SKILL AND STYLE ON THE HARPSICHORD

A REFERENCE MANUAL FOR THE DEVELOPING HARPSICHORDIST

by JEAN NANDI

CONTENTS

INTRODUCTION

The present volume is intended as a supplement to *STARTING ON THE HARPSICHORD*, the method for musical beginners who have chosen the harpsichord as their first instrument. *SKILL AND STYLE ON THE HARPSICHORD* addresses topics of specific interest to harpsichordists, and to singers and other instrumentalists wishing to achieve a musical overview of performance practices in the Baroque era. Another supplementary volume, *PLAYING WITH THE ELEMENTS OF MUSIC*, is a reference guide to general music theory for those beginners who wish to look up matters such as intervals, chords, phrase structure, and the like. All of these volumes are written in simple language for the nonmusician, and are intended for self-teaching as well as for use in class or private lessons.

The information included in *SKILL AND STYLE* is scattered in an immense literature which is not easily accessible to the musical beginner. The modern introductions to these subjects have up to now been addressed exclusively to advanced keyboard players taking up the harpsichord as a second instrument.

As a teacher, I am finding increasingly that many adults and children are wanting to begin their musical studies on this beautiful instrument, the popularity of which has steadily grown since the early 1950's. I hope the materials included in these volumes will help make their studies both meaningful and pleasurable.

Jean Nandi
Berkeley, Calif., 1990

ACKNOWLEDGMENTS

IMPORTANT INSTRUCTIONS TO THE BEGINNER

Many of the musical examples in this book will appear somewhat formidable, inasmuch as they are taken directly from the harpsichord literature without simplification. Their purpose is to allow you to see and hear the various musical elements under discussion as they actually occur in pieces of music you will encounter.

Do not struggle with trying to perform these illustrations! Try to pick out the notes and combinations of notes or other elements referred to in the text. You can *slowly* play the critical elements yourself, and notice how the structures under discussion appear on a page of music. Try to find other examples in your own music, once you know what to look for on the page. Then, by all means have a friend or teacher play the excerpts in the examples, to make musical structure audible as well as visual!

CHAPTER I. *LOUD AND SOFT ON THE HARPSICHORD*

Review the mechanism of harpsichord action, as described in *STARTING ON THE HARPSICHORD*, pages 2-5. Remember that the strings are *plucked,* and that the action is essentially "on-off", or "all or none". Either you pluck the string, or else no sound occurs.

Try touching the keys harder or more gently on any of the notes on your harpsichord. You will find it scarcely makes any difference in how loudly the strings sound. It will, however, make a difference in the quality of the sound. In fact, if you listen carefully, you will find that the loudest, most beautiful sound comes when you play "softly"--just gently plucking the strings without banging on the keys. This is very different from a piano, where the harder you push a key the louder the sound.

Because we can't make notes appreciably louder or softer by pushing harder or playing more lightly, we do not think very much in terms of DYNAMICS (loud and soft; getting louder; getting softer) on the harpsichord. We think mainly of *emphasis* and of *accents*.

EMPHASIS THROUGH TOUCH

In *STARTING ON THE HARPSICHORD* you were introduced to the idea of creating an accent by ARTICULATION. Briefly, this involves creating a very short silence before the accented note. By thus uncovering the attack of the plectrum on the string, the "uncovered" or ARTICULATED note seems more prominent than the notes which surround it.

In *STARTING ON THE HARPSICHORD*, you learned to make articulations of this type on the strong or accented notes within each measure. Articulations which thus define the meter, I call ORGANIC.

Since an articulation will produce an apparent accent wherever it is applied, it is clearly possible to use this technic to create apparent accents wherever you desire them. Articulations which are added in addition to those defining the meter I have called TEXTURAL.

Apart from the variety in positioning articulations within a measure of music, it is also possible to infinitely vary their size. A big articulation is one with a relatively long silence preceding it. The silence, it must be remembered, is created out of the time value of the *preceding note*. Thus, the larger the articulation, the shorter is the note which comes immediately before the accented note. This can all be accomplished without altering the *rhythm*--the attack of each note can occur exactly on its beat or portion of a beat.

If one wishes to de-emphasize a note, or make it seem softer, one has only to do the reverse of articulation. Thus when two notes are played in a LEGATO manner (smoothly

connected, so that no silence occurs between them), the second note will seem softer than the first. In this case we have covered up the sound of the plucking or attack of the second note, resulting in an absence of any accent.

One can carry the softening of a note still further, by using an OVERLEGATO touch. This means that one note is *held down* while playing a second one, covering not only its attack, but also the development of the second tone. Clearly this overlapping of notes can be carried out to varying degrees, thus giving great variety to the effect.

The harpsichordist needs to experiment a great deal with these three basic forms of touch. In this way he or she will gain complete control of the *timing* of the attack and release of notes, as well as becoming highly sensitive to the expressive results.

In connection with touch, and the attack of notes in relation to dynamics, the sensitive player will discover that the *speed* with which the pluck is made will influence the resultant sound. A harsh, quick attack of a key will result in a fast, explosive plucking sound. Alternatively, one can slowly "stroke" the string to produce a gentle, mellow development of the tone. The development of pitch and tone will vary greatly, depending on whether the string is "twanged" roughly, or allowed slowly to expand into its maximum vibrations.

These effects can be used in a "dynamic" sense, creating accents with relatively harsh, rapid plucks. More often, however, they are used to create different tone *qualities*, by which one can characterize a piece or a section of a piece.

EMPHASIS BY ALTERATIONS OF TEXTURE

In addition to the way in which notes are connected, or in which one touches the keys, you can also create effects of loud and soft by changing the *number of notes* which are heard at any one time.

This is accomplished in several ways. One of these is inherent in the composition of a piece of music. This consists of adding more notes in places where the composer wishes to hear an accent, and having fewer notes sounding in places which are intended to be relatively soft. Thus the total texture can be *thick* (with many notes sounding at once), or *thin* (with few or only one note heard at a time).

Apart from the textures the composer has written, the player can also modify the density of sound in several ways. In some cases, notes can actually be added or deleted to give or remove emphasis from certain beats or parts of a phrase. This is especially important when accompanying other instruments or singers, where the exact number of notes is not usually fixed.

Another way of changing the texture is to change the *spacing* of notes. This is done by various kinds of ARPEGGIATION of chords. Arpeggiation is basically a technic in which not all of the notes of a chord are played at once. The notes can be spaced out to varying degrees, thus influencing markedly the density of sound produced at any given moment.

Again, the skillful harpsichordist experiments constantly with these variables. Discover, and learn to control, the amount of sound that can be produced by a given number of notes which are spread out over variable amounts of time.

EMPHASIS THROUGH RHYTHMIC ALTERATIONS

In *STARTING ON THE HARPSICHORD*, you were taught to "breathe" at the ends of phrases. Technically, this involves a *very slight* alteration of the rhythm, so that a listener clearly hears one phrase end, and a second one begin. The introduction of the second phrase is given emphasis by virtue of the very small rhythmic break (or "breath") before it starts.

The skilled harpsichordist learns to use such RHYTHMIC ALTERATIONS or RHYTHMIC NUANCES in a great many places, to emphasize certain notes or parts of phrases, and to weaken the effects of others. For example, to heighten the effect of a particularly strong beat in a measure or a phrase, one can prolong the accented note very slightly. This needs to be done with great care, so that the listener is not aware of changes in the placement of the beats. Very often the note which follows the lengthened, accented, note will actually be shortened slightly, and moved rhythmically toward the next beat.

I should like to emphasize that *some* displacement of the beats actually occurs with rhythmic alterations, despite what virtually all theorists say on this subject (later theorists refer to these alterations of rhythm as RUBATO). Attempting to make the beats absolutely steady while playing with a flexible, expressive rhythm, will in fact result in even more apparent distortion.

If, after a relatively large rhythmic alteration, you try to "catch up" with the beat by rushing the following notes, you will only be aware of a jerkiness in the rhythm. The secret of successful rhythmic flexibility is to use sufficient discretion so that the listener believes that the beats are steady, and in fact is induced to "breathe" right along with the player!

As with other nuances of accent and emphasis, rhythmic nuance or alteration can vary widely in degree. Naturally, one wants to save the biggest effects for the most spectacular moments of the piece! Again, experiment with how much rhythmic alteration is required for the kind of effect you wish to produce. Also, listen for "overdone" rhythmic alterations that sound disturbing or distracting. Listening to yourself on a tape recorder is the best way to learn good judgement in the use of this technic.

LOUD AND SOFT THROUGH REGISTRATION

The methods described above are the most significant means by which the harpsichordist achieves "dynamic" effects. Clearly these technics are usable on even the simplest of instruments. However, there is yet another way in which some harpsichords can sound loud or soft: through changes in REGISTRATION.

Go back and look at Figures 1-3 in *STARTING ON THE HARPSICHORD*, and pick out the kind of harpsichord you have. If your harpsichord has more than one row of jacks (Fig. 6 from *STARTING ON THE HARPSICHORD*), it is possible to get louder or softer by combining two or more strings simultaneously while playing just one note (one key). Here's how that works:

Each row of jacks (called a REGISTER) can be moved back and forth (to the left or right) so that the plectra either contact the strings or bypass them. You should have a STOP (either a hand lever or a foot pedal) which accomplishes this move.

Some SINGLE MANUAL HARPSICHORDS (one keyboard) have two or three rows of jacks (registers). You can play each separately, or you can play two or more together. The latter will produce a louder sound. Also notice that each one separately has a different TIMBRE or TONE COLOR. That is, the quality or character of the sound differs with each. Mixing and combining registers produces not only a louder sound, but a different tone color as well.

A DOUBLE MANUAL INSTRUMENT (see pages 1-2 and Fig. 3 of *STARTING ON THE HARPSICHORD*) has two keyboards. Usually three (sometimes four) rows of jacks or registers are present. One or more registers are controlled by the lower keyboard (or manual), and one by the upper keyboard.

The two manuals can be COUPLED together, usually by the player shoving the entire upper keyboard back toward the name board (*away* from the front of the instrument). This engages two or more registers simultaneously. Watch the keys of the upper manual go up and down as you play on the lower! When the lower manual has more than one register, one of these can be moved back and forth ("off" and "on") by means of a hand stop.

One type of register plays notes an octave higher than "normal". The notes at "normal" pitch are played by an EIGHT-FOOT REGISTER (8-foot, or 8'), and the higher pitch is called a FOUR-FOOT REGISTER (4-foot, or 4'). These seemingly strange terms come from the lengths of organ pipes which correspond to the lowest Cs on each of the registers. Some double manual harpsichords even have a SIXTEEN-FOOT REGISTER (16-foot, or 16'). The 16-foot register plays the notes an octave lower than "normal".

With a double manual harpsichord, it is possible to play contrasting sections of a piece *loud* (called FORTE in Italian) or *soft* (called PIANO in Italian). Usually two or three registers can be played simultaneously from the lower manual, whereas the upper manual controls only a single 8-foot register. One can thus easily change from one sound to the other without manipulating the stops. A very few pieces in the early harpsichord literature (such as J. S. Bach's *Italian Concerto*) make use of this possibility. Even in the "heyday" of the harpsichord (1600-1750), double manual instruments were probably relatively rare.

It is important to realize that it is not necessary to have all these "gadgets" on your harpsichord in order to play expressively and musically. If you have several different registers available, it is usual to choose one kind of sound that best represents the character of the piece you are playing. It is fussy and distracting to try to change things in the middle of a piece, and does not correspond to the usual performance practice of the great harpsichordists of the past (16th, 17th and 18th centuries).

The methods discussed herein are intended to instruct you in the best way to play on a single keyboard with a single register. Remember that the fundamental means of expression on the harpsichord involve *touch*, *spacing*, and *timing* of the notes. You can always add changes of register to correspond with your idea of a particular piece, should you happen to have these options available. In any case, if you do have a 4-foot register or a second keyboard, by all means try your pieces on different registers to find out what they sound like!

FURTHER COMMENTS CONCERNING HARPSICHORD REGISTRATION

Apart from the dynamic (loud and soft) effects of changing registers, attention should be paid to the TIMBRE (tone color or quality) of strings plucked at different points along their length.

In general, the further back (away from the player, toward the middle of the string) a string is plucked, the darker and more mellow the tone. Any harpsichord, single or double, which has two 8-foot sets of strings, will have one plucked in back of the other. These two are called the BACK and FRONT 8-foot registers, respectively. (These two are often designated 8I and 8II, respectively.) On a double manual instrument, the back 8-foot (8I) is controlled by the lower manual, the front (8II) by the upper.

Some uses of registration involve contrasting the *tone colors* of the registers. This may be done by playing different pieces, or parts of pieces, on different registers. On a double manual harpsichord, one can also play two contrasting registers simultaneously, with one hand on the upper manual, and the other on the lower. Since the front 8-foot (controlled from the upper manual) is generally a bit softer and lighter in tone than the back, it is usual to have the left hand parts on the upper, with the right hand playing the back 8' (perhaps along with other registers) from the lower manual.

Two additional registers, affording still other types of tonal contrast, are found on certain historical harpsichords. You may encounter them on modern copies. The first of these is the NASALE (sometimes called the LUTE STOP, but not to be confused with the BUFF, referred to on page 6). The NASALE occurred on some large 18th century English and Flemish instruments. It consists of a separate row of jacks which pluck the front 8-foot strings at a position even further forward (toward the player) from the normal front 8-foot register. The result is an exceptionally bright, rather nasal sound, which gives this register its name. The nasale, like the front 8-foot, is always controlled from the upper manual of a double manual instrument.

An unusual register found on mid- to late 18th century French instruments was the *PEAU DE BUFFLE* (pronounced "Poe-duh-Boof"!). This is again a row of jacks which pluck one of the normal 8-foot sets of strings, this time the one controlled by the lower manual. However, the material used to pluck the strings (PLECTRA) differs from the normal QUILL (see page 7, below). The plectra of the *peau de buffle* are made of soft buffalo skin! The result is a soft, delicate sound, rather like a fortepiano being played softly. Some dynamic nuance is possible with these plectra, so that the sound is really more pianistic than harpsichord-like.

Probably you know that the art of playing the harpsichord, as well as the methods of its construction, had been almost totally lost during the 19th century. At the beginning of the 20th Century, harpsichords again started to be built. However, these do not correspond to our present ideas about the kinds of instruments used in the Renaissance, Baroque, and early Classical periods. Because a great deal of 20th Century music has been written for the early 20th century "harpsichord", however, we need to acquaint ourselves with its characteristics.

These harpsichords--now often referred to as REVIVAL INSTRUMENTS--were first produced by the Pleyel company in France, and later by other companies such as Sabathil, Neupert, Sperrhake and Wittmeyer. The most famous player of this type of instrument was Wanda Landowska. This remarkable lady was indeed a great artist, and almost single-handedly caused the revival of our instrument in modern times. Another important figure in the promotion and building of harpsichords was the early music enthusiast Arnold Dolmetsch.

The Pleyel harpsichord was built almost like a modern piano, in that it had very heavy bracing. The action of the keys was very heavy, and a special technic of playing had to be developed for this reason. These large double-manual instruments had the following DISPOSITION (this means the arrangement of registers on any particular harpsichord):

The lower manual controlled an 8-foot plus a 16-foot register. The upper manual could play both a second 8-foot and a 4-foot register. The manuals could of course be COUPLED, resulting in any possible combination of these registers. The mechanism for changing registers and for coupling the manuals consisted of five foot-pedals arranged beneath the instrument. This mechanism enabled the player to rapidly change registers at any time during performance, in contrast to the historical instruments with their hand stops.

One further "register" was found on the Pleyel. This was called the BUFF or LUTE STOP, and was controlled by a hand lever. This consisted of a series of dampers that could be pushed up against the strings at the point where they pass over the forward bridge (called the NUT). The result is that the BUFF STOP has a rather choked-off sound, which was thought to resemble the plucking of a lute. The buff stop has remained a favorite sound effect for many modern harpsichordists, and apparently was also found on many original instruments.

I should hasten to point out that all these various gadgets were found on some (perhaps in some instances, only one!) harpsichords from the late 18th century. This was a transitional period, when the fortepiano gradually "took over" as the most popular keyboard instrument. Harpsichord builders were concocting more and more radical experiments, in the hopes of competing with this new keyboard instrument which could *graduate* between loud and soft. The most astonishing of these innovations was the Venetian SWELL, which looked like a Venetian blind laid over the strings. A foot pedal or knee lever could gradually open and close this louvered covering. You can more or less duplicate the effect of this by having a friend slowly open and close the lid of your harpsichord while you are playing!

The 20th century literature written for the Pleyel and similar harpsichords is often unplayable on instruments which have hand stops. When you explore music from the present century, you must be aware if such an instrument is called for. You will find many registration changes written throughout single movements of such pieces, which obviously

cannot be managed without foot-pedals. Sometimes, however, a transcription of such pieces can be made that still sounds well, provided the original intent is understood.

Finally, a few comments about materials used for PLECTRA (the part of the playing mechanism actually responsible for plucking the strings) will be helpful. Historically, plectra were made of raven QUILLS--that is, the thick ends of the shafts of wing feathers from this bird. Some modern harpsichord builders and players still like to use bird quill (the modern equivalent comes from crows). However, this material is fragile and tends to soften with use, so that real quills of this type require constant attention.

In the 20th century, various newer materials have been used in place of bird quills. In the Pleyel and other early 20th century ("revival") instruments, plectra were made of hard leather. Such leather exhibits some of the same problems as quill, in that it softens with time. Additionally, leather plectra are rather thick, heavy, and unwieldy, and do not result in the same fine control of tone production as do the modern plastics or natural quill.

The Neupert company began using *nylon* for their plectra. Nylon seems too soft for precise control, and the majority of later 20th century builders have turned to the use of *Delrin*. This plastic has many of the same properties as natural quill, and it also holds up well over long periods of playing time.

Hopefully you will have a chance to try instruments with a variety of registration possibilities, as well as those with different plectrum materials. When you do, be aware of the sound and feel of the instrument, as it relates to these various elements.

CHAPTER II. MUSICAL NOTATION

MODERN PITCH NOTATION FOR KEYBOARD

Musical NOTATION is a system of indicating the PITCHES and DURATIONS of the notes which we sing or play on instruments. The system of notating *pitches* which you have been taught (in *STARTING ON THE HARPSICHORD*, or any other 20th century keyboard method) is the one which came into use during the course of the 18th century. This system, which we can call MODERN KEYBOARD NOTATION, is the one generally in use today.

In order to make comparisons with earlier (or later!) systems, I should define the system of modern keyboard notation to which I am referring. Pitches are indicated by locating notes on a GRAND STAFF, which consists of two sets of 5 lines, placed one above the other. The exact position of these notes on the keyboard is designated by the use of CLEF SIGNS: TREBLE (or G) clef, and BASS (F) clef. By definition, the lines on which the clefs are positioned designate the G above middle C, and the F immediately below middle C, respectively.

Other notes are located by interval above or below these fixed notes, each line or space on the staff representing a natural note on the keyboard. Sharps or flats are given special symbols in relation to the notes on the staff. Notes which exceed the range of the two staves are positioned on or between LEDGER LINES placed above or below the staves. This system of modern pitch notation is reviewed in Figure 1.

OTHER TYPES OF NOTATION IN USE TODAY

It should be pointed out that the notation for instruments other than the keyboard is somewhat different, and indeed varies from one instrument to another. Music for ENSEMBLES (groups of instruments and/or voices) will be written on a SCORE, which has separate staves for each of the instruments involved. Since the keyboard player generally has the full score from which to play, it will be necessary for you to become familiar with SCORE NOTATION when you play with other instruments or voices.

A discussion of score notation is beyond the scope of this book. However, the addition of only 1 or 2 parts (soloists, for example) will merely result in 1 or 2 staves of music being added above the keyboard Grand Staff. Gradually, your eye and mind will be able to take in these additional lines, so that you can follow the music that other members of the ensemble are playing. Depending upon the instruments or voices involved, the additional lines may be written in clefs other than treble or bass (see the following pages).

STAFF with TREBLE CLEF
and TREBLE G --the first G
(a FIFTH) ABOVE Middle C

STAFF with three C's
(Middle C at the bottom)
showing LEDGER LINES
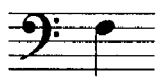
STAFF with BASS CLEF
and BASS F -- the first F
(a FIFTH) BELOW Middle C

STAFF with three C's
(Middle C at the top)
showing LEDGER LINES

REMEMBER THAT---
a SHARP (♯) RAISES the Note a HALF STEP.
a FLAT (♭) LOWERS the Note a HALF STEP.
a NATURAL SIGN (♮) CANCELS a preceding sharp or flat.
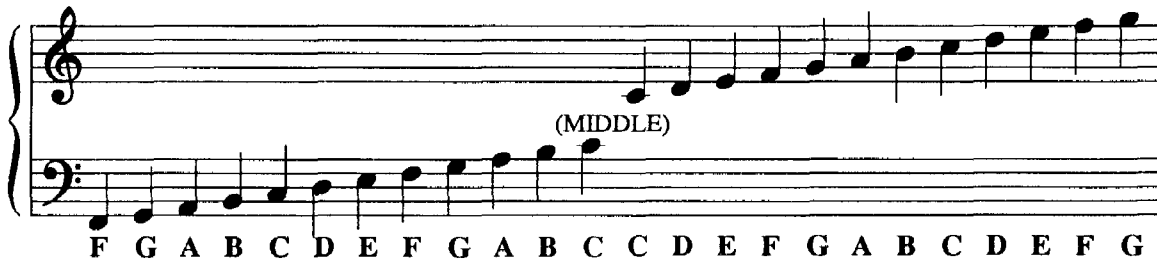
F♯   B♭

GRAND STAFF with all the Notes:

(MIDDLE)

F G A B C D E F G A B C C D E F G A B C D E F G

FIGURE 1. Review of Modern Pitch Notation

Finally, I should mention the fact that some modern experimental music uses other methods of indicating pitches and/or durations of notes. Since these newer systems are experimental, modern composers are generally careful to give full directions to the players as to the meaning of the notation used. Therefore I will not attempt to cover this new field for the harpsichordist who wishes to explore very recent 20th century music.

STAFF NOTATION IN THE BAROQUE ERA

During the 17th century, musical notation gradually evolved from earlier systems, used by Medieval and Rennaisance composers, to the keyboard notation used at present. The latter was fully established by the mid-18th century.

Earlier keyboard systems differed from the modern one both in the use of variable numbers of lines within the staves, and also in the use of a number of different clefs in addition to the modern Treble and Bass clefs. There was also a system of TABULATURE used in 17th century Germany, Scandinavia, and Austria (called "North German Organ Tabulature") in which letters represented notes, which were not placed on a staff at all (see Figure 2).

DEUTSCHE ORGELTABULATUR IN DER K.K. HOFBIBLIOTHEK.

FIGURE 2. An Example of North German Organ Tabulature

Fig. 2, J. J. Froberger, Suite VI. From *Denkmäler der Tonkunst in Österreich*, Vol. 13 (Johann Jakob Froberger, *Orgel- und Klavierwerke* II., ed. by Guido Adler). Published by Akademische Druck- u. Verlagsanstalt, Graz, 1959. Reproduced with permission.

Figure 3 shows an Italian piece from the early 17th century. Notice that the treble staff with treble clef has six lines. The bass staff has eight lines, and two different clefs! The bass (F) clef is still on the fourth line, however, and the C clef above it is really redundant.

Figure 4 starts out with a G clef on the *third* line of a staff which has six lines. The bottom line of this staff thus represents middle C. On the third staff (second "line" of music) the right hand part changes to a C clef (see below), so that the bottom line now represents

Fig. 3 (page 11), G. Frescobaldi, *The First Book of Toccatas and Partitas*, (Borboni, 1615). Reproduced with the permission of the Royal College of Music, Prince Consort Road, South Kensington, London, SW7 2BS.

Fig. 4 (page 11), John Bull, from the *Fitzwilliam Virginal Book*, Vol. II (frontispiece), 1963. J. A. Fuller Maitland and W. Barclay Squire, editors. Dover Publications, Inc., 180 Varick St., New York, N. Y., 10014. Reproduced with permission.

the A a third below middle C. The bass (F) clef in this figure again is placed on the fourth line, but the bass staff has six lines.

FIGURE 3. Italian Staff Notation, Early 17th Century

FIGURE 4. Early 17th Century English Staff Notation

(Citations on page 10)

In reading the music on page 11, it is necessary for us to think of the extra staff lines as extended *ledger lines*. Those of us accustomed to thinking of the top line of the bass staff as A, for example, will find it difficult to adjust to this notation!

The very first CLEF SIGN used in Medieval music notation was a symbol which represented middle C. This clef has been written variously, like this: ⊟ or ‖ß or ⊟ , with the line passing through the middle of the clef locating middle C.

The C clefs came to be used extensively in early music, and still appear in much of the keyboard music of J. S. Bach in the 18th century. By repositioning the C clef on various lines of the treble or bass staff, it was possible to avoid the extensive use of ledger lines which occur today in modern notation. Thus, instead of learning to count and recognize many ledger lines above and below the staff, the Baroque musician learned to read in many different clefs placed variously on the staves.

There were four C clefs in common use in keyboard music of the 17th century. The actual clef symbols were identical, but the location of each on the staff was different. The SOPRANO CLEF was a C clef positioned on the bottom (1st) line of the staff. Remember that the location of the clef tells you where middle C is located on the staff. Hence middle C and all other notes on this staff are positioned a third higher than they are on the modern treble staff.

A second C clef was the MEZZOSOPRANO CLEF, located on the 2nd line of the 5-line staff. This clef was used only rarely in keyboard music, but was common early in the 17th century in vocal writing.

The third, and very common, C clef was the ALTO CLEF. This C clef, positioned on the 3rd (middle) staff line is still in use today. It is known as the "viola clef", because music for the viola is written extensively in the alto clef. The reason for this is that middle C (in the middle of the staff) is close to the middle of the viola's ordinary range. By using the alto clef, most of the music can be written on a single staff with minimal use of ledger lines.

The final C clef, located on the 4th staff line, is the TENOR CLEF. This one also is in use today, in music for the violoncello and bassoon. Remember that middle C is now located where bass F would be on our bass staff. Thus the notes must be read a fifth higher than they would be on the bass staff, positioning them more suitably for the normal range of these instruments.

In addition to all these C clefs, which might appear at any time in keyboard music, two further clefs are to be found in the French keyboard literature well into the 18th century. One of these, the BARITONE CLEF, is an F clef just like our bass clef. However, instead of being positioned on the 4th staff line, bass F is located on the 3rd line! Think about the consequences of this--middle C is now on the top line of the staff, and the bottom line is low B! Occasionally an F clef is found in other locations (especially on the 2nd staff line). One needs to watch out for this when picking up a piece of early French music!

The other clef found in the French keyboard literature (and even more often, ensemble music), is the FRENCH VIOLIN CLEF. This is a G clef, looking exactly like our treble clef,

but located instead on the bottom (1st) line of the staff. This note is now treble G, placing all the notes on the staff a third lower than they are on the modern treble staff.

