The Melodic Line I

This text is entitled *Harmony*, yet there is very little music that is only harmonic. Melody, on the other hand, can stand alone, as you know from your own experience when you whistle or sing a tune.

The earliest known music is exclusively melodic, and melody's importance in music composition continues to the present in spite of the many and diverse changes in musical styles over the years. Article #7, "Some Varieties of Melodic Expression," at the end of this chapter illustrates a few of the widely different concepts of melodic writing found during the course of the history of music.

Melodies associated with traditional harmony sound as they do because they represent the interaction of four musical elements: *form, pitch, harmonic implication,* and *rhythm and meter.*

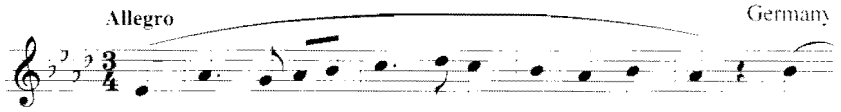
Form

Most music is written in some orderly arrangement. In the music of the West, certain patterns of musical construction have come to be commonly (though not exclusively) used. These patterns are known as musical *forms.*

The term *form* refers to the shape or structure of the object or concept being described. In music, a form usually ends at a cadence point; a form begins either at the beginning of the piece or immediately after a cadence. Since a musical composition usually has more than one cadence, it usually contains a series of forms. These smaller forms, in turn, will often combine to make up a larger kind of form, the nature and description of which is determined by the number of cadences and the nature of the material between cadences.

The Phrase From this general description, we can turn our attention to the smallest of the forms, the *phrase.* In melodic writing, the phrase is a group of notes leading to a cadence. The distance from the first note of a phrase to the cadence may be any number of measures, though usually not more than eight. The four-measure phrase is so commonly used that it may be considered a standard length with which phrases of other lengths may be compared. Figure 7.1 shows such a phrase, ending with a perfect authentic cadence in measure 4. The phrase is marked off with a *phrase mark,* a curved line extending from the first note to the last note of the phrase.

FIGURE 7.1 *Phrase*



A phrase may also consist of two or more distinct units, called *motives*. In Figure 7.2, two two-measure motives combine to make the phrase. The motive is a unit of melody smaller than a phrase, usually identifiable by a pause in the melody, the rhythm, or both. The phrase mark is used to indicate the length of the motive.

FIGURE 7.2 *Phrase Composed of Two Motives*

The Period Two phrases may combine to form a *period*. In the period, the first phrase, called the *antecedent phrase*, usually ends with a half cadence or an imperfect cadence. The second phrase, called the *consequent phrase*, then ends usually with a perfect cadence, though again an imperfect cadence is possible.

Periods may be *parallel* or *contrasting*. A period is parallel when the two phrases are similar in some respect. Often the two phrases are identical except at the cadence points, as in Figure 7.3, but any marked similarity in the two phrases will justify analysis as a parallel period. In Figure 7.4, measure 1, note that the skip of a sixth down is answered in measure 5 by a skip of a sixth up. Other melodic features are similar in the two phrases, and the rhythmic pattern is identical.

When the two phrases lack any specific or general melodic similarity, the period is contrasting, as in Figure 7.5.

FIGURE 7.3 *Parallel Period: Nearly Identical Phrases*

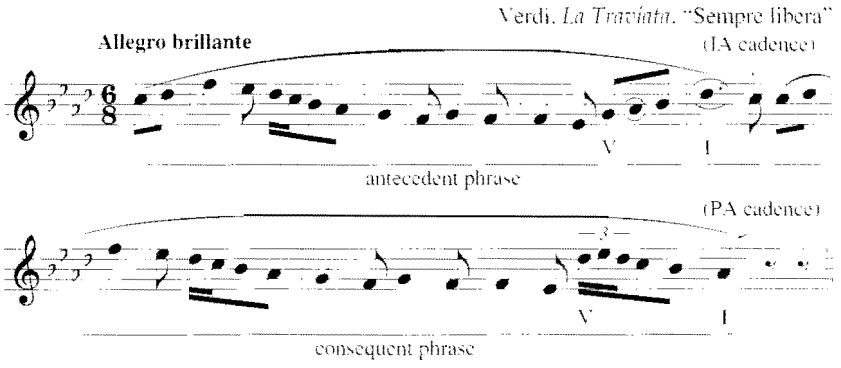


FIGURE 7.4 *Parallel Period: Phrases with Features in Common*

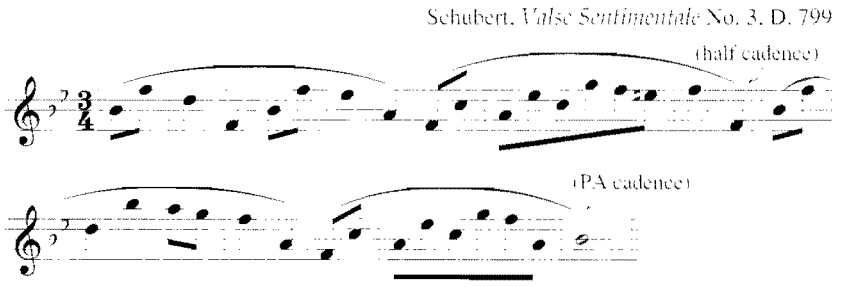
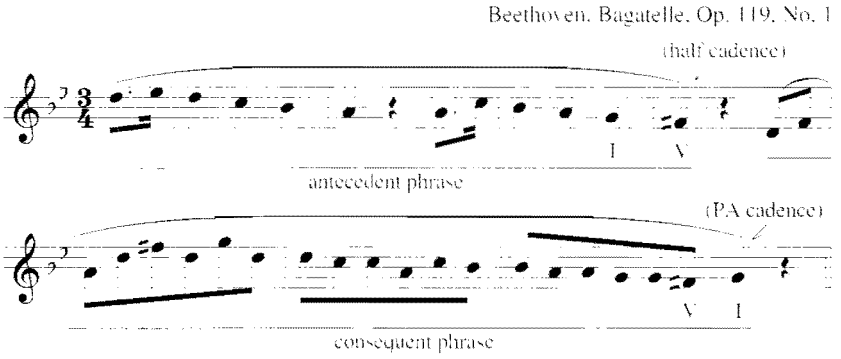
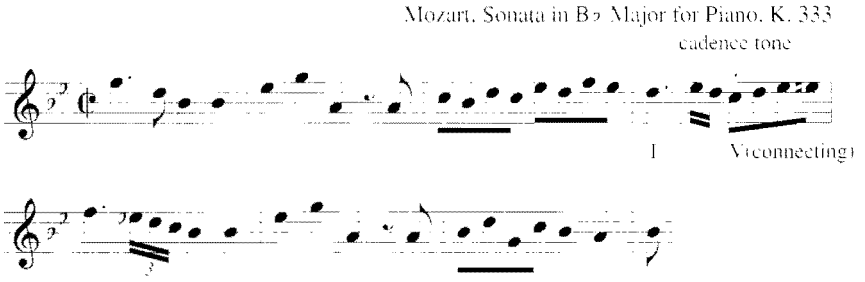


FIGURE 7.5 *Contrasting Period*



Often the close of the antecedent phrase of a period will be connected to the opening of the consequent phrase by one or more decorative pitches. Locating the cadence will help to identify the last note of the antecedent phrase.

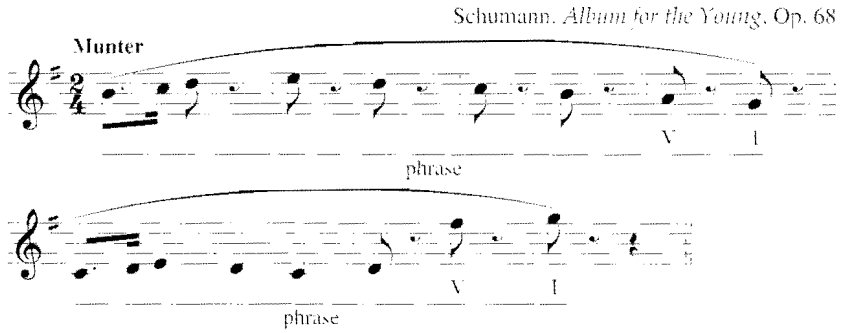
FIGURE 7.6



At times, successive phrases will each end with the tonic note. Since the perfect cadence marks the *end* of a formal pattern, these phrases cannot be combined into a

larger form. Figure 7.7 contains two four-measure phrases, each ending on the tonic note; therefore, this excerpt is not a period, but simply two phrases.

FIGURE 7.7 *Successive Phrases*



Phrases are also classified according to the rhythmic placement of their first and last notes, that is, whether these notes occur on a strong beat or on a weak beat of the measure. There are, of course, four such combinations, the most common of which are those with strong final tones.

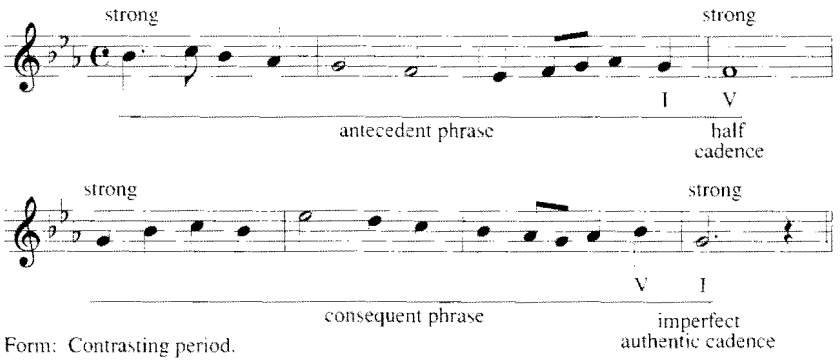
First note	***Final note***	***Example***
strong	strong	Figure 7.7 (second phrase)
weak	strong	Figure 7.1
strong	weak	Figure 7.7 (first phrase)
weak	weak	Figure 7.3 (first phrase)

When two phrases combine to form a period, they commonly display the same beginning and ending characteristics; however, other combinations are not infrequent, as in Figures 7.3 and 7.7

ASSIGNMENT 7.1 *Analyzing form in melodies.* Each of these melodies will be a parallel period, a contrasting period, or two successive phrases. Copy out the melody and indicate *(a)* the location and name of the cadence, using roman numerals V–I or I–V; *(b)* the phrase lengths, by a bracket from the first to the last note of the phrase; *(c)* the nature (strong or weak) of the first and final notes of each phrase; and *(d)* the name of the entire form.

Example

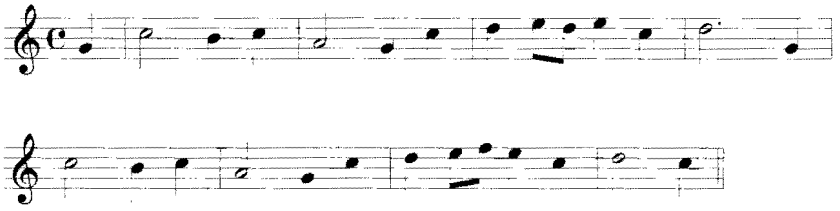
Silcher, "Alle Jahre wieder"



Form: Contrasting period.

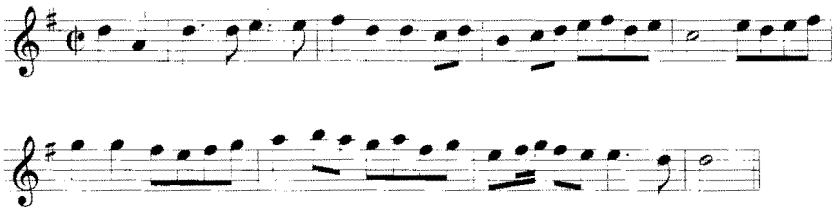
(1)

Brahms, Symphony No. 1, Op. 68



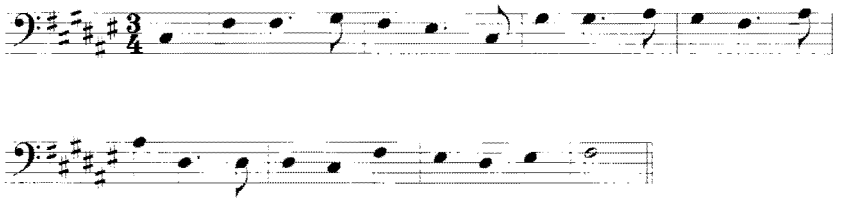
(2)

Elizabeth- Claude Jacquet de la Guerre (1667–1729), *Semelé*



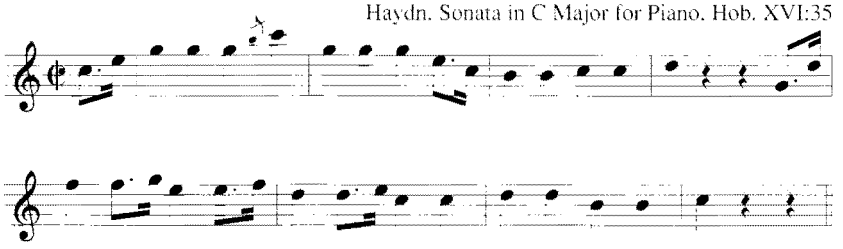
(3)

Spain



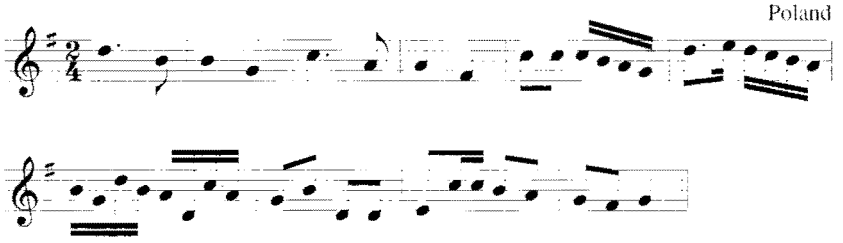
(4)

Haydn. Sonata in C Major for Piano. Hob. XVI:35



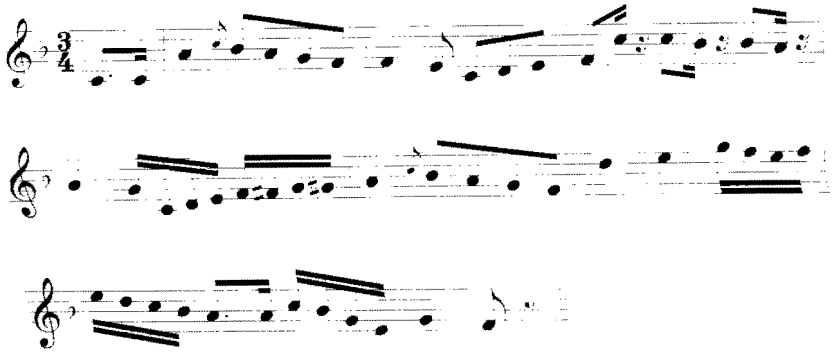
(5)

Poland



(6)

Beethoven, Sonata in F Minor for Piano, Op. 2, No. 1



In Appendix E: Answers to (1), (2), and (5) are given.
In the Workbook: Answers to (1) and (2) are given.

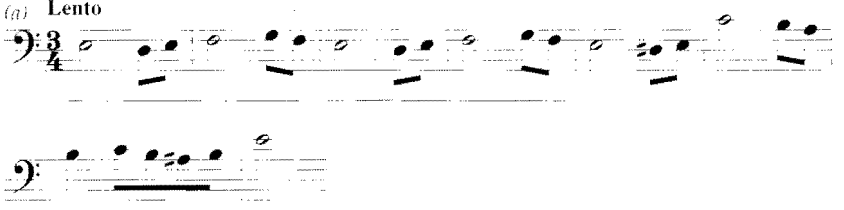
Repetition and Sequence In the parallel period, we have seen the second phrase act in some ways as a representation of the first. This repetition is often almost exact except for the last note or last few notes, as in Figure 7.3.

Repetition within the phrase is just as valuable as within the period, both for preventing too many ideas from being included in the short space of four measures and for emphasizing a good idea once it has been stated. Exact repetition can be effective if not done to the point of monotony. In Figure 7.8*a*, the repetition of measures 1–2 in measures 3–4 is exact, and in *b*, the sense of repetition is not disturbed by the final three notes.

