clavecymbal" is defined as "a pair of Virginals, or Claricords" by Blount in his *Glossographia* (1656).[37] Praetorius attempts to clarify things in 1619, writing that in England all instruments of the harpsichord type, large or small, were called "virginall."[38]

The spinet became common in middle-class England, and the term appears alongside harpsichord and virginals. Samuel Pepys confessed in his Diary on April 4, 1668, that he had decided to buy a spinet because "I had a mind to a small harpsichon, but this takes up less room, and will do my business as to finding out the chords."[39]

Foreign instruments were very popular in Engand, especially those built by the Flemish Ruckers family. For example, in 1710 it was reported that the Romer Tavern in Gerard Street housed "two matchless clavearis, which are considered the best in the whole of England . . . They are over 100 years old and were built by two of the most famous masters in Antwerp. The best was made by Hans Ruckers and the other by his son . . . Jean Rucker. . . . Both have double keyboards."[40]

France

Organ Music

With regard to French keyboard music there is no difficulty in determining which work was written for organ and which for harpsichord. Composers in France made a clear and unambiguous distinction because almost every piece of the French organ literature carries the name of a specific organ registration (e.g., *Duo, Cromorne en taille, Dialogue sur les grand jeux, Plein jeu,* etc.). This tradition appears early on in France, the first example being a manuscript from 1610 with pieces titled *Pour le cornet* and *Pour les registres couplez*. The connection to Spanish organ music, with its emphasis on registration, should also be evident. Furthermore, each registration/title implied a specific compositional style and character. For example, a *plein jeu* piece called for the full organ registration (e.g., *grand orgue,* positif, and mixtures), and would be written in the dramatic *durezze et ligatura* style. A *petit plein jeu* would feature more figuration in sixteenth notes. A *récit de trompette* implied that the melody, often treated in fugal fashion, was played on the indicated stop and accompanied by flutes or other appropriate registrations. Its rhythm and character was usually that of a bourée or gigue. The French classical organ and the French classical style are thus intimately connected, and the player of this repertory would therefore be advised to become familiar with both the registration of the instrument and the genres that originated with it.

The earliest master of French organ music was J. Titelouze. His two published works, *Hymnes de l'Eglise* (1623) and *Le Magnificat* (1626), are generally conservative and dependent on Gregorian chant; the strict cantus firmus technique and a polyphonic texture recalls the Spanish style. Other followers of Titelouze include C. Racquet and E. Richard. F. Roberday attempted to introduce some Italian elements into French organ music, and even included works of Froberger, Frescobaldi, and Ebner in his *Fugues et Caprices* (1660). By mid-century the increasing popularity of opera, dance, and chamber music could not be ignored; organists gradually favored simple textures and elegantly ornamented melodies, while never completely leaving the older style. Some of the major publications of organ music include books by N. Gigault, who still wrote serious liturgical music but employed rapid manual changes and a high degree of ornamentation. N. Le Bègue wrote three *Livres d'Orgue,* consisting of Masses, *noëls* with variations, dances, and *simphonies*. A. Raison was Clérambault's teacher, and also a valuable commentator on style; the theme of his *Trio en Passacaille* bears a strong resemblance to Bach's Passacaglia in C minor. G. Nivers was said to have written with "detachment and easy grace" ("froideur et la grace facile") and contributed over a hundred compositions in the church modes. N. de Grigny wrote perhaps the last *Livre d'orgue* of the century in 1699, and

Harpsichord Music

The music of the *clavecinistes* represents the most idiomatic and arguably the best pure harpsichord music of the seventeenth century. Its origins can be found in compositions by Dumas, la Grotte, Champion, and the *Joueurs d'épinette* of Louis XIII. Stylistic traits are shared with the French lutenists, such as an emphasis on dance movements, extensive ornamentation, and the improvisatory prelude.

In the clavecin style, a two-voice texture predominates, featuring an elegant, richly ornamented melodic line and a simple accompaniment. Intricate contrapuntal writing or choralelike homophony is avoided, and fugues, ricercares, fantasias, and sonatas are rare. The French harpsichord composer achieved maximum expressive effect by the resonant spacing of parts, a sensitivity to sonorities, and a rich harmonic language. Virtuoso keyboard displays were kept to a minimum.