I G CLEFS:

    1. TREBLE CLEF -- Treble G on second line

    2. FRENCH VIOLIN CLEF -- Treble G on first line

II C CLEFS:

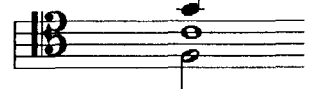   1. SOPRANO CLEF -- Middle C on first line

    2. MEZZOSOPRANO CLEF -- Middle C on second line

    3. ALTO CLEF (= VIOLA CLEF) -- Middle C on third line

    4. TENOR CLEF -- Middle C on fourth line

III F CLEFS:

    1. BASS CLEF -- Bass F on fourth line

    2. BARITONE CLEF -- Bass F on third line

    3. Two other possibilities, unnamed, but occasionally found in French Baroque music.

FIGURE 5. Summary of Baroque Clef Signs
(Whole notes show Middle C; Half notes, Bass F; Quarter notes, Treble G)

These various clefs make reading FACSIMILES (exact reproductions of the originals) of early manuscripts or publications difficult for us. For those who wish to take the time to learn, the rewards are great, since we can actually see the music as the composer and his or her contemporaries saw it. This often gives us new insights into the way the music might have sounded.

The sense of personal contact with the composer is especially true in the case of AUTOGRAPH MANUSCRIPTS, which are actually in the handwriting of the composer. Published music from the Baroque period was in the form of ENGRAVINGS, often supervised by the composer. These also seem to have a much more personal touch than the standardized music printing of today.
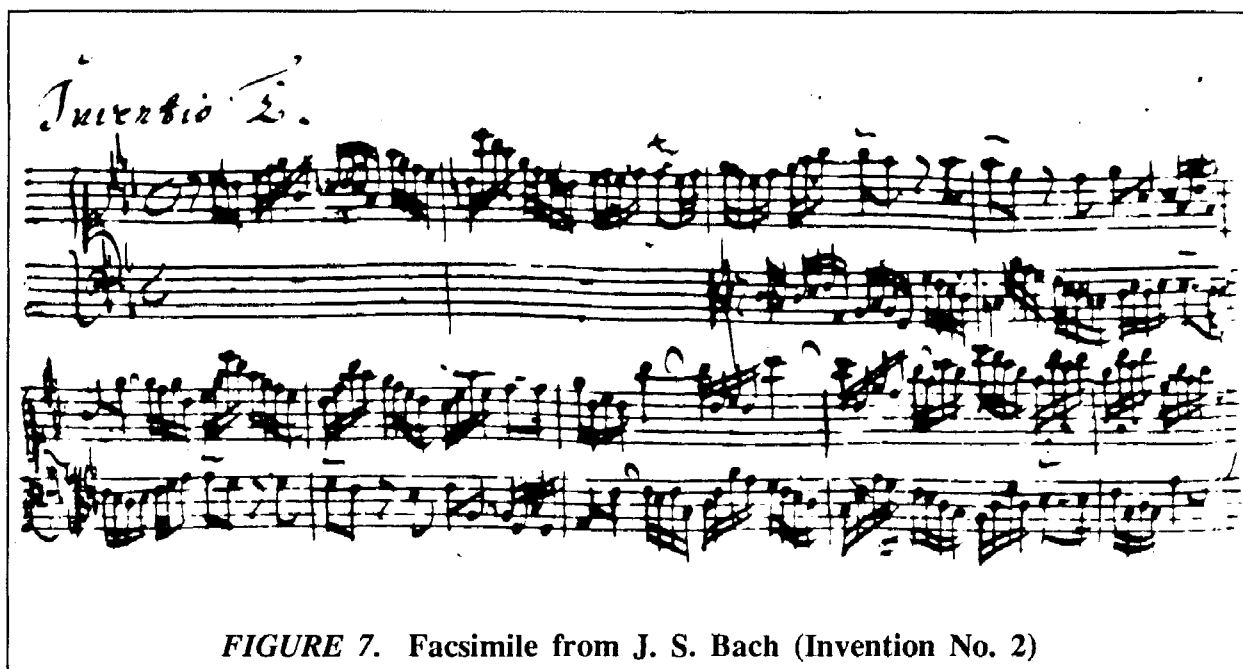
For those who wish to pursue the topic of early notation further, I have summarized the various baroque clefs in Figure 5 on page 13. Figures 6-9 illustrate some FACSIMILES of early manuscripts or editions, with brief descriptions of the clefs involved.

FIGURE 6. Facsimile of a Page from François Couperin

Fig. 6, F. Couperin, *Pièces de Clavecin, Ordre I.* Facsimile of the 1713 edition. Reproduced by arrangement with Broude Brothers Limited, 141 White Oaks Rd., Williamstown, MA 01267.

The first line of Figure 6 shows *treble* and *alto* clefs. The bass moves to the *bass* clef near the end of the first line.
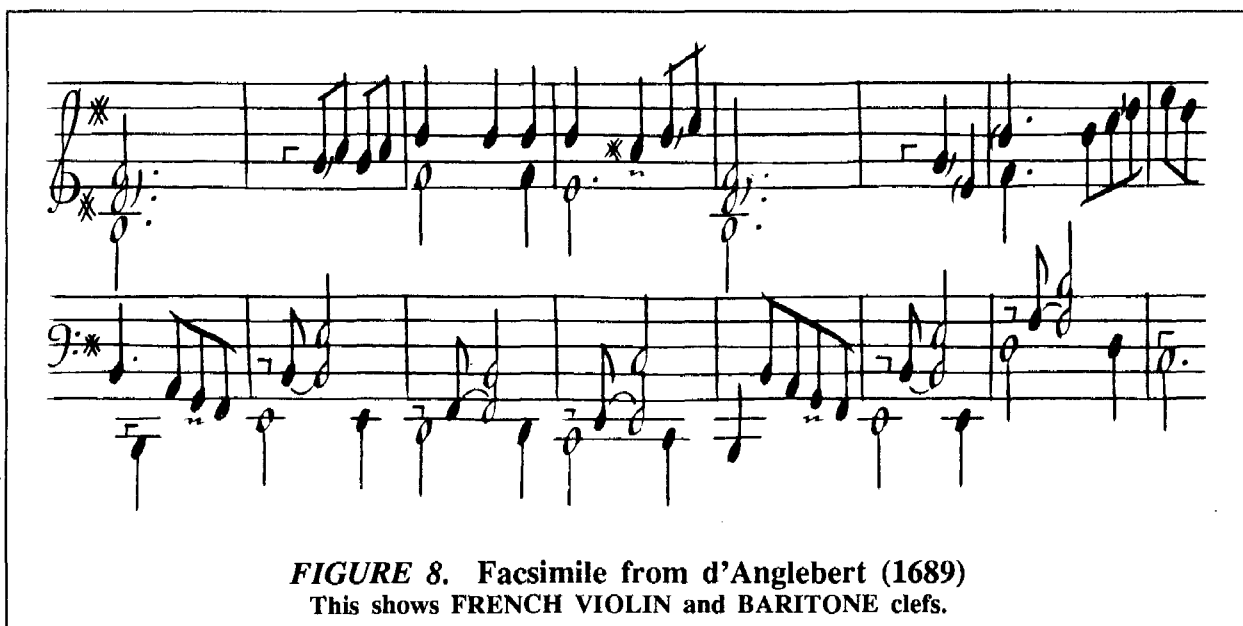
In Figure 7, the top line is in *soprano* clef. At the beginning of the entrance of the second voice, an *alto* clef is indicated. On the next line, the second voice is presented in the *bass* clef. Compare this opening with the modern notation in Figure 56.

FIGURE 7. Facsimile from J. S. Bach (Invention No. 2)

Fig. 7, J. S. Bach, *Two- and Three-Part Inventions.* Facsimile edition, page 4. Reproduced with the permission of Dover Publications, Inc., 180 Varick St., New York, N. Y., 10014.

FIGURE 8. Facsimile from d'Anglebert (1689)
This shows FRENCH VIOLIN and BARITONE clefs.

Fig. 8, J.-H. d'Anglebert. *Pièces de Clavecin.* Facsimile of the 1689 edition. Reproduced by arrangement with Broude Brothers Limited, 141 White Oaks Rd., Williamstown, MA 01267.

FIGURE 9. Facsimile from Pierre Février (1734)
This shows TREBLE and TENOR clefs.
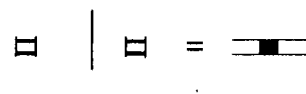
Fig. 9, Pierre Février, *Pièces de Clavecin.* Facsimile of the 1734 edition, page 30. Reproduced with the permission of Éditions Minkoff, Rue Eynard 8, Cours des Bastions 5, Case postale 377, 1211 Genève 12, Switzerland

NOTATION OF DURATION--NOTE VALUES

Long before the Baroque era, musicians had worked out a system of PROPORTIONAL NOTATION, in which the duration of notes could be progressively halved (divided into half, again and again). Our modern NOTE VALUES are derived from this proportional (and seemingly mathematical) system.
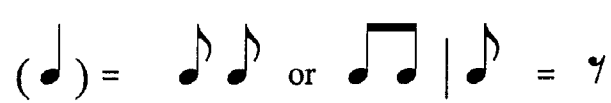
You are already familiar with note values, starting with the WHOLE NOTE, and going to progressively shorter values, each successive note exactly half as long as the one before. The note values presented in *STARTING ON THE HARPSICHORD* include the HALF NOTE, QUARTER NOTE, EIGHTH NOTE, and SIXTEENTH NOTE. Remember, also, that each of these notes has a corresponding REST (or silence) of equivalent length. The rests are indicated, like the notes, with a series of symbols (see Figure 10).
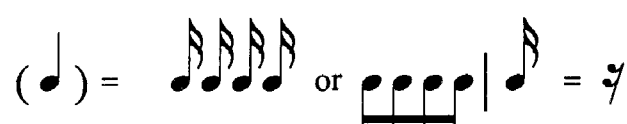
These are the American names for these note values. However, much of the literature on early music has been published in Europe. The European and British names for note values are different! Figure 10 shows the appearance of notes and rests of different values, with the American and English (in parentheses) names for each.

FIGURE 10. Note Values and Rests
(Each successive note value is exactly HALF the time of the preceding.)

Figure 10 also shows some longer and shorter note values than the ones given in *STARTING ON THE HARPSICHORD*. Occasionally, in early music, you will encounter a note which is twice as long as a whole note. This is called (in America) a LONG.

There are theoretically many possible note values shorter than 16th notes. However, usually these are not practical to play! The only ones in common use are the THIRTY-SECOND NOTE and the SIXTY-FOURTH NOTE.

Since all of these note values result in various multiples of 2 or 1/2, other means had to be devised to divide a note into three subunits. Two systems have been used. One involves the use of DOTS to extend a note by exactly *half* its written value. Thus a dotted half note (♩.) equals three quarter notes in length, and so on. The other system uses notes called TRIPLETS, three of which take up the normal time of two ordinary notes of the same value. Thus ♪♪♪ takes up the same time as two ordinary eighth notes, the total duration being that of a single quarter note.

INEXACT NOTATION OF DURATION IN BAROQUE MUSIC

Baroque composers were not terribly concerned with writing their music in a mathematically exact way. The notation of music was thought to suggest to the player the correct "realization" of a given piece. Much was left up to the player's knowledge of style, form, and current "good taste" (in French, *bon goût*).

In addition, there were a number of RHYTHMIC CONVENTIONS which enabled the musical shorthand to be imprecise, and also easier to write. The latter consideration was perhaps much more important to the 17th and 18th century composer or copyist than we might realize. Think about writing your musical manuscripts with quill pen and ink, or engraving the published versions!

The subject of rhythmic conventions is discussed in Chapter III. At this point, I wish to point out certain habits of notation that might confuse the player trained in our modern, systematic way of writing note durations.

Sometimes, a note or series of notes are intended to sound "as fast as possible", without specifying their absolute speed. This normally occurs with UPBEATS (notes on or after weak beats), which are intended simply to rush toward the next downbeat (see Chapter III). They are to be played in relation to what follows, not with what came before. Baroque composers sometimes indicated this with what look like impossibly fast notes, which are not "accounted for" in the beat which contains them. Figure 11 shows such a group of upbeat notes in a prelude by François Couperin.

Another instance of inexact notation of duration, also involving upbeats, results from the fact that precise notation of *rests* is very uncommon in Baroque music. For example, in
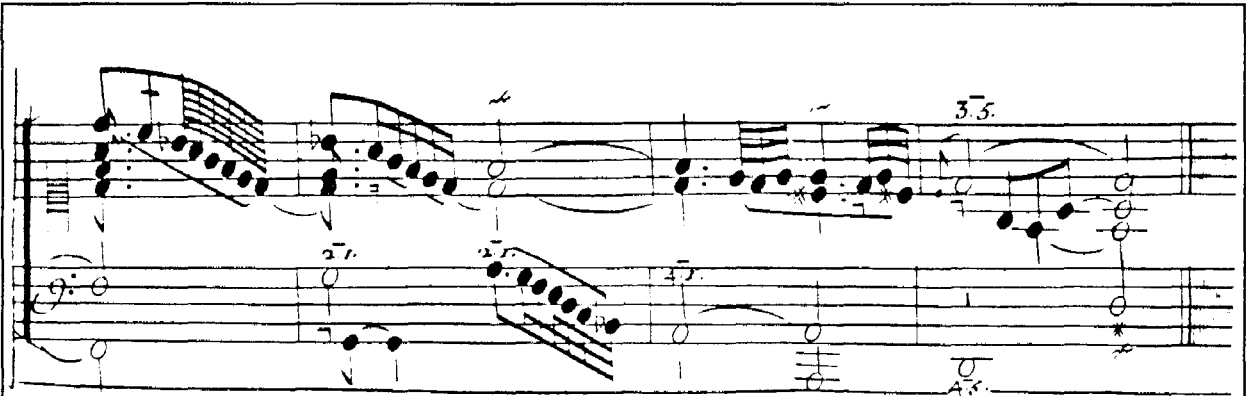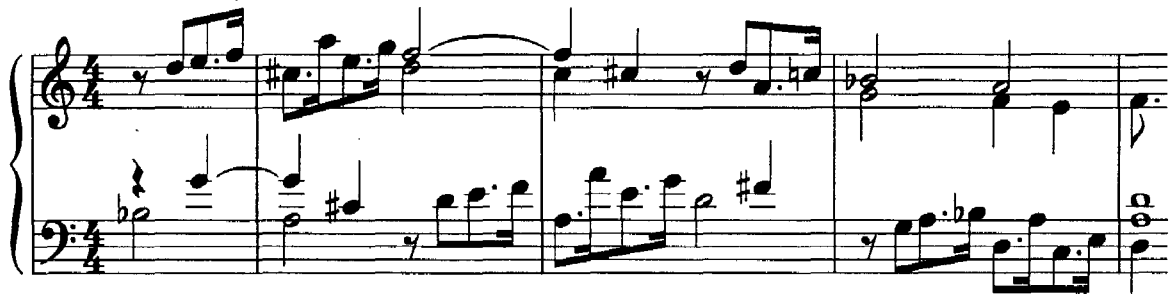
FIGURE 11. Fast Notes of Indeterminate Value in a Prelude of François Couperin

This is a form of ACCOMODATION to a predominate rhythm (dotted eighth plus sixteenth).

Notes as written (Frescobaldi):

Notes as performed:

FIGURE 12. Eighth Note Upbeats, Performed to Correspond with Sixteenth Notes

Fig. 11,   F. Couperin, *L'Art de Toucher le Clavecin, Prélude 2.* Facsimile of the 1717 edition. Reproduced by arrangement with Broude Brothers Limited, 141 White Oaks Rd., Williamstown, MA 01267.

Fig. 12,   G. Frescobaldi, *The First Book of Toccatas and Partitas,* Vol. II, page 39. Kalmus edition number K03452, reproduced by the consent of BELWIN-MILLS PUBLISHING CORPORATION, c/o CPP/BELWIN, INC., Miami, FL 33014.

a piece with a basic rhythm involving dotted eighths and sixteenth notes (♪.♪), upbeats which begin with the sixteenth note alone will usually be written as eighth notes. This seems to result from a universal reluctance to write a dotted eighth note *rest*. In accordance with a general rule about accomodating most rhythms to the prevailing one, the eighth note upbeat is still played as a sixteenth (or possibly even faster if OVERDOTTING is involved!).

An example of this type of inexact notation is illustrated in Figure 12 on page 19. For further explanation of *accomodation* and *overdotting* see the section on "Rhythmic Conventions in the Baroque period" in Chapter III.

CHAPTER III. RHYTHM, TEMPO, AND ARTICULATION

Although much of this material is discussed elsewhere, it is hoped that the following will serve as review. These three topics are of the greatest importance to expressive harpsichord performance.

RHYTHM *vs.* METER

The RHYTHM of a piece of music is the combination of longer and shorter notes, and the manner in which these are organized. In music, longer and shorter notes are specified by a variety of note values, as described above (pages 16-18). The way these note values are grouped, and the presence or absence of regularly recurring pulses or BEATS, constitutes the RHYTHM of the music.

When musical sounds are organized in such a way as to have regularly recurring, steady beats, we have METRICAL MUSIC. Much of the music that we play on the harpsichord is metrical. In this kind of music, there is usually a hierarchy of stronger and weaker beats. These recur over a regular period of time. The exact grouping and frequency of the strong and weaker beats is called a METER.

In METRICAL MUSIC, which has regularly recurring BEATS, each such beat can theoretically be given by any one of the note values described above (pages 16-18; Figure 10, page 17). The kind of note giving the beat, as well as the number of notes per beat, is indicated by a TIME SIGNATURE. The most common of these use the quarter note as one beat, as in $\frac{4}{4}$ meter or COMMON TIME (**C**), and in $\frac{3}{4}$ meter.

Although the quarter note is often the basic beat, other note values can represent the beat in many time signatures. For example, in $\frac{3}{8}$ meter, the eighth note equals one beat; in $\frac{3}{16}$, it is the sixteenth note. In $\frac{4}{2}$, $\frac{2}{2}$, or ₵ (*ALLA BREVE*), the half note gives one beat. In COMPOUND TIMES, a dotted note equals one single beat (such as ♩. in $\frac{6}{4}$, and ♪. in $\frac{6}{8}$ or $\frac{12}{8}$). (See the section on Compound Time in Chapter VI of *STARTING ON THE HARPSICHORD.*)

Each time signature is characterized by a particular grouping of strong and weak beats. For example, the first and third beats of $\frac{4}{4}$ meter are strong, the second and fourth beats are weak. In $\frac{6}{8}$ meter, the two dotted quarter notes are strong, with the eighth notes in between being weak. These characteristics of each meter are discussed more fully in *STARTING ON THE HARPSICHORD.*

The strongest beat of the measure is generally the first. This is called a DOWNBEAT, as it coincides with the downward stroke of the conductor's baton. Weaker beats, or portions of the same, which are in motion toward a downbeat are called UPBEATS.

It should be emphasized that the beat can be assigned any speed, or TEMPO, no matter what note value is used to represent it. In fact, the size of a note value does not in any way indicate its speed. A page which is "black" with 32nd notes does not necessarily represent "fast" music. In fact, this is usually indicative of a very slow beat, with the 32nd notes being free and flowing ornamentation of a slow and simple melody (see Figure 16, page 33).

Similarly, some early Baroque dances were written in very long note values, but in fact had very quick tempi! The appearance of a galliard in $\frac{3}{1}$ meter, for example, might suggest a very slow solemn piece. Knowledge of the dance type (see the sections in Chapter VI on Dance Forms), however, would make one realize that the whole note beats are played at a rapid tempo!

It has often been remarked that the relationships between note values is wholly mathematical, and music has been referred to as a "mathematical" art. Although this may be true of written music, as it appears on the page, one does not actually hear music as though it were based on any rigid or formal system. Although the beats are more or less steady in metrical music (see the discussion of rhythmic alterations, page 3, above), the smaller note values in between the beats may be treated with considerable freedom.

METRICAL vs. RHYTHMICALLY FREE MUSIC

From the definition of rhythm given above (page 21), it can be implied that while some music has regularly recurring beats (METRICAL MUSIC), other kinds of music do not have these steady pulses. There is a considerable body of such RHYTHMICALLY FREE music in the literature for the harpsichord.

Actually, the amount of rhythmic freedom expected in different MUSICAL GENRES (types of pieces) varies widely in baroque music. Some music is *strictly* metrical--almost mechanical, as in some dances and marches, for example. Some music breathes in a flexible manner, as in arias which have a more or less free "vocal" line above a steadier bass which marks the meter (as in Figure 16 on page 33).

In addition to those metrical pieces which can be more or less flexible, there are also UNMEASURED pieces. This means "without measures or meter". Apart from the absence of a steady pulse, the note values are often played with considerable inexactness. Unmeasured music is intended to sound IMPROVISATIONAL, as though the player were making it up on the spot with a free flow of ideas. For the most part, the kinds of pieces utilizing these free rhythms are PRELUDES and PRELUDE-LIKE pieces, as discussed in Chapter VI, below.

In performing such pieces, one needs to distinguish clearly between *long* and *shorter* notes. In some free preludes, no distinction has been made for you, as only one note value may be used (see Figure 13). In such pieces, it is often necessary to prolong the long notes

FIGURE 13. Unmeasured Prelude in A Minor by Louis Couperin (Facsimile)
(Observe SOPRANO and BARITONE clefs.)

Fig. 13, from the "Bauyn" manuscript. Reproduced with permission from the Bibliothèque Nationale, Paris.

much more than either the note value would suggest, or than one would expect given your own sense of timing as a player. Remember that in unmeasured music, the listener has no recurring beats to use as landmarks, which will tell him whether or not a note is long or short! The difference therefore has to be greatly exaggerated.

Sometimes composers give directions as to the manner in which unmeasured or rhythmically free music is to be realized. It is important to know that music in this rhythmically free style does not necessarily look unmeasured on the page. One must know from the style of the piece, or from the directions of the composer, whether or not to treat an apparently metrical piece in a rhythmically free manner.

RHYTHMIC ALTERATIONS

This subject has already been discussed on page 3, above. A few additional comments are called for at this time. It cannot be overemphasized that, although the relationships between note values on paper are indeed quite mathematical, the art of music is not mathematical! If one makes the relationships too exact and mechanical, then one plays "like a metronome" and not like a musician.

Remember that music must "breathe", and phrases must be clearly heard. At times you may wish to slow down slightly when coming to a phrase ending, and to pause just long enough to breathe in between the phrases. (Naturally these effects will be more or less evident, depending on the nature of the piece you are playing.)

Apart from the phrasing, you need to emphasize the strong beats within measures, occasionally by actually prolonging the notes which occur on such beats. One always needs to feel the upbeats of a measure or a phrase as moving toward the downbeats, often very literally.

One does indeed make small alterations in the exact time values of notes in order to achieve these goals. However, it is important not to change the *relative* note values. In other words, do not turn a quarter note into an eighth, or an eighth note into a sixteenth. (There was, after all, a reason why the composer gave them these values in the first place!) But when an upbeat (an eighth note, for instance) is moving toward another note, you may indeed want to make this upbeat note just a little shorter and a little later than its exact mathematical value.

Some more conventional alterations in the apparent time value of notes were discussed above (pages 18-20), and are also encountered in the following section.

RHYTHMIC CONVENTIONS IN THE BAROQUE PERIOD

Certain kinds of RHYTHMIC ALTERATIONS occurred frequently enough to become a part of the common musical language within different periods and national styles. We call these alterations RHYTHMIC CONVENTIONS.

The purpose of rhythmic conventions is to give added flexibility by not using very precise rhythmic notation. Common usage, however, guided the performer in the manner in which to change or alter the written note values.

One of the most important rhythmic conventions concerns the performance of *dotted notes*.

Very commonly, dotted notes were performed in an OVERDOTTED manner. This means that the long note of the pair (the note bearing the dot) is prolonged beyond its exact value. The time is then "made up" by shortening the note which follows the dot, so that one reaches the following beat at exactly the right moment.

If this manner of playing is carried out over a great many dotted figures, the motion of the piece becomes somewhat jerky, with pauses on downbeats, and abrupt rushing upbeats. This rather stylized performance is characteristic of certain kinds of pieces, such as the FRENCH OVERTURE, for example (see Chapter VI).

However, overdotting can occur in many other places, as an expression of rhythmic freedom. As with any rhythmic convention, the overdotting can be varied according to the taste of the player. Sometimes the dotted figures can be highly exaggerated, and at other times just slightly altered from the exact note values.

Sometimes, along with overdotting, one adds an articulation at the dot, producing a silence between the long dotted note and the upbeat which follows it. This results in a loud and prominent upbeat, which might easily be called for in the vigorous opening of a French Overture.

Another conventional treatment of dotted notes is to UNDERDOT them. That means that the dotted note is not even held for its full written value. This occurs most often when combining dotted figures in one voice with triple or compound meter in another. An excellent example of this occurs in the E flat major *CORRENTE* from J. S. Bach's third "French" Suite. The dotted figures in the left hand ACCOMODATE to (or "match") the triplet rhythm of the right hand. Thus ♩♪ is transformed into ♩♪ . (See Figure 14 on page 26.)

Underdotting may also occur in GIGUES or other types of pieces which are normally in triple meter. In these cases, the dotted eighth plus sixteenth note (♪) may be written in the place of a pair of notes which should have a triplet rhythm. This is shown in Figure 15 (page 26). My own experience, writing these pieces in the configurations of different meters, has demonstrated that the dotted version was much easier to put down on paper! Quite possibly this fact accounts for the convention.

Another very important Baroque rhythmic convention concerns the UNEVEN or UNEQUAL performance of notes which look as though they are to be played evenly. This is a convention of the 17th and 18th century French style, and was known to the French as *"INÉGALITÉ"* (pronounced "in-ay-gal-i-tay"). The uneven notes are called *NOTES INÉGALES* (pronounced "note in-ay-gahl").

FIGURE 14. Accomodation to the Predominantly Triplet Rhythm in a *Corrente*
(J. S. Bach, E Flat Major "French" Suite)

FIGURE 15. Accomodation of Rhythm to Conform to the Meter of a Gigue
(J. J. Froberger, Gigue from *Suite VII*)

Fig. 14 (page 26), J. S. Bach, *Verzeichniss der Mitglieder der Bach-Gesellschaft.* Breitkopf & Härtel, Leipzig, 1897. Vol. XLV, Bd. 1. BWV 815.

Fig. 15 (page 26), J. J. Froberger, *Oeuvres Complètes pour Clavecin, Vol. I*, p. 180. H. Schott, ed. Published with the kind authorization of Éditions Heugel, 175 Rue Saint-Honoré, 75040 Paris, Cedex 01.

Unequal performance usually applies only to eighth notes in pieces of moderate tempo. It consists of slightly prolonging the first note of a *pair* of eighth notes, and slightly shortening the second note. A pair, in this case, refers specifically to two notes which go from a strong to a weak part of the beat. In this example the pairs are marked with slurs. The stronger first member of each pair is made longer, the second, weaker eighth note is shortened (the length of the beats is not changed).

Perhaps it will occur to you that this is not an entirely new idea. In fact, much of normal rhythmic alteration, as described above (pages 3 and 24), involves something similar. The difference, in the French style, was that it was applied so consistently to almost all of the eighth note pairs within an entire piece.

There were some further "rules" concerning the use of unequal performance. Generally it applied only to eighth notes which were going up or down by *step*. Probably these were also slurred in pairs, unless indicated otherwise. Leaps and repeated notes were apt to be played evenly, although other reasons for rhythmic alteration might take precedence and result in elongation of the first of such pairs as well.

If the tempo were too quick, unequal performance was dropped. Also, at very slow speeds, the unequal performance was shifted from eighth notes to sixteenth notes (as in slow ALLEMANDES--see Chapter VI). In any single piece, only one note value was given the unequal treatment.

Occasionally a French composer would mark some of pairs of eighth notes with dots, as shown here: . This implies a slightly detached style of performance, and the notes should not be performed unevenly.

The words *NOTES ÉGALES* (pronounced "note ay-gahl") or *MARQUÉ* ("mar-kay") also indicated an even manner of performance.