FIGURE 7.8 *Repetition within the Phrase*

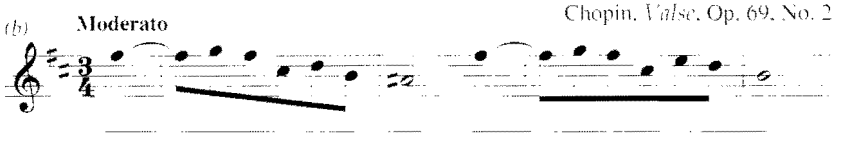
Chopin, *Valse brillante*, Op. 34, No. 2

(*a*) **Lento**



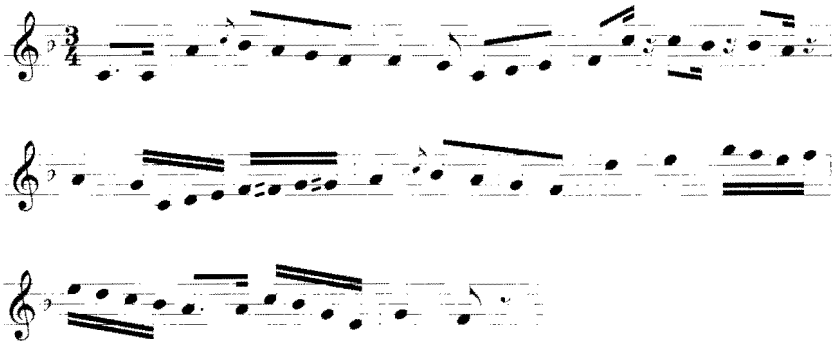
Chopin, *Valse*, Op. 69, No. 2

(*b*) **Moderato**



(6)

Beethoven, Sonata in F Minor for Piano, Op. 2, No. 1



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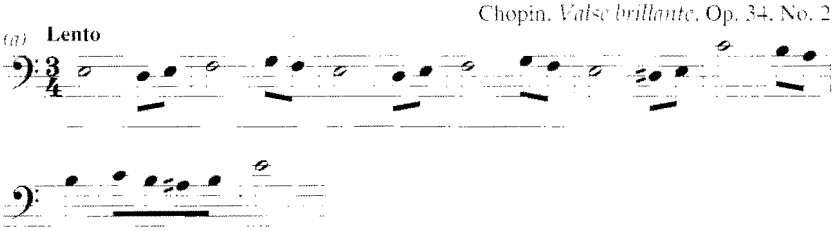
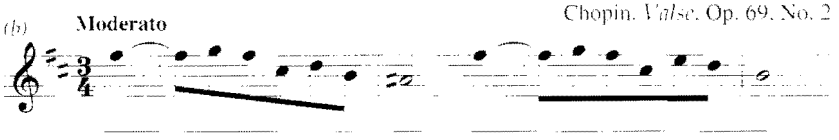


Chopin, *Valse*, Op. 69, No. 2

(*b*) **Moderato**

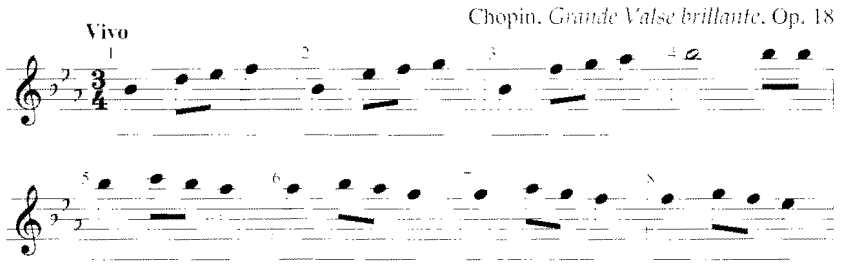


Repetition may be modified by *inversion*. In this process, each note in the repetition of the given melodic figure progresses to the next note by the same interval, but in the opposite direction. Measures 7–8 of Figure 7.9 are the inversion of measures 5–6. (The quality of the interval, whether major or minor, is not considered, only the interval number. Measure 5 shows a major second down, answered in measure 7 by a minor second up.)

FIGURE 7.9 *Melodic Inversion*

Sequence is similar to repetition, except that the repeated material appears at a new pitch level. This device thus allows similarity and variety simultaneously. Consequently, it is one of the most successful and widely used devices in music composition—not only in melody but in rhythm and harmony as well. In Figure 7.10, look first at measure 5. The melodic and rhythmic elements (the two usually go together) of this three-note figure are repeated in each of measures 6–8 as a sequence.

FIGURE 7.10 *Melodic Sequence*



Are measures 1–3 modified repetition or sequence? Either analysis can be justified, since sequence need not be exact. It may be modified to some extent, as long as the aural impression of repetition is clear. In Figure 7.11, the last two measures are a sequence of the previous two measures, although they differ by one note.

FIGURE 7.11 *Modified Sequence*

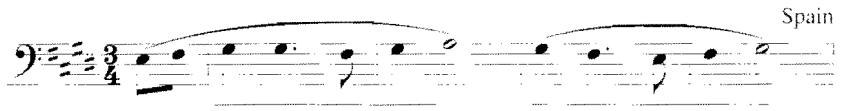
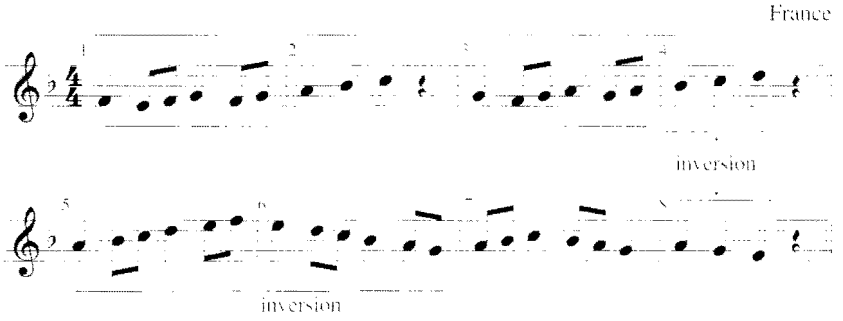


Figure 7.12 contains the following uses of sequence:

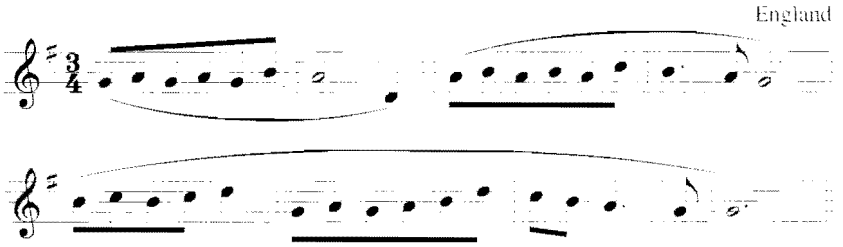
1. There is a three-note sequence in measure 1.
2. Measures 3–4 are a sequence of measures 1–2.
3. Measure 6 is the inversion of measure 5.
4. To conclude this melody, measure 7 features, for contrast, the rhythmic figure in reverse, and measure 8 shows the inversion of the three-note figure located at the end of the antecedent phrase.

FIGURE 7.12

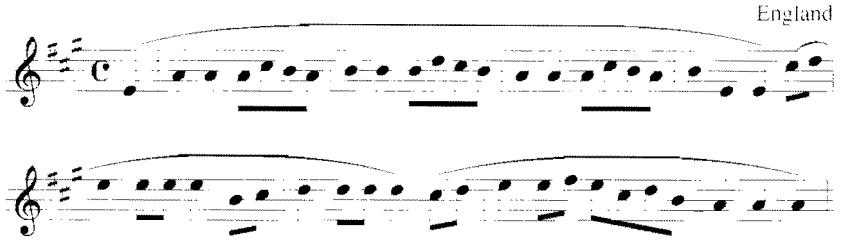


ASSIGNMENT 7.2 Locate and describe examples of repetition and sequence in these melodies, and also in (3) and (4) from Assignment 7.1.

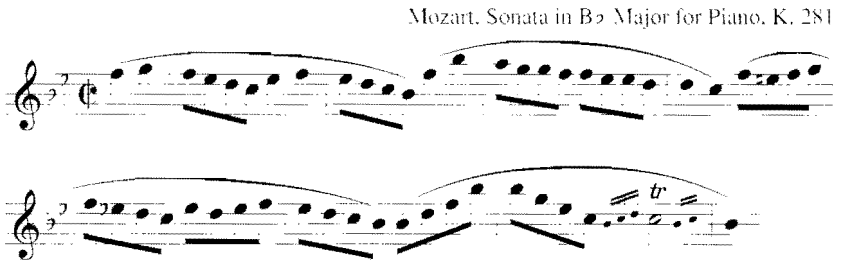
(1)



(2)



(3)

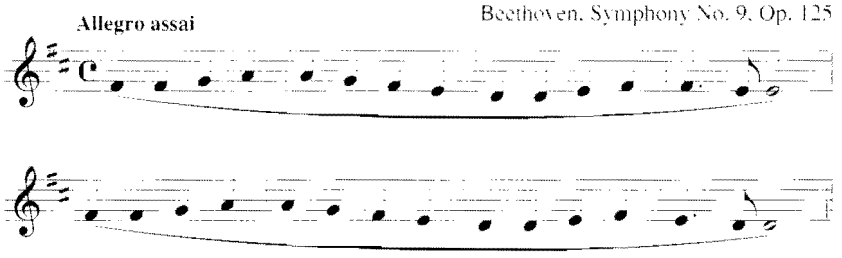


In Appendix E: The answer to (1) is given.
In the Workbook: The answer to (1) is given.

Pitch

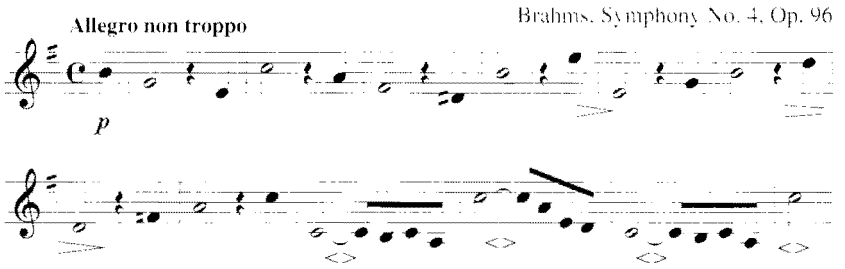
Intervals and Scale Passages How complex need a melody be to be considered a "good" melody? Not complex at all if one considers the well-known passage from Beethoven's Ninth Symphony, shown in Figure 7.13, a "good" melody! It consists entirely of scale steps and uses only quarter notes in the first three measures of each phrase. Also, look back at Figure 4.1 ("Jesu, Joy of Man's Desiring"), which includes only one interval other than a scale step.

FIGURE 7.13



At the other extreme, the melody of Figure 7.14 uses in its first eight measures only intervals of a third and larger.

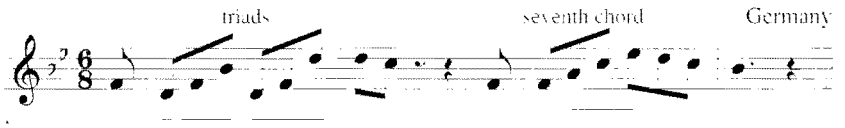
FIGURE 7.14



But we will find that most melodies lie somewhere between these two extremes, using a judicious combination of scale steps and larger intervals. The study of simple melodies should include these considerations:

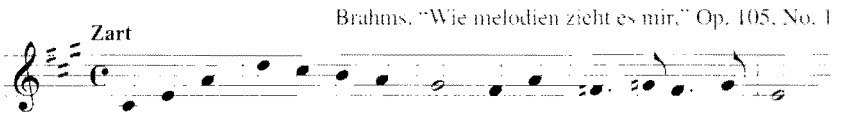
a. Intervals. Intervals of a third or larger can be used freely when resulting in the arpeggiation of a chord, though the number of successive skips is usually not more than three.

FIGURE 7.15



The last of three successive skips at the beginning of Figure 7.16 is to a nonharmonic tone, the harmony remaining tonic.

FIGURE 7.16



A large leap (a fifth or larger) is usually approached from the direction opposite the skip and left in the direction opposite the skip, as in Figure 7.17.

FIGURE 7.17

Bach, Minuet, BWV Anh. 14

b. Scale passages. The usual scale-line passage does not exceed six tones, though longer passages are not uncommon. Looking at number 6 of Assignment 7.1 (page 136), we see that, with but one exception, each scalar passage is limited to four, five, or six notes. The exception, in measure 4, is a run of eight tones, but encompassing only the interval of a sixth because of the chromatic tones.

c. Range. The range of the melody (lowest note to highest note) must not exceed the range of the voice or instrument for which the melody is written. The ranges shown for part-writing voice lines on page 86 also apply here. Note the limited range of the folk songs included in this chapter. Instruments have a much wider range than the human voice. Their outer limits are included in Appendix B.

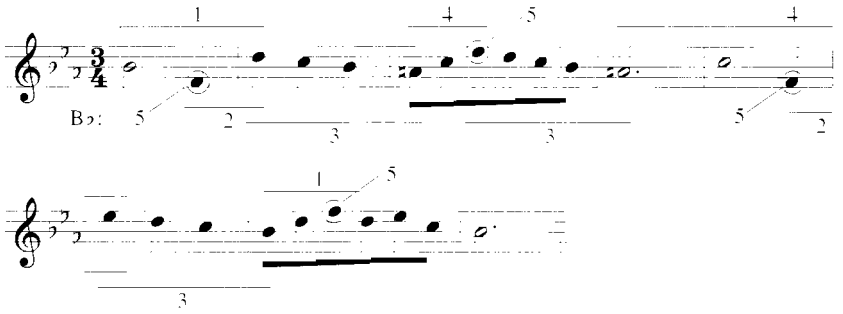
In most melodies, the highest tone, sometimes called the *climax note*, is not repeated within the phrase, and often not within the period. Its effectiveness is usually lost upon repetition. The same is true of the lowest note *(anticlimax note)*, though in its case the rule is not so strictly observed.

ASSIGNMENT 7.3 Analyze the melodies on page 145, looking for the following features:

1. Scale lines. How many notes go in the same direction? How is the run in one direction approached and left?
2. Chord outline. Which chords are outlined in a series of two or more skips?
3. Large leaps. Is the leap approached and left by similar or contrary motion, and is it approached and left by scale step or by skip?
4. High and low notes. Check for the highest note and the lowest note in each phrase. Is either found twice or more?
5. Note any exceptional practices and try to determine why they were used.

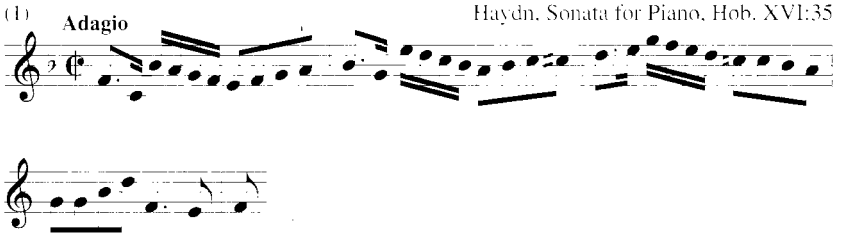
Explanations for the melodic features indicated by the bracketed and circled notes are listed after the following example.

Mozart, Symphony No. 39, K.543



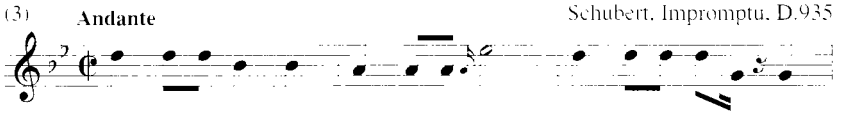
1. These skips outline the tonic triad. In measure 1, the last note is left in contrary motion. In measure 7, the first note is left in a motion contrary to its approach.
2. The large skip is approached and left by contrary motion.
3. In the scale line of four or five notes, each group is approached and left by contrary motion.
4. These skips outline the dominant seventh (V^7) chord, and each group is approached and left by contrary motion.
5. The low notes and the high notes of each phrase are circled. Each phrase displays one of each.

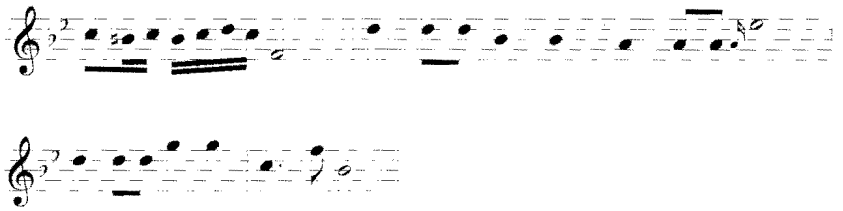
(1) **Adagio** Haydn, Sonata for Piano, Hob. XVI:35



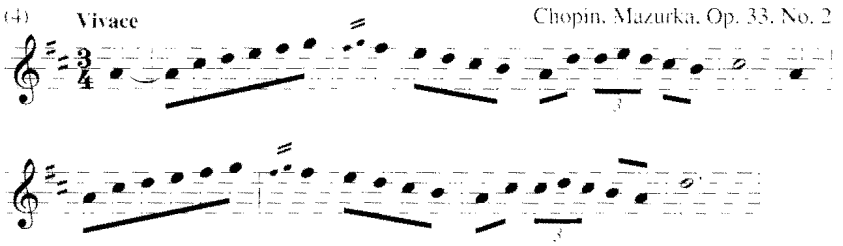
(2) **Adagio** Mozart, Oboe Quartet, K.370

(3) **Andante** Schubert, Impromptu, D.935





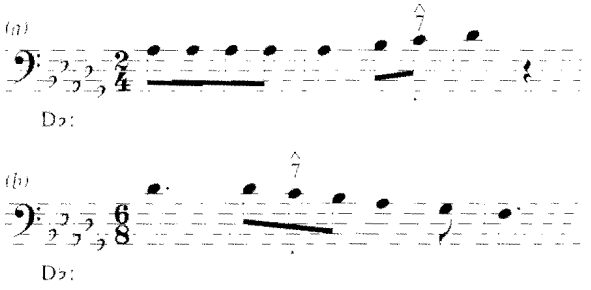
(4) **Vivace** Chopin, Mazurka, Op. 33, No. 2

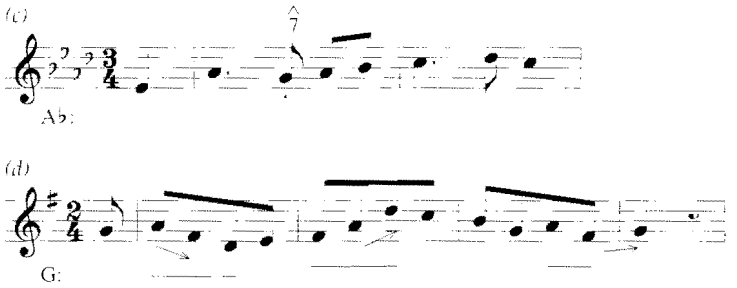


(5) **Ziemlich langsam** Brahms, "Sapphische Ode," Op. 94, No. 4

The Leading Tone The leading tone, $\hat{7}$, must be treated with care. As its name implies, it *leads* to the tonic. When approached by step from below, the leading tone must progress to the tonic (Figure 7.18*a*). When preceded by the tonic note, it may progress down by step, as in a scale (Figure 7.18*b*), or it may return to the tonic (Figure 7.18*c*). When it is part of an arpeggiated triad figure, its direction is determined by the direction of the arpeggio (except when it is found as the final note of the arpeggio, in which case it returns to tonic—Figure 7.18*d*).