Two of the most distinctive features of the style are its ornamentation and the *style brisé*. Players might at first be astonished by the number and variety of ornaments, and contemporary writers often expressed dismay at their profusion. However, this is not ornamentation in the sense of divisions or embellishments, and the manner in which it is used distinguishes it from all other Baroque keyboard music. The ornaments here are decorations of the melody like the additions to French furniture of the period. More important, they are meticulously notated and applied to create an astonishing range of nuance, color, and dynamics on the harpsichord. These *agréments* are not optional or improvisatory, but become an integral part of the composition. One need only play a French melody with ornaments removed to understand fully their crucial impact on the music, and it is advisable to learn a piece this way. Since most composers developed their personal system of notation, the player should carefully study the table of ornaments usually found at the beginning of the published work.

The *style brisé* or *style luthé* indicates arpeggiated writing that creates a kaleidoscopic palate of rich sonorities and implied polyphony. As the name implies, the *style luthé* recalls lute practice, and the technique is idiomatic to no other keyboard instrument but the harpsichord.

The ascent of Louis XIV to the throne in 1643 was a pivotal moment in the history of French music, and signaled a dramatic change in the society and culture. The lutentists and *jouers d'épinette* receded into the background, and their intimate, small-scale pleasures were replaced by grandeur and majesty. As Titelouze wrote to Mersenne, "I remember having seen in my youth everybody admiring and being delighted by a man playing lute, and badly enough at that . . . now I see many lutenists more skilled than he who are hardly listened to."[41] La Fontaine lamented in 1677 that "the time of Raymon and Hilaire is past, nothing pleases now but twenty harpsichords, a hundred violins. . . ."[42]

The *clavecinistes* attained the central place in the court of the Sun King, and produced some of the richest literature in the history of the harpsichord. The tradition remained fairly consistent for almost 200 years, reaching its culmination with F. Couperin and continuing into the last years of the eighteenth century.

Masterpieces of the seventeenth-century repertory were written by Jacques Chambonnières, Louis Couperin, and Jean Henry d'Anglebert, and many fine works will be found in the books of *Pièces de clavecin* by composers such as Dumont, Le Bégue, Hardel, Clérambault, and E. Jacquet de la Guerre.

Two aspects of French performance practice pose considerable challenges to the early keyboard player and deserve special mention here: *inégalité* and the improvisatory prélude.

Inégalité or *Notes Inégales*

There are numerous instances in the seventeenth-century keyboard repertory in which the performer is allowed and sometimes obligated to alter the notated rhythm. The practice of "overdotting" in overtures and the use of dotting in specific passages by Frescobaldi are two such examples. The principle of *inégalité* in French music, however, is unique to France and remains one of the most misunderstood concepts in all of performance practice.

Inégalité refers to the technique in which passages written with equal note values are performed in unequal rhythm. There is no disagreement that it was standard in the performance of French music. Numerous sources corroborate this fact. As François Couperin writes in *L'Art de toucher de clavecin*: "We notate otherwise than we perform, which is the reason why foreigners perform our music less well than we perform theirs."[43]

M. de Saint-Lambert states that "the equality of movement that we require in notes of the same value is not observed with eighth notes when there are several in a row. The practice is to make them alternately long and short, because this inequality gives them more grace."[44] The earliest account of French-style inequality is documented by Loys Bourgeois in 1550: "The manner of singing well the [quarter] notes is to sing them two by two dwelling some little bit of time longer on the first, than on the second . . ."[45]

Nivers advises in 1665 "to augment ever so slightly the aforementioned eighths, and to diminish ever so slightly in proportion those that follow . . . which is practiced according to discretion, and many other things which prudence and the ear have to govern."[46]

Bacilly wrote in 1668:

> Although I say that in diminutions there are dots, alternate and assumed, which is to say that of two notes, one is ordinarily dotted, it has been deemed appropriate not to mark them, for fear that one one might accustom

himself to execute them by jerks. [*Notes inégales* should be executed] so delicately that it is not apparent.[47]

Jean Rousseau warned in 1687 to "take care not to mark them [the *notes inégales*] too roughly."[48] Monteclair further cautions that "when the melody proceeds in disjunct intervals, the eighths are ordinarily equal."[49] In other words, the performer of French music must play a stepwise succession of apparently equal note values with some degree of inequality.