Sometimes the unevenness of pairs of eighth notes was reversed, producing a short-long pair (starting on the beat) rather than the usual long-short pair. This usually was done for special effect, and was most often heard in pieces of moderate speed, which yet have a fairly lively character. Except for some of the music of François Couperin, this type of unevenness was never overtly indicated in the music. The appearance of slurs in some 18th century French harpsichord music (such as that of Jean-Philippe Rameau), may imply the use of short-long performance.

Short-long performance (usually quite abrupt or quick) appeared in English music (where it was known as the SCOTCH SNAP), and in Italian music (there called LOMBARDIC RHYTHM). Generally, but not always, this type of rhythm was actually indicated by the notation.

The amount of unevenness in unequal performance is highly variable. It can range from a barely perceptible alteration of the exact note values, to something that sounds like truly dotted notation (♪ ♪). The purpose of having such a convention is to give the performer freedom and flexibility, which would have been impossible had one tried to notate these subtle rhythms in a precise manner.

The French style of playing tends to soften the accents inherent in the meter. The occurrence of an uneven line of notes, played in a flexible manner at the will of the performer, tends to disguise or mute the accents inherent in metrical notation. This music can be thought of as being like "impressionistic" painting, where sharp lines are not present, and one has only a rather hazy, distant view of the material presented by the painter. French music really "shimmers" when played in the appropriate conventional style.

TEMPO

The TEMPO or *speed* at which a piece of music should be played is generally indicated in words (often, but not always, written by the composer). Very often these words are in the Italian language. From the beginning of the 18th century, Italian became a sort of universal musical language. It was helpful for composers to be able to indicate their thoughts on the tempo (itself an Italian word!) or character of the piece in a manner that would be understood by all players, no matter what their national origin.

Nevertheless, it was not until the end of the 18th century that musical styles became truly international. As a result, you will still find tempo indications as well as other descriptive words in other languages in your early harpsichord pieces. This is particularly true in the case of French composers, who were generally unwilling to depart from their own manner of speaking. It would be helpful to invest in a French-English dictionary if you plan to play much of the French repertoire.

The universal Italian terms for various fast tempos are as follows: ALLEGRO (pronounced "Al-*lay*-grow"), PRESTO, and VIVACE ("Vi-*vah*-chay"). More moderate speeds include MODERATO ("mo-der-*ah*-toe") and ANDANTE ("ahn-*dahn*-tay"). In the Baroque period "Andante" meant a "walking" speed.

Much slower TEMPI (pronounced "*tem*-pee"--the Italian plural of TEMPO) have the Italian words ADAGIO ("ah-*dah*-jee-oh") or GRAVE ("*grah*-vay") attached. The Baroque meaning of the word LARGO ("*lahr*-goe") was sometimes slow, and at other times a rather moderate tempo.

Besides the Italian (or French) words, tempi were often indicated by reference to various dances. For example, a piece might be described as being in the tempo of a MINUET

or SARABANDE or GAVOTTE (see Figured Bass Exercise No. 18 on page 119). One was expected to know the dances well enough to know what speeds were appropriate. (Unfortunately, these changed with time, historically. Players of course knew the dances of their own time, but we need to make a special study to interpret the character and tempo of dances throughout the historical periods in which harpsichord music was written. For a preliminary discussion, see Chapter VI.)

In my experience as a teacher, far too much emphasis is placed on *speed* by beginners. Mostly, the tempo indications reflect the *character* of a piece, rather than its absolute speed. For example, the word "vivace" really means "lively", which is better achieved through sprightliness of articulation and rhythm, rather than by any absolute notion of speed.

In considering absolute speed, listen carefully to your harpsichord for clarity and sustaining power. It is not possible to go either extremely slowly or very very quickly on this instrument, at least to achieve really musical results. However, harpsichords vary considerably, as do different registrations on the same harpsichord.

At too slow a speed, the connections between notes are not heard, so that a melody cannot be sustained. At too fast a tempo, the action of the instrument begins to compete with the musical sound, and clarity is lost. Listening to your instrument is of the utmost importance in determining speed. Use a tape recorder frequently to help develop your judgement and musical sensitivity.

One final remark about tempo or speed. One naturally (and usually unknowingly!) has a tendency to play faster as one learns a piece of music. As your concept of the piece becomes clearer, and your fingers begin to know the way around the notes, everything begins to seem easier! We may think that we are playing at the same speed as we did at the beginning, but in fact it is much quicker.

Near the beginning of your study, mark with a metronome the tempo which you think is appropriate for the form and character of this piece. Later, constant comparison with this metronome marking will be helpful in determining whether you are in fact playing at the speed you think you are!

ARTICULATION

Much has been said already on the subject of how notes are physically connected. When the sound of one note continues until the next is played, we speak of LEGATO playing.

When the sound of one note overlaps the next, we call it OVERLEGATO.

When there is an interruption of sound between one note and the next, we speak of the notes as being DETACHED or ARTICULATED.

An ARTICULATION is the *silence* between notes which are detached. It should be observed that this is a harpsichordist's definition! Many other musicians use the word "articulation" in other ways. On the harpsichord, an articulation creates an apparent accent on the note which follows the silence. (This is the ARTICULATED NOTE.)

As has been stated many times, an articulation is produced by shortening the sound of the note which precedes it. An articulation does not change the time between the *attacks* of two notes, and it should not change the rhythm of the music.

Sometimes one may wish to change the rhythm (RHYTHMIC ALTERATION) at the same time as making an articulation. This happens, for example, on important downbeats where one wishes to reinforce the sense of accent produced by an articulation, by additionally prolonging the ARTICULATED NOTE (the one following the silence). It is important to realize that these two events are entirely independent, but reinforce each other when used together.

VARIETIES OF ARTICULATION

ORGANIC ARTICULATIONS define the *meter* of a piece, and produce accents on all the strong beats. These articulations must not be left out under any circumstances, except where one deliberately wishes to soften a normally accented beat (as at the end of a phrase). The prominence given to these articulations depends upon the style and character of the piece.

TEXTURAL ARTICULATIONS add detached notes which change the character of the music. When the character is soft and mellow, we use much legato, connecting all the notes that do not need to be articulated (gently!) in order to define the meter. Articulated or detached notes add brightness to the sound, and can give a feeling of liveliness to a piece.

Remember that articulations can be of all possible sizes, from those which are virtually unheard, to very sharp STACCATO (extremely detached) sounds. Tiny articulations will still clarify the important metrical accents, but the listener will have the impression that the playing is smooth and legato.

Sharp STACCATO notes are used very little on the harpsichord. Remember that each tone on the harpsichord takes a certain amount of time to develop properly. Listen carefully while plucking a string very slowly. The instant of plucking gives an unclear pitch, while the tone itself "blossoms" and develops into something more lovely only a moment later. If this development is not permitted, by damping the string too soon after the pluck, the resultant sound will be harsh and the pitch unclear.

The development of tone and pitch vary greatly from one harpsichord to another. Listen very carefully to your own instrument, being sure not to make notes so short as to sound unpleasant. Notice also that low bass notes need to be prolonged longer than do notes high in the treble. Generally, therefore, a more highly detached mode of playing is possible in the right hand than in the left.

The size of the articulations required to produce clarity of accents varies not only with the instrument, but also with its REGISTRATION. The plucking of two or perhaps three strings simultaneously requires time to "clear" the sound, or to entirely silence all of the strings. You will therefore need to vary the size of your articulations according to the registration used. Try playing the same piece on one 8-foot stop, and then on two 8-foot registers together. In the latter case you will need to damp the strings a little sooner before an accented note, in order to give as much clarity as you achieved with the single 8-foot sound.

CHAPTER IV. ORNAMENTATION

ORNAMENTS are *decorations* which serve to add color and interest to your music. Ornaments are also referred to as EMBELLISHMENTS.

For the harpsichordist, the subject of ORNAMENTATION is vast and never-ending! I will just try to give some essential facts about ornaments, which will guide you in the simple embellishment of your pieces. This should serve as an introduction to this large subject. For more information, consult the reading list at the end of this volume.

Ornaments serve a number of purposes. First, certain notes or beats within a measure can be accented, and parts of phrases can be emphasized, with the addition of ornaments. Remember that the accents produced on the harpsichord by articulation and rhythmic alteration are necessarily subtle. The introduction of a *dissonance*, produced by an ornament, causes notes, beats, or parts of phrases to stand out in a much more obvious way.

Secondly, the addition of ornamentation can *sustain* very slow-moving parts, as well as to fill in what sound like "empty spaces" in the music. Unlike the organ, the harpsichord cannot sustain its tone. As the tone dies away, the "idea" of a note can be kept going by the addition of an ornament. Sometimes it seems as though the composer has written only an "outline" of the piece. In these cases, we need to fill in the spaces between the main notes of the outline with some kind of embellishments.

In the slow movements of dance suites or sonatas, extensive ornamentation may be expected of the player. In such movements there is time for the addition of a large number of extra notes, and the slow-moving parts need to be sustained. Thus the slow SARABANDE, or ADAGIO sonata movements are opportunities for creative embellishment by the performer.

A third purpose of ornamentation is to *vary* repeated sections of music. Much of early music, particularly the dances, is in BINARY FORM, with each of two sections being repeated exactly. It was customary, on taking each repeat, to add some new ornamentation to give a fresh view of the music.

Finally, ornaments are used to mark CADENCES (see *PLAYING WITH THE ELEMENTS OF MUSIC*), to prepare us for hearing the ends of phrases. Almost always a trill or similar ornament occurs on the note just before the final note of a cadence, marking the end of a musical sentence.

Initially, ornaments were largely EXTEMPORIZED or IMPROVISED (made up on the spot during performance). There are treatises from the 16th and 17th centuries which describe the kinds of ornaments that could be added to music. Generally speaking, the earliest composers did not indicate them. Gradually, during the 17th and 18th centuries, composers began to aid the performer by writing out their ornaments more and more explicitly.

An important reason for this change was the beginning of *music publication*, and the distribution of published music among amateur players. In early times, there was no real distinction between performers and composers, so that it was unnecessary to indicate ornaments in the written music. As the performance of music by players other than the composer became wide-spread, composers felt the need to indicate ornaments with some kind of notation.

It is very important to appreciate this history of ornamentation, because it demonstrates that embellishment is by nature IMPROVISATIONAL. Whether or not the ornaments are indicated by symbols or by notes, they should sound as though the player had just invented them on the spot! The freedom and spontaneity required can perhaps only be achieved after the player has attempted to improvise his or her own ornaments in simple pieces. Having done so, precomposed ornaments can then be added in the same spirit!

GENERAL CLASSIFICATION OF ORNAMENTS

The two main types of ornaments are known as "French" and "Italian".

The so-called "French" ornaments, and those related to them, are usually indicated in the music by SIGNS or SYMBOLS rather than by notes. One reason for this is that it is easy to recognize the symbols as being ornaments, and not to confuse them with the main notes of the piece. Secondly, the exact REALIZATION (meaning the pitches, number, speed and rhythm of the notes to be performed) cannot be specified with an abbreviation or symbol. Both these facts help to produce an improvisational effect, which should always be considered of primary importance. In most books about early music, a great deal of attention is given to the French ornament symbols and their realizations.

Equally important, however, is the so-called "Italian" style of ornamentation. This is too elaborate to incorporate into simple signs or symbols, so it is necessary to write the Italian ornaments in regular notes. This style of embellishment occurs particularly in slow movements, where, as indicated above, there is lots of room to incorporate additional notes.

Since Italian ornaments are written with ordinary notes, it is difficult to identify them, unlike the French symbols. We must learn to recognize which of the many notes of an Italian style piece are in fact ornaments, and then to treat them with the same freedom and spontaneity as those of the French style. Figure 16 shows an example of Italian ornamentation. The main notes of the melody have been circled, revealing the *ornamental* notes in between them.

Apart from the differences in the way French and Italian ornaments are written, there is also a difference in intent.

French ornaments encrust a melodic line with little jewels which sparkle upon it, but which do not change the line in any essential way. Italian ornamentation, on the other hand, tends to "hide" the simple melody, covering or concealing the original line with notes which go both above and below it.

FIGURE 16. Example of Italian Ornamentation
(from the second movement of J. S. Bach's *"Italian Concerto"*)

Fig. 16, J. S. Bach, Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, n.d. Vol. III, Bd. 1. BWV 971.

To summarize this distinction, Italian ornamentation results in a new and elaborately beautiful melody created around a few simple notes. In the French style, the original melody must always be heard, while being adorned with little clusters of notes which highlight various aspects of that melody.

Although these two types of ornaments are labelled "French" and "Italian", Baroque musicians of every nationality actually used both kinds of ornamentation. Figure 17 gives an

example of "Italian" ornamentation by a French composer. The use of "French" symbols by an Italian composer can be seen in Figure 18. Needless to say, English and German composers likewise used a mixture of styles.

FIGURE 17. Example of "Italian" Ornamentation in French Music.
from François Couperin, *La Majesteuse* (*Sarabande*)

FIGURE 18. Example of "French" Ornamentation in Italian Music
Trill symbols in a Sonata by Domenico Scarlatti (K133)

Fig. 17, F. Couperin, *Pièces de Clavecin, Ordre I.* Facsimile of the 1713 edition, page 4. Reproduced by arrangement with Broude Brothers Limited, 141 White Oaks Rd., Williamstown, MA 01267.

Fig. 18, D. Scarlatti, *Sixty Sonatas*, Vol. I, page 76 (K133). R. Kirkpatrick, ed. Copyright © 1953 G. SCHIRMER, INC. (Copyright Renewed) International Copyright Secured. All Rights Reserved. Reprinted by Permission.

One important point to be made concerns the *legato performance* of virtually all ornaments, regardless of national origin! Once you have decided which notes actually belong to a given ornament, all of these notes should be placed under a "mental slur". This serves

to tie all the notes of a single ornament together, none of which (beyond the first) should be given an accent such as would follow an articulation.

CLASSIFICATION OF ORNAMENT SIGNS AND SYMBOLS

1. The TRILL
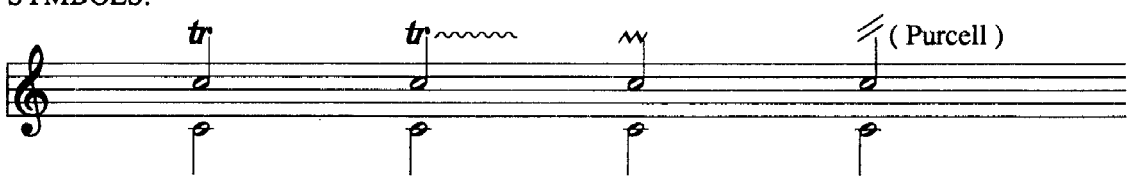
The most common ornament is the TRILL, in which the written note, called the MAIN NOTE, alternates with a note either a half step (m2) or a whole step (M2) *above* it. This upper note is called the UPPER AUXILIARY.

A great many Baroque trills begin on the upper auxiliary, alternate rapidly with the main note, and end on the latter. Remember that the *main note* is the one you see written in the music! We call this an UPPER NOTE TRILL.

The smallest number of notes (called REPERCUSSIONS or BEATS) possible in an upper note trill is four, as shown in Figure 19. If the main note is a long one (as a half or whole note), the trill can be greatly extended with a larger number of repercussions.

Figure 19 shows some common SIGNS for trills, and some possible REALIZATIONS. In all of the figures which follow, it is very important to remember that ornaments need not be played in such an *exact* manner as appears in the realizations. Remember that the appearance of precision is owing to the limitations of our notational system!

FIGURE 19. Upper Note Trills--Various Signs and Realizations

2. TRILLS with TERMINATIONS

A common variant of the upper note trill includes a TERMINATION. The *termination* is a neat way of ending a trill so that the notes connect with the note which follows the ornament. Figure 20 shows trills with such endings. The termination normally consists of the main note, the note *below* the written note (called the LOWER AUXILIARY), and a return through the main note to a new written note a step above the main note of the trill.

Sometimes, as shown in Figure 20, the repercussions of the trill may cease in the middle of a long note, with the termination occurring after holding the main note (after the trill proper is completed). Occasionally the termination may be played *before* the end of the time value of the main note, and be followed by a breath of silence!

FIGURE 20. Trills with Terminations
(These are USUALLY, but not always, played in relation to a following note.)

3. TRILLS with PREFIXES

Many trills begin by prolonging the very first note, which is the *upper auxiliary* (see Figure 21.)

Sometimes more elaborate PREFIXES are used. Figure 21 shows a prefix which starts *below* the main note, passes through the main note to the upper auxiliary, finally beginning the repercussions of the trill itself. Another is shown in which you begin on the upper auxiliary, pass down through the written note to the lower auxiliary, back up again to your starting place (upper auxiliary), at which point you finally begin the trill proper. Needless to say, with elaborate prefixes which take up time, the trills need to be on long notes.

Figure 27 (page 43) shows all the common signs and symbols for trills, with their possible additions and variations.

FIGURE 21. Trills with Prefixes
Possible realizations follow each symbol.

4. MAIN NOTE TRILLS

Some trills begin on the main note itself, and alternate with an upper auxiliary. An example of a long trill of this type is the Italian RIBATTUTA. This interesting ornament begins with a *dotted* configuration, starting slowly and gradually speeding up to a full trill. The ribattuta is shown in Figure 22.

Notes should be connected in a LEGATO manner, as with all ornaments.

FIGURE 22. Ribattuta
This Italian ornament can sometimes be used in place of a long trill.

A main note trill without this rhythmic alteration at the outset is probably a much more common occurrence than most harpsichord players realize. For example, the opening of J. S. Bach's Prelude in G minor from Book I of the *Well Tempered Clavier* is shown in Figure 23 (page 38). This movement begins with a long trill in the right hand. Inasmuch as the opening harmony of a prelude should be that of the tonic chord, it does not make sense to start the piece with a dissonant A against the G of the bass.

In this situation (Figure 23), I would use a trill which starts on the main note, and which gradually accelerates and finally dies away. This type of treatment does not result in an accent (such as would be produced by the upper note trill). It is, instead, a means of sustaining the G and thus prolonging the initial harmony.

FIGURE 23. Opening Trill in a Prelude of J. S. Bach

Fig. 23, J. S. Bach, *The Well-Tempered Clavier, Vol. I*, No. 16. Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, 1866. Vol. XIV. BWV 861.

It is probable that many of the ornaments to be played in early English music (from the Elizabethan and Jacobean periods) are intended to be short main note trills, with only three or five repercussions. There is great uncertainty as to the meaning of the early English ornament symbols, since no treatises describing these have survived.

However, many upper note trills are written out in full in this music, suggesting strongly that the ones indicated by symbol are of a different type.

The English symbol most likely associated with the main note trill, along with suggested realizations, is illustrated in Figure 24.

FIGURE 24. Main Note Trills in English Music
("Jhon Come Kiss Me Now" by William Byrd)

Fig. 24, William Byrd, from the *Fitzwilliam Virginal Book,* Vol. I, No. 10, 1963. J. A. Fuller Maitland and W. Barclay Squire, editors. Dover Publications, Inc., 180 Varick St., New York, N.Y., 10014. Used with permission.

5. SLURRED TRILLS

The "slurred trill" is a variant of the main note trill, described above. These occur when the upper auxiliary of a trill happens to be the same note as the note which comes right before the trill. If you think about this, you will see that this situation applies when the melody line is descending by step. In the French style, as described by François Couperin, such trills were often played without repeating the upper auxiliary, thus effectively *tying* this upper note with the preceding note.

François Couperin indicated this type of trill with a *slur* between the preceding note and the written main note which is to be trilled. The result is a trill which begins on the main note, and which is slurred in a very legato manner to the note before it (see Figure 25). This type of trill, therefore, does not produce an accent. It can be softened still further by beginning the trill *after the beat* on which the main note begins, still holding over the upper auxiliary from the beat before it.

The slurred trill usually occurs on an unaccented beat, since the ornament does not create an accent. For this reason, too, this type of main note trill usually occurs on a short note and is itself short in duration.

It is my belief that the slurred trill was extremely common in all national styles, even though it was not discussed by composers outside of France. I think this form of the trill should be used liberally in places where trills are indicated on weak, unaccented beats. Its probable inclusion in two pieces by J. S. Bach is indicated in Figure 25 (page 40).

FIGURE 25.   Slurred Trills in F. Couperin and J. S. Bach

Fig. 25, 1) François Couperin, *Pièces de Clavecin, Ordre I*, page 88. K. Gilbert, ed. Published with the kind authorization of Éditions Heugel, 175 Rue Saint-Honoré, 75040 Paris, Cedex 01.

2) François Couperin, *Pièces de Clavecin, Ordre V*, page 123. K. Gilbert, ed. Published with the kind authorization of Éditions Heugel, 175 Rue Saint-Honoré, 75040 Paris, Cedex 01.

3) J. S. Bach, Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, 1897. Vol. XLV, Bd. 1. BWV 814.

4) J. S. Bach, Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, 1890. Vol. XXXVI, Bd. 4. BWV 190.

After mastering these details of how the notes are realized, it is extremely important to remember that any trill is an *ornament*, and therefore should be allowed great freedom and flexibility of expression.

Sometimes you may want a short, tight, "spicy" trill which strongly accents a particular note. At other times, you might desire a flowing, slowly developing series of repercussions, which can lovingly extend the sound of a beautiful long note. Occasionally you may wish

to leave a space between the repercussions of the trill and its termination. On still other occasions, you might tighten the entire trill and its termination, leaving a space between the latter and the next note.

The auxiliary tone involved in an ornament (such as the upper auxiliary in the trill) must be within the tonality of the phrase in which it occurs. In the key or tonality of G minor, for example, a trill on the note D would use E♭ as the upper auxiliary (a half step above the main note). In the key of G major, however, a trill on the same main note (D) would use the auxiliary E♮ (a whole step above, and appropriate to the G major tonality).

In deciding whether an auxiliary note should lie a half or a whole step away from the main note, you must notice whether or not the music has MODULATED into a key other than that of the key signature (refer to *PLAYING WITH THE ELEMENTS OF MUSIC*). François Couperin very kindly wrote sharps or flats above or below his ornament signs, to precisely place the auxiliary note. Most other composers did not do this, and, like J. S. Bach, expected us to know the tonality of the phrase.

Although rules are given that ornaments must begin exactly *on the beat* at all times, I think a certain latitude is possible depending on the musical context. We know that sometimes the beginning is delayed, as in the slurred trill of François Couperin. Generally the function of a trill is not well served by beginning *before* the beat. However, this possibility can be considered in some situations, in the interest of making the flow of the music as free as possible. The most meaningful "rule" in music is to listen carefully to the instrument, and to the musical effect you are creating!

Figure 27 on page 43 summarizes the various symbols used by composers of different periods for trills of different types. Unfortunately for the player, it is necessary to learn the appearance of all these signs, since different composers used different symbols for the same ornaments.

The trill is the most common of all harpsichord ornaments, and it is useful to learn to trill in each hand with all possible combinations of fingers. Each player needs to learn which of his or her fingers are the strongest for trilling. These should be used whenever possible, as they will readily produce the most beautiful trills. However, one also needs to practice other finger combinations, in order to be able to use any pair of fingers as may be required by the fingering of the music. Simple trill exercises are indicated in Figure 26 (page 42).

6. The MORDENT

This is the next most common ornament among the French symbols. The MORDENT resembles a trill in that the repercussions alternate between the main note and an auxiliary pitch. With the mordent, however, the auxiliary is the note *below* the written note (LOWER AUXILIARY). It is either a half or a whole step below, depending on the tonality (see the remarks above concerning which auxiliary to use with a trill.

8va -

Continue down three more octaves, using the *same* pair of fingers all the way. Then start over again with a new fingering.

Use the following pairs of fingers, and decide which you like best!

> **RH: 3-2, 4-3, 5-4, 3-1, 4-2, 5-3**
> **LH: 1-2, 2-3, 3-4, 4-5, 1-3, 1-4, 2-4, 3-5**

Snap the second finger of each pair down on the final note and hold, as indicated.

Practice getting a *very smooth legato* over each pair of notes. Only after getting the feel of connection of the strings, try speeding up the trills, as follows:

and
8va - even *8va* -

etc.   etc.
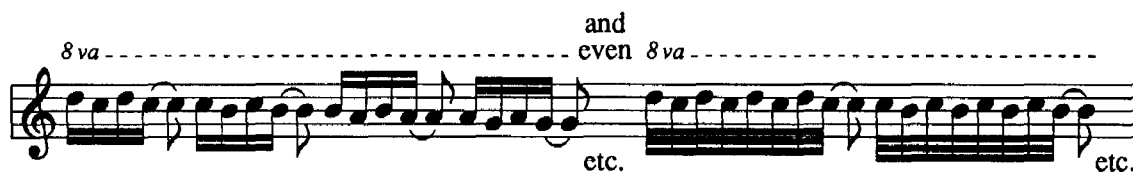
Also be sure that you try exercises using sharps and flats, as suggested here:

etc.

Try *extending* a trill over a longer period of time. Start *slowly*, and *gradually* speed up.

Think of the long trill as a phrase, and focus your attention on the final note. Snap your finger down onto this last note and hold it. Gradually extend the trill over a longer and longer time span. At first you will tire easily, but with practice you will develop endurance.

Now try the extended trill while keeping a steady beat on one note in the other hand! Do not let the steady pulse change while you accelerate your trill!

Now you are ready for the long trills in Bach Inventions, among others!

FIGURE 26. Trill Exercises

FIGURE 27. Summary of Trill Symbols

The most common mordent (Figure 28) consists of only three notes. It begins on the main note, goes down to the lower auxiliary, and returns to end on the main note. Like the trill, the mordent may be extended on long notes, including many more repercussions. Occasionally the mordent actually begins on the lower auxiliary, goes upward to the main note and finally ends there. Remember always to end on the main note!

Like the trill, the mordent generally begins right on the beat, and almost never before it. Occasionally the mordent can be delayed, starting after the beat. Remember, too, that like other ornaments, it should be performed in a *legato* manner.

*WATCH OUT! Purcell's mordents look like trills!

FIGURE 28. Mordents

7. The APPOGGIATURA

The APPOGGIATURA (pronounced "ah-poj-yah-*toor*-ah") is a single note which is *dissonant* with the bass. The ornament either rises or falls by step to a main note, which is consonant with the bass. This ornament should always be played precisely on the beat.

An appoggiatura is sometimes indicated by a note written in very small print. Sometimes a special symbol, such as given by d'Anglebert and Rameau, was used. At other times, the appoggiatura is actually written out in ordinary notes. (See Figure 29.)

Appoggiaturas can be long or short. If long, the ornament may take up as much as 2/3 of the value of the main note. It can also be very brief, like the beginning of a trill or mordent. As with other ornaments, the dissonant note is *slurred* to the main note. To enhance the accent given by the dissonance, it is important to clearly articulate the appoggiatura itself (preceding it with a short silence).

SYMBOLS -- Any of which can be performed in any of the following ways:

SYMBOLS   Various of the possible realizations:

Remember always to make the ornament connect with the Main Note in a LEGATO manner.

FIGURE 29. **Appoggiaturas**

A *rising* appoggiatura is often combined with a mordent. The French refer to this combined ornament as the *PORT DE VOIX PINCÉ* (approximately pronounced "pour-de-vwah-pah-say"). The result is similar to a mordent coming from below, with the first lower auxiliary note often prolonged. Figure 30 shows examples with different symbols and realizations.