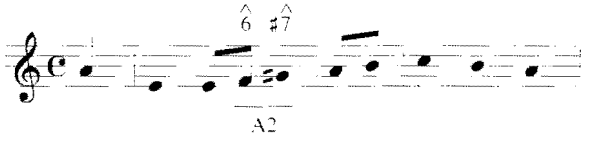
FIGURE 7.18





Minor Keys: The Sixth and Seventh Scale Steps In a minor key, $\hat{6}$ and $\hat{7}$ require particular attention. If the harmonic form of the scale is used, the interval of the augmented second results. Although this interval does have limited uses, it is generally avoided, especially in less sophisticated styles.

FIGURE 7.19

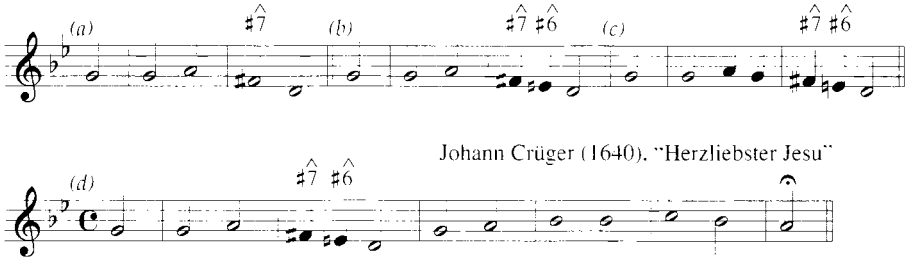


As its name implies, the melodic form of the minor scale is generally used in melodic writing. When a melody ascends through a scale line from the dominant tone to the tonic tone, $\hat{6}$ and $\hat{7}$ are usually raised.

FIGURE 7.20

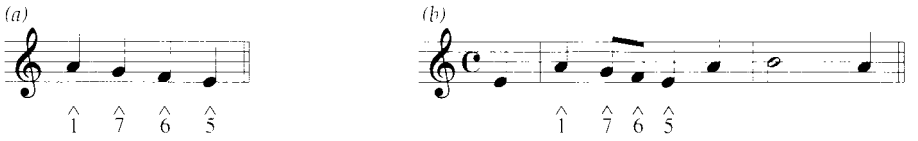
When the V triad is written as an arpeggio (either direction), $\sharp\hat{7}$ is used. When this pattern is filled in with passing tones, it appears as though the ascending form of the scale were used in a descending passage (Figure 7.21).

FIGURE 7.21



Otherwise, when descending, $\hat{1}$ $\hat{7}$ $\hat{6}$ $\hat{5}$, $\hat{7}$ and $\hat{6}$ are generally lowered.

FIGURE 7.22

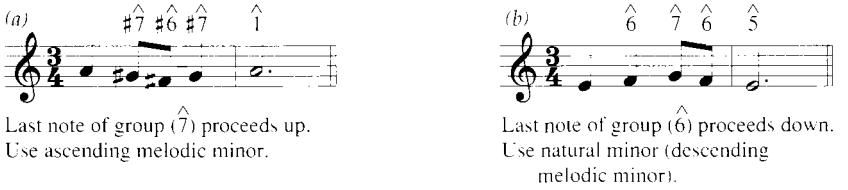


When $\hat{7}$ is used without $\hat{6}$ in a stepwise passage, it is raised and proceeds up (Figure 7.23*a*); when $\hat{6}$ is used without $\hat{7}$, it is lowered and proceeds down (Figure 7.23*b*).

FIGURE 7.23

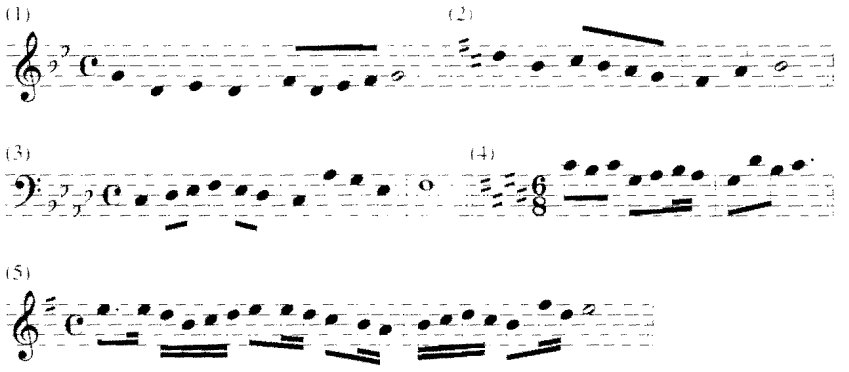
Occasionally, both $\hat{6}$ and $\hat{7}$ are found in a stepwise passage, but not between the tonic and dominant tones. In this case, each $\hat{6}$ and $\hat{7}$ of the group is treated alike. If the last note of the group is $\hat{7}$, all notes of the group are raised (Figure 7.24*a*). If the last note of the group is $\hat{6}$, all notes of the group are lowered (Figure 7.24*b*).

FIGURE 7.24



The G♯ of Figure 7.24*a* implies V in I–V–I, and the F♯ of Figure 7.24*b* implies iv in i–iv–i. The decorative (nonharmonic) tones, between G♯ and G♮ and between F and F♯, are so written to avoid the melodic augmented second.

ASSIGNMENT 7.4 Above each sixth scale step, write ♯6 or ♭6, and above each seventh scale step, write ♯7 or ♭7. Place the correct accidental before each of these tones. Remember that (1) a natural sign will be used in some instances and (2) an added chromatic sign applies to all notes on that line or space in a given measure.

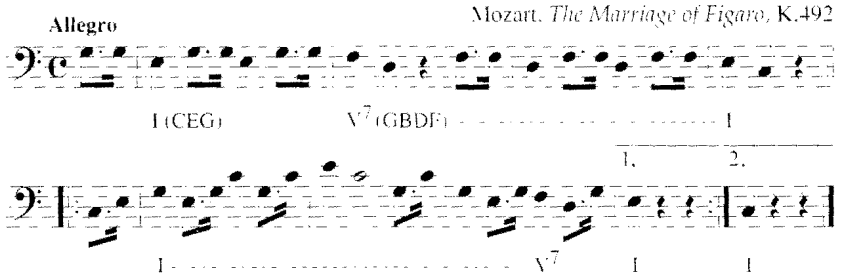


In Appendix E: Answers to the entire assignment are given.

Harmonic Implication

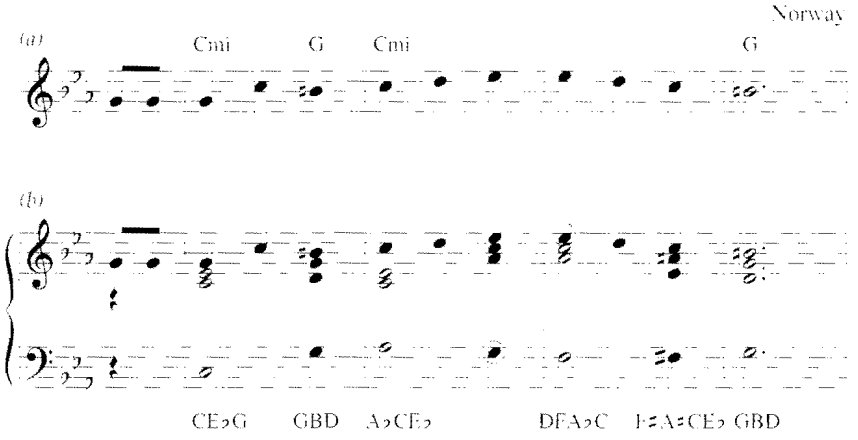
It should take not much longer than a glance to figure out the obvious harmony that Mozart intended for this tune:

FIGURE 7.25



The implication of such simple harmonic structures is inherent in many folk songs and composed melodies in Western culture. That is not to say that a given tune can be harmonized in only one way, however. The folk song of Figure 7.26*a* shows lead sheet symbols of I and V only, but in *b* the same tune is shown with one of the many possibilities using a wider variety of harmonies.,

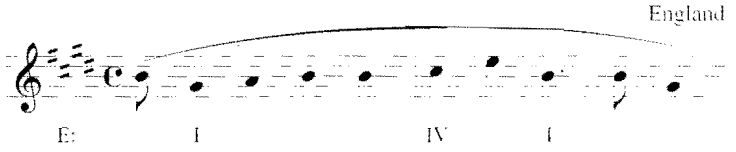
FIGURE 7.26



But for now, we will study harmonic implication with tunes that can be harmonized using I, i, IV, iv, V, and V^7 only. Here is what to look for:

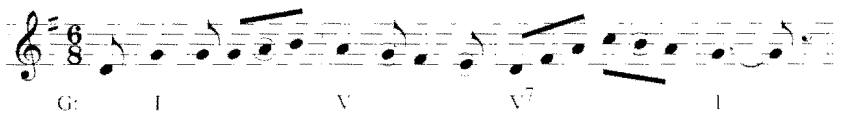
1. A chord is actually outlined in the melody, or suggested by an interval.
   Figure 7.25: Every tone is part of a chord—an interval from the chord or a complete chord.
   Figure 7.26: The first interval, G up to C, suggests C E♭ G.
   Figure 7.27: The interval C♯ up to E in E major obviously implies IV (A C♯ E).
   Figure 7.28: The entire V^7 chord is outlined in measure 3.

FIGURE 7.27



2. When there is no chord outline, the strong beat, or beats, of the measure may suggest the harmony. In Figure 7.28, measure 1, the three repeated notes, G, plus the final B suggest a tonic triad, G B D, and in measure 2, the A and the F♯ on the principal beats suggest the dominant triad, D F♯ A. (The circled notes are nonharmonic tones, to be discussed shortly.)

FIGURE 7.28

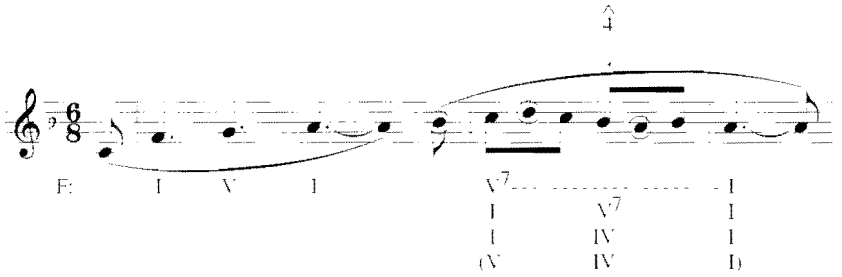


Chord changes may, of course, occur within the measure, as the melodic line dictates.

FIGURE 7.29

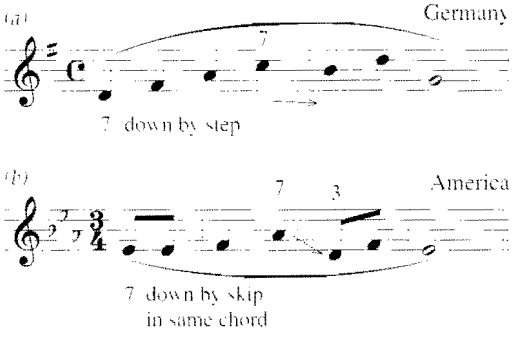
In some cases, $\hat{4}$ can be harmonized with *either* IV *or* V^7. The arrow in Figure 7.30 points to $\hat{4}$ in F major, which in this context can be the B♭ of IV (B♭ D F), or the B♭ of V^7 (C E G B♭). Four harmonizations are therefore possible, though the last, V–IV, is neither conventional nor effective.

FIGURE 7.30



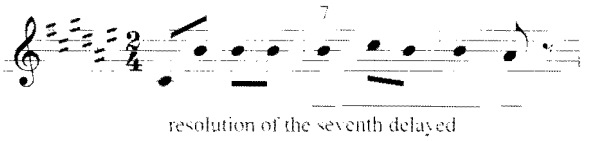
When 4 implies the seventh of a V^7 chord, it usually proceeds downward by step, but it may skip to another member of the V^7 chord (Figure 7.31).

FIGURE 7.31



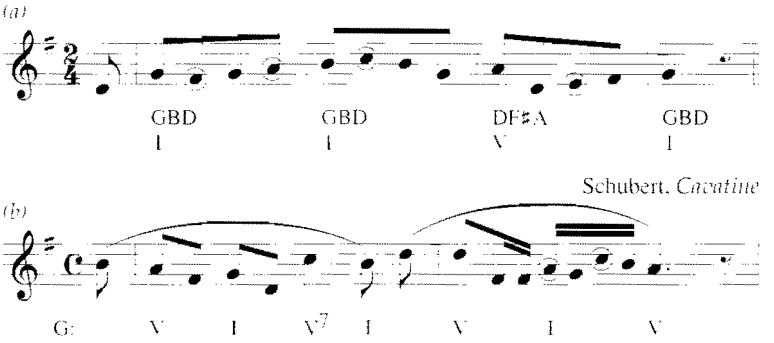
In rare cases in which the seventh is allowed to ascend, the melodic line usually descends immediately after to effect a normal resolution of the seventh.

FIGURE 7.32



3. Most melodies will contain *nonharmonic tones* (review "Cadences Incorporating Dissonances," page 72). Most common and easiest to spot are those that occur stepwise between chord tones, as seen in Figure 7.33*a*, though nonharmonic tones approached otherwise are not uncommon (Figure 7.33*b*).

FIGURE 7.33

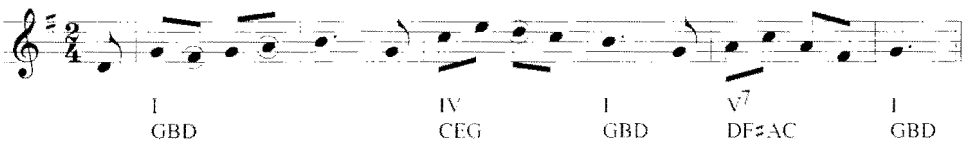


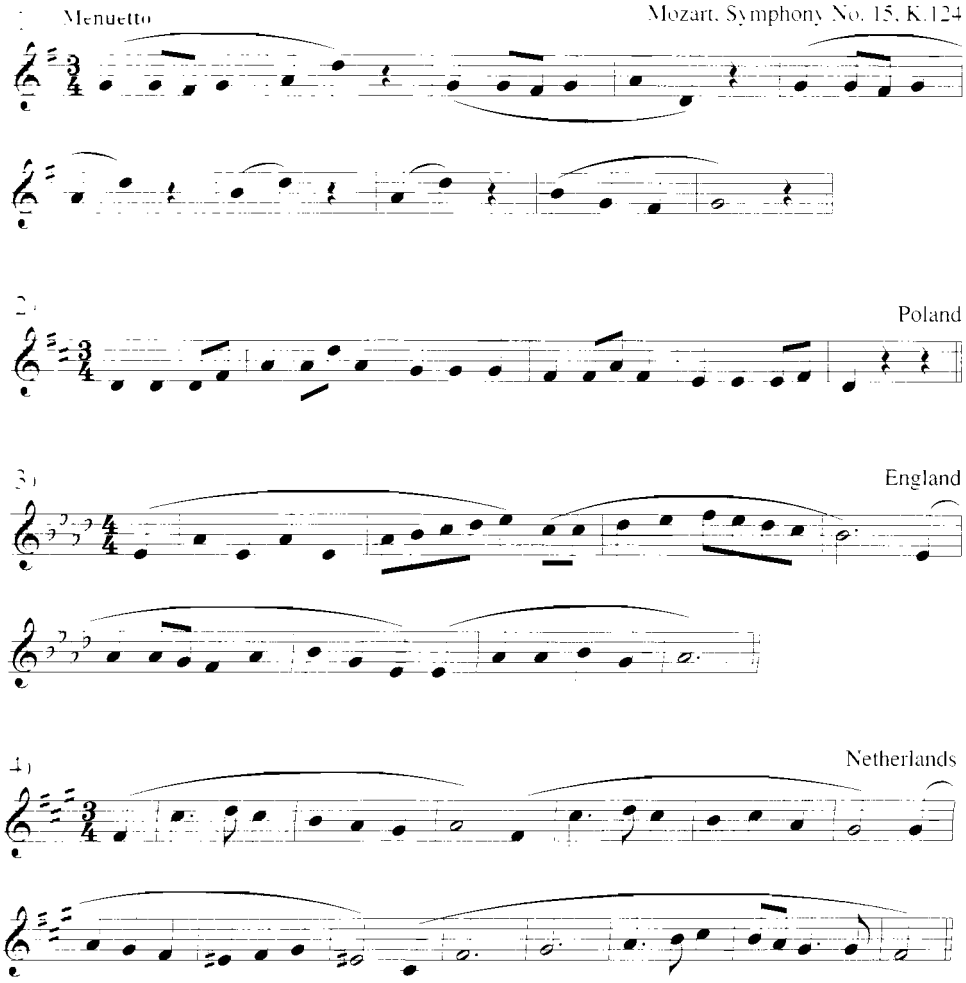
ASSIGNMENT 7.5 Analyze the harmony implied in these melodies, using the example as a guide.

1. Place the chord numbers I, i, IV, iv, V, and V^7 below the staff, as appropriate.
2. Place the chord spellings below the staff.
3. Circle the nonharmonic tones.

Upon completion, play the melody with its harmonization.

Example





Rhythm and Meter

The simplest kind of rhythmic pattern in a melody would be the use of a single note value. Such melodies are rare. Melodic interest is heightened by contrast in the duration of the pitches. This contrast can be very simple, as demonstrated in the melody of Figure 7.13, which consists of only quarter notes except for the cadence at the end of each phrase.

Although more rhythmic variety can be expected in most melodies, the variety of rhythmic patterns is usually limited, and repetition of those chosen is frequent. The Schubert melody, number 3, from Assignment 7.3 (page 145) is a good example. Only the pattern ♩ ♫ ♩ ♩ or ♩ ♫ 𝅗𝅥 is found in five of its eight measures, with each phrase concluding with rhythmic patterns differing from each other.