It is, however, not the existence but rather the degree of inequality that has led to such confusion and misinterpretation. The most common misconception is that inequality means the creation of uniform dotted rhythms. Although such dotting is, to be sure, a possible realization, it is only one of an infinite range of rhythmic interpretations. Composers were certainly able to notate such dotted rhythms clearly and without ambiguity, and they appear side by side with evenly notated passages.

To correctly understand *inégalité,* one must realize that it is really a highly refined rubato, an expressive device that must be applied with subtlety and artistry; its very nature is such that it cannot be notated. In one sense, *inégalité* is not a rhythmic concept at all, but rather one of articulation and phrasing. This becomes clear from the internal evidence of the music itself, and from the written sources as well. For example, Saint-Lambert writes: "It is a matter of taste to decide if they should be more or less unequal. There are some pieces in which it is appropriate to make them very unequal and others in which they should be less so. *Taste is the judge of this,* as of tempo" (italics mine).[50] Therefore, the use of *inégalité* defies a strict or simple mathematical realization, but demands of the performer the widest range of subtle expression, based on the character of the piece and on *bon gout.*

Inégalité remained within the borders of France. That is, composers of other nationalities were certainly aware of its existence, but there is no basis to assume that it should be applied to their music except when these composers were consciously writing in the French style.[51]

Prélude

Every nationality has a genre that is improvisatory in nature. For example, the Italian toccata, the German praeambulum, and the English prelude all allow the player considerable rhythmic and expressive freedom. However, the notation of French preludes is particularly difficult to decipher and interpret, and the inexperienced player might not know just where to begin. The French were aware that this practice might cause trouble. Le Bègue wrote:

> I have tried to present the preludes as simply as possible, with regard to both conformity of notation and harpsichord technique, which separates or repeats chords rather than holding them as units as is done on the organ; . . . I ask the intelligent gentleman to please supply what is [illegible]

> sidering the great difficulty of rendering this method of preluding intelligible enough for everybody.[52]

Almost every composer contributed works to this genre, and they used a wide variety of notational systems. Those of Louis Couperin are the most ambiguous, written entirely in whole notes with a forest of wavy lines. Other composers added occasional rhythmic figures, dotted lines to indicate simultaneous striking, and ornamental signs. The musical approach, however, is the same. The player should become familiar with the available information regarding performance practice and notation. He should make a thorough harmonic analysis of the piece, and it is often useful to write a figured bass for it whenever possible. A decision should be made as to which notes are melodic and which represent passing tones or keyboard figures. A familiarity with other improvisatory styles is advisable, and a comparison with Froberger's toccatas and pieces marked *à discretion* will be invaluable. On the surface, Froberger's notation in this style appears more regular, but the freedom of execution is no less than that which one would use for the French repertory.

F. Couperin speaks to the heart of the matter: "Those who would like to try these preludes should play them in a relaxed manner, not following the exact written values too precisely, unless I have expressly marked the word 'measured.' Thus, one may venture to say that, in many ways, music, as well as poetry, has its 'prose' and its 'verse.' "[53]

Notes

1. Diruta refers here to the Spanish theorist Tomás de Santa Maria, who takes a diametrically opposed approach to hand position and playing technique. Santa Maria advocates "that the hands be placed hooked, like the paws of a cat, in such a manner that between the hand and the fingers there will in no way be any curvature; instead, the knuckes have to be very sunken, in such a manner that the fingers are higher than the hand [and] arched. And thus the fingers remain more pointed, so as to strike a greater blow" (Santa Maria–*Libro,* 37; trans. in Rodgers–*Early Keyboard,* 220). Santa Maria is an instructive and valuable source, but the reader should be cautioned that the early date of this treatise makes it more applicable to keyboard style in the middle of the sixteenth century rather than to the very different repertory of the seventeenth. It is interesting to note that the theorist was also thinking of the early clavichord: "The fifth thing is to press the keys down as far as they will go conveniently, so that if the instrument is a clavichord, the tangents will raise the strings properly; moreover, in such a way that the voices will not depart from their pitch by sharping" (Santa Maria–*Libro,* 32; trans. in Rodgers–*Early Keyboard,* 223).
2. Diruta–*Transilvano*; translated in Rodgers–*Early Keyboard,* 278–80; cited in Soderlund–*Organ Technique,* 34–35.
3. Nivers–*Livre d'orgue*; translated in Pruitt–*Nivers,* 158; cited in Soderlund–*Organ Technique,* 102.
4. F. Couperin–*L'Art* (trans. Halford), 29.
5. Forkel–*Bachs Leben,* Ch. 3; translated in David/Mendel–*Bach Reader,* 308.
6. Bermudo–*Declaración,* fol. lxiv