8. The so-called "PASSING" APPOGGIATURA

A true, dissonant appoggiatura occurs *on* the beat, as stated above. Some ornaments, which (unfortunately!) look just like these, are played *before* the beat. Since these resolve to a consonant note directly on the strong beat with which they are associated, they are not true

SYMBOLS   POSSIBLE REALIZATIONS:
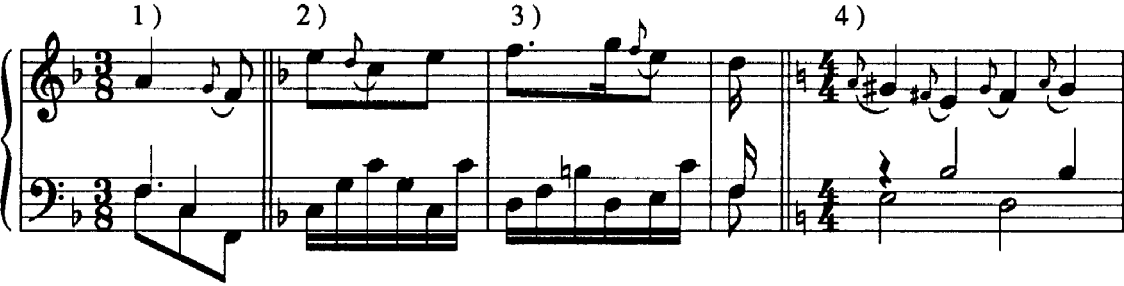
Remember to play these ON THE BEAT, and with all Notes connected in a LEGATO manner.

FIGURE 30. Port de Voix Pincé
(This is really a combined APPOGGIATURA plus MORDENT.)

appoggiaturas. They are referred to as "passing", and are called *NACHSCHLÄGE* (this is pronounced "nahkh-shlay-guh") by the Germans. (The singular of this word is *NACHSCHLAG*, and is pronounced "nahkh-shlahg".)

The "passing" appoggiatura always (and only) occurs at a point where the melodic line passes downward through the interval of a third (M3 or m3). It is very common in French music at the ends of phrases. It can occur at other points within the phrase, but one needs to "try out" both the strong appoggiatura as well as the "passing" variety, to decide which is most appropriate in any given situation.

Examples from F. Couperin

Appoggiaturas which pass downward through the interval of a third are played *before* the beat (passing) at CADENCES, as in example 1, and when passing from a strong to a weak beat, as in example 2. The ornament in example 3 should be played *on* the beat, as it moves from a weaker to a stronger beat in the measure. All the appoggiaturas in example 4 should be *on* the beat, regardless of interval relationships, inasmuch as they form a SEQUENCE.

FIGURE 31. The So-Called "Passing" Appoggiatura

Fig. 31, François Couperin, *Pièces de Clavecin, Ordres IV* and *V*. K. Gilbert, ed. Published with the kind authorization of Éditions Heugel, 175 Rue Saint-Honoré, 75040 Paris, Cedex 01.

It is customary to articulate before the appoggiatura, thus slurring into the main note which is on the beat. Frequently this results in a slur over a bar line, which necessarily weakens the natural accent on a strong beat. Think, as you do this, of the profound difference in the effect of a passing *Nachschlag* compared with a normal appoggiatura.

Figure 31 on page 45 illustrates examples of "passing" appoggiaturas. Observe that you cannot tell by their appearance which kind of appoggiatura is appropriate in any given case. Whenever you see the appoggiatura symbol in the passing position of a descending third, you should at least give the "passing" form of this ornament a try!

9. The ACCIACCATURA

This ornament (pronounced "ah-*chah*-ka-toor-ah") serves a similar function to that of the strong appoggiatura. Rather than just decorating a single line of melody, however, the acciaccatura often (although not always) occurs as part of a chord. It is a single note which is dissonant with the bass and with other members of the chord. Like the appoggiatura, the acciaccatura is written out, either in small notes or in notes of ordinary size.

The distinctive feature of the acciaccatura is that it is played *simultaneously* with its main note, or note of resolution. The ornament is then released, quickly or slowly, depending on the degree of dissonance one wishes to hear. The effect, as illustrated in Figure 32, can be quite startling!

FIGURE 32. Acciaccaturas
(from Domenico Scarlatti, K132)

Although the French composers achieved somewhat similar effects with the use of overlegato in arpeggiated chords, the acciaccatura is a strictly Italian ornament! Look for it particularly in the music of Domenico Scarlatti and his followers.

10. The ARPEGGIO

Normally almost all chords of three or more notes are played in an ARPEGGIATED or slightly broken manner. This means that the notes are not struck simultaneously, but are generally played from the bass upward. The notes can follow each other very rapidly or quite slowly, and always in a legato or overlegato manner.

Occasionally an arpeggio sign or symbol, such as is shown in Figure 33, is actually indicated in the music. This implies an *ornamental* arpeggio, in contrast to the normal breaking of chords.

To distinguish an ornamental arpeggio from your normal treatment of chords, the spacing of the tones of the chord needs to be greater (further apart). The notes may come in a sequence different from the usual bottom to top. Figure 33 shows some common possibilities, breaking upwards or downwards.

Notice that Bach's symbol does not distinguish between UPWARD and DOWNWARD arpeggios.

FIGURE 33. **Arpeggios**

Many other decorative ways to break chords are possible. Some examples are given in Figure 34 (page 48). If there is time (!), any of these (or others) can be used, even if only a simple arpeggio sign is given.

Sometimes the sign for an arpeggio indicates that passing or dissonant tones are to be added in between the notes of the chord. Examples are shown in Figure 35 (page 48). The realization involves introducing and then releasing nonchord tones, while the rest of the notes of the chord continue to be held. Compare this with the less delicate acciaccatura, described above (page 46). The introduction of such passing tones is similar to the somewhat simpler ornament called the SLIDE, described on page 51.

Chords may be broken in a MEASURED or an UNMEASURED fashion, according to taste.
Total time for the full arpeggio must be the same as the length of the original chord.
Use overlegato "to taste".

As you can see, there are essentially no limits! Try discovering more ways yourself.

FIGURE 34. Example of Ways to Break an Arpeggio

FIGURE 35. Arpeggios with Passing Notes

Occasionally composers wrote a whole series of chords in solid blocks, with the word ARPEGGIO or *"HARPEGGIO"* above the entire collection. This is illustrated in Figure 36 (page 49). Of course the manner of breaking the chords is entirely up to the performer.

Finally, sometimes one finds a somewhat perplexing arpeggio sign over a two-note interval. What is usually meant is a rather even and metrical breaking of the interval, while holding the first note in an overlegato fashion under or over the second (see Figure 38 on page 50). Although in theory this realization could easily be achieved without using an ornament sign, labelling it as an embellishment (that is, giving it a symbol) results in a somewhat freer treatment than would be likely with strictly written note values.

The Number of Notes varies within each chord. Therefore, you will have to vary
the RHYTHM of your realization in each measure.

etc.
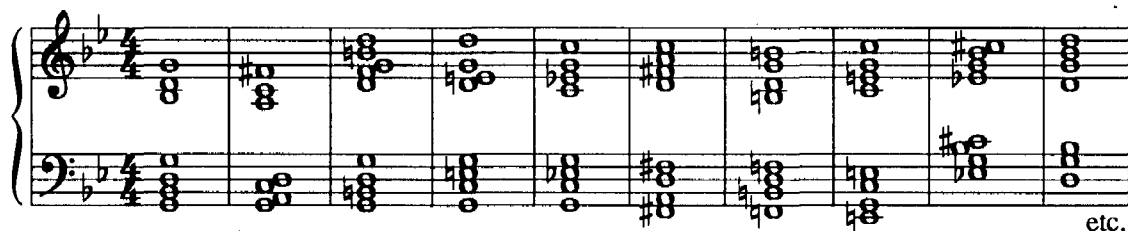
FIGURE 36. Prelude (titled "Arpeggio") by Handel

Fig. 36, G. F. Handel/Squire and Fuller-Maitland PIECES FOR HARPSICHORD. Vol. I, page 41. Used by permission of European American Music Distributors Corporation, sole U. S. and Canadian agent for Schott.

Two-note intervals marked with arpeggio signs may sometimes include a dissonant passing tone (Figure 38, page 50). These are then identical to the three-note SLIDE (page 51).

11. The TURN

This is another extremely common ornament. The TURN consists of a group of notes which surround the written (main) note.

The ornament starts on the note a half or whole step above (upper auxiliary). It passes down through the main note, and goes below it to the lower auxiliary (a half or whole step below). Finally, it returns to the main note, ending there.

SYMBOL   PLAYED

            or

FIGURE 37. The Baroque Turn

Remember that there are exactly four notes in the usual Baroque turn! The main note may be held after the turn, but more commonly, the ornament leads directly into a new note a step above the one which bears the sign.

The turn is similar to the group of notes which forms the *termination* of a trill (page 36). Figure 37 shows the symbol and two possible realizations for the turn. This can, of course, be played quickly or slowly, depending on the musical context and on the length of the main note.

WRITTEN   PLAYED   WRITTEN   PLAYED

(from Marchand)

When symbols are used, the realization of the arpeggio may be slightly freer than in the cases below, where the arpeggiation is written out.

Notice that the second symbol, which looks like an arpeggio sign, actually results in a SLIDE, containing a dissonant passing note.   (In François Couperin's Table of Ornaments, these two symbols are exactly reversed!)

(from F. Couperin)

Another way to write 2-Note Arpeggios (from the same piece):

FIGURE 38.   Two-Note Arpeggios

Fig. 38, Louis Marchand, *Pièces de Clavecin*, page 9, edited by T. Dart, revised by D. Moroney. Éditions de L'Oiseau-Lyre, S. A. M., Les Remparts, Monaco. Used with permission.
François Couperin, *Pièces de Clavecin, Ordre III*, pp. 78-9. K. Gilbert, ed. Published with the kind authorization of Éditions Heugel, 175 Rue Saint-Honoré, 75040 Paris, Cedex 01.

It should be noted that the turn had a different realization during the Classical and Romantic periods. This later type of turn included five notes. It started on the main note, proceeded up to the upper auxiliary, back down through the main note to the lower auxiliary, and finally up again to end on the written note. Occasionally, in Baroque music, one finds such a five-note turn written out in ordinary notes. It is entirely possible to use five-note turns among your many possible ornaments when freely improvising.

12. The SLIDE

Another common ornament is the slide. This can be written in different ways, as shown in Figure 39. It basically consists of two notes, starting a third (major or minor) *below or above* the main note, and sliding through a passing tone up or down to the latter.

In French music, the starting note is indicated. Notice the similarity of the symbol to that of a passing nonchord tone in an arpeggio (see Figure 35, page 48). The German notation shows the main note only. These symbols are shown in Figure 39. The occasional French slide which resembles a two-note arpeggio is shown in Figure 38.

Regardless of how it is written, the slide begins exactly on the beat with its first note, the passing and ending (main) notes following an unspecified amount of time later. It can be played quickly or slowly, depending on whether you want to hear it as an accent on the beat, or as a slow filling out of "empty" space on the instrument.

FIGURE 39. The Slide

ORNAMENT TABLES

There are still other ornaments indicated by special symbols, particularly in the French school. Rather unfortunately, each French Baroque composer created his own shorthand for indicating ornaments. These were laid out in ORNAMENT TABLES, which showed the symbols and their approximate realizations. These ornament tables (appearing in the published music of French composers) must be consulted when playing any French Baroque music.

The writings of Howard Ferguson, Howard Schott, and Richard Troeger, cited in the reading list at the end of this volume, contain excellent summaries of the various ornaments and their symbols as they appear in the Baroque harpsichord literature.

The so-called "French" ornaments can be added to any kind of music. You should use them to vary your pieces, to give accents where needed, and to fill out "empty spaces" where the notes seem to be moving too slowly for the harpsichord to sustain. Additionally, trills are expected at cadences (on the PENULTIMATE, or next-to-last, note). Depending on the amount of time available, trills may or may not have terminations and even prefixes.

Make an ornament table of your own, using any symbols which are easy for you to remember. (As a student, I found François Couperin's table most comprehensive and straightforward.) As you work on a piece, write in some ornament symbols so that you can remember what you wished to add as you go through the piece a second time. As you gain facility with ornaments, you will be able to do this spontaneously. At the beginning, you will need reminders of what you had decided were the nicest possible ornaments for each place in the music.

Remember, just as with ornaments written in by a composer, you must perform your own in a free and easy manner. The listener should never be able to distinguish between ornaments which were written on the page of music, and those tossed off improvisationally by the performer!

STUDY AND PERFORMANCE OF ORNAMENTS

Students often ask, "How can I make my ornaments sound smooth and liquid, as they do with a truly expert player?" In practicing ornaments, play them very slowly, constantly feeling for the connection between the plucking of one string and the next, until a very smooth *legato* is attained. Then play the ornament at the correct tempo, trying always to retain the sense of smooth connections between the notes.

Keep your hand very light, making sure that you are supporting your hand with your forearm, and not pressing down into the keys. The only time that you should allow forceful pressure on a key is at the end of a fast trill. Here you can "snap" your finger down on the final note, giving the entire trill a certain rhythmic impulse towards that note.

It is often stated that ornaments should always be played on the beat (with the exception of the "passing" appoggiatura or *Nachschlag*). However, in actual Baroque practice there seems to have been considerable latitude possible. Figure 40 shows an excerpt from a piece by the French composer Antoine Forqueray. The notes have been carefully placed on the page, showing considerable lack of simultaneity between the hands. Some of the ornamental notes in the right hand even come before the left hand downbeats! Notice also that the bass notes themselves do not always coincide with the beats. This extraordinary freedom and flexibility of note placement suggests that a rigid concept of where to begin ornaments is probably not a realistic view of actual Baroque performance practice.

FIGURE 40. Sarabande ("La Léon") by A. Forqueray Showing Alignment of Parts

Fig. 40, Antoine Forqueray, *Pièces de Clavecin*, page 94. C. Tilney, ed. Published with the kind authorization of Éditions Heugel, 175 Rue Saint-Honoré, 75040 Paris, Cedex 01.

DIVISIONS AND DOUBLES

There are two additional types of ornamentation referred to in the literature on early music. DIVISIONS was the word used by early English composers to represent ornamented repeats or variations. Even in binary or ternary dance pieces, the repeated sections with new ornamentation were frequently written out by the composer. The composition of divisions involved filling in the spaces between the main beats with a larger number of notes (of smaller note values) than in the original version. An example is shown in Figure 41 (page 54).

Divisions are similar to the Italian style of ornamentation (see pages 32-35, above), in that the newly added notes completely fill and obscure the original simple melodic line.

First six measures of opening, called Variation 1:

The same six measures of Variation 2:

The same six measures of Variation 3:

FIGURE 41. **Elizabethan Division Technic: "Robin" by John Munday**
(Modified from the *Fitzwilliam Virginal Book, No. 15*)

Fig. 41 (page 54), John Munday, from the *Fitzwilliam Virginal Book*, Vol. I, No. 15, 1963. J. A. Fuller Maitland and W. Barclay Squire, editors. Dover Publications, Inc., 180 Varick St., New York, N. Y., 10014. Used with permission.

FIGURE 42. Sarabande and Double by J. S. Bach (BWV 833)

Fig. 42, J. S. Bach, Neue-Ausgabe Sämtlicher-Werke. Ser. V, Vol. X, pp. 64-65. Gemeinsame Edition: >> Bärenreiter-Verlag Kassel . Basel . Tours . London << und >> VEB Deutscher Verlag für Musik Leipzig << Alle Rechte Vorbehalten / 1976 / Printed in Germany. Reproduced with permission.

However, the English (and also early Spanish) division is a more rhythmically regular and less free and fluid type of variation than is typical for Italian ornamentation (see Figure 41).

Divisions were commonly EXTEMPORIZED (improvised) by the player. Frequently one would be given a tune, and would produce a series of variations which were then called "divisions".

Analogous to the divisions, were the French DOUBLES (pronounced "doobl"). The DOUBLE consisted of a second version of an entire piece, in which the notes in between the

main beats are now moving twice as fast as previously. Again, this idea could be extended to an entire set of variations.

Figure 42 (page 55) shows an example of a DOUBLE. This one is actually by J. S. Bach, who frequently borrowed ideas and technics from his French contemporaries.

The double needs to be distinguished from an ordinary ornamented repeat such as that shown in Figure 43. The double is charactarized chiefly by the regularity of the added notes, similar to those of a division. The double was played as a second piece, after having played the original with all its repeats. Repeats may be taken in the double as well, making it into a true VARIATION rather than simply an ornamental way of taking a repeat.

The ornaments added by the player, when repeating each section of a binary piece, were called *AGRÉMENTS* (pronounced "ah-gray-maw") by the French. The ornaments shown in Figure 43 should be played on the second repeat of each section, and not in the manner of a double. Bach was here giving us a lesson in the art of improvisation of ornaments, which should of course be played in the free and flexible style of spontaneous embellishment.

THE USES OF ITALIAN ORNAMENTATION

Finally, when does one use the florid Italian style of ornamentation, and how does one learn to use it? The symbols of the "French" school are much easier to get under one's fingers, and study of French Baroque music can quickly give you a feeling of how and where to add these small, graceful decorations.

The best way to learn the art of Italian ornamentation is to study pieces such as the slow movement of Bach's *Italian Concerto* (Figure 16 on page 33) or his G minor *Sarabande with Agréments* (Figure 43). Many other examples exist for the harpsichord, and even more in the Baroque chamber music literature.

With considerable exposure to the Italian style, you will begin to be able to embellish slow pieces in a similar manner. As with the French ornaments, you should feel free to write in some notes or shorthand indications of note patterns at the beginning of your study. Just remember to play them in a very free manner.

The addition of your own Italian style ornaments is not regularly called for in the harpsichord literature. In the 18th century at least, when this type of embellishment was required, the composer generally wrote it out. It is extremely important, however, to be able to recognize those notes in an Italian piece which are in fact ornamental. To study such pieces, you should simplify the melodic line, making an outline which could represent a simple, unadorned version of the music. Then add back the ornaments the composer has provided, but play them as though you had invented them yourself!

Sarabande, beginning of the second section:

Ornamented repeat (*Agrémemts*):

FIGURE 43. *Sarabande with Agréments* **by J. S. Bach (BWV 808)**
(From the G minor "English" Suite)

CHAPTER V. MUSICAL TEXTURE AND CONTRAPUNTAL FORMS

HOMOPHONIC *vs.* POLYPHONIC OR CONTRAPUNTAL MUSIC

The TEXTURE of music is made up of "horizontal" and "vertical" components. These words refer to the way various musical elements actually appear on a page of written music. *Horizontal* components are successive sounds which form melodies--often more than one at the same time. *Vertical* components of the texture are simultaneous sounds, such as the intervals and chords which result in musical HARMONY (refer to *STARTING ON THE HARPSICHORD* and to *PLAYING WITH THE ELEMENTS OF MUSIC*).

1) Melody largely in the bass (J. S. Bach)
    (Note the ARPEGGIATED chords in the right hand.)

2) Melody in the soprano part (from Pierre Attaingnant)
    (Note the SOLID chords in the left hand.)

FIGURE 44. Pieces in Homophonic Style

Fig. 44, 1. J. S. Bach, *The Well-Tempered Clavier, Vol. I*, No. 21. Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, 1866. Vol. XIV. BWV 866.

Fig. 44, 2 (page 58). Pierre Attaingnant, *Quatorze Gaillardes...* London Pro Musica Edition EK14, p. 25. Reproduced with permission from London Pro Musica Editions, 15 Rock Street, Brighton BN2 1NF, England.

Some music has a texture in which *vertical* elements predominate. This type of music is called HOMOPHONY or HOMOPHONIC MUSIC. Generally this type of music consists of a single MELODIC LINE, usually at the top (SOPRANO) or as the very lowest line of notes (BASS). This single melody will be accompanied by chords, or single notes which outline the harmonies. Examples are shown in Figure 44.

Another kind of homophonic piece actually consists of several VOICES (melodic lines) all of which have the same *rhythm* throughout. These are actually heard as a succession of chords. Figure 45 shows a chorale in which this type of homophony is present.

FIGURE 45. Homophonic Chorale
(All voices move simultaneously.)

Fig. 45, Source: Episcopal Hymnal, No. 277 ("Old Hundredth").

In contrast to homophony, there is much music in which the *horizontal* elements predominate. When several VOICES or melodic lines are played or sung at the same time, the music is called POLYPHONIC, or POLYPHONY (pronounced "pol-*if*-oh-nee"). When two or more voices are composed so as to work in contrast to each other, either in the direction of the melodic lines or in their rhythms, we speak of CONTRAPUNTAL MUSIC, or COUNTERPOINT. In this type of texture, the voices are heard as *independent* of each other, and the melody lines may stop and start in different places.

It is important to note that there is no such thing as "purely" horizontal music. As soon as two or more parts are sounded simultaneously, a "vertical" element is introduced, since we hear the harmonies produced by the notes which sound together. No two voices can be composed in an entirely independent manner, or the result would be chaos! However, it is important to recognize the types of pieces in which apparent independence of the parts is sought, inasmuch as the approach to performance of such pieces is very different to that of "purely" homophonic music.

COUNTERPOINT can be classified either as FREE, in which the voices seem to be totally independent, or IMITATIVE. In imitative counterpoint, the voices in the different parts "copy" each other. The voice or voices which "copy" the initial melody are called ANSWERING VOICES, and the "copies" are known as ANSWERS.

Imitation itself may also be rather free, or quite exact. In EXACT IMITATION, both intervals and rhythm are precisely copied in different voices. Observe that the notes themselves may be different, if the imitation begins on a different note in the answering voice. Such exact "copying" is also called REAL IMITATION. The part of the second voice which answers the first in this precise way is said to give a REAL ANSWER. An example is shown in Figure 46.

FIGURE 46. Imitation--Real Answer

Fig. 46, Girolamo Frescobaldi, *Orgel- und Klavierwerke*, Bd. II, p. 10. Bärenreiter-Verlag, Kassel. BA 2202. Reproduced with permission.

Freer forms of imitation include, for example, copying the intervals exactly but changing the rhythm, or imitating the rhythm and not the notes themselves (Figure 47). Sometimes the intervals are changed slightly as one passes from one voice to another, in order to conform to the tonality. In this case we speak of TONAL IMITATION, or a TONAL ANSWER (Figure 48, page 62). Additionally, ornamentation may be added to change to a greater or lesser degree the sound of the imitative part (Figure 49, page 62).

Other interesting imitative "tricks" (called "scholarly devices"!) include the following (Figures 50 and 51, page 63): INVERSION involves turning the original melodic line upside-down! This can also be exact or approximate. AUGMENTATION is the case where an answer is played in notes twice as long as the original. DOUBLE AUGMENTATION is

the use of notes four times as long! DIMINUTION is the opposite of augmentation, where the answer is performed in notes of half the value of the original (DOUBLE DIMINUTION uses notes of one fourth the original value).

1) Imitating the rhythm, changing the intervals (J. S. Bach, *Sinfonia 6*)

2) Imitating the intervals, changing the rhythm (Frescobaldi, *Canzona detta la Gardana*)

Subject (already rhythmically modified)

new rhythm, same Subject (STRETTO)

FIGURE 47. Imitation of Rhythm *vs*. Interval

Fig. 47, 1. J. S. Bach, Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, n.d. Vol. III, Bd. 1. BWV 792.

Fig. 47, 2. Girolamo Frescobaldi, *Orgel- und Klavierwerke*, Bd. I, p. 77. Bärenreiter-Verlag, Kassel. BA 2201. Reproduced with permission.

mm. 1 - 3. Intervals are adjusted to the tonality:

mm. 17 - 19. Two further statements of the subject, additionally adjusted for new tonalities:

FIGURE 48. Imitation--Tonal Answer

Three different versions of the same motive, in a Prelude by J. S. Bach:

mm. 1 - 2   mm. 5 - 6   m. 27

(Note change of mode in these two examples.)

FIGURE 49. Imitation with Ornamentation

1) J. S. Bach, BWV 871

Subject in original form

Subject inverted and augmented

Subject inverted

(All three statements of the subject are presented in stretto.)

2) J. S. Bach, BWV 878

mm. 1 - 2   mm. 28 - 29

Subject in original form

Two statements of Subject in diminution

FIGURE 50. **Manipulation of Fugue Subjects**

Jan Pieterzoon Sweelinck. *Fantasia Chromatica*

mm. 1 5. Subject in original form: mm. 171 - 174. Stretto of Subject in diminution:

mm. 189 - 192. Subject in double diminution (no stretto):

FIGURE 51. **Further Subject Manipulation**

(Citations on page 62.)

Actual pieces often have mixtures of free and imitative counterpoint, as shown in Figure 52. Additionally, many Baroque keyboard pieces exhibit a combination of homophonic and polyphonic elements.

FIGURE 52. **Mixture of Free and Imitative Counterpoint in a Fantasia by Byrd**

Fig. 52, William Byrd, from the *Fitzwilliam Virginal Book*, Vol. I, No. 8, 1963. J. A. Fuller Maitland and W. Barclay Squire, editors. Dover Publications, Inc., 180 Varick St., New York, N. Y., 10014. Reproduced with permission.

FIGURE 53. Allemande Showing Mixed Contrapuntal and Homophonic Writing

Fig. 53, Louis Couperin, *Pièces de Clavecin*, page 67. A. Curtis, ed. Published with the kind authorization of Éditions Heugel, 175 Rue Saint-Honoré, 75040 Paris, Cedex 01.

The contrapuntal idea was very strong in the Baroque period. Even in dance pieces, which were essentially homophonic in outlook, imitative material was often introduced. Examples are shown in Figures 53, above, and 54 (page 66).

Voices in strictly contrapuntal pieces are referred to, from the top down, as SOPRANO, ALTO, TENOR, and BASS. The majority of contrapuntal works are based on four voices. When fewer than four are present, it is considered that one or more of the normal voices has been left out. Thus a two-voice work is thought of as consisting of soprano and bass only. Occasionally a fifth or sixth voice may be added. Such works are rare, and needless to say, very difficult for the keyboard performer.

One important point needs to be made concerning the notation of contrapuntal pieces for keyboard, especially those which are written in four voices throughout. Very often such pieces were written in OPEN SCORE. This means that each voice was written on a separate staff, generally with the clefs corresponding to the names of the voices (soprano, alto, tenor, bass--see page 12, above). This enabled the player to easily follow the separate parts. The use of such scores caused much confusion during the 19th and early 20th century. Keyboard pieces from the 17th or 18th centuries, written in this open score manner, were later thought to be for string quartet or some other ensemble medium.

Johann Jakob Froberger, Courante from *Suite X*

FIGURE 54.   Courante with Imitative and Chordal (Homophonic) Writing

Fig. 54, J. J. Froberger, *Oeuvres Complètes pour Clavecin, Vol. I,* p. 193. H. Schott, ed. Published with the kind authorization of Éditions Heugel, 175 Rue Saint-Honoré, 75040, Paris Cedex 01.

BAROQUE CONTRAPUNTAL FORMS

There were a number of different types of Baroque keyboard pieces in which the contrapuntal element was the most important focus.

1. CANON

The CANON is the strictest of the contrapuntal forms, in that the entire piece consists of exact imitation. The melody of the second voice comes in before the first has finished, and that of the third voice before the second has finished, etc., so that they entirely overlap. Often, but not always, a canon consists of a single THROUGH-COMPOSED melody. This means that no part of the melody is repeated, but it continually unfolds with new material.

Canons can be composed at any interval. This means that the second voice can begin at a unison, 2nd, 3rd, etc. above or below the first. Canons also may require the use of inversion, augmentation, or diminution (see the kinds of imitation described on pages 60-61, above).

1) The Puzzle (contrary and direct motion):

moto contrario e recto

2) The Solution (using modern clefs):

etc.

This canon is a ROUND, since the end fits against the beginning.
It can be continued indefinitely!