A melodic sequence is, of course, almost invariably coupled with a rhythmic sequence, although rhythmic sequence is possible without its melodic counterpart; in Figure 7.7, the rhythmic pattern of the two phrases is basically the same (the second phrase uses ♩ instead of ♪♪), but the melodies differ.

Rhythmic patterns in recurring measures of equal lengths with accents implied on the strong beat(s) of the measure are typical of the music of the tonal era. Concepts of rhythm in the music of both the pre-seventeenth-century era and the twentieth century are described in the article "Another Metrical Concept" on page 343.

Melodic Composition

To the noncomposer, the composition of a piece of music often appears to come about when a special musical gift is aided by an unexplainable source of inspiration. Although the presence of both of these factors is certainly helpful, more important to a composer's accomplishments is a thorough knowledge of the materials with which he is working.

The well-known melody from Beethoven's Ninth Symphony (Figure 7.13) is a case in point, showing how a fine melody can be constructed from the simplest materials. In this melody

1. the scale line is used throughout;
2. the harmony implied is I and V only;
3. the rhythmic pattern of repeated quarter notes is varied only at each cadence;
4. the form is a simple eight-measure period.

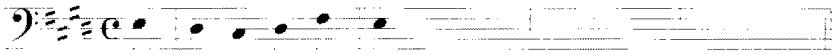
The following assignments will give you the opportunity to write original melodies. The test of a good melody is its "singability." Playing a melody on the piano will not necessarily reveal a defect, since almost any melody can easily be played. If when you are singing, you find the melody contains an awkward interval or section, try to determine the cause of the defect. Then rewrite the melody as much as necessary until it is easily singable.

ASSIGNMENT 7.6 *Melody writing.* Continue each of these melodic beginnings to complete a four-measure phrase. Indicate the implied harmony using roman numeral symbols. Circle all nonharmonic tones. Upon completion, play your melody and harmonization at the keyboard.

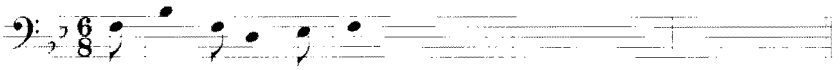
(1) End with a perfect cadence.

(2) Use sequence and end with a perfect cadence.

(3) Use sequence and end with a half cadence.



(4) Choose a cadence.



(5) Use sequence.

(6) Use sequence.

(7)

(8)

ASSIGNMENT 7.7 *Melody writing.* Using any of the phrases from the examples in Assignment 7.6 as the first phrase of a period, experiment with both parallel and contrasting periods. If your phrase from Assignment 7.6 ends with a perfect cadence, rewrite it so that it ends with a half or an imperfect cadence and then continue with the consequent phrase.

ASSIGNMENT 7.8 *Melody writing.* Write completely original periods, following your instructor's directions for such factors as clef, key signature, time signature, and use of sequence. Edit each melody by indicating motives or phrases with phrase marks and by including a tempo indication and dynamic markings.

Summary

Form is a term describing the structure of a composition.

A *phrase* is a group of notes leading to a cadence.

Two phrases may combine to form a *period.* The first phrase ends with a half or an imperfect cadence, and the second usually with a perfect cadence.

In a *parallel period,* the two phrases are similar melodically and/or rhythmically. In a *contrasting period,* the phrases lack such similarity.

A phrase may include *repetition* of musical ideas. A *sequence* is similar to repetition but at a different pitch level.

Melodies are commonly made up of scalar passages and chord outlines. Larger intervals are usually approached and left by contrary motion.

Some scale steps must be handled with care. The leading tone "leads" to the tonic. In a minor key, the sixth and seventh scale steps are raised or lowered according to the direction in which they move.

Many melodic lines imply a harmonic background, though an actual harmonization is not limited to the most obvious implication.

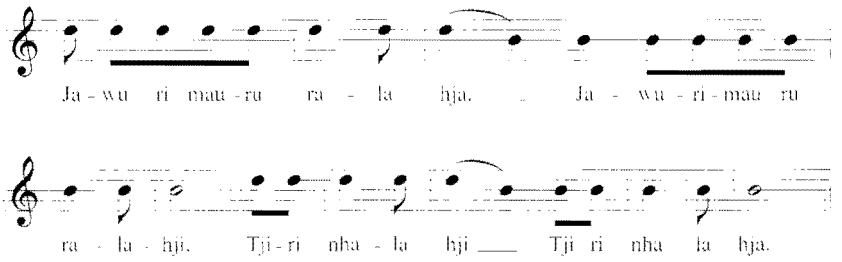
ARTICLE #7

Some Varieties of Melodic Expression

Since melody exists in all parts of the world and has existed presumably from prehistoric times to the present, we can assume that it has displayed many forms and characteristics. A few examples will show the contrast between these other forms and the characteristic melodies of the period of Western music (ca. 1600 through ca. 1900) being discussed in this text.

The following chantlike aboriginal melody, which has been placed in notation by researchers, certainly shows no harmonic implication, no regular metric system, and too few notes to establish a feeling for scale or key. However, a rudimentary form is established when the passage of repeated D's followed by repeated B's is started over again in measure 5.

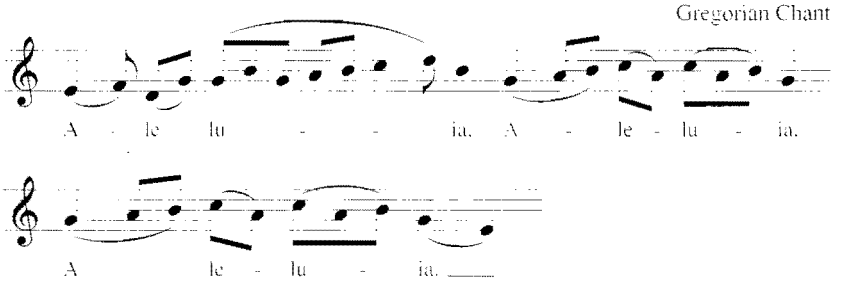
Australian Aboriginal Melody



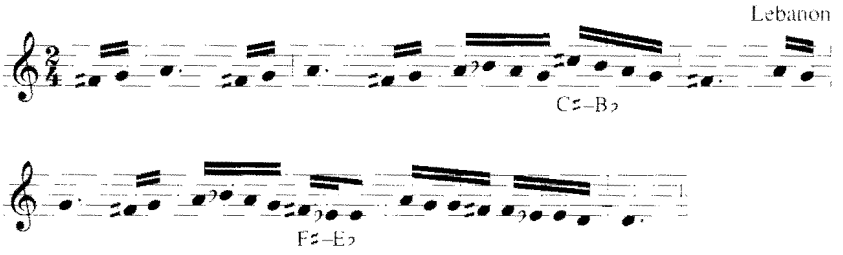
(Let us hurry, the wind is fierce and keen.)

The next example is taken from the earliest known body of Western music, the Gregorian chant of medieval times (ca. A.D. 800). It displays a scale pattern of E F G A B C D E, with tonic on E. This scale is known as the Phrygian mode and is one of several scales, known as *modes*, that were in use before 1600. Since that approximate date, this system has been reduced to two scales, now called major and minor.

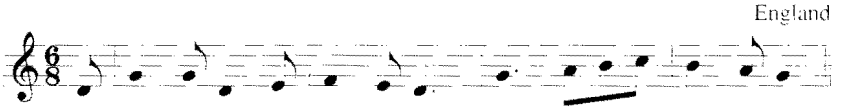
Gregorian Chant



Both the medieval modes and the present major and minor modes are based on half steps and whole steps only. In Eastern Europe, the Near East, and the Arab countries of Asia and Africa, scales containing one or two augmented seconds (three half steps, or a step and a half) are a major part of their melodic resources. In the next example, the augmented seconds are E♭–F♯ and B♭–C♯, and the entire scale is D E♭ F♯ G A B♭ C♯ D. In Eastern Europe, this scale is often known as the *Hungarian minor scale* or the *Gypsy minor scale.**



Folk music of Western European cultures has consistently made use of scale patterns that are the same as the medieval modes. This tune is based on the Mixolydian mode (G A B C D E F G).

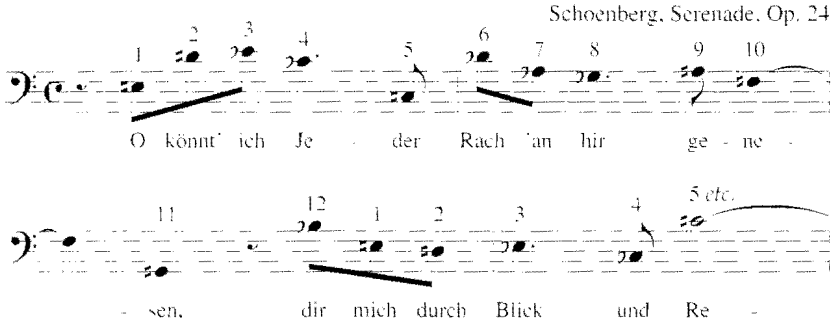


(Further comment on modal writing in composed music is included in the article "Another Metrical Concept," on page 343.)

Since the common practice period, melody has often abandoned the tonal concept and proceeded in many directions. The most dramatic of these is called the twelve-tone system of music, in reference to the twelve tones of the chromatic scale. Its basic premises are that no note may be repeated until the other eleven have been sounded and that the so-called *row* of twelve tones, which is established before the composition is begun, will be used consistently throughout.

*Further examples of medieval modes can be found in Chapter 19 of the author's *Music for Sight Singing*, 4th ed. (Prentice Hall, 1996).

Schoenberg, Serenade, Op. 24



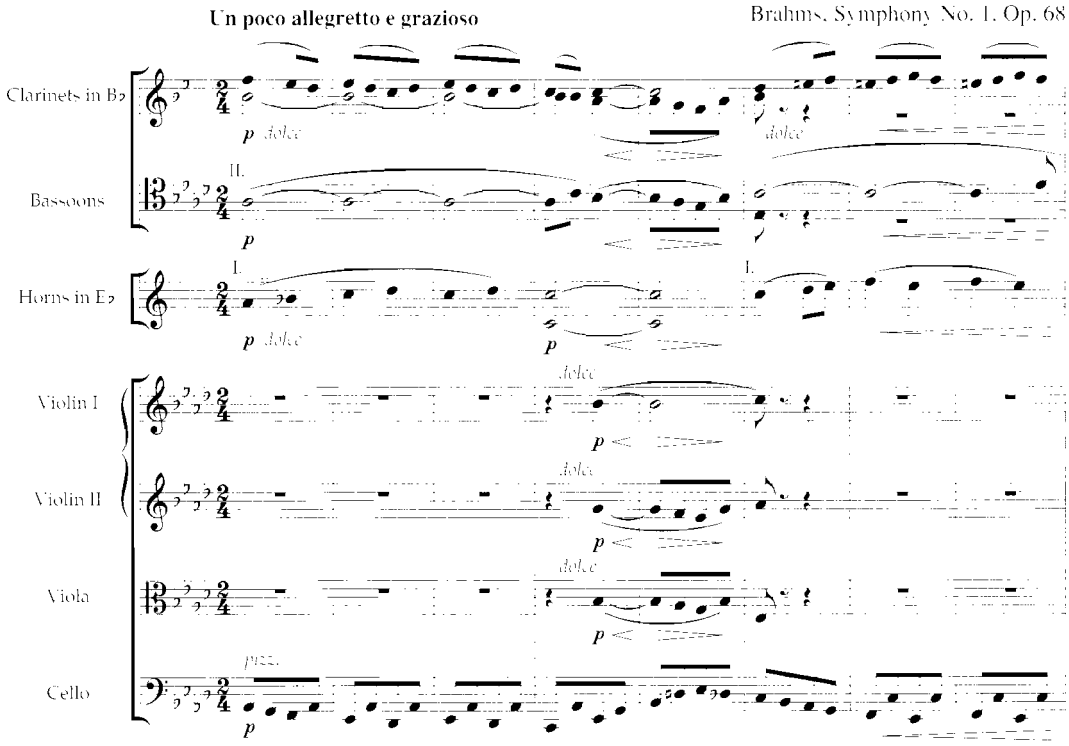
Characteristic of this melody is its angularity—the predominance of wide skips (also seen in the Brahms example, Figure 7.14)—and the inadmissibility of any harmonic implication.

Although these few illustrations can serve as only small samples of the wide variety of melodic practices found in different regions and eras, they should serve to point out several characteristics that differentiate melodies of the common practice period from those of other cultures and other times.

C Clefs; Transposing Instruments

Here is an excerpt from an orchestral score,[1] the opening of the third movement of Brahms's First Symphony. Can you read this score, or does its use of C clefs and transposing instruments baffle you? We will decipher this score one step at a time and reassemble it near the end of the chapter.

CD FIGURE 8.1



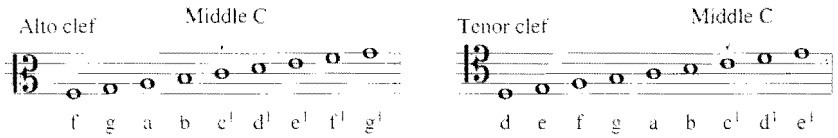
A score in which each instrumental or vocal line is on a separate staff, such as the one in Figure 8.1, is known as an *open score*.

C Clefs

The C clef[2] is universally used in music, though not as commonly as the treble and bass clefs. The C clef sign 𝄡 or 𝄚 indicates the location of *middle C* on the staff. It is particularly useful for those instruments whose range extends from the middle part of the bass clef to the middle of the treble clef because it avoids excessive ledger lines.

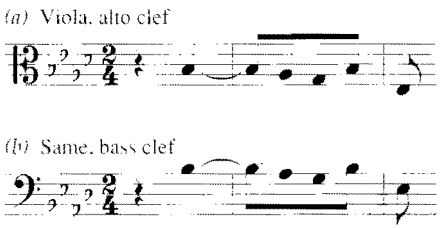
When the C clef is found on the third line of the staff, it is known as the *alto clef*, used almost exclusively by the viola and occasionally by the trombone. When the C clef is found on the fourth line of the staff, it is known as the *tenor clef;* it is often used by the cello, the bassoon, and the trombone, and occasionally by the double bass.

FIGURE 8.2



The viola part of Figure 8.1 uses the alto clef (Figure 8.3*a;* shown in *b* in the bass clef).

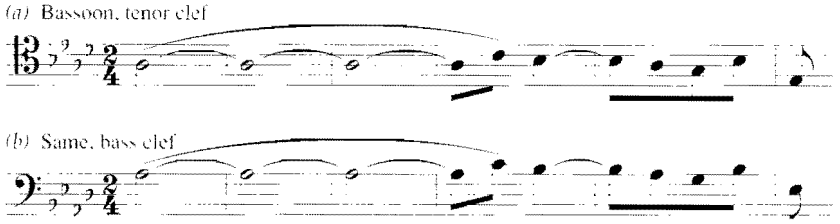
FIGURE 8.3



The bassoon in Figure 8.1 uses the tenor clef. Figure 8.4 shows its notes:

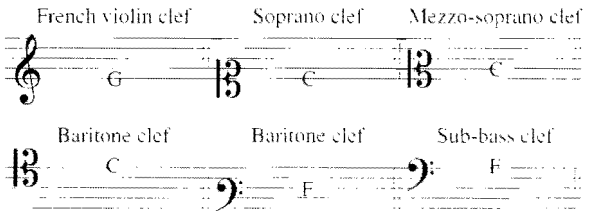
[2]Early versions of various clefs, including C clefs, can be seen on page 39.

FIGURE 8.4



The alto, tenor, treble, and bass clefs are the only ones in common use today from a system of ten clef signs used in music before about 1750. The other six clefs are shown in Figure 8.5.

FIGURE 8.5



These clefs can be found in very old editions of music and in many modern publications of pre-nineteenth-century music.

ASSIGNMENT 8.1 Learn the names of the lines and spaces of the alto clef. Check your ability in the following two ways:

(a) Name the pitch when the line or space is given. Example: fourth line; answer, E.

(b) Name the line or space when the pitch name is given. Example: F; answer, first line or fourth space.

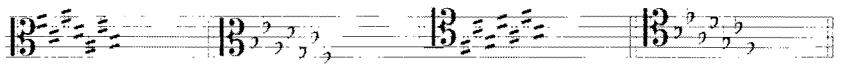
In the Workbook: Answers to the entire assignment are given.

ASSIGNMENT 8.2 Learn the names of the lines and spaces of the tenor clef. Follow the procedures of the previous exercise.

In the Workbook: Answers to the entire assignment are given.

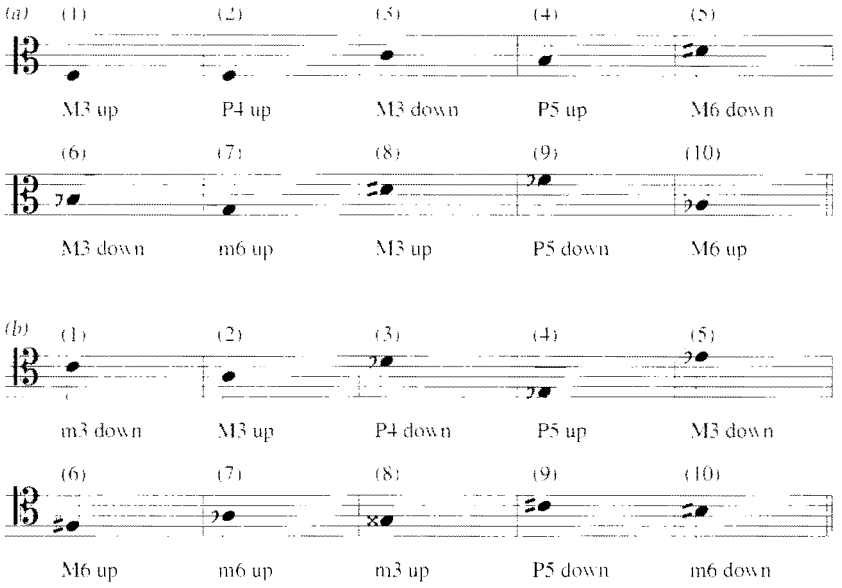
Figure 8.6 shows how sharps and flats for the key signatures are placed for the alto and tenor clefs. Observe that the patterns are the same as for the treble and bass clefs, except for the sharp keys in the tenor clef. Starting with the first sharp on F (second line), succeeding sharps are in a pattern, up a fifth, down a fourth.