8. The conscientious player who is committed to performing earlier repertory with historically informed principles would be well advised to avoid the use of the word "never" or "always." Musicians in earlier centuries were as accomplished musically and technically as today (if not more so), and were as diverse in the range of their strongly held approaches to playing and interpretation. Contemporary styles of performance would also often change, or be adapted to the particular exigencies of the situation or conditions of the performance (such as acoustics, nature of the instrument, social or religious context, etc.) To assume that there is one answer, one absolute "truth" to a musical question is not only incorrect, but antithetical to the very nature of artistic endeavor.
9. Praetorius–*Syntagma* II: 44; translated in Hammond–*Frescobaldi,* 235.
10. Saint-Lambert–*Principes* (trans. Harris-Warrick), 70.
11. F. Couperin–*L'Art* (trans. Halford), 31.
12. Diruta–*Transilvano* I, fol. 5v; translated in Hammond–*Frescobaldi,* 232.
13. Ibid.; translated in Rodgers–*Early Keyboard,* 298; cited in Soderlund–*Organ Technique,* 36. Once again Santa Maria–*Libro* (trans. in Rodgers–*Early Keyboard,* 225; cited in Soderlund–*Organ Technique,* 21) holds an opposing viewpoint: "The finger that strikes first is always raised before the one that immediately follows it strikes." In other words, détaché.
14. For an interesting article on the subject of "not leaving the instrument empty," see Tagliavini–Art.
15. Nivers–*Livre d'orgue*; translated in Pruitt–*Nivers,* 162; cited in Soderlund–*Organ Technique,* 104.
16. An excellent description of "overlegato" is provided by Saint-Lambert when explaining the execution of the *port de voix*: "The pen stroke drawn above the notes in the realization of the *port de voix* is a slur, which means it is necessary to run those notes together, that is to say that one must not raise the fingers while playing them, but wait until the second of the two notes is played before raising the finger that played the first one." Saint Lambert–*Principes* (trans. Harris-Warrick), 86. This technique should also be conservatively applied to the organ! Both Nivers–*Livre d'orgue* (preface) and Raison–*Seconde Livre d'Orgue* (preface) advocate it.
17. Engramelle–*Tonotechnie*; translated in Veilhan–*Regles,* Introduction.
18. Trabaci–*Secondo libro,* 117.
19. Some of the factors that would imply the use of the clavichord include written indications in the preface or title page, notated signs for *Bebung* (vibrato), idiomatic musical texture, and the purpose and location of the performance.
20. Scheidt–*Tabulatura nova,* preface.
21. Speth–*Ars magna,* "Vor-Bericht"; cited in Apel–*Keyboard,* 582.
22. Cited in Harley–*British Keyboard* 2, 151.
23. Milán–*El Maestro,* preface.
24. Morley–*Plaine and easie,* 180, cited in Apel–*Keyboard,* 209.
25. Frescobaldi was also not averse to blatant keyboard showmanship. Hammond–Frescobaldi, 232 (citing Antonio Libanori, *Ferrara d'oro imbrunito* [Ferrara, 1665–74], par. 3) describes how he would sometimes entertain his friends by playing compositions with the hands reversed, palms upward.
26. Other contemporary writers recommended playing eighths and sixteenths in this way in allegro movements, "as if they were half dotted," implying a generally accepted practice in the period. See for example Scipione Giovanni, *Intavolatura di Cembalo, et Organo* (Perugia, 1650; preface reproduced in Sartori–*Bibliografia,* 411–12).
27. Frescobaldi–*Toccate,* preface; translated in Apel–*Keyboard,* 456. The advice given here also appears in Frescobaldi's *Toccate e partite* of 1615.
28. Viadana–*Cento concerti,* preface; Agazzari–*Del sonare*; Cavalieri–*Rappresentatione*; preface