FIGURE 55. Puzzle Canon by J. S. Bach
(from the "Goldberg Variations")

Fig. 55, J. S. Bach, *Vierzehn Kanons*, BWV 1087. C. Wolff, ed., Bärenreiter BA5153, pp. 9, 14. Bärenreiter-Verlag, Kassel. Reproduced with permission.

A special kind of canon is the CRAB CANON, in which the second voice is the first melody played backwards (literally, from the last note back to the first)!

In a canon, as new material unfolds, it has to fit against the second voice, playing the preceding bars. The structure of the canon must incorporate the decision as to when the second voice begins, as indicated in Figure 55 by the position of the *Segno* (𝄋). The total number of voices, if more than two, also needs to be planned and specified.

When a canon is composed as an entire piece, it often was written in the form of a puzzle! That is, only the first voice was actually written out on the music paper. Directions were given for the REALIZATION (final method of performance) of the piece as a canon. The directions would include the total number of voices, the interval at which the second voice would begin, and the use of augmentation, inversion, etc. A puzzle canon is shown in Figure 55.

Canons may also appear as parts of other pieces. This is called CANONIC WRITING. Also, a piece which is an entire canon may also contain some NON-CANONIC or free voices. Such pieces are called ACCOMPANIED CANONS.

A ROUND is a special kind of canon in which the end of the melody can be played against the beginning, thus providing for perpetual repetition of the entire piece. It is

necessary to plan the phrases of a round carefully, so that when each voice gets to the end, it can start again at the beginning (see Figure 55)!

Other canons and are illustrated in Figures 56-59 on the following pages.

(Compare with the FACSIMILE in Figure 7, page 15.)
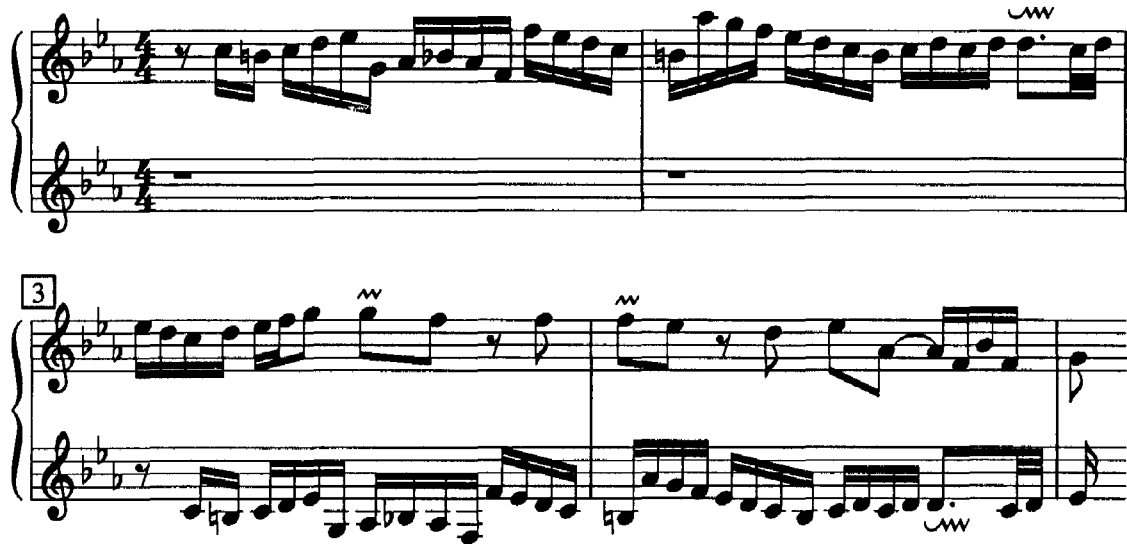
FIGURE 56. Canon at the Octave, Direct Motion ("Right Side Up")
J. S. Bach, Two Part Invention No. 2

FIGURE 57. Accompanied Canon at the Fourth, Contrary Motion
(J. S. Bach, "Goldberg Variations", Var. 12)

Fig. 56, J. S. Bach, Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, n.d. Vol. III, Bd. 1. BWV 773.

Fig. 57, J. S. Bach, Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, n.d. Vol. III, Bd. 1. BWV 988.

1) J. S. Bach, *Art of Fugue*, BWV 1080

Subject inversus, augmentation

2) J. S. Bach, Canons derived from the bass of the "Goldberg Variations", BWV 988

Canon in four voices with augmentation and diminution, plus contrary and direct motion:

Subject inversus (upside-down), double diminution

Subject rectus (right-side up), diminution

Subject inversus, normal values

Subject rectus, in augmentation

This needs to be played by two people on two harpsichords!

FIGURE 58. Canons with Augmentation and Diminution

(See Figure 14, page 26, on the subject of accomodation.)

FIGURE 59. Canon at the Tenth, Direct Motion
(J. S. Bach, *Art of Fugue*)

Fig. 59, J. S. Bach, Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, 1878. Vol. XXV, Pt. 1. BWV 1080.

2. RICERCAR

An attempt is made herein to distinguish between various contrapuntal forms prevalent in the 17th century. It should be pointed out, however, that the lines of distinction are very blurred among the most common types of pieces. Only the CANON, at one extreme, and the FUGUE (a late adaptation of the more developed contrapuntal pieces) can be clearly distinguished.

The RICERCAR (pronounced "*reech*-er-car") is generally found to be the most "scholarly" or the most highly structured of these contrapuntal pieces. The ricercar is usually based on a SUBJECT, which is a short melody repeated throughout the piece in different voices. The subject is presented in the TONIC KEY (tonality of the piece) and is TRANSPOSED (shifted) into the key of the DOMINANT (beginning on the fifth degree or tone of the scale). (For a complete discussion of the meaning of these terms, see *PLAYING WITH THE ELEMENTS OF MUSIC.*)

In some RICERCARE (plural of ricercar, pronounced "reech-er-*car*-ay") the subject may be TRANSFORMED by inversion, augmentation, or diminution. Sometimes a second subject (or COUNTERSUBJECT) is presented along with the first one. Sometimes this countersubject is actually a transformation of the first subject.

FIGURE 60. Ricercar by Froberger, Showing Series of Subjects

Fig. 60, J. J. Froberger, *Oeuvres Complètes pour Clavecin, Vol. I*, pp. 242-245. *Ricercar V.* H. Schott, ed. Published with the kind authorization of Éditions Heugel, 175 Rue Saint-Honoré, 75040, Paris Cedex 01.

The ricercar is often MULTISECTIONAL. In the first section, the subject is presented fully in each voice, and then developed by means of transposition and transformation. After the final cadence, a new section begins, in which a new subject is presented and developed

similarly. In most ricercare, the new subject is some kind of transformation of the original subject. Very often this transformation involves a rhythmic change. Again, after a full cadence, still another section occurs with a new transformation of the original subject. This process continues in an "open-ended" fashion, until the composer decides to bring the piece to a final close.

In the ricercar, which was an early (16th and 17th century) form, there is no attempt to "tie the piece together" by any sort of return to the opening material. Unity of purpose is achieved by the use of the same subject material throughout, in its various guises. Variations (transformations) of a subject, as they appear in different sections of a ricercar, are shown in Figure 60 (page 71).

There is a Spanish contrapuntal form, which appears more or less equivalent to the ricercar, called the TIENTO.

3. CAPRICCIO

The CAPRICCIO (pronounced "cap-*reech*-ee-oh") is another multisectional contrapuntal form, very similar in structure to the ricercar. The subject may be freer, more tuneful material, however (sometimes even based on a popular tune). New sections may in some cases use unrelated subjects.

4. CANZONA

Yet another multisectional, largely contrapuntal, form is the CANZONA. This word means "song", and the subjects of the CANZONAE (plural, pronounced "can-*zone*-ee") are often derived from songs.

The canzona is often considerably freer than the ricercar or capriccio. Occasionally the strict leading of four independent voices is abandoned for a more fluid or flexible texture. Very commonly, the cadences which end each section are in a rhythmically free style. This kind of florid, ornamented, cadence came to be used in solo instrumental pieces of various kinds, and was called a CADENZA. An example of the opening and closing of a single section from a canzona is shown in Figure 61.

5. FANTASIA or FANCY

This type of piece is really improvisational, and will be discussed at greater length in the next section (pages 95, 98) on other types of musical forms (see also Figures 52 and 74 on pages 64 and 97).

Very often, however, improvisation in the Baroque period was done in a contrapuntal manner. Thus all or parts of many FANTASIAS were contrapuntal, and some can hardly be distinguished from ricercare. Because the content of this type of piece was not fixed, however, it is impossible to generalize about the structure of pieces with this title.

FIGURE 61. Canzona by Frescobaldi--Opening and Closing of First Section

Fig. 61, Girolamo Frescobaldi, *Canzona Seconda, The First Book of Toccatas and Partitas.* Vol. II, pp. 56-57. Kalmus edition number K03452, reproduced by the consent of BELWIN-MILLS PUBLISHING CORPORATION, c/o CPP/BELWIN, INC., Miami, FL 33014

6. TOCCATA

Like the fantasia, the Italian TOCCATA was an improvisational form. The toccata usually featured much PASSAGEWORK (meaning scale-like passages, written out arpeggios, and other rapid "flourishes") in free rythmn. However, the later toccatas included contrapuntal, and also sometimes chordal, sections in between the florid passages. In the hands of J. S. Bach, the contrapuntal sections were actually developed into complete fugues. (See also page 95, under "Free-Style pieces, and Figure 73 on page 96).

Additionally, some toccatas, like some fantasias, were entirely contrapuntal from one end to the other. These in particular were called toccatas with *Ligature e Durezzi* ("ties and hard sounds"), which explored the interesting harmonic possibilities of tied notes and the dissonances that they cause with the other voices.

7. FUGUE

The FUGUE (pronounced "fewg") was an 18th century form which is clearly derived from the kinds of pieces described above. Most fugues are based on a single subject. Unlike the open-ended 17th century contrapuntal types, the subject of a fugue is retained throughout the entire piece. In a sense, the fugue could be looked upon as an enlarged and highly developed single section from a ricercar or capriccio.

As in a ricercar, the fugue subject is first introduced in each voice in sequence, starting in the tonic key (I), moving to the dominant (V), and continuing to alternate I and V until all voices have entered. The keyboard fugue may contain any number of voices, from 2 - 6 (although 4 is the norm). This opening of the fugue, introducing the subject, is called the EXPOSITION.

After the exposition, the fugue undergoes DEVELOPMENT. In this section the subject is usually transposed into keys other than tonic and dominant. It may also be transformed in various ways (by inversion, augmentation, diminution, etc.). This section (development) usually involves MODULATION into different tonalities. (Review *PLAYING WITH THE ELEMENTS OF MUSIC* for definitions of these terms!)

The development may also include sections where the subject occurs in canon (see pages 66-69). This is known as STRETTO (plural STRETTI). This means, of course, that the entrances of the subject overlap, so that a second voice begins before the first has completed a full statement of the subject.

Near the conclusion of the fugue, the subject is usually presented again one or more times in the tonic key. This final statement of the subject is known as the CODA (this is a special use of that term!). Sometimes the piece concludes immediately. In other cases, there may be a prolonged and often quite free ending, occasionally involving the introduction of extra voices to fill out the harmonies.
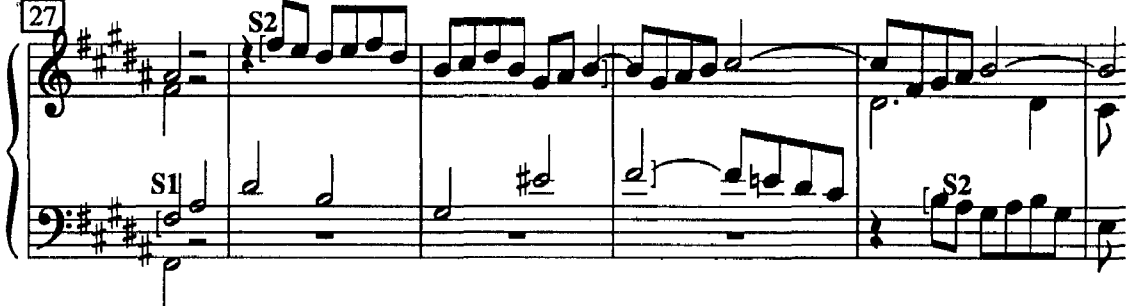
Fig. 62 (page 75), J. S. Bach, *The Well-Tempered Clavier, Vol. II*, No. 5. Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, 1866. Vol. XIV, Bd. 1. BWV 874.

EXPOSITION, showing the entrances of the subject in all four voices (**SATB**)

(The overlapping of soprano and bass entrances in the exposition is somewhat irregular.)

Start of DEVELOPMENT (Subject, in alto voice, is transposed to E Minor.)

STRETTO (alto and soprano voices) in DEVELOPMENT   beginning EPISODE

Continuation of EPISODE in DEVELOPMENT (no subject present):

FIGURE 62. **Fugue with Single Subject, Showing Elements**

There are usually many sections of the fugue which do not include statements of the subject. These sections, which often modulate, are called EPISODES. Episodes are frequently characterized by SEQUENCES, in which a fragment of melody may be moved up or down by step or skip to a new starting place. The melodic fragment (MOTIVE), along with its associated harmonic or contrapuntal accompaniment, will be repeated several times (most often three times), with each repetition starting in a new place.

Figure 62 (page 75) illustrates various elements of such a fugue with a single subject.

In some fugues, the subject is accompanied by one or more subsidiary themes. These are called COUNTERSUBJECTS if they appear consistently with the subject throughout the piece. A simple fugue with two countersubjects is illustrated in Figure 63.

FIGURE 63. Fugue with Two Countersubjects

Fig. 63, J. S. Bach, *The Well-Tempered Clavier, Vol. I*, No. 2. Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, 1866. Vol. XIV. BWV 847.

Some fugues present two or three different subjects one after another. In this case, each subject is given a new exposition. Although this resembles the multisectional forms, usually the new sections are not so clearly cut off one from the other. Additionally, the various subjects are generally combined near the end of such a fugue. These are called DOUBLE or TRIPLE FUGUES. A double fugue is illustrated by Figure 64 (page 75).

The technic of writing fugues may be incorporated into other kinds of pieces. Such fugal sections, which are not entire pieces in themselves, are called FUGATO SECTIONS.

Beginning of First Exposition:

Introduction and Exposition of Second Subject (S2)--S1 continues along with this.

FIGURE 64. Double Fugue

Fig. 64, J. S. Bach, *The Well-Tempered Clavier, Vol. II*, No. 23. Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, 1866. Vol. XIV. BWV 892.

Another word, used to describe short but complete pieces in fugal style, is FUGHETTA ("little fugue"). These do not undergo such elaborate treatment as does a true fugue.

The fugues of Johann Sebastian Bach were a culmination of the rich Baroque contrapuntal style of writing. A study of his total output of this genre demonstrates every possible manner in which the fugue can be utilized. In fact, the *Art of Fugue* (the title of Bach's last harpsichord work) illustrates that the fugue is really a process of composition, rather than a fixed or rigid form.

8. DUOS, BICINIA, and TWO-PART INVENTIONS

A number of strictly two-voice contrapuntal pieces, called DUOS or BICINIA (singular, BICINIUM, pronounced "bi-*sin*-ee-um"), are known from the 17th century. These are freely imitative, and may have been keyboard exercises for the study of contrapuntal performance. It is necessary to begin with pieces in two parts, corresponding to the right and left hands, in order to learn to make two voices sound as independent as possible.

Johann Sebastian Bach, who was a very systematic teacher, wrote 15 such two part pieces, which he called INVENTIONS. These explored a variety of compositional possibilities for two contrapuntal voices (including the construction of strict fugues). At the same time, they provided the player with an equal variety of technical problems to solve, as well as training in the performance of independent parts. (See Figures 7 and 56 on pages 15 and 68.)

9. SINFONIA

The introduction of a third voice on the keyboard represents a very large technical jump for the performer. It is not too difficult to perform two independent parts which correspond to the two sides of your body. A third voice becomes a theoretical problem, to be imagined as it actually passes from one hand to the other.

J. S. Bach clearly realized that once this leap had been made, so that the player could introduce a third imaginary voice, he or she could then go on adding voices up to the point of running out of fingers! Consequently, Bach wrote 15 further studies in three voices, leading up to the performance of four-part fugues and other contrapuntal pieces. To these studies he gave the title SINFONIA (pronounced "sin-fone-*ee*-uh"). Because of their relationship to the Inventions, later musicians have called these pieces "Three-Part Inventions".

Fig. 65 (page 79), Michael Praetorius, *Terpsichore*, 1612. Nos. 283 and 285. Gesamtausgabe der Musikalischen Werke, Bd. XV, Herausgegeben von Friedrich Blume. Reproduced with permission from Möseler Verlag, Wolfenbüttel u. Zürich.

CHAPTER VI.   OTHER BAROQUE MUSICAL FORMS

Apart from contrapuntal pieces, described above, there were a large variety of other musical forms used in the harpsichord music of the 17th and early 18th centuries. Although contrapuntal writing was often used in other types of pieces, it was not primarily emphasized in the forms described below.

Probably the most important forms, especially for the beginner at the harpsichord, were the dances. At first, dances were played individually or singly. The early keyboard dances resembled TRANSCRIPTIONS (that is, adaptations for harpsichord) of dances played by small ensembles, which would have accompanied actual dancers. (The harpsichord alone was seldom if ever used for this purpose.)

DANCE PAIRS

Gradually dances came to be performed two at a time, in PAIRS. Usually the first member of the pair was the slower of the two, and it was generally in duple or quadruple meter. The second, livelier, dance, was almost always in some form of triple meter. Very often, exactly the same musical material was used in both dances, being simply "recast" in a new meter and tempo. The Germans called such pairs *TANZ* (pronounced "tahnts") and *NACHTANZ* (meaning "dance" and "afterdance") (see Figure 65). Compare this with the VARIATION SUITE, discussed on page 88, below.

These are the first few measures of a pair of dances. Notes are almost (not quite) identical, but the meter has been changed to create two different dances rhythms.

Passemeze (Tanz)

Gaillarde (Nachtanz)

FIGURE 65.   Tanz und Nachtanz

(Citation on page 78)

In Elizabethan and Jacobean England, two dances came to be commonly paired. These were the PAVAN (in France, this was spelled PAVANE, and pronounced "pah-*vahn*") and the GALLIARD ("*gal*-yard") (French spelling was GALLIARDE). As expected, the pavan was a slow, stately piece in $\frac{4}{4}$ meter, while the galliard was brisk and in 6 beats per measure (usually $\frac{6}{4}$). Very often, as in the German paired dances, the same musical material was used in both pieces.

Both the pavan and galliard were normally TERNARY in form. This means that there were three STRAINS, or sections, each of which was repeated. Very often early English composers wrote out the repeats, varying the music with fairly elaborate ornamentation. Using letters to represent each strain, with the varied repeat indicated by a PRIME (') after the letter, the ternary form can be diagrammed A A' B B' C C'. (See *STARTING ON THE HARPSICHORD* for the use of such letter diagrams.)

Because the pavan was such a grave piece, it came to be used as a vehicle for intensely serious musical expression. The later pavans of the great English composers, such as William Byrd, are very far removed from simple accompaniments to the dance.

The pavan and galliard were important in the music of the great lutenists of England and France during the first part of the 17th century. Pavanes appeared among early French harpsichord pieces, but by the middle of the 17th century were considered old-fashioned.

THE DANCE SUITE OF THE 17th AND 18th CENTURIES

By the middle of the 17th century, French and some German composers were writing rather standardized collections of dances which they called SUITES (pronounced "sweets"!). By this time, some of the earlier dances (such as the BRANLE and PASSAMEZZO, as well as the pavane and galliarde) had been dropped from the repertoire. The ALLEMANDE and COURANTE became the most prominent dance pair, essentially replacing the pavane and galliarde on the European continent. These also were transformed into fairly elaborate pieces. There was a French and an Italian version of each.

As the century progressed, the SUITE became more and more standardized, and always included the following four dances: ALLEMANDE, COURANTE, SARABANDE and GIGUE, usually in that order. Very often a number of other dances and occasionally other types of pieces were inserted between the sarabande and the gigue. We now refer to these additional pieces as "optional" dances or pieces.

Virtually all of these newer dances (exceptions are noted below) were written in BINARY FORM. This form consists of two strains, each being repeated (e.g. A A B B or A A' B B'). Usually variations of each strain were not written out, but the performer was expected to add some new ornamentation when taking the repeats.

Most of the dances that were used by keyboard composers filtered through the French court of Louis XIV, from the mid-17th century into the early 18th century. Therefore, although many of these dances originated in other countries, they became in some manner "Frenchified", and took the form that occurred in the French court.

There were some notable exceptions to this rule, where Italian versions of dances evolved separately (particularly in the case of the four principle dances). Many composers, including some French ones, would select either a French or an Italian version of each dance type. Occasionally two allemandes or courantes would occur in a single suite, often of contrasting styles.

THE FOUR PRINCIPLE DANCES OF THE LATE 17th CENTURY SUITE

1. ALLEMANDE or *ALAMANDA*.

The French ALLEMANDE ("ahl-mahnd") eventually took the place of the serious pavane. Like the pavane, it was in $\frac{4}{4}$ time, and was slow and stately. By mid-century, the allemande was characterized by an upbeat at the beginning. The allemande was also used as a vehicle for serious musical communication. This was the least dance-like and most musically elaborate of all of the dance forms.

The *ALAMANDA* ("ahl-ah-*mahn*-dah)--the Italian version of this dance--was much lighter, livelier, and more dance-like. Actually, rather few of these Italian types occur in the keyboard literature. In 17th century Italy (not a big source of harpsichord dance suites) the *alamanda* is most commonly found in music for strings.

In France, however, there were always two forms of the allemande: in the first, slow and serious, the sixteenth notes were played unequally (*inégale*) and with great weight. Another common version of the slow allemande contained many dotted configurations. The second type, faster and lighter, corresponded to the French "idea" of the Italian *alamanda*. In this version, eighth notes are the predominant moving notes. Unevenness, if occurring at all, would be applied to the eighth notes rather than the sixteenths.

In Germany, the allemande was clearly derived from the slow French type. However, German allemandes--with their steady sixteenth notes--tended to be more flowing and not quite as slow as the French.

2. COURANTE or *CORRENTE*.

The COURANTE ("coo-rahnt") is the French version of this dance. It is rather dignified and not too fast. The meter has 6 quarter note beats. Characteristically, the courante is constantly shifting from the compound $\frac{6}{4}$ meter (in which beats 1 and 4 are emphasized), to $\frac{3}{2}$ (accenting beats 1 and 3 and 5). This results in a rather continuous sense of HEMIOLA (see *STARTING ON THE HARPSICHORD*) throughout the dance. The actual dancers maintained a steady 3 half note beats per measure ($\frac{3}{2}$ meter), and the elaborate music was in rhythmic counterpoint to the choreographed dance.

The Italian *CORRENTE* ("core-*rent*-ay) was generally simpler in form (especially in the 18th century). It was in a simple triple meter, often $\frac{3}{4}$ or $\frac{3}{8}$, and was very often filled with

1) Louis Marchand -- French Gigue

2) J. S. Bach -- French Gigue (BWV 813)

3) J. J. Froberger -- Italian *Giga* (*Suite II*) (Note the use of imitation here.)

4) Domenico Zipoli -- Italian *Giga*

etc.

Note: Although Examples 1 and 2 were extensively ornamented in the originals, the French
ornaments have been omitted in order to show the essence of the dotted French style.

FIGURE 66. Comparisons of Gigues in the French and Italian Styles

Fig. 66, 1. Louis Marchand, Pièces de Clavecin. T. Dart, ed., revised by D. Moroney, pp. 8-9. Éditions de
L'Oiseau-Lyre, S.A.M., Les Remparts, Monaco. Used with permission.

Fig. 66, 2. J. S. Bach, Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, 1897.
Vol. XLV, Bd. 1. BWV 813.

Fig. 66, 3. J. J. Froberger, *Oeuvres Complètes pour Clavecin, Vol. I*, p. 86. H. Schott, ed. Published with the
kind authorization of Éditions Heugel, 175 Rue Saint-Honoré, 75040, Paris Cedex 01.

running sixteenth notes. The *corrente* tended to be fast and brilliant rather than elaborate (see Figure 14, page 28).

An initial upbeat is usual with both forms of this dance.

3. SARABANDE.

The SARABANDE ("sah-rah-*band*) was a fairly slow and dignified dance in triple meter. The French version was based on large chords, without a great deal of melody. The sarabande became a vehicle for the elaborate improvisation of ornaments, since the movement was slow and the melody simple (see Figs. 17 and 43, pp. 34 and 57).

The Italian version of this dance (*SARABANDA*) was not so thick and rich in harmony, but tended to be more melodic and flowing. In either case, both French and Italian ornamentation were extensively applied. Examples of the Italian type can be seen in Figures 42, 68 and 80 on pages 55, 88 and 114.

Both versions of this dance were characterized by a frequent accent or long note on the second beat of the measure. Another common rhythmic feature was the so-called "feminine ending" of phrases on the last (weakest) beat of the three-beat measure.

4. GIGUE.

The GIGUE ("jheeg"), as it existed in France in the mid-17th century, was derived from the Scottish or Irish Jig. It was in $\frac{6}{8}$ meter, with a characteristic dotted rhythm. The Italianate *GIGA* ("jee-ga"), in contrast, had a much simpler rhythm (also in $\frac{6}{8}$ or $\frac{3}{8}$). As usual, the tempo of the Italian form was considerably faster. The rhythms of these two styles of gigue are compared in Figure 66. Other examples are seen in Figure 15 on page 26 and in Figured Bass Exercise No. 21, page 121.

In both cases, this often boisterous piece was also IMITATIVE and quasi-contrapuntal. As might be expected, the German composers carried this aspect to the greatest extreme, sometimes turning their gigues into fully formed fugues.

OPTIONAL DANCES

One notable feature of the "core" dances of the suite, described above, is the predominance of various forms of triple meter (or compound duple meter). This is equally true of the optional forms. One aid in distinguishing these, however, is to pick out the few that are in duple or quadruple meter. These will be discussed first.

1. GAVOTTE.

The French GAVOTTE is in $\frac{4}{4}$ meter. It characteristically begins with an upbeat of two quarter notes, starting on the third beat of the measure. Its phrases end on the second beat of the measure. The gavotte is somewhat dignified, but light and not too fast. (See Figured Bass Exercise No. 18, page 119.)

The Italian *GAVOTA* seems to have had a separate evolution from a much earlier French dance known as the BRANLE. (Note: there were several versions of the branle, some of which were in triple meter.) The *gavota* is in $\frac{4}{4}$ meter, but begins on the downbeat and ends on a strong first beat.

2. BOURÉE.

The BOURÉE ("Boor-*ay*"), also in $\frac{4}{4}$ meter, is considerably faster and more robust than the gavotte. The bourée begins with an upbeat on the fourth beat of the measure.

3. RIGAUDON.

The RIGAUDON is another energetic dance in $\frac{4}{4}$. It is not very different from the bourée, although perhaps more humerous than boisterous. It should definitely be played in a light-hearted manner.

4. MENUET (or MINUET).

Of the optional dances in triple meter, the MENUET is the most common. It is by far the most well-known to beginning harpsichord students, as this is the simplest of the dances to play. Menuets are in a fairly lively $\frac{3}{4}$ time. In most, the measures are strongly linked in two-bar groups. The dance as choreographed consisted of 6 beats. Like the courante, the dance itself made a kind of rhythmic counterpoint against the music.

5. PASSEPIED.

The PASSEPIED ("pass-*pyae*") is quite a fast dance, usually in $\frac{3}{8}$ meter. It is somewhat similar to a menuet, but generally played considerably faster.