FIGURE 8.6



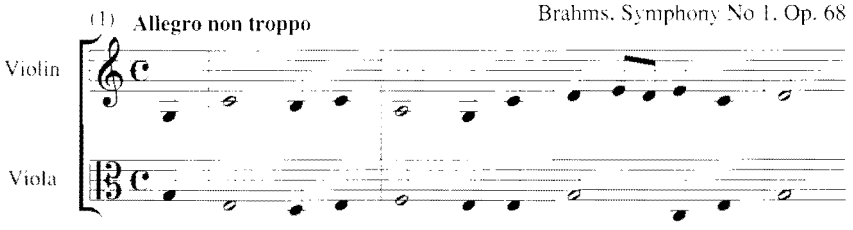
ASSIGNMENT 8.3 Write the key signature for each major and minor key in both the alto and the tenor clefs.

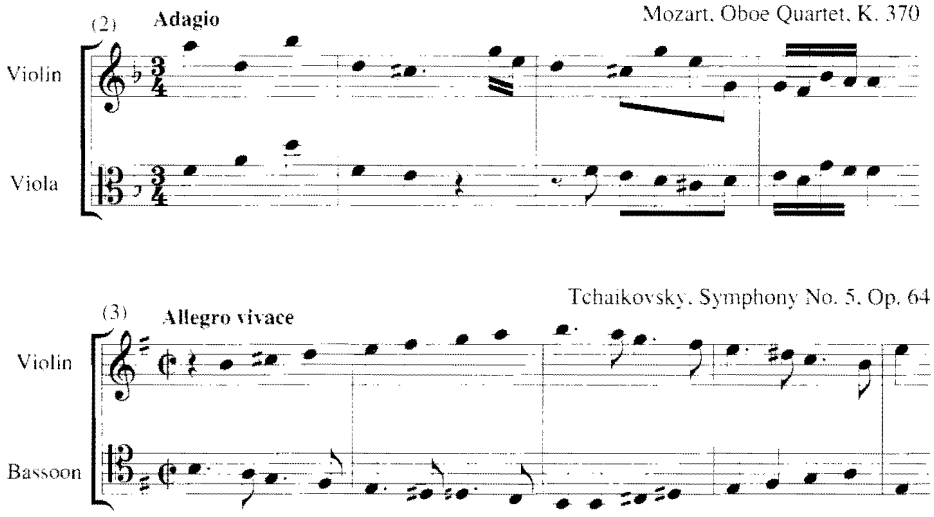
ASSIGNMENT 8.4 *Writing intervals in the C clefs.* Write the second note of the given interval *(a)* in the alto clef and *(b)* in the tenor clef.



In Appendix E: Answers to Assignment 8.4 a (1)–(5); and b (1)–(5) are given.
In the Workbook: Answers to the entire assignment are given.

ASSIGNMENT 8.5 Rewrite both lines of each example, replacing the C clef with a treble or bass clef as appropriate and using the correct notation for that clef. Remember that the C clef indicates *middle C*.



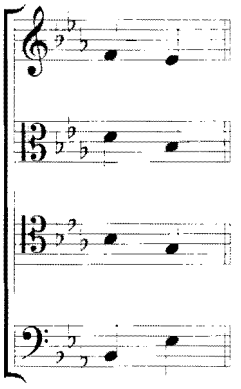


In Appendix E: The viola line in (1) is given.

ASSIGNMENT 8.6 *Writing cadences in open score.* Write each cadence in four parts, one part to a staff, using clefs as shown below. Example: E♭ major, $\frac{\hat{2}–\hat{1}}{V–I}$ ($\hat{2}$–$\hat{1}$ indicates scale-step progression; in E♭ major, F–E♭).

Observe:

1. Brace connecting the staves in open score.
2. Use of stem direction for a single melodic line on each staff.



Write these cadences in the same manner:

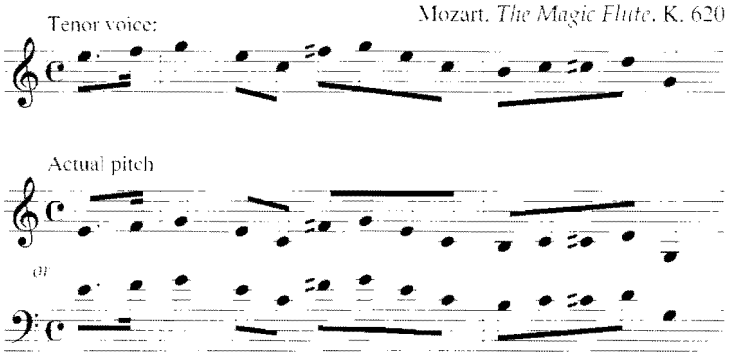
(1) G major	$\hat{2}$	$\hat{1}$	(5) B♭ major	$\hat{3}$	$\hat{2}$
	V	I		I	V
(2) D minor	$\hat{1}$	$\hat{7}$	(6) F♯ minor	$\hat{5}$	$\hat{5}$
	i	V		V	i
(3) E major	$\hat{7}$	$\hat{1}$	(7) D♭ major	$\hat{5}$	$\hat{3}$
	V	I		V	I
(4) F minor	$\hat{2}$	$\hat{3}$	(8) G♯ minor	$\hat{1}$	$\hat{2}$
	V	i		i	V

In Appendix E: Answers to (1) and (2) are given.
In the Workbook: Answers to the entire assignment are given.

A Clef for the Tenor Voice

The tenor clef is ideal for the tenor voice, since use of either the treble or the bass clef results in a large number of ledger lines. Though the tenor clef was once used for the tenor voice, it has been replaced by the treble clef, but with its notation an octave higher than it sounds (Figure 8.7). The clef is sometimes written as 𝄡 or 𝄞, the latter now becoming commonly used.

FIGURE 8.7



Transposing Instruments

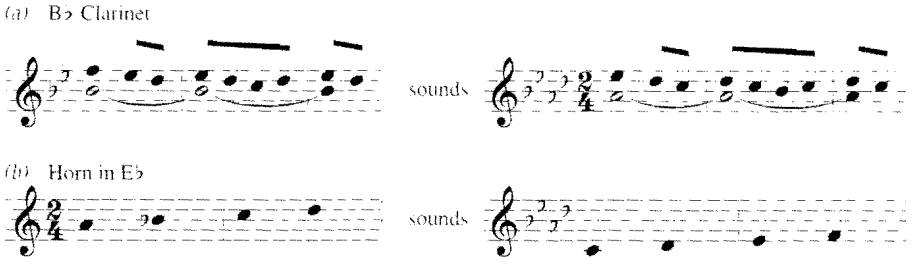
The clarinet part of Figure 8.1 is marked "Clarinet in B♭." Such a description indicates a transposing instrument, that is, one whose written notation is different from its actual pitch. In this case, "in B♭" means that when the clarinet plays C on its staff, the sound produced is a major second lower, "concert B♭," the B♭ of the piano or other nontransposing instruments. Thus the general rule: A transposing instrument sounds its name when it plays C. The B♭ clarinet sounds B♭ when it plays C.

There are two transposing parts in the Brahms score, Figure 8.1; they are shown separately in Figure 8.8. Note that the composition is written in the key of A♭ major.

1. In Figure 8.8*a*, the part for the B♭ clarinet is written in B♭ major, a major second *above* the concert key of A♭ major. Therefore, each note of the clarinet part sounds a major second *lower* than written. The first note, F, sounds E♭, and so forth.
2. In Figure 8.8*b*, the part for the horn in E♭ is written in F major, a major sixth *above* the concert key of A♭ major. Traditionally, horn parts have been written without key signatures, with accidentals placed in the music as needed. In the example, the second note requires a flat, since B♭ is $\hat{4}$ of the F major scale. In reading the E♭ horn part, each note sounds a major sixth *lower* than written. The first note, A, sounds C, and so forth.

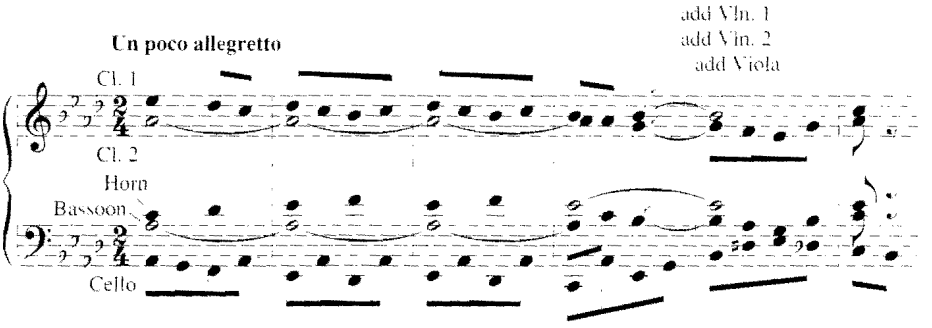
Since about the mid–twentieth century, many composers have been writing horn parts *with* key signatures. Figure 8.8*b* so written would have a key signature of one flat.

FIGURE 8.8



Putting these together with the C-clef parts (Figures 8.3 and 8.4) and the remaining nontransposing instruments, the opening five measures of Figure 8.1 look like this in piano score.

FIGURE 8.9 *Figure 8.1 in Piano Score*



Regardless of your preferred performance medium, your ability to read various notations as presented here should greatly increase your musical horizons and music literacy by making available to you the means for comprehending music scores more complex than those for solo performance.

Writing for Transposing Instruments. When the instrument name includes a pitch name, find the interval between that pitch name and the C above. For the clarinet in A, the pitch A up to C is a minor third. Therefore, the part for clarinet in A will be written a minor third above concert pitch. For example, for a piece in G major for clarinet in A and piano, the piano part will be in G major (signature, 1 sharp) and the clarinet part in B♭ major (signature, 2 flats).

Horns may be in D, E♭, E and F, the last the most common. The part for a horn in F is written a perfect fifth above concert pitch.

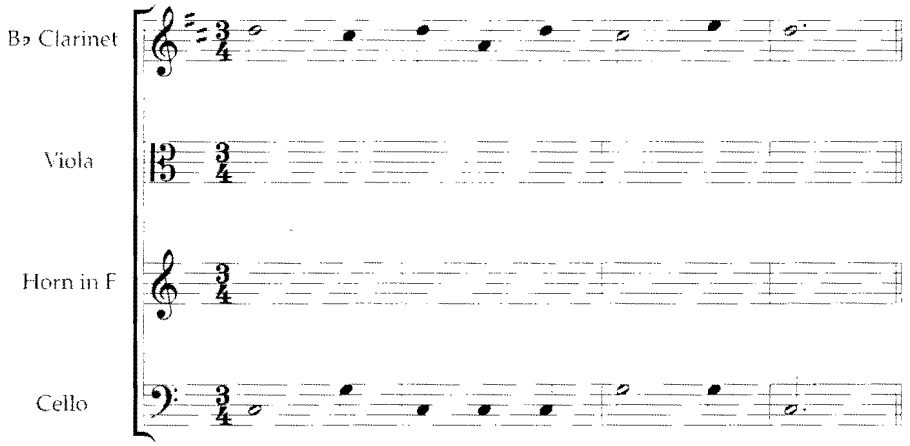
ASSIGNMENT 8.7 *(a)* Write or name the concert pitch in each of these examples.

(b) Write the note on the staff that will sound the given concert pitch.

In Appendix E: Answers to the entire assignment are given.
In the Workbook: Answers to the entire assignment are given.

ASSIGNMENT 8.8 Rewrite previous part-writing examples for various instruments.

(a) From Assignment 5.8 (1), fill in the two inner voices.



(b) Using (2) from Assignment 5.8, make a staff such as the one above and use the following instruments, starting with the top staff: flute, viola, bassoon (tenor clef), and contrabass.

(c) Continue with (3) and (4), using instrumentation as chosen or assigned. Examples from Assignment 6.10 may also be used.

Summary

C clefs locate middle C on the staff.

The C clef on the third line is called the *alto clef;* the C clef on the fourth line is called the *tenor clef.*

C clefs are used by a number of orchestral instruments, including the viola, the bassoon, and the trombone.

The tenor voice, written in the treble clef, sounds an octave lower than written, often indicated by  .

Some instruments are *transposing instruments,* such as the clarinet in B♭. Each transposing instrument sounds its name when it plays its C.

9

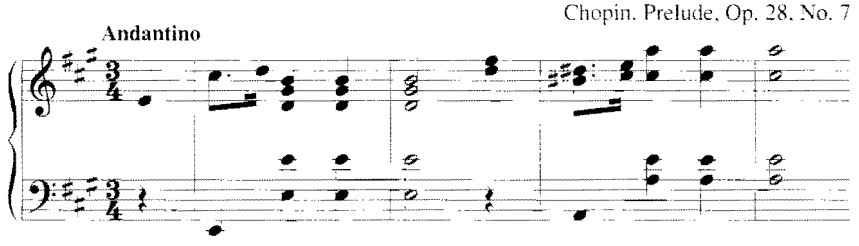
The Triad in Inversion

Review "Inversion" and "Figured Bass" in Chapter 2.
See the article "The Theory of Inversion" at the end of this chapter.

Inverting a chord means simply placing a chord member other than the root as the lowest sounding voice. Except for certain types of music in a popular vein, the exclusive use of roots as bass notes is rare. One such example is a well-known prelude by Chopin, a sixteen-measure composition without a single inversion. The first four measures are shown as Figure 9.1

FIGURE 9.1

Chopin, Prelude, Op. 28, No. 7

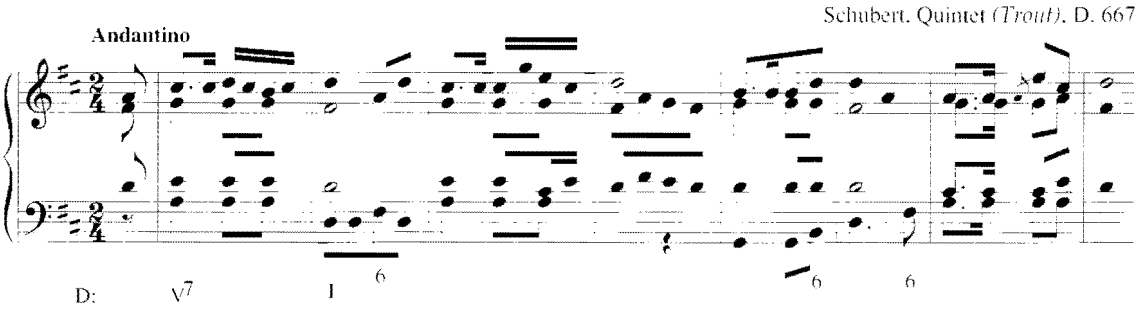


The Triad in First Inversion

Use of inversions has two advantages, one harmonic and the other melodic.

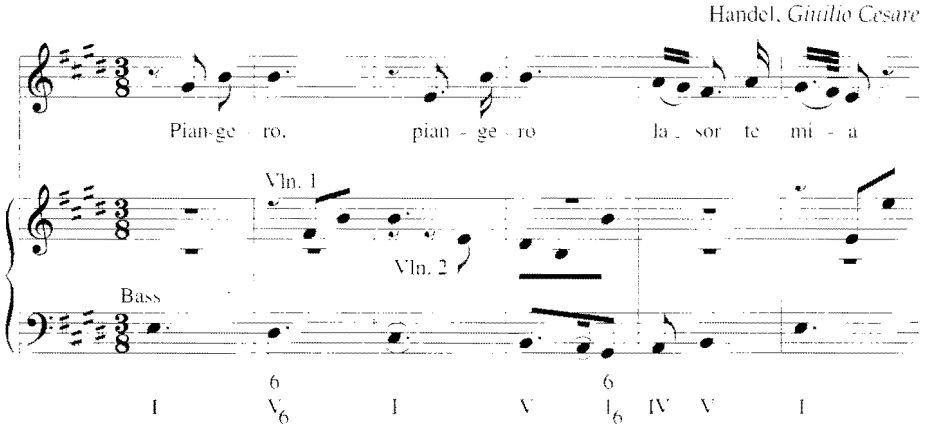
1. *Harmonic:* A triad and its inversions provide three different sonorities while using the same letter names (four for seventh chords). Thus, the easiest way to introduce an inversion is by arpeggiating the bass line. In Figure 9.2, Schubert uses mostly roots in the bass but makes three welcome changes in sonority where he places the third in the bass.

CD FIGURE 9.2



2. *Melodic:* Without the inversions, the lowest voice lacks any sense of being a melodic line. With inversions, the bass can become truly melodic. The bass line of Figure 9.3 consists only of scale steps, made possible by the use of two triads in first inversion. Of particular interest is Handel's determination to maintain a scale line even though in measure 3 the bass note C♯ is held throughout the duration of the E G♯ B triad.[1]

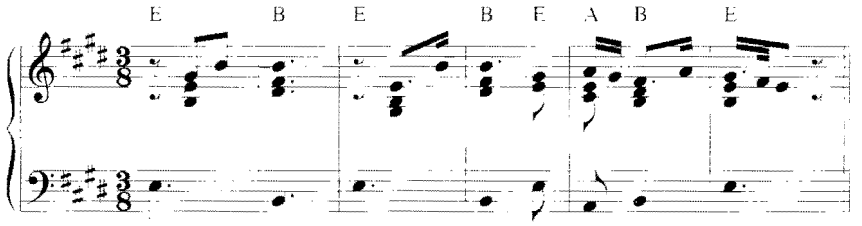
CD FIGURE 9.3



Listen to Figure 9.4, a lead sheet version of Figure 9.3 using a minimal harmonization (roots in the bass); now there should be no question about the heightening of musical interest through the use of inversions.