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30. Banchieri–*L'organo suonarino,* as cited in Sartori, *Bibliografia* 1: 184, and Hammond–*Frescobaldi,* 224.
31. Ottavio Durante, *Arie devote,* preface, cited in Hammond–*Frescobaldi,* 225.
32. Trabaci–*Secondo Libro.*
33. Cited in Apel–*Keyboard,* 771.
34. Froberger's gigues present an interesting performance practice problem. Several are notated in duple meter with dotted rhythms, rather than the expected groups of three in triple meter. Various solutions have been suggested, but the most probable performance is one suggested by Lucy Hallman-Russell (paper presented at the Acts of the International Froberger Colloquium, Monbeliard, France, 1992), in which the notated duple rhythms are played as triplets. A similar instance occurs in the gigue of Bach's "French" Suite in D minor.
35. Mace–*Musick's Monument,* 120; cited in Harley–*British Harpsichord* 2: 85.
36. Purcell–*Choice Lessons,* preface; cited in Donington–*Interpretation,* 344, 350. Purcell provides similar information in Playford–*Introduction* (1694), [75–78]. See also Harley–*British Harpsichord* 2: 219.
37. Cited in Harley–*British Harpsichord* 2: 153.
38. *Syntagma* II: 62.
39. Pepys–*Diary,* 149.
40. Z. C. von Uffenbach, *London in 1710, from the Travels of Zacharias Conrad von Uffenbach,* translated by W. H. Quarrell and Margaret Mare (London, 1934); cited in Harley–*British Harpsichord* 2: 165.
41. Mersenne–*Correspondence* 1: 75; cited in Ledbetter–*Harpsichord,* 8.
42. Jean de la Fontaine, "Epître à M. de Niert sur l'opéra" in *Oeuvres diverses,* vol. 2 (Paris, 1677; rpt., Paris, 1958), as cited in Ledbetter–*Harpsichord,* 13.
43. F. Couperin–*L'Art* (trans. Halford), 49.
44. Saint Lambert–*Principes* (trans. Harris-Warrick), 46.
45. Bourgeois–*Le droit chemin,* ch. 10; cited in Hefling–*Rhythmic Alteration,* 3.
46. Nivers–*Livre d'orgue,* 114; cited in Hefling–*Rhythmic Alteration,* 4.
47. Bacilly–*Remarques,* 232; cited in Hefling–*Rhythmic Alteration,* 6.
48. J. Rousseau–*Traité,* 114; cited in Hefling–*Rhythmic Alteration,* 12.
49. Monteclair–*Nouvelle méthode,* 15; cited in Hefling–*Rhythmic Alteration,* 15.
50. Saint Lambert–*Principes* (trans. Harris-Warrick), 46.
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Plucked String Instruments

Paul O'Dette

The Lute

During the sixteenth century, the tuning, stringing, and construction of the lute remained remarkably consistent from one country to the next, with the exception of the vihuela in Spain with its waisted design. The basic six-course instrument, tuned fourth-fourth-third-fourth-fourth, was played all over Europe for most of the century with only subtle variations in stringing and construction practiced in different regions. In the seventeenth century, however, each country took its own approach to the instrument, resulting in new tunings, playing techniques, and types of lutes. In fact, the whole concept of how the lute should be used and what kind of music should be played upon it took radically different turns in different parts of Europe. To understand this development more easily, we will consider each country individually.

Italy

The trend in the late sixteenth century was to add bass strings to the lute to provide a more sonorous low register and to make playing in some keys easier. This trend continued in the seventeenth century, with the addition of an octave of diapasons to complement the original six courses, which were still tuned in the Renaissance fashion. The extra bass strings required changes in the construction of the instrument since they would have been too thick to make a satisfactory sound at the length of the fingered strings. Thick gut strings produce a dull, muddy tone, so that for gut-strung instruments, longer string lengths are preferable since thinner strings can be used. The process of wrapping strings with silver or