6. LOURE.

The LOURE ("loor"), as well as the FORLANE and CANARY, are closely related to the French gigue. The loure, often called the "Spanish gigue", was usually written in $\frac{6}{4}$ meter. It is quite slow and dignified, with a pronouncedly dotted rhythm. As originally choreographed, it was a very difficult dance performed by a solo male dancer.

7. FORLANE.

Again similar to the gigue, the FORLANE is in a jolly $\frac{6}{8}$ meter, and the rhythm is usually similarly dotted. This dance often takes the place of a gigue in suites by French composers. (See Figured Bass Exercise No. 22, page 121.)

8. CANARY.

The CANARY ("*can*-a-ree") also has the gigue-like dotted rhythm, and again is in a lively $\frac{6}{8}$ meter. In fact it is faster than the gigue (the French gigue is only moderately fast). The canary is to be played as fast as possible! Like the forlane, the canary is sometimes used as a substitute for the gigue in a French dance suite.

ADDITIONAL DANCE-LIKE FORMS THAT WERE INCLUDED IN SUITES

1. AIR.

AIR, or ARIA (pronounced "*ah*-ree-ah"), really means "song". However this title was used to mean different things by various composers. Many of the German composers, including Handel, wrote airs which were very song-like pieces. Often slow pieces in $\frac{3}{4}$ meter, which did not have the characteristics of a sarabande, would be called "airs".

In contrast, Bach appears to have used this term to apply to pieces that were dance-like, but not actual dances. Bach's airs were usually in $\frac{4}{4}$ meter, and seem to be quick, lively and "danceable".

2. RONDEAU.

A RONDEAU ("ron-*doe*"; plural RONDEAUX, pronounced "ron-*doze*) is a *musical form*, rather than a dance form. It consists of a strain or section called the GRAND COUPLET (labelled "A" in the following letter diagram), normally repeated once. The next strain is called the FIRST COUPLET ("B"), which is played through once, after which you return to the grand couplet and play through that once again (without the repeat). This process continues, with the entrance of a SECOND COUPLET, THIRD COUPLET, and so on. Each time, the grand couplet is sandwiched in between. (Note: The word *couplet*, in French, is pronounced "coo-*play*".)

The letter diagram of this musical form looks like this: A A B A C A D A ....etc.

Although not a dance itself, the rondeau was commonly used in dance-like pieces that were included in the later dance suites. Additionally, some dances--particularly the sarabande and menuet--were sometimes written in RONDEAU FORM instead of the usual BINARY FORM (A A B B). In these cases, the piece would be referred to as a sarabande or menuet *en rondeau.*

The French CHACONNE (pages 86-87) was almost always written in rondeau form.

3. POLONAISE.

POLONAISE ("pol-oh-*naze*") simply means "Polish piece" or "Polish dance". Usually in ¾ time, this was very often a modified menuet. Characteristically, polonaises started on a downbeat with two sixteenth notes followed by an eighth note (♪♪♪ ♪ ♪ etc.). An accent on the second beat was also common.

Other types of dances with Polish "flavor" appeared in dance suites, and would be referred to as *a la Polonaise* (or "Polonoise", or "Polacca").

4. ANGLAISE.

As with the "Polish" polonaise, the ANGLAISE ("ahng-*glaze*") (sometimes spelled "Angloise") simply meant an "English" dance. The anglaise was generally in $\frac{4}{4}$ meter, and the dance type was not really specified.

5. CHACONNE, PASSACAGLIA, and GROUND.

The CHACONNE ("shah-*con*") and PASSACAGLIA ("pah-sah-*cah*-lya") were often large, and frequently quite serious, pieces which were dance-like. Both of these were constructed over GROUND BASSES (somewhat standardized, repeated melodic and/or harmonic figures in the bass).

It was not unusual to end a dance suite with a chaconne or passacaglia (commonly following the gigue). This gave musical balance to the suite, which usually began with an elaborate prelude, overture, and/or a large allemande at the beginning.

Originally the musical forms of chaconne and passacaglia were clearly distinct from one another. The French chaconne and Italian CIACONA ("chya-*coh*-na") were always in
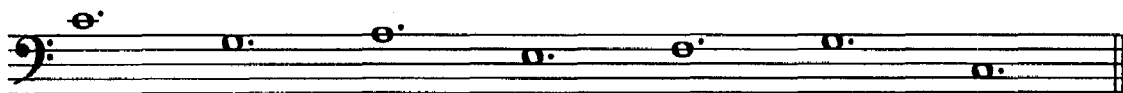
FIGURE 67. Ground Basses for the Ciacona and Passacaglia
(Original forms from the early 17th century)

triple meter, with a bass like that shown in Figure 67. The Italian passacaglia was a more serious piece, initially, and could sometimes be in $\frac{4}{4}$ meter. The passacaglia was called *PASSACAILLE* by the French (pronounced "pass-ah-kie"). Figure 67 compares the original passacaglia bass (16th century) with that of the chaconne.

By the mid-17th century, there was much confusion as to the distinction between these two types of pieces--the words chaconne and passacaille were frequently used interchangably. In France, the chaconne was usually in RONDEAU FORM (see page 85, above). The Italian *ciacona*, on the other hand, was a set of continuous variations over a repeated harmonic pattern. Both of these were characteristically in triple meter (many chaconnes cannot be distinguished from "sarabandes en rondeau"). The passacaglia, still occasionally in $\frac{4}{4}$ meter, tended to be less dance-like.

English composers, particularly in the late 17th century, had a similar kind of piece called a GROUND. This could be in any musical form, but was characterized by a repeated bass pattern. Grounds were sometimes quite lengthy, and were not necessarily grouped with other dances.

THE FURTHER EVOLUTION OF SUITES

The dance suites were collections of pieces all of which were in a single key or tonality. This was necessary, or at least certainly useful for harpsichordists, because retuning of notes was not required in between pieces (see Chapter IX, on Temperament). By the 18th century, occasional pieces in related tonalities might be inserted into the middle of a suite. Most commonly these would be in the parallel (rarely, the relative) major or minor keys (review these terms in *PLAYING WITH THE ELEMENTS*).

More and more in the 18th century, French composers began to include other kinds of pieces (that were not dances) in these collections. Sometimes a new title would be given. For example, François Couperin always used the word *ORDRE*, to distinguish these collections of pieces from suites of exclusively dance pieces.

Apart from the dance-like pieces (such as rondeaux) already described, the new kinds of pieces included DESCRIPTIVE and so-called "CHARACTER" pieces. Sometimes these were musical descriptions of personalities, or of natural phenomena, or of animals or birds. Very often we don't know just exactly what was being described. Gradually these pieces became more and more numerous, so that the later French collections included very few actual dance forms. The groups of pieces continued to be largely in a single tonality, however.

In Germany, the use of the original dance forms persisted much later than in France. However, with some composers, the dances became very greatly transformed into true "concert" pieces (as opposed to those clearly related to the choreographed dances). In the later suites of J. S. Bach, for example, the dances bear little resemblance to those of a 17th century collection. However, the derivation from the original dance can always be discovered.

Opening of the Allemande:

Opening of the Courante (actually a *Corrente*):

Opening of the Sarabande (actually a *Sarabanda*):

FIGURE 68. Variation Suite
(Johann Adam Reincken)

Fig. 68, Johann Adam Reincken, *Sämtliche Werke für Klavier*, ed. by Beckmann, pp. 28-30. Breitkopf & Härtel, Walkmühlstraße 52, D-6200 Wiesbaden 1, Germany. Used with permission.

VARIATION SUITES

As mentioned above (pages 79-80), dance pairs preceded the collection of dances into larger groupings. Such pairs of dances often consisted of rhythmic variations of the same musical material. Later in the 17th century, many composers, especially among the Germans, began to write entire suites of dances based on this same principal. Thus one could have an allemande, courante, sarabande and gigue all composed of the same melodies and harmonic sequences, but cast into the different rhythmic structures characteristic of each dance type (see Figure 68).

FIGURE 69. German Variation Technic
(Aria by Dietrich Buxtehude)

Fig. 69, Used with the kind permission of Editions Wilhelm Hansen AS, Copenhagen. From the WH-edition: Dietrich Buxtehude--PIANOWORKS, pp. 64-71.

The word used in the early 17th century for a set of VARIATIONS (as described below) was PARTITA. The variation suites also were referred to as partitas, as they were viewed as a special kind of variations. Later Bach and some other German composers referred to any dance suite as a PARTITA.

OTHER TYPES OF VARIATIONS

VARIATION is a *technic* in which musical material is modified and presented in different ways. With the paired dances and variation suites, as we have seen, the approach to variation is largely *rhythmic*.

In Chapter IV (on ornamentation), you encountered some common types of MELODIC VARIATIONS. In these, a melody is varied by the insertion of additional notes. When this is done in a rather systematic way, we call the result a DOUBLE or DIVISION (see pages 53-56).

In the hands of the early English composers, the Division often took the form of written out repeats in the ternary (occasionally binary) dance forms. Sometimes, on the completion of a ternary form (A A' B B' C C') (see page 80) the composer would begin all over again, with A'' A''' B'' B''' C'' C'''! This process could be repeated indefinitely, although usually was limited to two or three cycles of this sort.

Other types of MELODIC VARIATIONS were treated somewhat more freely than the double or division. Usually these variations were based on some simple folk melody, although a dance form might also be used. Often the melody to be varied was only a single strain, after which would appear Variations 1, 2, 3 etc. Commonly, when the tune was well known, its very first appearance in the piece would already be "Variation 1".

This type of variation, usual among Italian and German composers, utilized a large number of different technics even within a single piece. Sometimes these were called MELODIC-HARMONIC VARIATIONS, since the harmonic sequence was retained, but the actual melody line might be considerably altered in one or more variations.

Often some of the variations would involve a change of MODE (e.g. from a major key to its parallel minor), and sometimes the melody would be subjected to various contrapuntal procedures (see pages 60-61). Occasionally rhythmic variations of the type used in variation suites would be introduced. To review these, see page 88 and Figures 65 (page 79) and 68 (page 88). Sometimes variation involved rather free ornamentation. At other times, the regular addition of small note values in between the main notes of the original melody would be indistinguishable from the technic of the double or division (compare Figures 41 and 42 on pages 54 and 55).

Further examples of these technics are illustrated in Figure 69 (page 89).

Another style of variation is known as the CANTUS FIRMUS VARIATION. Here a single melodic line is repeated over and over again throughout the piece. Commonly this line, known as the CANTUS FIRMUS, occurs initially in a middle voice. (Its position may change

FIGURE 70. Cantus Firmus Variation by William Byrd
First half of the cantus firmus, C.F., only (notes circled).

Fig. 70, William Byrd. J. A. Fuller Maitland and W. Barclay Squire, editors, The *Fitzwilliam Virginal Book,* *Vol. I,* No. 101, 1963. Dover Publications, Inc., 180 Varick St., New York, N. Y., 10014. Used with permission.

at some point in the variation set.) The cantus firmus generally remains unchanged, but the musical material around it in the other voices is constantly varied.

There are many examples of cantus firmus variations in the early English literature. Pieces titled *In Nomine* or *Miserere* use PLAINSONG melodies, based on GREGORIAN CHANTS. The cantus firmus technic is illustrated in Figure 70 (page 91).

When a cantus firmus occurs in the bass of a piece, then the form is called a GROUND BASS VARIATION or simply a GROUND (see also page 87, above). There were a number of STANDARD BASSES (particularly in Italian music) which served as both cantus firmus and also the harmonic framework for such compositions. A few of these are shown in Figure 71.

FIGURE 71. Standard Italian Bass Melodies

In both the ground bass and the cantus firmus sets of variations, the remaining material was usually free. However, a specific melody was also associated with some of the standard Italian basses (such as the *Folia* or *Romanesca*). The composer might or might not choose to include the melody in the variation scheme. Figure 72 shows two PARTITAS (sets of variations) composed over the *Ruggiero* bass. Both are by Frescobaldi, but only the first makes use of the *Ruggiero* melody.

Two examples by Girolamo Frescobaldi. Notes of the bass have been circled in both excerpts.
(Compare Figure 71)

1) Opening of *Prima Parte*, from *Partite 12 sopra l' Aria di Ruggiero*

2) from *Capriccio del Soggetto scritto sopra l' Aria di Roggiero*

The tune ("Fra Jacopino") which is written over the *Ruggiero* bass.

FIGURE 72. Comparison of Two *Ruggiero* Variations

(Citations on page 94)

FREE-STYLE PIECES--INTRODUCTORY PIECES

There are a number of musical forms from the Baroque period which are rhythmically free, to a greater or lesser degree. Most, but not all, of these pieces serve as introductions to one or more additional works, such as a suite of dances. The free-style pieces will be discussed first, after which some other types of pieces which also serve as introductions are described.

1. PRELUDES

In *PLAYING WITH THE ELEMENTS OF MUSIC*, in the chapter on Chord Progressions, a method was given for the improvisation of a PRELUDE or other free-style piece from a harmonic sequence. Written preludes, too, are often based on simple chord progressions. Usually the chords are arpeggiated and elaborated with ornaments, making a beautiful free-style opening movement with which to introduce a dance suite or other collection of pieces in the same tonality.

Some preludes became very elaborate, but the essence of this form is its free and improvisational nature. In some 17th century French Preludes (called UNMEASURED PRELUDES, or *PRÉLUDES UNMESURÉS*), no rhythm or meter was indicated at all, thus ensuring that the piece would be played in a free style (see Figure 13, page 23). In the 18th century, composers thought that it was too difficult to learn a piece from such vague notation. Although 18th century composers wrote their preludes in ordinary notation, they often were intended to be played in a "free and easy manner", like an improvisation. (See the comments by François Couperin in his *L'Art de Toucher le Clavecin*, cited in the Reading List.)

English and German preludes have a regular metrical framework. However, these usually are still elaborated chord progressions, and need to be played as though inventing them on the spot! To learn such pieces, one needs to reduce the music to its fundamental chords. Then think about what it would be like to use this chord progression as a basis for improvising a piece in the manner given. In Figure 73 (page 96), Froberger's *Plainte* is a similarly free-style introductory piece cast in the form of an allemande (see page 98).

Initially, preludes were not written down at all. The harpsichordist was expected to "feel out" the instrument and "warm up" in the key in which he or she was going to play. We are indeed fortunate that so many composers chose to leave written versions of these improvisations, to show us how it was done. When playing a collection of pieces which lack an opening or introductory piece, it would be entirely appropriate to improvise a prelude in the style of the music at hand. You can try this out, using the directions given in *PLAYING WITH THE ELEMENTS*.

Because the prelude started out as an introductory piece, the word "prelude" came to mean almost any kind of opening movement. Thus the "preludes" of J. S. Bach and some other later 18th century composers could be very elaborately composed pieces, intended simply

to introduce or go before another piece or group of pieces. Bach in fact used almost any type of piece for this purpose, but generally avoided specific musical forms such as dances.

2. *INTONAZIONE*, TOCCATAS, and *TASTADAS*

In 16th and early 17th century Italy, there were prelude-like keyboard pieces which were similar to English preludes of the same period. These consisted of many scale-like runs with chordal passages in between. These prelude-like Italian pieces were called *INTONAZIONE* (pronounced "in-tone-*natz*-ee-one-ay").

In the 17th century, the *intonazione* became greatly elaborated, and came to be called TOCCATAS. In Spain, comparable pieces were known as *TASTADAS*. In the toccatas, the scale-like passagework became highly elaborated, and was treated in a rhythmically free manner. Mixed together with this were chordal and/or contrapuntal passages, derived from the chord progressions found in the *intonazione*.

In the earliest toccatas, the various sections were not clearly demarcated. Later, the contrapuntal portions became very large and clearly separated from the free flowing passagework. In the toccatas of J. S. Bach, each section was quite lengthy. The contrapuntal parts were transformed into fully worked out fugues.

Since the later toccatas were multisectional, partly contrapuntal, forms, they have also been discussed under the Contrapuntal Forms, above (page 74).

Italian toccatas and French unmeasured preludes represent two kinds of experiments in writing down a rhythmically free, improvisational type of piece. Frescobaldi found it necessary to accompany his toccatas with elaborate instructions for their performance. Similarly, François Couperin had to explain how his *préludes*, which look like rigidly fixed metrical music, must sound fluid and flexible.

In Figure 73 (page 96) a toccata by Froberger is compared with an unmeasured prelude by Louis Couperin. The latter contains a "quote" from the former. It is interesting to see how the same musical material is expressed on paper in two very different ways.

3. FANTASIAS and VOLUNTARIES

The FANTASIA (or "FANCY") was the early English version of a large introductory piece in free style. As discussed above (in the section on Contrapuntal Forms, page 72), the fantasia could be a purely contrapuntal work. (In fact, the Italian fantasias seem to have been exclusively so.) More commonly, however, contrapuntal sections were mixed with prelude-like passages. Sometimes sections containing dance-like rhythms were interspersed.

In contrast to the toccata, which begins with chords and free passagework, the English fantasia generally opens with imitative counterpoint (see also Figure 52, page 64). Only later in the piece are other kinds of compositional technics gradually introduced.
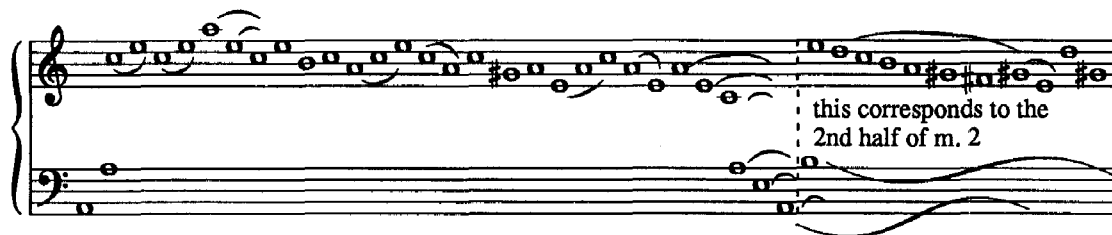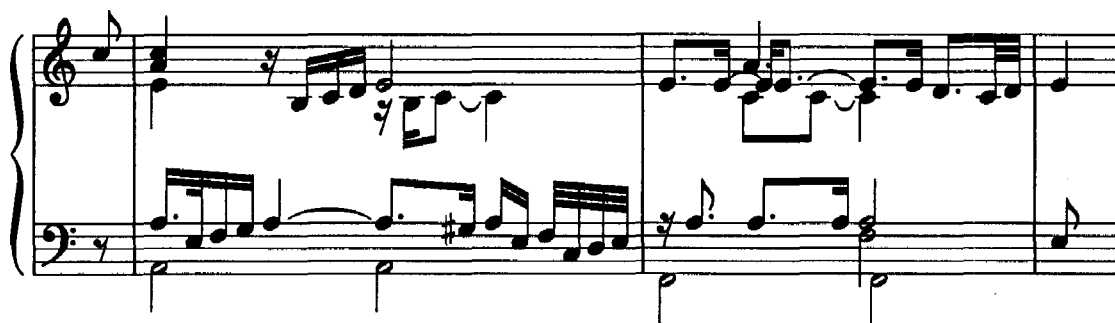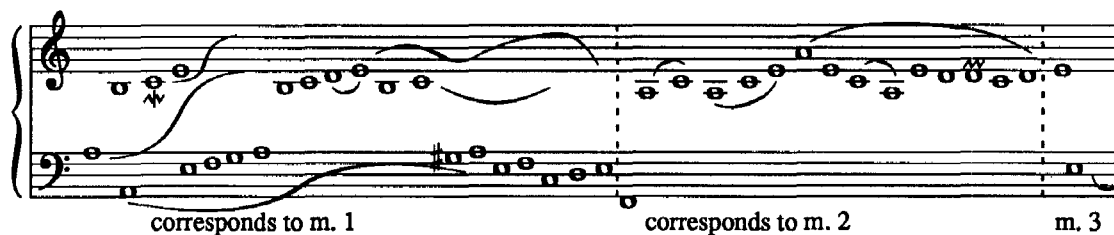
FIGURE 73. Comparisons of Notation Styles--Froberger *vs.* Louis Couperin

Fig. 73, J. J. Froberger, *Oeuvres Complètes pour Clavecin*, Vol. I, p. 2. H. Schott, ed. Published with the kind authorization of Éditions Heugel, 175 Rue Saint-Honoré 75040 Paris Cedex 01.

Second example from Denkmäler der Tonkunst in Österreich, Vol. 21 (Johann Jakob Froberger, *Orgel- und Klavierwerke* III., Ed. by Guido Adler), pbulished by Akademische Druck- u. Verlagsanstalt, Graz, 1959. Used with permission.

Louis Couperin, (both examples), from *Pièces de Clavecin*, page 1. A. Curtis, ed. Published with the kind authorization of Éditions Heugel, 175 Rue Saint-Honoré 75040 Paris Cedex 01.

1) J. S. Bach, *Chromatische Fantasie* (BWV 903), mm. 1 - 2

2) J. S. Bach, *Fantasie* of contrasting style (BWV 904)

mm 1 - 3:   mm. 22 - 24

3) William Byrd, Fantasia from the *Fitzwilliam Virginal Book, No. 52*

contrapuntal opening, mm. 1 - 4:

dance-like section:

FIGURE 74. Comparisons of Fantasias--Bach and Byrd

Fig. 74, 1. J. S. Bach, Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, 1890. Vol. XXXVI, Bd. 4. BWV 903.

Fig. 74, 2 (page 97). J. S. Bach, Verzeichniss der Mitglieder der Bach-Gesellschaft. Breitkopf & Härtel, Leipzig, 1890, Vol. XXXVI, Bd. 4, BWV 904.

Fig. 74, 3. William Byrd, J. A. Fuller Maitland and W. Barclay Squire, editors, The *Fitzwilliam Virginal Book, Vol. I*, 1963. No. 52. Dover Publications, Inc., 180 Varick St., New York, N. Y., 10014. Used with permission.

The idea behind all these varieties was to allow one's imagination free reign, letting the improvisation flow from one thought to another with no fixed structure or end-point in mind. It is important to realize that the 17th century players were quite capable of actually improvising in this manner. We are indeed fortunate to have some indications, through the written fantasias, of what their free invention was like. We must do our best to recreate the sound of such a spontaneous burst of creativity!

Another English musical form, similar to the fantasia, was the VOLUNTARY. Voluntaries were intended to precede a church service, and frequently served as a prelude to a fugue or some other structured piece. Although originally conceived as introductions to something else, both the fantasia and the voluntary could also stand alone, as independent works.

In the 18th century, particularly in Germany, the term "fantasia" was also used for an improvisational style of piece. However, many 18th-century German fantasias consisted almost entirely of running passages and rapidly arpeggiated chords, like those found in the free sections of toccatas. The most famous of the fantasias of this style is the *Chromatic Fantasy* of J. S. Bach. Mozart was still writing similar works for the fortepiano near the end of the 18th century.

Interestingly, Bach also wrote some highly contrapuntal fantasias. This is undoubtedly a reflection of Bach's unusual (for the time) sense of historical perspective (he had studied the contrapuntal fantasias of Frescobaldi and Froberger when he was a young man). Figure 74 (page 97) illustrates the enormous contrast in the appearance of two different types of fantasias by Bach, as well as the opening of an English piece with the same title! How fascinating for us today to observe the many styles in which harpsichordists were able to improvise in the 17th and 18th centuries.

4. TOMBEAUX

Another free-style piece, which resembles a free or unmeasured prelude, was the French *TOMBEAU* ("tom-*boe*"; plural *TOMBEAUX*, pronounced "tom-boze"). The title means "tomb" or funeral piece. *Tombeaux* were sad, serious pieces, usually based on a slow dance such as the allemande or pavane.

Tombeaux were memorials to important people who had died, and were played in an extremely free and unmeasured style. These pieces usually stood alone, although Froberger used them occasionally to substitute for the first movement (allemande) of a dance suite (e.g. the *Plainte* in Figure 73, page 96).

OTHER LARGE INTRODUCTORY FORMS, WHICH SOMETIMES STAND ALONE

There are two very large musical forms which were used in the 18th century to introduce keyboard suites or other groups of pieces. These are the RITORNELLO FORM and the FRENCH OVERTURE. (The French spelled this word *OUVERTURE*.) In contrast to the improvisatory PRELUDES, which are often in free style (even unmeasured, see page 94), the ritornello forms and overtures were strictly metrical. They are derived from, and imitate, orchestral pieces of Italian and of French origin, respectively.

1. CONCERTO-RITORNELLO FORM.

The RITORNELLO FORM is derived from the first movement of a BAROQUE CONCERTO ("con-*chair*-toe"). CONCERTI (plural of concerto) are orchestral pieces in whch a *solo instrument* is played "against", or in contrast to, the full orchestra. In some concerti, several solo instruments may be used against the orchestra, or one part of the orchestra may be played against another (as in a CONCERTO GROSSO).

The Baroque concerto did in fact originate in Italy, and achieved its characteristic musical form in the hands of Antonio Vivaldi (1678-1741). The entire piece typically consisted of three movements: fast - slow - fast. The first, and often the third movements were in ritornello form, whereas the slow movement was in a freer style. In this second movement, the soloist often played a flexible, highly ornamented melodic line against a soft accompaniment of the orchestra.

The musical form of the first movement of a baroque concerto is given the name RITORNELLO from the fact that the opening material of the movement, played by the full orchestra, keeps coming back again and again throughout the movement. (The Italian word "ritornello" means "the little thing which comes back".) Generally the ritornello consists of several musical fragments--whole phrases or parts of phrases. Not all of these are brought back each time, so that the ritornello does not resemble a true RONDO (or RONDEAU--see page 85) form. The entire ritornello returns at the very end of the movement.

The contrasting solo sections may use some elements from the ritornello. More frequently, these sections use different musical material--often spectacular runs (scale passages) and other ornamental figuration which display the technical skill of the soloist. These SOLO sections (plural, SOLI) are sandwiched in between statements of all or part of the ritornello by the full orchestra. The orchestra sections are known as TUTTI (meaning "all together", and pronounced "*too*-tee").

On a double manual harpsichord, TUTTI (representing the full orchestra) can be performed on the *lower manual* or keyboard, with two or more sets of strings engaged. Contrasting SOLO sections can be played on the *upper manual*, on a single 8-foot register. Johann Sebastian Bach developed this art to a high degree (see page 4). For "practice" in the imitation of a Baroque concerto, Bach TRANSCRIBED a number of these by Vivaldi and other composers--converting pieces written for full orchestra into pieces to be played on a double manual harpsichord alone.

These transcriptions involved entire concerti--all three movements. The slow second movement was to be played with the right hand on the lower manual (usually with two 8-foot registers engaged) to represent the florid solo part. The left hand, this time imitating the soft accompaniment of the orchestra, is played on the upper manual (on a single 8-foot register).

Having satisfied himself that a single harpsichord could represent at least the "idea" of a full orchestra, J. S. Bach went on to write one of his most famous pieces, *The Concerto in the Italian Style* (known to us as "The Italian Concerto"). This is an independent three movement work, like the transcriptions described above, but consisting of entirely original music composed at the outset for a double manual harpsichord. (A portion of the middle movement can be seen in Figure 16, page 33.)

These pieces, which imitate the concerto-ritornello form, are among the very few Baroque pieces which actually require the use of a double manual instrument.

Apart from these few works which imitated entire concerti, Bach used the ritornello form in a number of introductory pieces. Inasmuch as they were pieces which preceded dance suites or other movements, Bach referred to them as "preludes". The most notable and characteristic preludes of this type are those to the so-called "English Suites" (nos. 2-6). These pieces imitate the first movement of a Baroque concerto, in the manner described above.