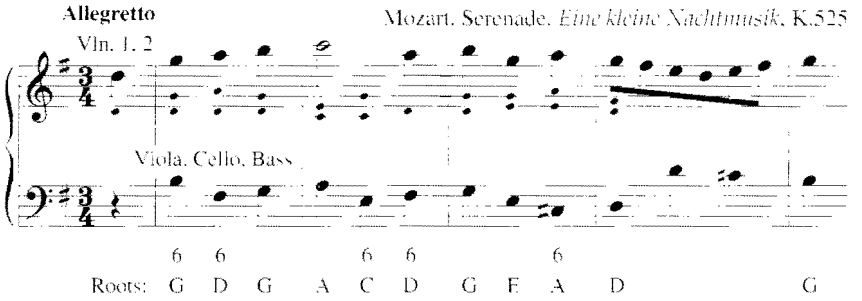
[1] The C♯ in the bass might be considered the root of C♯ E (G♯) B, a seventh chord, vi^{7}. However, the treatment of the seventh (B) is atypical (Chapter 13). On the other hand, the long duration of C♯ as a nonharmonic tone is also uncommon. Ambiguous situations such as this are not infrequent in music. In these cases, specific analyses may not be possible.

CD FIGURE 9.4



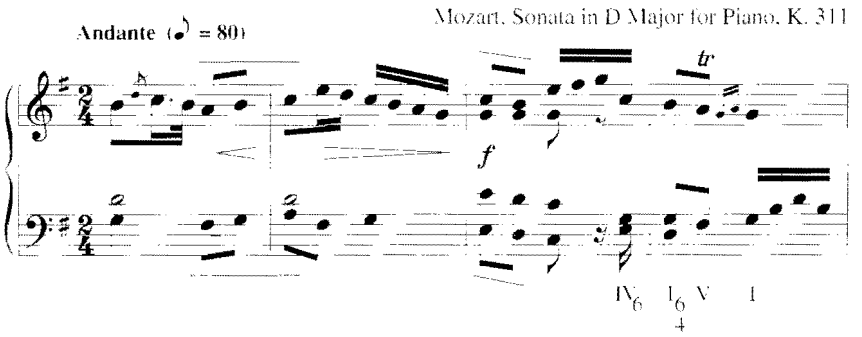
In one of Mozart's most popular works, first inversions are used to create a melodic sequence in the bass line, measures 1–2. Also notice the initial interval in the first measure, the leap of a fourth from "third to third." Written in only two voices, the harmonic movement is implied and should be quite clear. We have added middle voices (for analysis only—not for performance!) in stemless notation.

CD FIGURE 9.5



Also effective is the use of first inversions to create parallel thirds and sixths between the bass and an upper voice. Figure 9.6 shows thirds in measures 1–2 and sixths in measure 3. The triad marked I^6_4 will be discussed shortly.

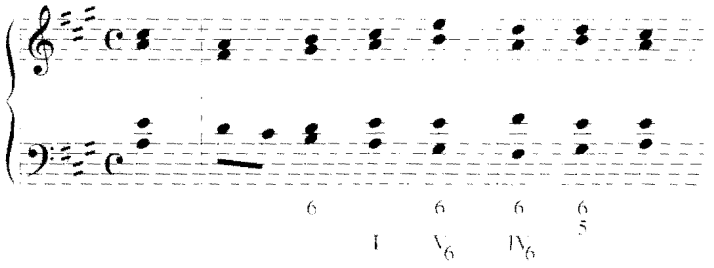
CD FIGURE 9.6



Like the bass line of Figure 9.3, the bass line of Figure 9.7 is mostly stepwise. Of interest here is the V_6–IV_6 progression.[2] In a series of first inversions in which the bass moves stepwise, any chord progression may appear, even those that are otherwise uncommon or rare. In Chapter 6, we noted that the use of V–IV is limited, but as a succession of first inversions its use is common.

CD FIGURE 9.7

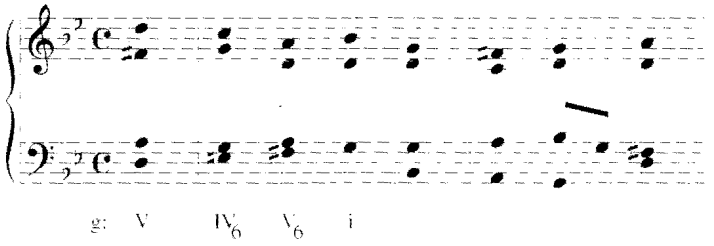
Bach, "Du Friedefürst, Herr Jesu Christ" (#42)



In another pair of first inversions (Figure 9.8), the bass line in minor passes through ♯6 and ♯7, requiring the subdominant triad to be major, IV_6, as it progresses to V_6. Also note that IV_6 is preceded by V to begin the stepwise motion in the bass.

CD FIGURE 9.8

Anon. (ca. 1670) "Nun sicht der Tag"



In summary, inversions can create more musical interest by

1. arpeggiating a triad (Figure 9.2);
2. progressing by leap from triad root to inversion (or reverse), or from inversion to inversion (Figure 9.5);
3. using a scale line in the bass, where the inversion is found intermittently (Figure 9.3), or when inversions are in succession (Figures 9.7 and 9.8);
4. moving the bass line in thirds or sixths with an upper voice (Figure 9.6).

[2] V_6–iv_6 can be used in a minor key. The minor dominant triad will be studied in Chapter 16.

The Triad in Second Inversion

In contrast to the liberal use of first inversions, the second inversion is restricted to a limited number of specific devices. This is because the triad in second inversion contains a perfect fourth between the bass and one of the upper voices. From very early times in the history of Western music, the perfect fourth above the bass has been considered a dissonance, requiring specific resolution and therefore limiting the ways in which the inversion can be used.

The Cadential Six-Four Chord This chord is so named because of its frequency of use at a cadence point, though it is used commonly in other locations. Harmonic movement culminating in a I_4^6–V–I cadence is so common that the progression is virtually a "trademark" of tonal harmony, and for that reason it was virtually abandoned in the new concepts of music composition developing in the early years of the twentieth century.

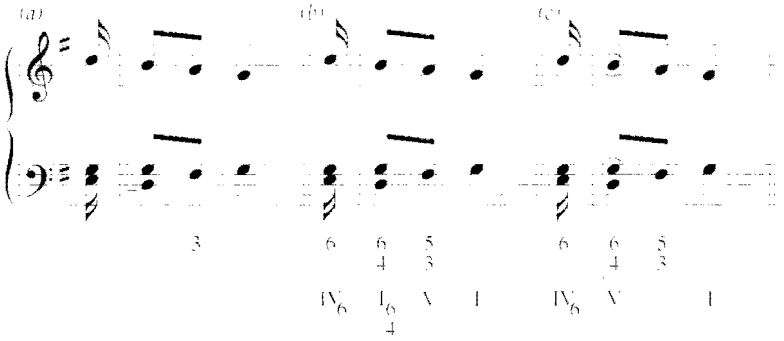
Look at the triad marked I_4^6 in Figure 9.6. You can clearly see the spelling G B D in G major; yet, if asked to sing the root of this triad, most people respond by singing (not incorrectly) the bass note D. There must be an explanation for this contradictory interpretation.

Figure 9.9 demonstrates these interpretations.

1. In *a*, the "dissonant" fourth above the bass is clearly marked.
2. In *b*, the progression to V is analyzed the way it *looks*—two triads, I and V.
3. In *c*, the progression is analyzed the way it *sounds*—a V triad with nonharmonic tones above its root in the bass.

Try playing (or listening to) Figure 9.9, stopping at the six-four chord. The necessity for resolution should be obvious. Note that the sixth (B) above the bass tone, though consonant with the bass note (D), is at the same time dissonant with the implied harmony, D F♯ A.

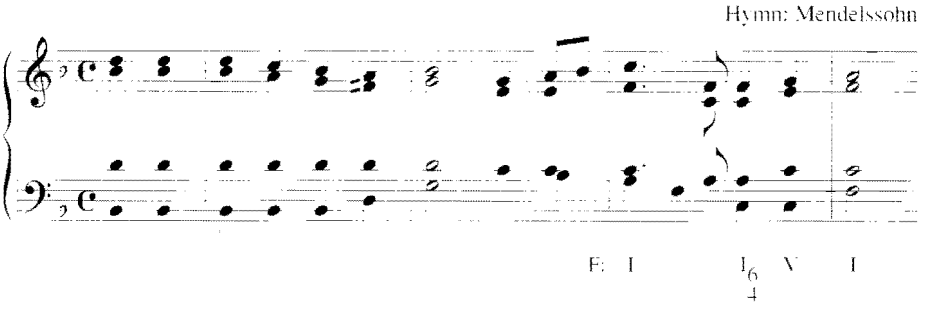
FIGURE 9.9



For purposes of analysis, we will consider the six-four sonority as a triad built above its fifth, as in Figure 9.9*b*, but in writing and listening, the dissonant function of the perfect fourth above the bass should always be kept in mind.

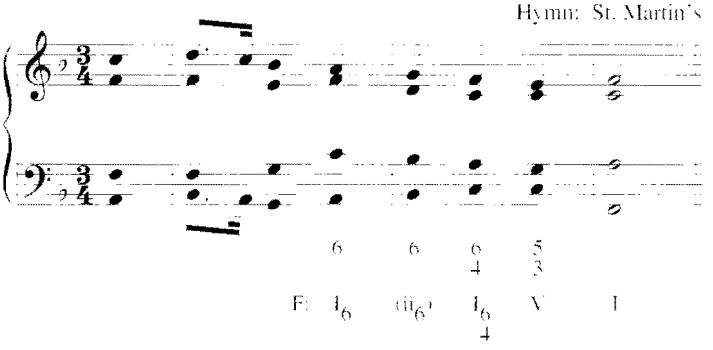
Even though the fourth usually resolves down, it is occasionally seen moving in the opposite direction (Figure 9.10).

FIGURE 9.10



In duple and quadruple time, the cadential six-four almost invariably occurs in a strong rhythmic position, allowing the ensuing tonic, root in bass, also to occur in a strong rhythmic position, as in Figure 9.10. In triple time, the six-four may also appear on the second beat of the measure, followed by V on the third beat leading to I on the next strong beat (Figure 9.11).

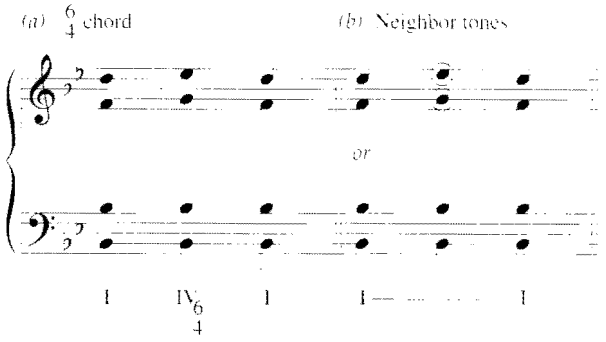
FIGURE 9.11



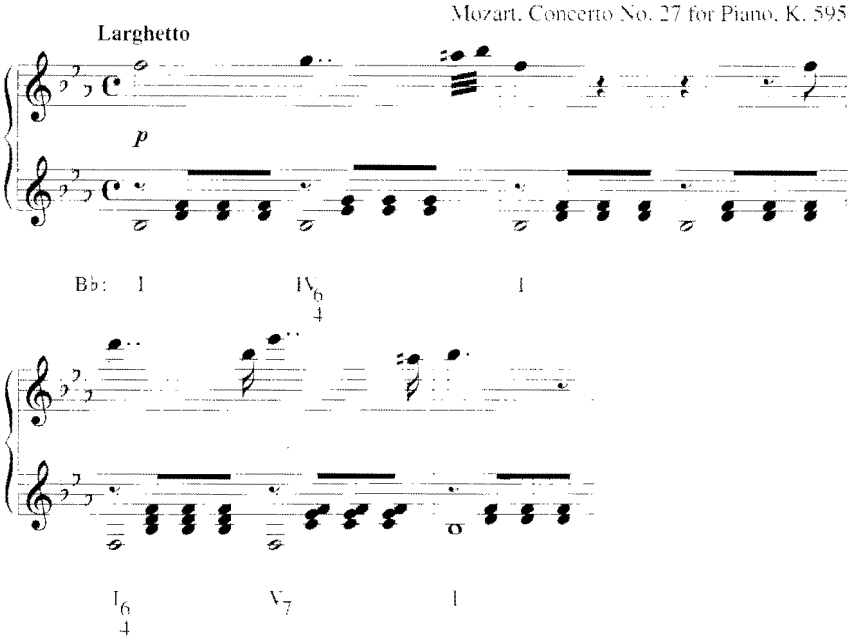
The Pedal Six-Four (Embellishing Six-Four, Auxiliary Six-Four) Here the bass note of the six-four is held over or repeated from the bass note of the previous chord and continued into the chord of resolution. The name derives from a nonharmonic tone, the *pedal point* or *pedal*, in which the bass holds a single tone regardless of the harmony above it. The pedal six-four is most commonly found as I–IV$\frac{6}{4}$–I (Figure 9.12).

The terms *embellishing*, *auxiliary*, and *neighbor* six-four present a different interpretation: The bass note is a chord tone above which there is movement to and from a nonharmonic tone (neighbor tones, Figure 9.12*b* and 9.13).

FIGURE 9.12



CD FIGURE 9.13



The Passing Six-Four This six-four is found between a triad in root position and its first inversion, or the reverse, and differs from the others in that there is no resolution of the perfect fourth. Rather, the root of the six-four sonority (G in Figure 9.14) functions as a chord tone sustained from the previous chord, the remaining tones acting as nonharmonic tones.

FIGURE 9.14

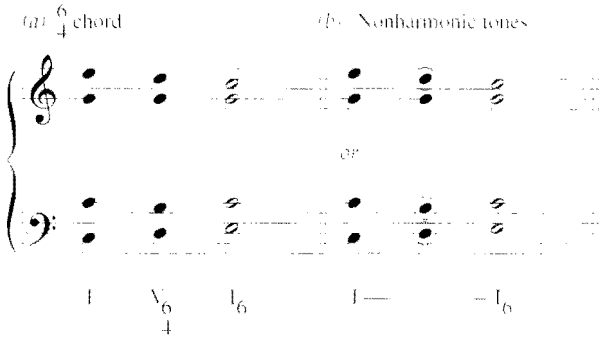
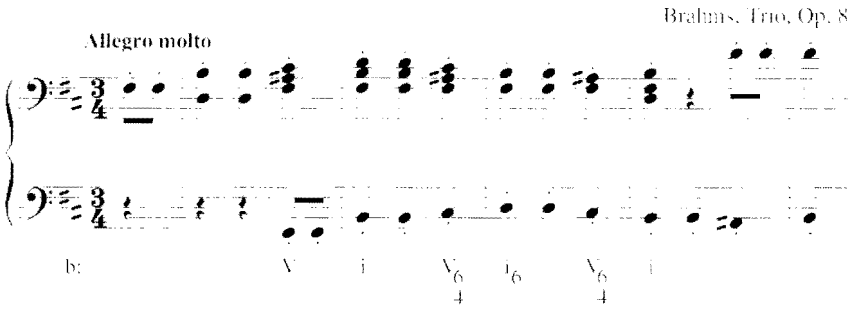
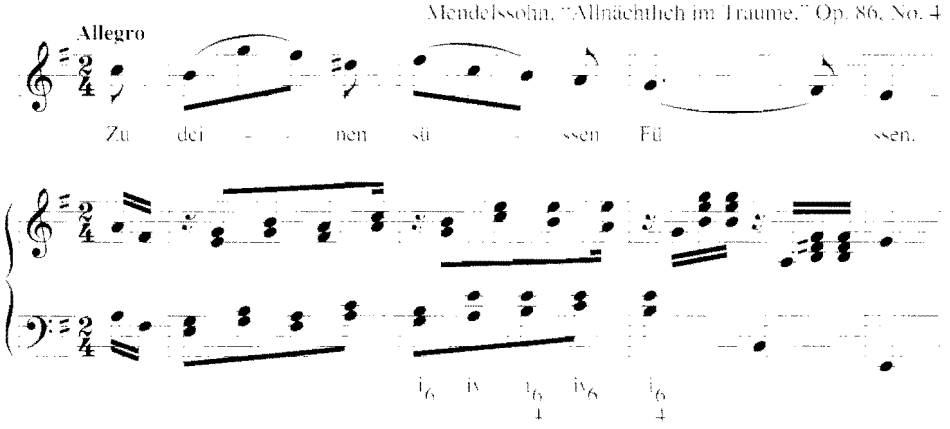


FIGURE 9.15



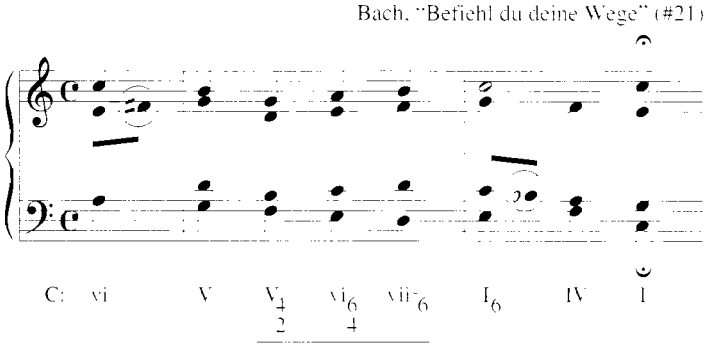
The most commonly used passing six-fours are (1) the I-V^6_4–I_6 or reverse, (2) the IV_6–I^6_4–ii^6_4, to be studied in Chapter 13, and (3) occasionally the iv–i^6_4–iv_6, shown in Figure 9.16. Note the lack of a G in the first i^6_4, allowing the two B's to function as nonharmonic tones in the iv triad.

FIGURE 9.16



You are not likely to see any other variety of a passing six-four, although there is always a possibility, such as this unusual passing $vi^{\flat}_{4}$ from a Bach chorale.