Probably because of the requirement that a double manual instrument be used (these were always relatively rare), the ritornello form does not play a large part in the solo harpsichordist's repertoire. It is important, however, to recognize the style when it is encountered (largely in these pieces by Bach), and to know how to properly represent it.

2. THE FRENCH OVERTURE.

The other type of large orchestral piece that was used as a substitute for a prelude came from France. The French OVERTURE was essentially invented by Jean-Baptiste Lully (1639-1687) in the mid-17th century. He composed these pieces as introductory movements to his operas and ballets. (Interesting, for us, is the fact that neither Lully nor the Italian Vivaldi ever wrote any music for solo harpsichord!)

The overtures became highly STYLIZED (that is, they developed a very rigid and predictable form). They are binary in form, having two sections, each of which is repeated. As in many binary pieces, the two sections are often (not always) very unequal in length, with the second part being much longer than the first.

The opening section of the French overture is always in duple or quadruple meter, and is very slow with many very dotted figures. These dotted figures are always exaggerated, and played in an OVERDOTTED manner (see page 25). This means that the long dotted notes are held longer than their given value, while the short upbeats are made very short.

I always think of the opening of a French overture as representing the "essence of upbeat", since all upbeats are very rapid and move urgently toward the exceptionally strong downbeats. Sometimes overtures are rather pompous. In any case, they are serious and have a dramatic sense of portent, anticipating what may follow.

Because the overture was originally an orchestral piece, those written for solo keyboard should be thought of as transcriptions representing the full orchestra. The opening section should therefore be played on the fullest register of your harpsichord, and with great grandeur.

The second part of a French overture is usually in triple or compound time, and is contrapuntal in texture. This section is much faster than the beginning. The shift from one meter and tempo to another reflects the slow-fast contrasts, incorporated into the overture itself, which are inherent in the sequence of dance forms to follow.

BAROQUE KEYBOARD SONATAS

The term SONATA causes most modern western musicians to think of the CLASSICAL SONATA, such as that composed by Mozart or Beethoven. The BAROQUE SONATA did not resemble this type of piece at all, and was not really related to it.

The word "sonata" originally referred to a kind of instrumental chamber work which originated in Italy at the beginning of the 17th century. The sonata was often written for a solo instrument (especially the violin) with a BASSO CONTINUO accompaniment.

The BASSO CONTINUO refers to a combination of two instruments. One of these, often a violoncello, played the BASS LINE itself. A second instrument, often a harpsichord, duplicated the bass line and also filled out the harmonies by improvising additional chords and/or melody lines. (Procedures for filling out a CONTINUO PART are discussed below in the Chapter VIII.)

Sonatas were even more often written for two solo instruments, and occasionally for slightly larger ensembles. Those for two soloistic parts were called TRIO SONATAS. This term came from the fact that there were three melody lines involved: two solo (usually soprano) parts plus the bass line. However, the performance of a trio sonata generally required four instruments, since the bass line was performed by the two instruments involved in the BASSO CONTINUO.

The early 17th-century sonatas for instrumental ensemble were rather like keyboard CANZONAE in their construction (review page 72). That is, they were multi-sectional, usually consisting of only a single movement which was broken up into several small parts. Some of the sections were imitative, and some were homophonic and often dance-like. Occasionally there were sections in free style, like a TOCCATA (pages 74 and 95).

Later in the 17th century, these small sections within the instrumental sonata were extended, and coalesced into four longer MOVEMENTS. The term "movement" refers to large, generally independent, sections of a longer work. The four movements of the Italian instrumental sonata were almost always arranged in the order of slow - fast - slow - fast.

This common type of sonata, described above, was called a *SONATA DA CHIESA* ("church sonata"). This was contrasted with pieces in which the movements were dance forms, called the *SONATA DA CAMERA* ("chamber sonata", the Italian equivalent of a DANCE SUITE). Supposedly, dances were not allowed in church. In fact, however, dance

movements were often included in the *sonata da chiesa*, but simply were not given dance titles. The final two movements, slow and then fast, of the typical sonata were very often an untitled *sarabanda* and *giga*.

The *sonata da chiesa* became transferred to the keyboard in the 18th century. A number of composers wrote original keyboard sonatas that had the same style and were in the same four movements as the ensemble sonatas of Corelli or Vivaldi. Excellent examples of these keyboard sonatas and sonata movements can be found among the keyboard "suites" of G. F. Handel.

Another type of keyboard piece, also called "sonata" (probably to distinguish it from pieces consisting of dance movements), occurred earlier in the 17th century. This type of sonata was probably derived from the keyboard toccata, rather than from the ensemble sonatas. Very often these keyboard sonatas consisted of single movements with no repeats, and were not clearly distinguishable from toccatas (pages 74 and 95) or canzonas (page 72). Sometimes the titles were confused as well, the same type of piece being called "toccata" in one instance, and "sonata" in another.

Many keyboard sonatas, especially toward the end of the 17th century, were written as *binary* single movements. In this feature they resembled dance pieces. Since they did not correspond to any actual dance type, however, they were called sonatas.

Sometimes two or more of these single sonata movements, particularly the binary ones, were grouped together, with contrasting tempi (speeds) and moods. The development of such single-movement "sonatas" occurred gradually during the later 17th century. Keyboard pieces by Alessandro Scarlatti (1660-1725), for example, were called "toccatas" but often verge on this type of sonata form.

Later Italian composers, such as Benedetto Marcello (1686-1739), wrote strictly binary pieces, but grouped numbers of them together. The most famous of the composers of this type of sonata was Domenico Scarlatti (1685-1757). Practically his entire output of keyboard works were binary sonatas, two or three of which were often grouped together, although many occurred as single binary pieces.

It might be added that the binary keyboard sonata, typical of the later Italian school, really took the place in Italy of the so-called "character piece" of the French and some German composers.

The CLASSICAL SONATA, of the Haydn - Mozart - Beethoven variety, seems to have been another offshoot of such earlier binary sonatas, as well as owing an important part of their structure to the ROUNDED BINARY dance forms. These are binary pieces which have a RECAPITULATION (restatement) of the opening section at the end. Stated in musical analytical terms, the form is A A B A B A, with the double bar and repeat signs occurring before the first "B".

By the very end of the 18th century, the second (and still later, the first) repeat came to be omitted from the fully developed SONATA FORM. (A discussion of the classical sonata form is beyond the scope of this book.) However, it seems likely that some of the

tonal development that occurred in many Baroque sonatas in binary form, such as those of Domenico Scarlatti, profoundly influenced the course taken later by classical sonata composers.

INTABULATIONS

An important part of the keyboardist's repertoire, particularly before the mid-17th century, were *transcriptions* for keyboard of other types of pieces. We already have already seen this in the case of the later concertos, overtures, and sonatas. Various other vocal and instrumental (ensemble) works similarly appeared in keyboard arrangements, called INTABULATIONS.

The many types of pieces treated in this manner included MOTETS, MADRIGALS, CHORALES, CHANSONS and other songs, as well as various instrumental movements. Very often the intabulation would be followed by a series of variations, constructed according to the principles discussed above (page 90) under that heading.

Because intabulation was such an important source of music for the early harpsichordist, it is worthwhile studying the technics used to transcribe pieces from other media to the keyboard. The creation of one's own intabulations is a practical and valuable way to add new works to the harpsichord literature, particularly those of the 16th century or even earlier.

CHAPTER VII. COMPOSITION OF A BASS LINE

Sometimes you are given a melody alone, for which you would like to write a second part for the left hand. Alternatively, you may come across an unaccompanied part for another instrument, such as a flute or the voice, and wish to accompany this on the harpsichord.

MUSICAL ANALYSIS (see *PLAYING WITH THE ELEMENTS*) is an important tool in the construction of a BASS LINE under a given melody. It is necessary to determine the PHRASE STRUCTURE inherent in the melody, and to understand where it begins and ends harmonically. What kinds of CADENCES are implied at the ends of the phrases?

Here is a simple melody, with which I can illustrate the process of creating a bass line. Figure 75 shows the folk melody which Ludwig van Beethoven used in the fourth movement ("Ode to Joy") of his Ninth Symphony.

FIGURE 75. Folk Melody--"Ode to Joy"--with Simple Analysis

Once you have composed a bass line to go with this tune, you can play the two parts together on the keyboard. If you prefer to accompany a voice or another instrument singing or playing this melody, you can add other parts or fill out chords in order to create an ACCOMPANIMENT.

The first thing to do, of course, is to determine the key or tonality of the piece. There are two sharps in the key signature. The tune begins on F♯ and ends on D. This indicates D major (rather than B minor, which has the same key signature).

Secondly, analyze the phrase structure. (For assistance in this process, see the analysis of the Bach minuets in *PLAYING WITH THE ELEMENTS*.) The "Ode to Joy" has four phrases. The first, designated A, ends at the end of m. 4 (m. stands for "measure"). This is followed by A', like A but with a different ending in m. 8. Phrase B is distinctive, and ends in m. 12. Notice the ANTICIPATION of the first note of the final phrase, A', at the end of m. 12. (That is, the first note of m. 13 is played ahead of time in the measure before.) Except for this anticipation and the rhythmic change at the beginning, the final A' is identical with mm. 5 - 8.

Now look at the beginnings and ends of these phrases. What kinds of cadences can be imagined there? In phrase A, the initial F♯ implies the third of the tonic D major triad (it would be strange to have a new harmony involving F♯ at this point!). M. 4 (end of A) begins with the same part of the tonic triad. Therefore, both of these points can be marked "I". The second and third notes in m. 4 are part of the dominant triad, A - C♯ - E. Thus phrase A ends with a HALF CADENCE (I - V). (Remember, from *PLAYING WITH THE ELEMENTS*, that the Roman numerals represent chords on the seven scale degrees.)

Phrase A' begins on I, identically with A. However, its conclusion in m. 8 is the reverse of phrase A. V (represented by the fifth of the dominant triad) goes to I, giving an AUTHENTIC CADENCE (V - I) in D major.

Phrase B starts with E, the fifth of the dominant triad. The next two notes (F♯ and D) are part of the tonic chord. Thus m. 9 goes from V to I. The end of the phrase (m. 12) goes from D to E and then A, suggesting a I - V cadence.

Finally, A' is nearly identical to the first A' (mm. 5 - 8).

Looking at the inner parts of these phrases, you can begin to construct a very simple bass line expressing some of these harmonies. Begin phrase A with D (scale degree 1, root of the triad I) in the bass. (If necessary, review this use of Arabic and Roman numerals in *PLAYING WITH THE ELEMENTS*). In m. 4, move from bass notes D to A (5) as indicated in Figure 76 (page 106). The second and third measures of this phrase could be thought of as parts of the tonic triad with some PASSING TONES (nonchord tones) in the melody. The bass in mm. 6 and 7, Figure 76 suggests this possibility. Alternatively, m. 2 might begin with V and move to I in the middle of the measure.

The simplest interpretation of phrase B gives three almost identical measures, going from V to I, with the final measure moving from I to V. Finally, Figure 76 shows the last A' as identical to the first.

FIGURE 76. "Ode to Joy"--Construction of Simple Bass Line

This extremely simple bass would make an acceptable accompaniment, especially if filled out with some chords. However, it doesn't make a very interesting bass line! In Baroque music, in particular, the bass should form a musical line which is as interesting melodically as the soprano (which here we are calling "the melody").

Look at the melody notes in between the beginning and end of each phrase. Think of them in terms of additional chords, which might make a sensible harmonic progression. Use your knowledge of the kinds of chord sequences which seem natural and musical (refer to *PLAYING WITH THE ELEMENTS*).

Additionally, think about MELODIC MOTION in the bass. It is always possible to introduce PASSING TONES in the bass itself, or notes which move in parallel or in contrary motion with respect to the melody line.

I have suggested a more interesting bass line in Figure 77. An analysis of the possible chord structure is included. In phrase A, as quarter notes are introduced in the melody, the HARMONIC MOTION is increased by having chord changes with each melody note.

FIGURE 77. **"Ode to Joy"--Elaboration of Bass Line**

How does one work out possible harmonies and resultant bass notes? In m. 1, the G could be the root of IV, for example. Putting B in the bass would give a first inversion IV$_6$ triad. The bass could then move to give a first inversion V$_6$ on the next beat. Starting with a root position V triad at the beginning of m. 2, it is possible to pass through IV$_6$ to arrive at I in the middle of m. 2.

The next three bass notes could be analyzed as the roots of VII - VI - VII, but actually you can see that the motion of the bass line is simply parallel to the soprano, creating a nice melody. The chord progression itself is sensible, going from a VII, *deceptively* to VI, then through VII to I at the beginning of the half cadence in m. 4. (Remember that VII can take the place of V, and is treated in much the same way.)

In phrase A' (mm. 6 and 7), notice the elaboration of the bass line with *melodic* ideas which can subsequently be analyzed harmonically. (If the chords make no sense harmonically, one should try again!)

The first two measures (9 and 10) of phrase B are quite straightforward. In m. 11, some passing tones are added to give variety. At the end of m. 11, the VII can lead nicely to I in m. 12. The introduction of the V triad (in m. 12) needs to be delayed, as it will lose its impact if it arrives on the weak second beat of the measure. Hence the insertion of II (G in the bass).

Composing a bass line (with its attendant harmonies) under a melody is called SETTING the melody. This word is also used as a noun, so that Figures 76 and 77 show two different SETTINGS of the "Ode to Joy". Figure 78 shows one of several settings which Beethoven used in his Ninth Symphony. Chord symbols have been written under the bass as before, so that you can compare Beethoven's harmonic thinking with mine!

The most interesting aspect of Beethoven's elaboration is his use of SUSPENSIONS (see *PLAYING WITH THE ELEMENTS*) to delay the appearance of a new chord. For example, in phrase A, he already introduced the *bass* of the IV$_6$ chord right at the beginning of m. 2, but he has held over a note from the previous triad. (Compare with the elaboration of preludes, described in *PLAYING WITH THE ELEMENTS*.)

Another kind of delay occurs in mm. 3 and 4. Here Beethoven simply used the same chord across the bar line, delaying the introduction of a new harmony until the second beat of m. 4. Note also the use of the I$_6$ chord at the end of m. 8. This gives an unfinished feeling to the phrase (A'), so that one knows that it is not the end of the piece.

In phrase B, Beethoven used a greater variety of harmonies. Each repetition of the little melodic unit in mm. 9, 10 and 11, sounds different in his setting. Note the introduction of a SECONDARY VII CHORD, a VII/VI (comparable to a SECONDARY DOMINANT-- see *PLAYING WITH THE ELEMENTS*), at the end of m. 11.

In the final phrase (mm. 14 - 15), notice particularly Beethoven's use of the suspension in the bass. This delays the introduction of the tonic harmony in m. 15.

FIGURE 78. "Ode to Joy"--Beethoven's First Setting

Fig. 78, Adapted from *The Nine Symphonies of Beethoven in Score*, The Miniature Score Series, Bonanza Books, New York, page 321.

How does one go about making these choices of chords which we think might support a simple melody? As indicated in *PLAYING WITH THE ELEMENTS* (the chapter on Analysis), analysis can be ambiguous when the full triad with all its members is not present. Clearly, this is very much the case when only a single line is present. Logic must tell you what possibilities are most reasonable.

The first note in the melody in Figure 75 (page 104) is F♯. This could belong to the following triads: F♯ - A - C♯, D - F♯ - A, and B - D - F♯. Since we have determined that the tonality is D major, our choice here is easy. One would assume the piece would begin on the tonic triad, D - F♯ - A.

Choices need to be made concerning whether each melody note in a measure belongs to a single triad, or whether to treat some of them as passing tones or suspensions. In the first of my two settings, all of m. 1 was treated as a single chord, interpreting the G on the third beat as a passing tone (Fig. 76, p. 106). The second version treated each of these notes as part of a separate chord (Fig. 77, p. 107).

At other times the choices are more ambiguous. For example, in m. 3 of Fig. 75, the D might be part of the following triads: D - F♯ - A (as in Fig. 76), B - D - F♯ (Fig. 77), or G - B - D (Fig. 78, page 109--Beethoven's version). It might even be a member of a SEVENTH CHORD, such as E - G - B - D. Although no one of these decisions is the "correct" one, the choice of a seventh is the least logical, chiefly because of the motion of the parts. Seventh chords need to resolve downward (see *PLAYING WITH THE ELEMENTS*, chapter on Preludes), which this one cannot do owing to the motion of the melody.

Another illustration of the logic of choices can be seen at the beginning of m. 8. The note E is in the melody. This could be part of the II triad (E - G - B), of V (A - C♯ - E), or of VII (C♯ - E - G) in the key of D major. However, we know that the E must be the beginning of a CADENCE, ending on I in the middle of m. 8. Thus the paired chords, either V - I or VII - I, are expected here. Since II - I does not form a cadence, it should be rejected.

In Beethoven's version of m. 8 (Fig. 78), V (A) is preceded by II_6. This slightly more elaborate progression, II_6 - V - I , is now quite logical.

Return to the setting of the "Ode to Joy" illustrated in Figure 77. As it stands, this piece is in two parts, which will work well as a harpsichord solo. However, if you wish to accompany a voice or another instrument, it is necessary to fill out the harmonies suggested by the bass line more elaborately. The next section, on FIGURED BASS, will show you how to do this.

CHAPTER VIII. RUDIMENTS OF FIGURED BASS

Figure 79 shows the bass line that I constructed on page 107 for Beethoven's "Ode to Joy" presented as a FIGURED BASS. This means that the harmonies are represented by numbers (called FIGURES) located under the bass notes. (Sometimes figures are written above the bass notes, in between the treble and bass staves.) These numbers tell you which *intervals* above the bass need to be played, in order to fill out the chords.

FIGURE 79. Bass Line from Figure 77, Expressed as a Figured Bass

Harpsichordists usually have two parts to work from. The melody (usually in the soprano) is on the upper staff, with the bass line and figures below. The melody is usually sung, or played by another instrument. The job of the harpsichordist is to play the bass and elaborate the harmonies suggested by the figures, thereby accompanying the second voice. The bass line, with its figures, is known as a FIGURED BASS or THOROUGH-BASS (this last term was the one used by Baroque musicians).

In performance, the bass line is very often doubled by another instrument, such as a 'cello or bassoon. It is this combination of harpsichord (or lute, harp or organ) realizing the harmonies, plus a doubled bass line, which is called the CONTINUO. Sometimes the bass line with its figures is referred to as a BASSO CONTINUO, and the performance by the harpsichordist from such a score is called CONTINUO PLAYING.

Examination of Figure 79 (page 111) reveals very few numbers under the notes of the bass line, even though this is called a figured bass! The FULL FIGURATION of chords and their inversions are given in *PLAYING WITH THE ELEMENTS*. In practice, however, the figures are very much abbreviated.

ABBREVIATED FIGURES USED IN FIGURED BASS

When there is no figure at all, as with the first note in Fig. 79, the numbers $\frac{5}{3}$ are meant. This refers to the intervals of a fifth and third above the bass note, which indicate that a ROOT POSITION TRIAD is called for (see *PLAYING WITH THE ELEMENTS*). The full REALIZATION of this harmony, therefore, would include an A and F♯ in some position above the bass.

It must be understood that the figures do not indicate which of these notes goes on top, nor how many of the three members are to be doubled. These matters are left entirely up to the player.

The figure "6", shown under the second and third notes of Fig. 79, is shorthand for $\frac{6}{3}$. The notes above the bass will thus be G - D and A - E, respectively. These are the FIRST INVERSION TRIADS IV₆ and V₆. Notice that the figures do not reveal the harmonic functions of the realized triads (compare Figure 77 on page 107).

The abbreviations used are in fact unique, and are all that is needed to be certain about the realizations of the chords. Thus the SECOND INVERSION of a triad is always fully figured, $\frac{6}{4}$, and is distinct from 6. The figure 7 implies a ROOT POSITION SEVENTH CHORD, which would be $\frac{7}{5}{3}$ if fully figured.

The INVERSIONS of seventh chords are abbreviated as follows: FIRST inversion is $\frac{6}{5}$ (full figuring is $\frac{6}{5}{3}$); SECOND inversion is $\frac{4}{3}$ (full figuring is $\frac{6}{4}{3}$); THIRD inversion is $\frac{4}{2}$ or just plain 2 (full figuring is $\frac{6}{4}{2}$).

Some figures involve accidentals, either a sharp or a flat written under a note or beside a figure. A lonely accidental under a note means to raise or lower the *third* of the chord. A sharp (♯) under the bass note D would mean to raise the third, F, to F♯. (In Figure 79 this is unnecessary, since the F♯ is in the key signature.)

An accidental *beside* a figure means to raise or lower that particular interval. In the second chord in Figure 79, a ♯6 under the B would indicate a G♯ instead of G♮ as the 6th above the bass. (Sometimes this is written 6̸.)

Another use of the slash, 5̸, indicates a DIMINISHED FIFTH. Such a figure might be written under the last note of m. 2 (Figure 79). The root position VII triad has a diminished 5th (C♯ to G♮).

Finally, SUSPENSIONS (see *PLAYING WITH THE ELEMENTS*) are also indicated in the figuring. These are tones held over (or repeated) from a previous chord, and producing a dissonance with the new chord. Since they need to *resolve* to a consonance, two numbers must be placed under the single bass note. For example, 4-3 represents a SUSPENSION of a fourth, held over from the previous chord, which will resolve to the consonant third over the same bass note.

Other figures which indicate suspensions are 7-8 and 9-8. In Figure 78 (page 109), the B in the bass in m. 2 would have the figures 7-6 under it, to indicate the suspended seventh, A, resolving to the consonant sixth, G, in the melody.

Finally, it often happens that a single chord is held over more than one bass note. Sometimes a new figure is placed under the second bass note, indicating the new intervallic relationships between this same chord and the new bass. However, an easier method which is also commonly used is to place a horizontal line under all the bass notes through which the same chord is sustained. Thus a figure followed by a line, such as $\frac{6}{5}$——, means to sustain or repeat this chord for the length of the line.

GENERAL RULES FOR REALIZING FIGURED BASSES

As noted in *PLAYING WITH THE ELEMENTS* (in the chapter on Preludes), rules for filling out harmonies include the avoidance of parallel motion in octaves or fifths. It helps to avoid too many root position triads in sequence. Try to throw in some inversions, so as not to have the parallel motion which results from consecutive root position chords. When this is unavoidable (see page 111, Figure 79, m. 7), be careful to use CONTRARY MOTION with the other voices.

Avoid doubling the *bass* in a 6 chord. Remember that the bass is actually the third of a first inversion triad. The root, which is the note that usually needs to be doubled, is actually an interval of a 6th above the bass note!

Avoid doubling the LEADING TONE (7th degree) of the scale. For example, in D major, don't double the C♯, as in the last chord of m. 1, Fig. 79.

To make a nice accompaniment to another instrument, the most important general rule is to have your part remain *below* the pitches of the upper part. The idea is that your harmonies, which fill out the figures, are to form inner parts between the given solo and the bass line.

Another rule in accompaniment is not to duplicate the notes of the solo. You will find, of course, that the note of the soloist occurs as part of the chord designated by each figure. If you go back to Fig. 77 (page 107), you will see, for example, that F♯ (part of the D chord) is the first note of the soloist. The 6 of the IV₆ chord in m. 1 is G, again the note of the soloist. It is surprisingly easy, in fact, to find yourself playing a soprano voice that duplicates the soloist's part.

When realizing figures (the harmonies) in three or four parts, it will be necessary to use notes that the soloist is playing. Just be careful to "hide" these notes somewhere inside the chord, while playing a different note in your own top part.

SOME FURTHER HINTS ON CONTINUO PLAYING

One way to ensure that your soprano line will be different from, and lie below, that of the soloist, is to write out a soprano line for yourself that accounts for part of the harmonies indicated by the figures. It will then be relatively easy to fill out the remainder of the chord with one or two more pitches. Another reason for planning ahead and possibly sketching in your own top line, is that this line should also have some nice melodic motion of its own. Avoid, if possible, ugly leaps and other awkward movements in the highest voice sounding on the harpsichord.

After outlining a simple soprano line and filling out the harmonies in two to four parts, you can elaborate further with some imaginative ornamentation. Sometimes it is nice to play along with the soloist in parallel motion (with thirds or sixths), sometimes to imitate the soloist's part, and so on. These elaborations will only come later, after the basic skill of realizing figures has been developed.

FIGURE 80. *Sarabanda (Largo)* from Sonata VII, Op. 5, by Corelli

(Citation on page 115)

Fig. 80 (page 114), Source: Arcangelo Corelli, *Sonate a violino e violone o cimbalo, Opera Quinta*, Facsimile of the 1700 edition, page 43. Published by the Studio per Edizioni Scelte, Florence, Italy, reproduced with permission.

FIGURE 81. Corelli *Sarabanda*, with Possible Realization of Figured Bass

A discussion of different *styles* of continuo playing and figured bass realization is beyond the scope of this book (refer to the Reading List). It should be emphasized that in no case is a "textbook" realization of figures, in the four-part manner of a chorale, considered to be the kind of accompaniment actually provided in a Baroque performance.

The number of notes included in each chord should vary, depending upon the dynamic effect one wishes to produce. Accented beats and points of emphasis in the music should be accompanied with a thicker texture than will be used where you want a softer accompaniment.

Don't be afraid, in places, to reduce your part to the bass line alone (especially if you do not have another bass instrument to reinforce the continuo). Additionally, of course, you can vary the accompaniment considerably with the judicious and imaginative use of arpeggiation of your realized chords.

Refer to Chapter I for hints as to how to use touch and texture in a dynamic way. The section on Ensemble Playing, in *STARTING ON THE HARPSICHORD*, should be consulted for help in getting started with your group.

A simple *sarabanda* by Corelli is used in Figures 80 and 81 (pages 114 and 115) to illustrate the realization of a simple figured bass using the principles outlined above. You should know, however, that a written version will never quite compare with the possibilities of a spontaneous accompaniment, in which the player is responding to the rhythm and dynamics introduced by the soloist. Furthermore, as in the case of ornamentation, the written chords do not reveal the nuances of imaginative (but discreet) arpeggiation. As with the performance of improvisational pieces, you need to imagine how an improvised accompaniment would sound, and perform the written version accordingly.

A series of exercises for practice in realizing simple figured basses are provided at the end of this chapter (pages 117-121). Some of these have a given soprano part, in which case you should try to follow the general rules for keeping below it and avoiding duplication. Other basses occur alone, for practice in creating a beautiful soprano line of your own!

It should be pointed out that, in the Baroque period, composers varied a great deal in how completely they indicated harmonies with figures. J. S. Bach, for example, was notorious for painstakingly writing the most elaborate and complicated figures, making many of his scores exceedingly difficult to read at sight. Some composers, especially 17th-century Italians, didn't bother to write any figures at all. Such a bass line was called an UNFIGURED BASS.

The absence of figures did not in any way imply that no harmonies were to be filled in, or that they were all root position triads! When you encounter such a part, it will be necessary for you to write in figures, in accordance with your knowledge of harmony. Use the tools you have developed in the study of harmonic analysis (*PLAYING WITH THE ELEMENTS*), along with the logical procedures discussed in Chapter VII.

Finally I should like to add a few words about accompaniment from a part which has already been realized by an editor. In fact, most of the music (certainly in any modern editions) you are likely to encounter has already had the harmonies filled in by someone else. Unfortunately, the editors who prepare most modern editions of early music are pianists, and their written accompaniments are suited to the piano and not the harpsichord. However, if you follow the general rules for accompaniment outlined above, you can modify such a written part to conform to these rules. (Be sure to keep below the soloist, not duplicate his or her part, etc.) The written part should serve primarily to help you find the notes belonging to the harmony--this is important for players who are still struggling with the interpretation and realization of figures at sight.