FIGURE 9.17



ASSIGNMENT 9.1 *Identifying triads in inversion.* Each of these music excerpts includes one or more triads in first and/or second inversion. Locate each inversion and describe its use. For first inversions, check the summary on page 172, and for second inversions, name each as described on the pages immediately preceding this assigment.

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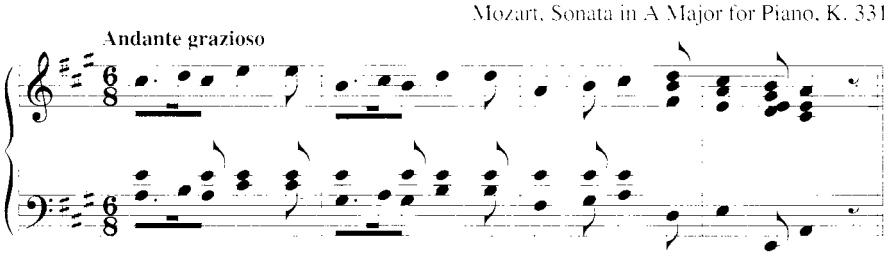
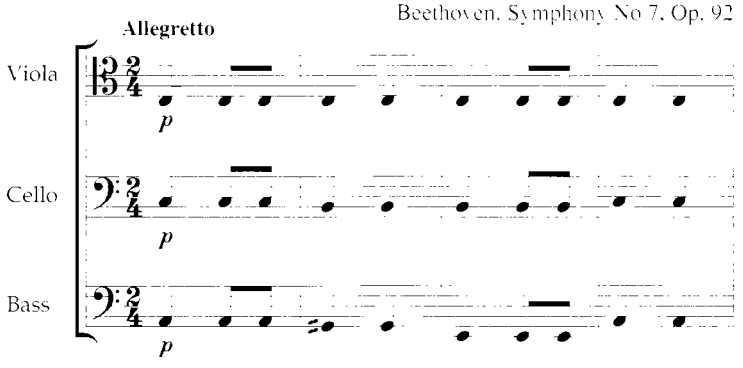


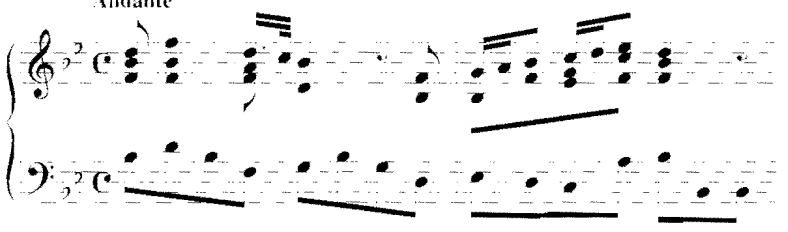
(2)



(3)

Andante

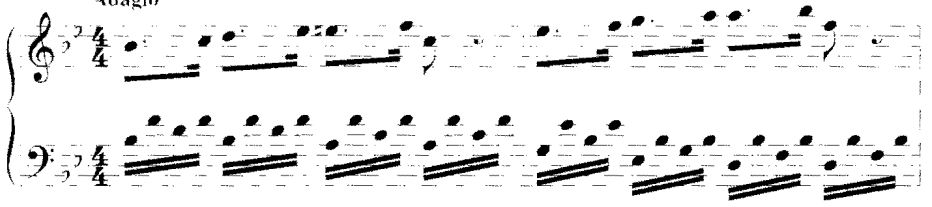
Handel, *Samson*



(4)

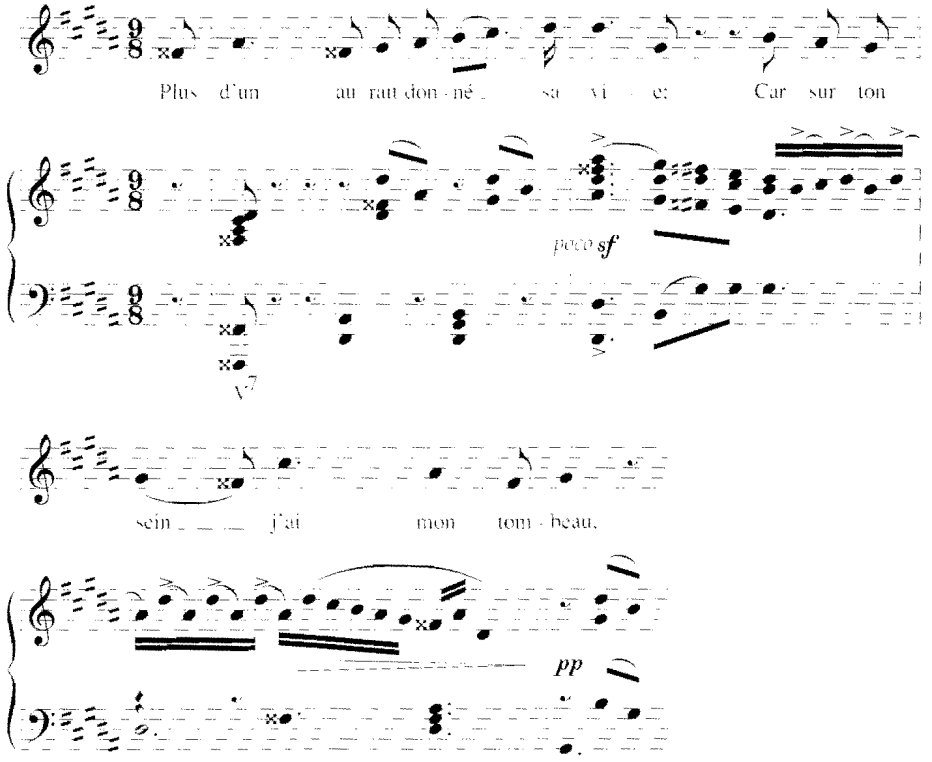
Adagio

Mozart, Sonata in F Major for Piano, K. 332



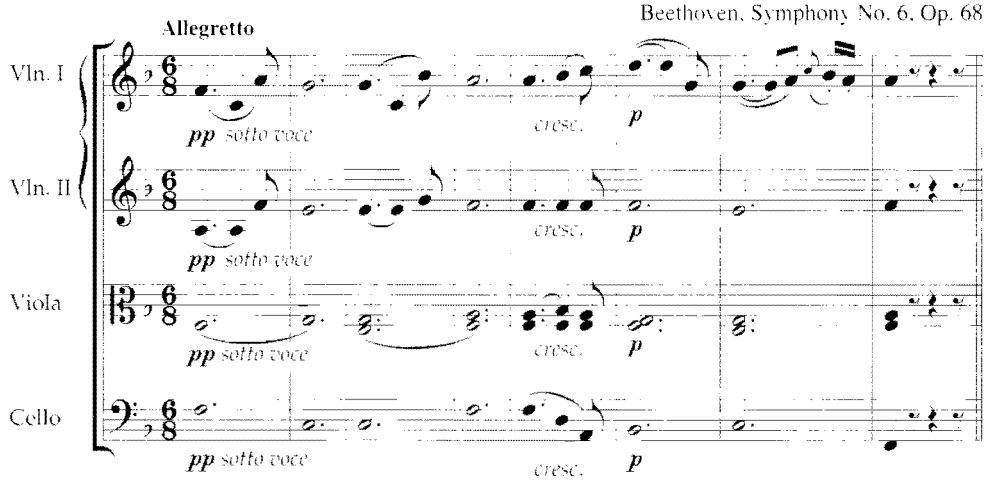
(5)

Berlioz, *Nuits d'été*, "La Spectre de la rose," Op. 7



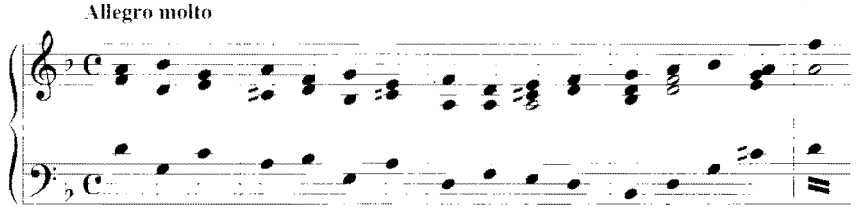
CD (6)

Beethoven, Symphony No. 6, Op. 68



CD (7)

Verdi, *Requiem*



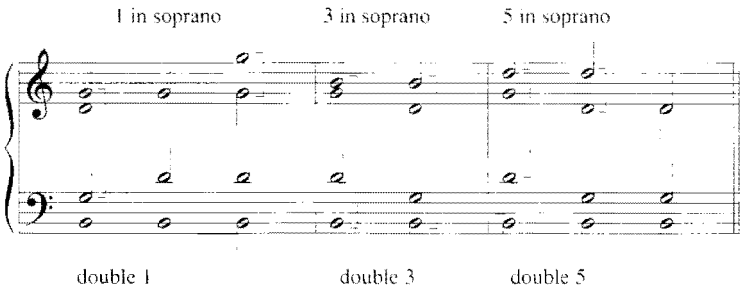
In Appendix E: The answer to (1) is given.

Writing a Triad in First Inversion

Any doubling is possible in a first inversion (even the leading tone under the right circumstances, see page 252), but we will start with the conventional doublings, that is, those which are most frequently used.

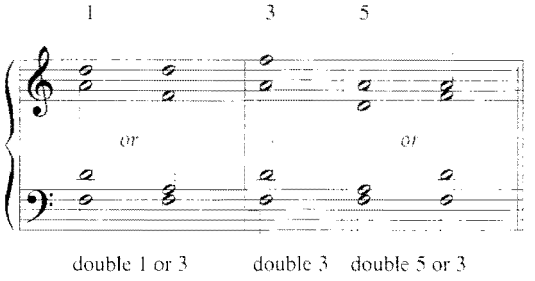
Major Triads The soprano note is doubled, with one each of the remaining triad tones.

FIGURE 9.18

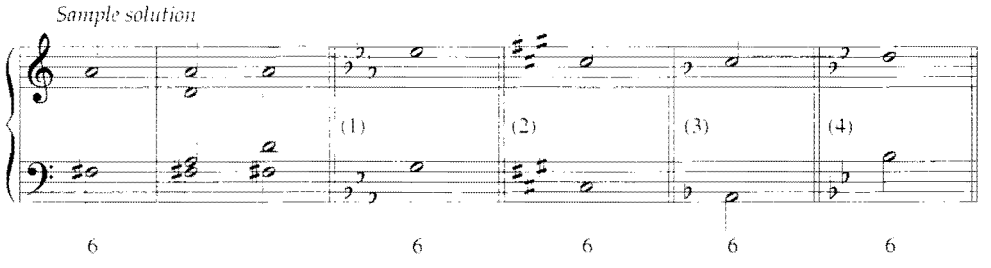


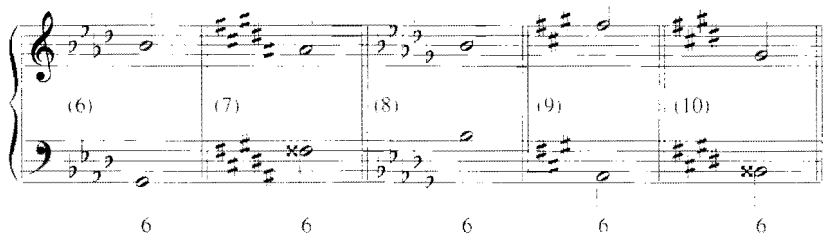
Minor Triads Although the same doubling applies to minor triads, it is also common procedure to double the third.

FIGURE 9.19



ASSIGNMENT 9.2 Add alto and tenor voices in these first-inversion triads. Write each in both open and close position, except where vocal range will not allow.





In Appendix E: Answers to (1)–(3) and (6)–(7) are given.
In the Workbook: Answers to the entire assignment are given.

Writing to or from a Triad in First Inversion

When progressing from a triad in first inversion to a triad in root position (such as V_6–I), or the reverse (I–V_6), you are most likely to avoid parallels and other problems by first writing the two voices that lead to and from the doubled note. These two voices can move in three different ways in relation to each other.

1. *Contrary motion:* The two voices move in opposite directions (Figures 9.20*a* and 9.21*a*).
2. *Oblique motion:* One voice remains stationary while the other moves (Figures 9.20*b* and 9.21*b*).
3. *Similar motion:* The two voices move in the same direction (Figures 9.20*c* and 9.21*c*).

FIGURE 9.20

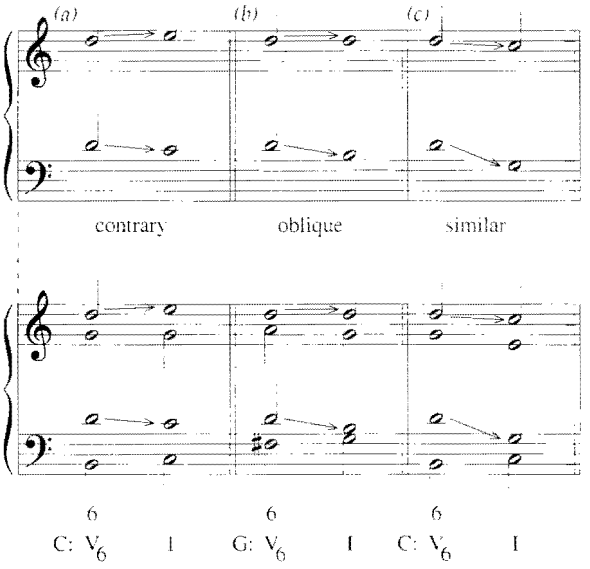
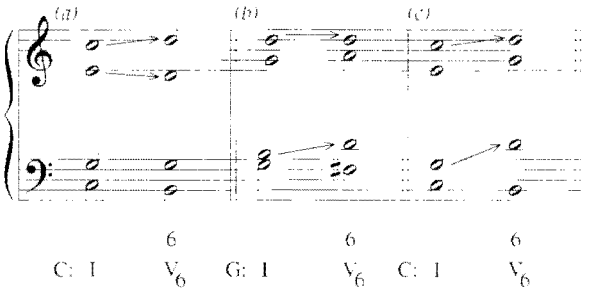
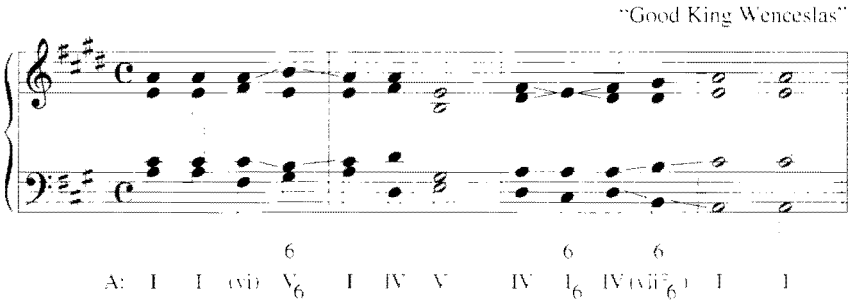


FIGURE 9.21



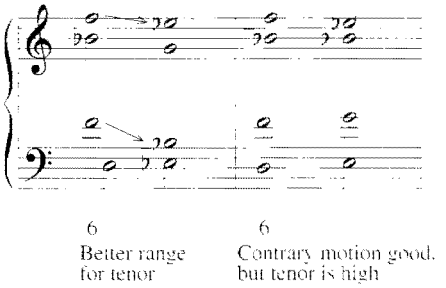
It is always best to use contrary or oblique motion in approaching and leaving the doubled note. In Figure 9.22, contrary motion is used exclusively at every occurrence of a triad in first inversion.

FIGURE 9.22



Similar motion is ordinarily necessary only in unusual cases when one voice must be brought into a better range or to effect a change of position.

FIGURE 9.23



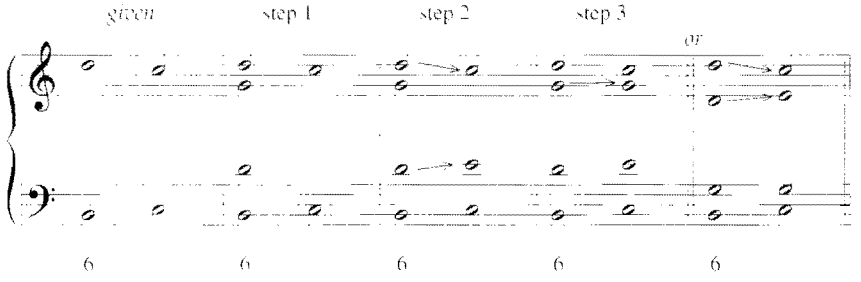
The most efficient procedure for part-writing to or from a triad in first inversion is as follows (Figure 9.24):

Step 1. Complete the first of the two triads.

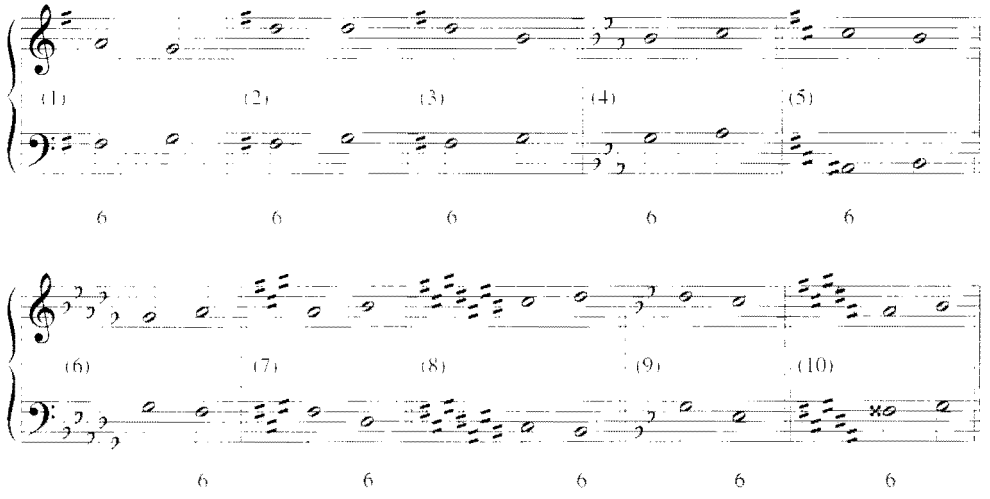
Step 2. Approach or resolve the doubled note by contrary or oblique motion if possible.