Try to use editions which do give the original figures (if such were present), and check the editorial realization against these. Surprisingly often the editorially written harpsichord part will be found to be incorrect!

EXERCISES USING FIGURED BASSES

GENERAL DIRECTIONS:

Add two or three notes to each chord. When adding three notes, you will need to *double* one of the notes, unless it is a seventh chord. Try to double the *root* or the *fifth*, rather than the third.

Avoid *forbidden progressions* (see **PLAYING WITH THE ELEMENTS**) such as parallel octaves or fifths, especially between the *outer parts* (soprano and bass).

Work toward a smooth *soprano line*. When a top voice has been provided, try to keep *your* soprano line almost entirely below this given top voice.

Do each exercise many times, starting in different positions, and experimenting with different soprano lines. Do them *at the keyboard*. Try to keep a slow but *steady* beat.

Transpose all exercises to several different keys, experimenting with both major and minor tonalities. If you like, write out the bass line with figures in the new keys.

Remember that ADDING A SHARP is the same as SUBTRACTING or DELETING A FLAT.

No. 17, Georg Philipp Telemann, *Die kleine Kammermusik, Sechs Partiten für Violine*, p. 43. Hortus Musicus, No. 47, Waldemar Woehl, ed. All rights reserved/6. Anflage 1963/ Printed in Germany by Bärenreiter, Kassel. Reprinted by permission.

18) (Handel) -- *A Tempo di Gavotti*

19) (Telemann) -- Presto

(Citations on page 120)

No. 18 (page 119), George Frideric Handel, VIER SONATEN FÜR ALTBLOCKFLOETE (Opus 1, No. 7), p. 24. © Schott and Co. Ltd., London, 1950. Copyright renewed. All Rights Reserved. Used by permission of European American Music Distributors Corporation, sole U. S. and Canadian agent of Schott and Co., Ltd., London.

No. 19 (page 119), Georg Philipp Telemann, *Die kleine Kammermusik, Sechs Partiten für Violine*, p. 35. Hortus Musicus, No. 47, Waldemar Woehl, ed. All rights reserved / 6. Anflage 1963 / Printed in Germany by Bärenreiter, Kassel. Reprinted by permission.

20) (J. S. Bach) -- *Chorale 179*

No. 20, J. S. Bach, *389 Chorale Melodies*. No. 179, p. 119. Kalmus edition number K03047, reproduced by the consent of BELWIN-MILLS PUBLISHING CORPORATION, c/o CPP/BELWIN, INC., Miami, FL 33014

No. 21 (page 121), Source: Arcangelo Corelli, *Sonate a violino e violone o cimbalo, Opera Quinta*, Facsimile of the 1700 edition, page 50. Published by the Studio per Edizioni Scelte, Florence, Italy, reproduced with permission.

No. 22 (page 121), François Couperin, *Concert Royale* No. 4, *Oeuvres Complètes, Musique de Chambre*, Vol. I, page 62. Edited by André Schaeffner, revised by Kenneth Gilbert. Éditions de L'Oisau-Lyre, S.A.M., Les Remparts, Monaco. Used with permission.

21) (Corelli) -- *Giga, Allegro*

22) (F. Couperin) -- *Forlane, Gayement*

In this type of movement, you will usually want to make only one chord change per beat.

(Citations on page 120)

CHAPTER IX. TEMPERAMENT

This is a discussion of the TEMPERAMENT of keyboard instruments--what it is, and why it is necessary. It is *not* a description of how to tune your harpsichord! (See the books by G. C. Klop, E. Kotter, and R. Troeger in the Reading List, below.)

SOME DEFINITIONS

In order to understand TEMPERAMENT, it is first of all necessary to understand the meaning of ACOUSTICALLY PURE INTERVALS. These are intervals, whether octaves or fifths, etc., in which the RATIOS OF THE FREQUENCIES betwen the upper and lower notes form the simplest possible fractions.

The FREQUENCY of a given pitch refers to the number of vibrations or oscillations (called CYCLES) per second produced by a string or other vibrating (sound producing) object. Actually, the word "frequency" always refers to the number of vibrations or cycles of the FUNDAMENTAL pitch produced by such a vibrating body. The FUNDAMENTAL is the lowest, and usually the strongest, pitch emitted.

(Recently, the term "Herz" has been used instead of "cycles per second". These two terms are abbreviated "Hz." and "c.p.s.", respectively.)

Besides the fundamental pitch, most vibrating bodies also produce a series of higher pitches known as OVERTONES or HARMONICS. These occur at intervals of an octave, compound fifth, etc. above the fundamental pitch. The relative strengths of each of these overtones varies with each type of sound-producing body, and accounts for the differences in the quality or character of sounds (known as TIMBRES) produced by different instruments.

The overtones or harmonics are extremely important in the identification, by ear, of the acoustical purity of any given interval.

Let us now return to the topic of frequencies, referring always to fundamental pitches. Treble A (above middle C) on a modern piano has a frequency of 440 cycles per second (or 440 Herz). A harpsichord tuned to so-called "Baroque pitch" is likely to have the same A tuned to a frequency of 415 cycles per second.

The RATIO OF FREQUENCIES is a fraction, expressing the vibrations per second of the fundamental pitch of the highest tone over that of the lowest tone. For example, an acoustically pure octave from treble A down to the first A below middle C will have a ratio of frequencies of 440/220. Those of you who are mathematically inclined will be able to reduce this fraction to its lowest common denominator, 2/1.

The simplest ratio of frequencies for two pitches an octave apart is 2/1. For an interval of a fifth, the simplest ratio turns out to be 3/2. Simplest ratios for acoustically pure fourths and major thirds are 4/3 and 5/4, respectively. Notice that these ratios get more complex as

we go to smaller and smaller intervals. This can be heard in the increasing complexity of the sounds of these intervals!

Review the discussions of intervals in *STARTING ON THE HARPSICHORD* and in *PLAYING WITH THE ELEMENTS*. Listen to each interval, for the quality of its sound, as you move from OPEN, through CONSONANT, to the DISSONANT intervals.

When an interval is acoustically pure, no BEATS or INTERFERENCE WAVES can be heard, and a pure sound is achieved.

In talking about the various intervals, one has a tendency to speak of them as though they were always acoustically pure. An "impure" interval is one that is still close enough to the ideal (simplest) ratio to be clearly recognized (as an octave, for example, and not a major seventh). With a slight discrepancy of this sort (in a ratio, for example, of 2.1/1.0), INTERFERENCE WAVES occur between the upper HARMONICS of the two tones. These waves, which produce a waxing and waning of the sound, are called BEATS. When these are prominent and rapid, the sound of the interval can be quite unpleasant!

TUNING AND TEMPERAMENT OF HARPSICHORD STRINGS

TUNING refers to the mechanical act of altering the pitches of your harpsichord strings. It involves the use of a TUNING HAMMER, placed over the TUNING PIN to which the string is attached. Turning the pin clockwise will tighten the string and raise the pitch. Turning counterclockwise loosens the string, lowering the pitch. Practice is needed to learn to do this in a very refined manner, since the changes of pitch involved in actual tuning and setting of temperaments are very small indeed.

What happens when you tune acoustically pure intervals on the harpsichord? It is certainly possible, and highly desirable, to tune the octaves so that they are pure and *beatless*. What about the intervals within (or smaller than) the octave? Remember that on a keyboard, one is limited to 12 rather artificially placed pitches within each octave. This is in contrast to the voice, or to unfretted string instruments (such as the members of the violin family), which can theoretically produce an infinite number of pitches within each octave.

The sensitive singer or violinist will alter the INTONATION (pitch placement) of each note, depending upon the musical context within which it is heard. For example, treble G can be heard as an octave above bass G. But it is also a fifth above middle C, a major third above E♭, a minor third above E♮, etc. To produce acoustically pure intervals in each of these contexts, the absolute pitch of G needs to be changed slightly.

On a keyboard, however, G is in a fixed position, regardless of the use to which we put it. This limits the possibilities of our intonation. When we tune a scale with all pure (sometimes called JUST) intervals (simplest ratios) we have what is called JUST INTONATION. This is really a kind of theoretical tuning, which cannot be used in practice because it is impossible to move, or MODULATE, from one scale to another.

Figure 82 (page 124) shows a "circle" of pure fifths. As you go around the circle to the right, from C, it is possible to tune each fifth (or its complement, the fourth) as pure and

The DIFFERENCE between this B♯
and a pure C is called the
PYTHAGOREAN COMMA

B♯

The end of this
circle does not
meet the beginning!

E♯

C

G

A♯

D

D♯

Tune UP from C by acoustically
pure fifths.

(or, for convenience, DOWN by
pure fourths)

A

G♯

E

C♯

B

F♯

FIGURE 82. **"Circle" of Pure Fifths, Illustrating the Pythagorean Comma**
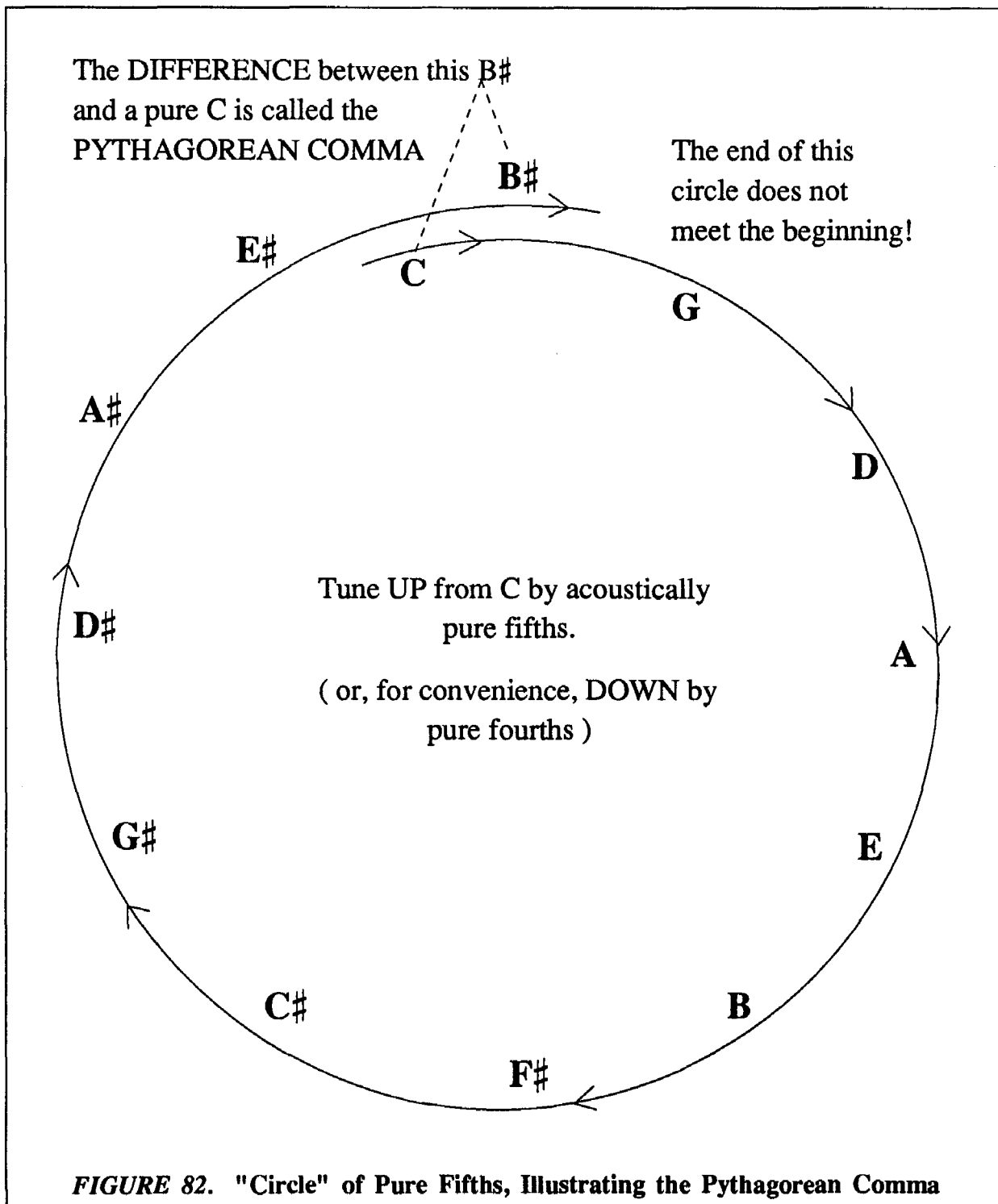
beatless. However, continuing all the way around the circle in this manner, we find that the interval F - C (the ENHARMONIC EQUIVALENT of E♯ - B♯ in the theoretical circle of fifths) produces a C which is higher than the one with which we started!

One way to speak about this is to say that the circle of fifths is "too wide" to meet in the middle again at C. This "error" (or the difference between fifths and octaves, if you will) is called the PYTHAGOREAN COMMA. How can we make the circle complete, so that all the fifths within an octave will meet again in the middle at C?

In fact, the only way to do this is to sacrifice the idea of having *all* pure fifths. (Long ago, it was decided that to allow impure octaves was unacceptable.) If we were to tune one or more of the fifths too *narrow*, we could compensate for the Pythagorean comma. This act, of deliberately *mistuning* an interval in order to somehow "squeeze" it into our fixed keyboard, is called TEMPERING the interval. Any system of tuning which makes use of such mistuned intervals is called a TEMPERAMENT.

Figure 82 shows that part of our theoretical problem is conceptual. On the keyboard, we treat the note D♯ as equivalent to E♭, for example, but they are in fact not the same! We actually make each note on the keyboard do double duty, serving as two different notes. Each must form parts of the fifths coming round on the "left hand side" (or "flat side") of C, as well as those coming round the other way ("sharp side"). When all the fifths are tuned absolutely pure (or JUST), these relationships do not hold.

It will be seen, then, that the concept of the complete circle of fifths with its "enharmonic equivalents", is merely a consequence of modern keyboard temperaments (particularly EQUAL TEMPERAMENT, described below). This theoretical idea has no basis in acoustical fact!

Figure 83 (page 126) demonstrates the consequences of tuning three pure *major thirds*, and comparing the results of this tuning with a pure octave. Starting with C, tune the following acoustically pure major thirds: C - E, E - G♯, G♯ - B♯. On the keyboard, this B♯ ought to be equivalent to the C an octave above where you started. In fact, the B♯ is too *low* to make an acoustically pure octave with the first C.

This error is called the DIESIS. To make a pure octave by tuning major thirds, one or more of the thirds would have to be tuned *wider* than pure (tempered), to compensate for the diesis.

Still another relationship is shown in Figure 83. To relate thirds to fifths, tune four acoustically pure (beatless) fifths up from C: C - G, G - D, D - A, A - E. This E should theoretically be a pure compound major third (a tenth) above the C from which you started. In fact, however, the E is too high to form a pure tenth. This particular error, or discrepancy, is called a SYNTONIC COMMA.

Because of the syntonic comma, whenever we tune pure or nearly pure fifths on our keyboard, the major thirds will turn out to be too wide! If, instead, we tune pure or nearly pure major thirds, the perfect fifths end up being narrow! This reciprocal relationship holds in all temperament systems, whenever we try to squeeze all the intervals represented by the 12 keyboard notes into an octave.

C ——————————— Acoustically pure octave ———————————→ C'

C ————→ E ————→ G♯ ————→ B♯

Acoustically pure major thirds - - - - - - -

The B♯ which results falls short of a pure octave from the original C.

This gap is called the DIESIS.

C ————→ G ————→ D ————→ A ————→ E'

Acoustically pure fifths - - - - - - - - - - - - -

C ————————————————→ E'

Acoustically pure major tenth (compound major third) - - - - -

The E' which results falls short of the E' obtained by tuning pure fifths.

This gap is called the SYNTONIC COMMA.

FIGURE 83. **The Diesis and the Syntonic Comma**

SYSTEMS OF TEMPERAMENT

It should now be clear that, in order to tune a keyboard instrument, some compromise is needed. Certain intervals must be deliberately mistuned, but it makes sense to place the impure intervals in the most acceptable places around the circle of fifths. What places seem most acceptable, in fact, depend upon the music to be played.

It turns out that many different kinds of compromises can be made. These various compromises are known as TEMPERAMENTS. The deliberately placed mistuned (that is, impure) intervals are known as TEMPERED INTERVALS.

Octaves are never impure in any of the temperaments used by harpsichordists. Sometimes the upper octaves of modern pianos are tuned wide. This supposedly increases the brilliance of the sound, by producing some extra beats.

On the modern piano, EQUAL TEMPERAMENT is used. In this temperament, the Pythagorean comma is compensated for by tuning all of the perfect fifths very slightly narrow. Each fifth is mistuned by exactly the same small amount, distributing the error over all of them. Since each fifth is in fact very close to pure, we are usually not aware of the discrepancy (beats are slow).

In equal temperament, since the fifths are nearly pure, the major thirds are all equally and painfully wide! Most modern musicians are not aware of this, because our ears have become accustomed to hearing these harsh thirds and interpreting them as being "in tune". In fact, the BEAT RATE (number of interference waves or beats per second) is so fast in these equal tempered thirds, that it is difficult to distinguish the beats as such. After hearing some acoustically pure major thirds, the equal tempered thirds simply sound wildly out of tune and sour!

Equal temperament is a CLOSED SYSTEM. This means that the circle of fifths is complete, making it possible to play in any of the possible major and minor tonalities. In addition, all major keys sound exactly alike, as do all minor keys. All have the same slightly narrow fifths, and the same mistuned major thirds.

Some historical temperaments that were used by early harpsichordists were OPEN. In these, the circle of fifths remained incomplete. An example of an open system is MEAN TONE TEMPERAMENT. In this system, all of the usable major thirds are tuned pure (beatless). This would result in unacceptably narrow fifths. To compromise, all of the usable fifths are tuned quite narrow, but equally so (actually, 1/4 of the Pythagorean comma). These fifths are much more noticeably out of tune than are the fifths of equal temperament.

When we talk about "usable" fifths and thirds, we are implying that some intervals that may look like fifths or thirds on the keyboard are in fact "unusable"! You will also find that some keys or tonalities are "usable" in mean tone, while others definitely are not!

As in equal temperament, all of the usable keys sound alike in mean tone temperament. All of them have pure major thirds and narrow fifths. However, no ENHARMONIC RELATIONSHIPS are possible. Thus G# is not equivalent to A♭, for example. In fact, only specific notes such as C, C#, D, E♭ (but not D#) are tuned in this system. You can change this, by retuning the E♭ to a D#, but then you lose the E♭!

In an open system such as mean tone temperament, there is always one totally unusable fifth. Thus G# - E♭ has a wildly out of tune sound, since it is not equivalent to G# - D#. Baroque musicians called this "horrible" fifth the WOLF! They described it as "howling" with a terrible sound!

What, then, is the purpose of such a tuning, which has so many obvious limitations? The *advantage* of mean tone temperament is the beauty of its major triads with their pure major thirds. (Notice that it is the tuning of the major third which is most critical in creating a beautiful-sounding triad.) In fact, Baroque musicians found the horrible major thirds of equal temperament completely unacceptable, and preferred to limit themselves to fewer possible scales, in order to achieve more beautiful intonation on their keyboard instruments.

Mean tone temperament is most suitable for early 17th century music, which does not modulate extensively. As greater freedom of modulation became musically desirable, different compromises of temperament came to be used. Most of these were closed systems like equal temperament.

The early closed systems, however, were *unequal*. In these, the major triads "closest" to C major (in the circle of fifths) were tuned with the purest major thirds. This meant that the fifths of these triads were narrow, often a quarter of the Pythagorean comma. Triads far removed from C major often had pure fifths, but the major thirds were too wide. These triads were used much less often, and their out-of-tuneness created tension in the music. The existence of tension in some intervals and not others was considered desirable. Baroque composers often used these differences in the sounds of major triads to great musical effect.

Closed systems such as the above are called WELL TEMPERED TUNINGS. It is likely that J. S. Bach wrote his *Well Tempered Clavier* for such a tuning or temperament (although the possibility that he intended *equal temperament* cannot be ruled out). Bach's extraordinary compendium of preludes and fugues in all major and minor tonalities demonstrated that with a closed temperament, all keys were possible with a single tuning of the keyboard. It was probably not intended that all sound alike, however! Although early harpsichord composers and tuners knew about equal temperament, they generally felt that other temperaments served their music better.

How is your harpsichord tuned? If you have an opportunity, try different historical temperaments, as they greatly illuminate the harpsichord music of the past.

LIST OF IMPORTANT EARLY COMPOSERS AND PUBLISHERS

NAME	NATIONAL ORIGIN	DATES
Attaingnant, Pierre (publisher)	France	*fl.* 1531
Bach, Carl Philipp Emanuel (son of J.S. Bach)	Germany	1714 - 1788
Bach, Johann Sebastian	Germany	1685 - 1750
Beethoven, Ludwig van	Germany	1770 - 1827
Bremner, Robert (publisher)	Scotland	*d.* 1789
Bull, John	England	1562 - 1628
Buxtehude, Dietrich	Sweden	1637 - 1707
Byrd, William	England	*c*1542 - 1623
Chambonniéres, Jacques Champion de	France	1602 - 1672
Clarke, Jeremiah	England	*c*1659 - 1707
Corelli, Arcangelo	Italy	1653 - 1713
Couperin, François	France	1668 - 1733
Couperin, Louis (uncle of F. Couperin)	France	1626 - 1661
Dandrieu, François	France	1682 - 1738
d'Anglebert, Jean-Henry	France	1635 - 1691
Farnaby, Giles	England	*c*1560 - 1640
Février, Pierre	France	*fl.* 1734
Forqueray, Antoine	France	*c*1671 - 1745
Frescobaldi, Girolamo	Italy	1583 - 1643
Froberger, Johann Jakob	Austria	*c*1600 - 1667
Gibbons, Orlando	England	1583 - 1625
Handel, Georg Frideric	Germany (later England)	1685 - 1759
Lully, Jean-Baptiste	Italy (later France)	1639 - 1687
Marcello, Benedetto	Italy	1686 - 1739
Marchand, Louis	France	1669 - 1732
Munday, John	England	*c*1565 - 1630
Pachelbel, Johann	Germany	1653 - 1706
Pasquini, Bernardo	Italy	1637 - 1710
Peerson, Martin	England	*c*1580 - 1651
Praetorius, Michael	Germany	*c*1570 - 1621
Purcell, Henry	England	1658 - 1695
Rameau, Jean-Philippe	France	1683 - 1764
Reinken, Johann Adam	Germany	1623 - 1722
Scarlatti, Alessandro	Italy	1660 - 1725
Scarlatti, Domenico (son of Alessandro)	Italy	1685 - 1757
Sweelinck, Jan Pieterzoon	Holland	1562 - 1621
Telemann, Georg Philipp	Germany	1681 - 1761
Tisdall, William	England	early 17th cent.
Vivaldi, Antonio	Italy	1678 - 1741
Zipoli, Domenico	Italy	1688 - 1726

READING LIST

Apel, Willi. *The History of Keyboard Music to 1700.* Indiana University Press, Bloomington, 1972.

Arneson, Arne J. and Stacie Williams. *The Harpsichord Booke: Being a Plaine and Simple Index to Printed Collections of Musick by Different Masters for the Harpsichord, Spinnet, Clavichord, and Virginall.* Index House, Madison, Wisconsin, 1986.

Arnold, F. T. *The Art of Accompaniment from a Thorough-Bass.* (2 volumes) Dover Publications, Inc., New York, 1965.

Bach, Carl Philipp Emanuel. *Essay on the True Art of Playing Keyboard Instruments.* (tr. by W.J. Mitchell) W.W. Norton & Co., Inc., New York, 1949.

Bedford, Frances and Robert Conant. *Twentieth-Century Harpsichord Music: A Classified Catalog.* Joseph Boonin, Inc., Hackensack, N.J., 1974.

Bukofzer, Manfred F. *Music in the Baroque Era.* W.W. Norton & Co., Inc., New York, 1947.

Caldwell, John. *English Keyboard Music Before the Nineteenth Century.* Praeger Publishers, New York 1973.

Cohen, Joel and Herb Snitzer. *Reprise. The Extraordinary Revival of Early Music.* Little, Brown & Co., 1985.

Couperin, François. *L'Art de Toucher le Clavecin.* (tr. by Margery Halford) Alfred Publishing Co., Inc. 1974.

Dart, Thurston. *The Interpretation of Music.* Harper & Row, New York, 1963.

Dolmetsch, Arnold. *The Interpretation of the Music of the Seventeenth and Eighteenth Centuries.* University of Washington Press, Seattle, 1969. (Original hardcover edition, Novello & Co., Ltd., London, 1915.)

Dolmetsch, Arnold. Appendix to *"The Interpretation of the Music...".* Novello & Co., Ltd., London, 1915.

Donington, Robert. *A Performer's Guide to Baroque Music.* Charles Scribner's Sons, New York, 1973.

Ferguson, Howard. *Keyboard Interpretation from the 14th to the 19th Centuries.* Oxford University Press, New York, 1975.

Gillespie, John. *Five Centuries of Keyboard Music.* Dover Publications, Inc., New York, 1965.

Hubbard. Frank. *Harpsichord Regulating and Repairing.* Tuners Supply, Inc., Boston, 1963.

Hubbard, Frank. *Three Centuries of Harpsichord Making.* Harvard University Press, Cambridge, Mass, 1965.

Keller, Hermann. *Thoroughbass Method* (tr. by Carl Parrish) W. W. Norton & Co., Inc., New York, 1965.

Kirkpatrick, Ralph. *Domenico Scarlatti.* Princeton University Press, Princeton, N. J., 1953.

Kirkpatrick, Ralph. Preface to *Domenico Scarlatti. Sixty Sonatas.* (2 volumes) G. Schirmer, Inc., New York, 1953.

Klop, G. C. *Harpsichord Tuning.* Werkplaats voor Clavecimbelbouw. Paleisweg 6, Garederen, Holland, 1974.

Kottick, Edward. *The Harpsichord Owner's Guide.* University of North Carolina Press, Chapel Hill, 1987.

Palmer, Larry. *Harpsichord in America: A Twentieth Century Revival.* Indiana University Press, Bloomington, 1989.

Quantz, Johann Joachim. *On Playing the Flute* (tr. by Edward R. Reilly) Schirmer Books, New York, 1966.

Reese, Gustave. *Music in the Renaissance.* (revised edition) W.W. Norton & Co., Inc., New York, 1959.

Russell, Raymond. *The Harpsichord and Clavichord.* Faber & Faber, Ltd., London, 1959.

Saint Lambert, Monsieur de. *Principles of the Harpsichord* (tr. by Rebecca Harris-Warrick) Cambridge University Press, New York, 1984.

Schott, Howard. *Playing the Harpsichord.* Faber & Faber, Ltd., London, 1971.

Troeger, Richard. *Technique and Interpretation on the Harpsichord and Clavichord.* Indiana University Press, Bloomington, 1987.

Tunley, David. *Couperin.* (B.B.C. Music Guide). British Broadcasting Corp., London, 1982.

Williams, Peter. *Figured Bass Accompaniment* (2 volumes). Aldane Publishing Co., Chicago, 1970.

Wilson, John. *Roger North on Music.* Novello & Co., Ltd., London, 1959.

Zuckermann, Wolfgang Joachim. *The Modern Harpsichord.* October House, Inc., New York, 1969.

LIST OF FIGURES

LIST OF FIGURES, concluded

INDEX