Step 3. Fill in the remaining voice with the note necessary to produce normal doubling. When the doubled note moves by contrary or oblique motion, the remaining voice usually moves by step or remains stationary, rarely moving by leap.

FIGURE 9.24



ASSIGNMENT 9.3 Write pairs of triads. Where possible, write the example in both voicings, as shown in Figure 9.24. Place the chord number below each bass note.

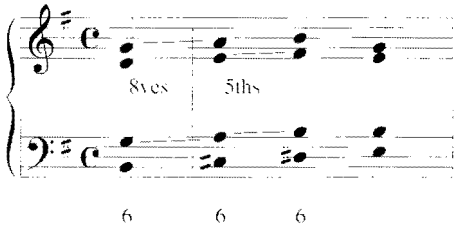


In Appendix E: Answers to (1), (5), and (7) are given.
In the Workbook: Answers to the entire assignment are given.

Writing Successive Triads in First Inversion

When triads in first inversion are used in succession, it is impossible for each of these triads to be found with the usual doubling in the same pair of voices, since parallel octaves and fifths will result.

FIGURE 9.25

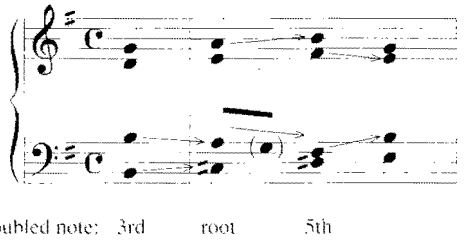


To avoid these, use a different doubling for each triad in inversion, if necessary.

In a most instructive example, Figure 9.26, Bach has successfully handled three successive first inversions, including $\hat{6}$ and $\hat{7}$ in the bass. He has avoided all the "booby traps" by carefully choosing his doubled notes, a different one in each triad. As a result, each doubled note is both approached and left by contrary motion. Study this example carefully, because in your work in inversions, you are unlikely to encounter any problem more difficult.

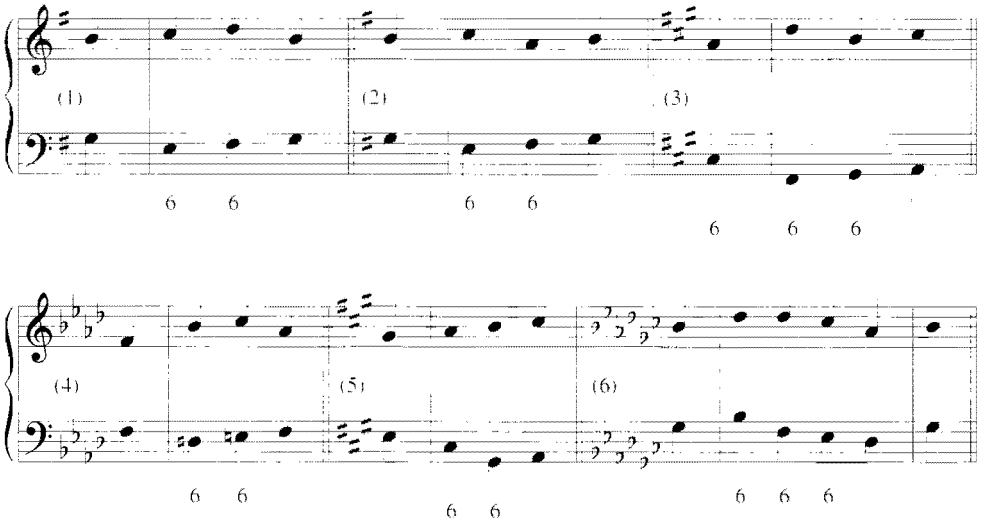
FIGURE 9.26

Bach, "O Herre Gott, dein göttlichs Wort" (#14)



When selecting doublings, be sure not to double the leading tone or any altered tone. Notice the $\hat{6}$ and $\hat{7}$ in Figure 9.26. Neither is doubled.

ASSIGNMENT 9.4 Write examples of successive first inversions.



In Appendix E: Answers to (1)–(3) are given.
In the Workbook: Answers to the entire assignment are given.

Writing a Triad in Second Inversion

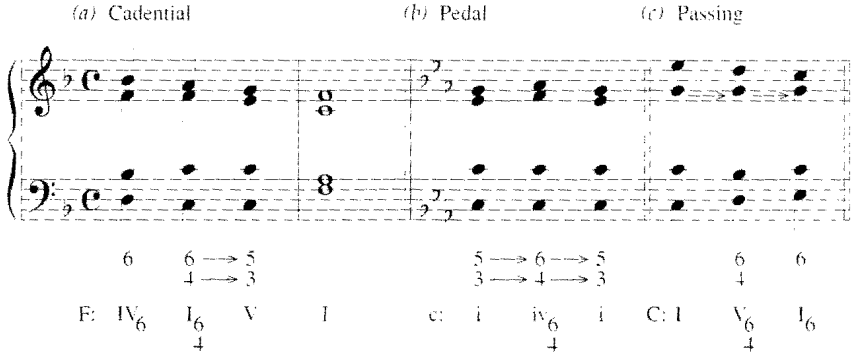
The ambiguity of the six-four triad, a sonority that appears to be a triad with tones that function as nonharmonic tones, places limitations on its doubling and its part-writing in a progression.

Doubling The fifth (bass note) is ordinarily doubled.

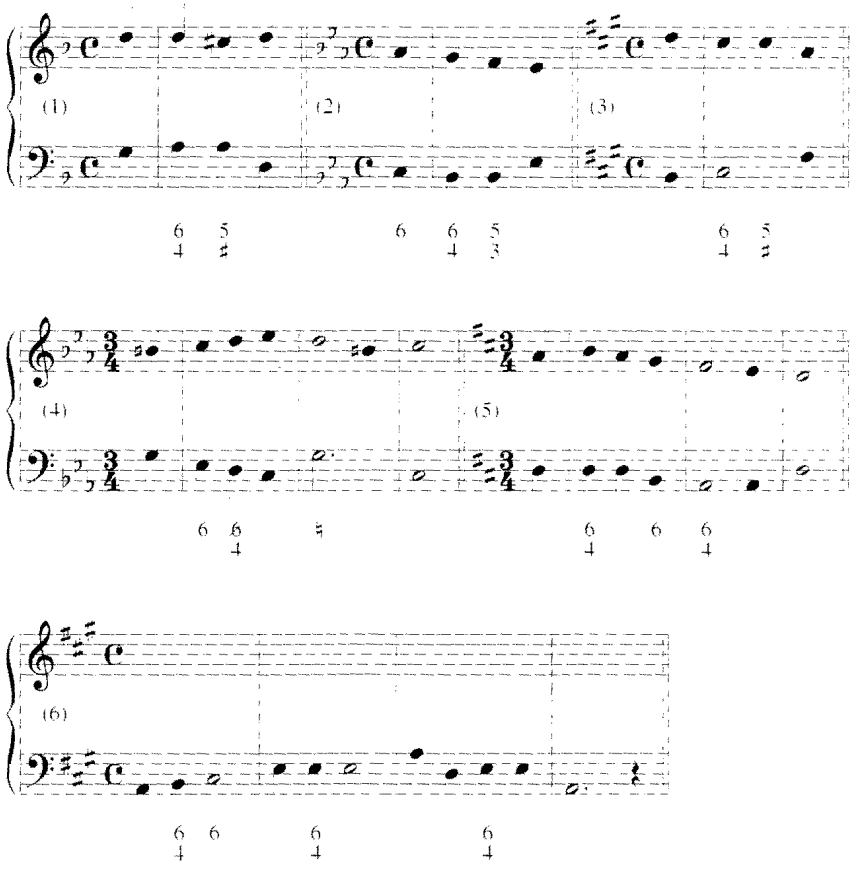
Approach and Resolution

1. *Cadential:* The bass note is *not* approached from the same tone or from the leading tone. In resolution, $\hat{6}$ moves to $\hat{5}$ above the bass, and $\hat{4}$ moves to $\hat{3}$ (Figure 9.27*a*).
2. *Pedal:* Motion above the bass is usually stepwise. (Figure 9.27*b*).
3. *Passing:* The "dissonant" fourth remains stationary (Figure 9.27*c*).

FIGURE 9.27



ASSIGNMENT 9.5 *Writing six-four chords.* Numbers 1–3 are cadential, number 4 is passing, and number 5 is pedal. In number 6, bass line only, supply three upper parts and include one example each of the three types of six-four chords.



In Appendix E: Answers to (1) and (5) are given.
In the Workbook: Answers to the entire assignment are given.

Other Part-Writing Considerations

Before we continue with phrase-length exercises, three additional observations applicable to any part-writing procedures will make your efforts easier.

The Melodic Augmented Fourth This interval is usually avoided in melodic writing and, therefore, should not appear in any voice line. Both tones of the interval have strong resolution tendencies, the upper resolving up and the lower resolving down. In a melodic leap, both resolutions cannot be accommodated, and the undesirable large leap must continue in the same direction (Figure 9.28*a*).

The problem is easily solved by using the augmented fourth's inversion, the diminished fifth, thus allowing the melodic change of direction (Figure 9.28*b*). How it works in a practical application, IV–V_6, is seen in Figure 9.29.

FIGURE 9.28

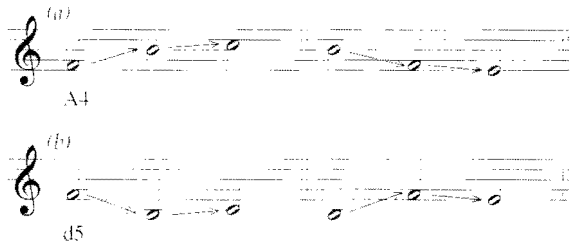
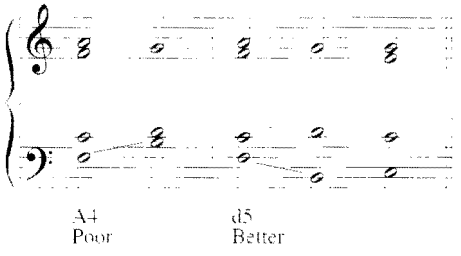
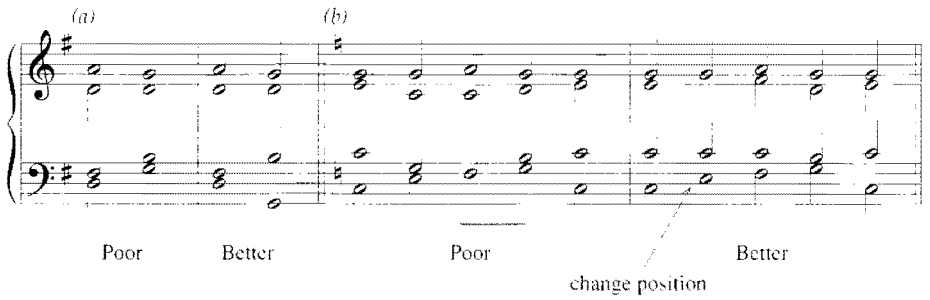


FIGURE 9.29



Overlapping Voices These can be illustrated better than described. In Figure 9.30*a*, measure 1, the bass note D moves to G, but the G is higher than the previous tenor note. These are overlapping voices, and they can occur between any pair of adjacent voices, ascending or descending. Correction is sometimes as simple as changing the direction of one voice (Figure 9.30*a*). Otherwise, change the triad position at some point before the overlapping pair. A good place to change position is at a repeated triad, as in Figure 9.30*b*.

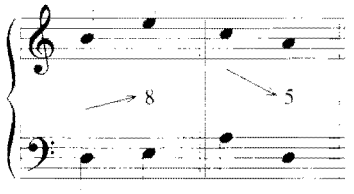
FIGURE 9.30



Unlike parallel fifths, overlapping voices are not to be considered completely unusable. They, along with crossed voices (page 88), are often useful when creating melodic lines using inversions and nonharmonic tones, as will be shown later.

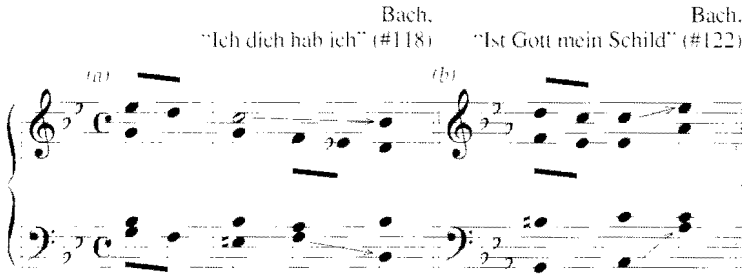
Hidden Octaves and Hidden Fifths (Direct Octaves and Fifths) A hidden octave occurs when two voices progress in similar motion to a perfect octave. A hidden fifth occurs when two voices move in similar motion to a perfect fifth. Although not parallel, they often produce the aural effect of parallel movement.

FIGURE 9.31



Hidden octaves and fifths are a problem *only* when they occur between the two outside voices of a composition (soprano and bass in four-part writing). Even then, they are acceptable when (1) the soprano moves by step, as in the perfect authentic cadence, soprano $\hat{2}$–$\hat{1}$ with bass descending (Figure 9.32*a*), and (2) when the bass moves by the interval of an octave, considered the same as a repeated tone (Figure 9.32*b*).

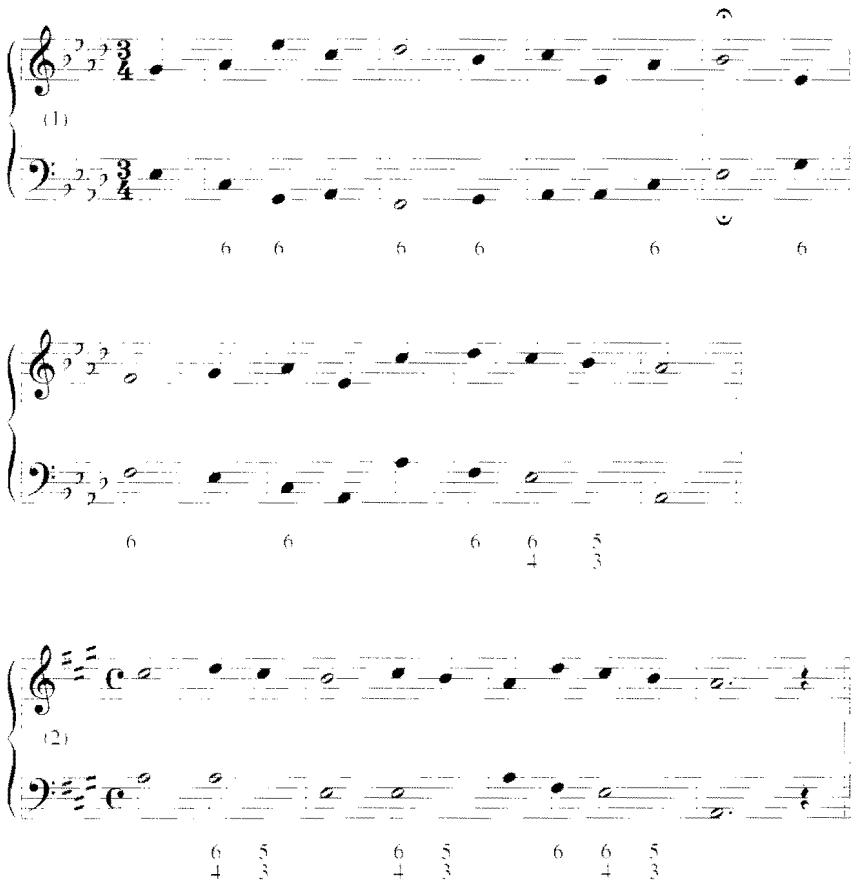
FIGURE 9.32

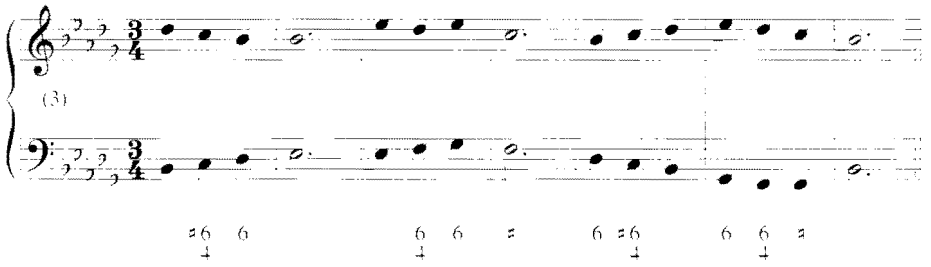


In other circumstances, a hidden fifth or octave between outside voices is not necessarily entirely unusable but should be chosen only after careful consideration of its aural effect.

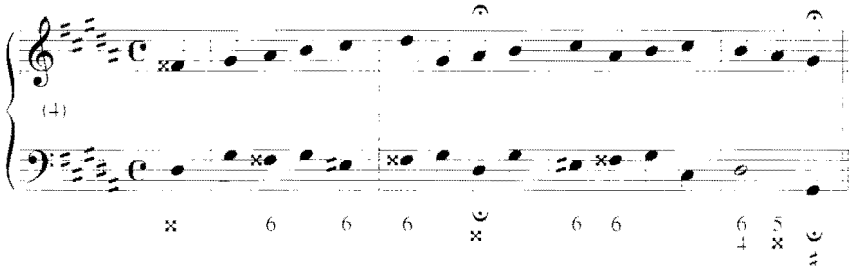
ASSIGNMENT 9.6

(a) Write extended exercises (the soprano and bass lines are given). Make a harmonic analysis.

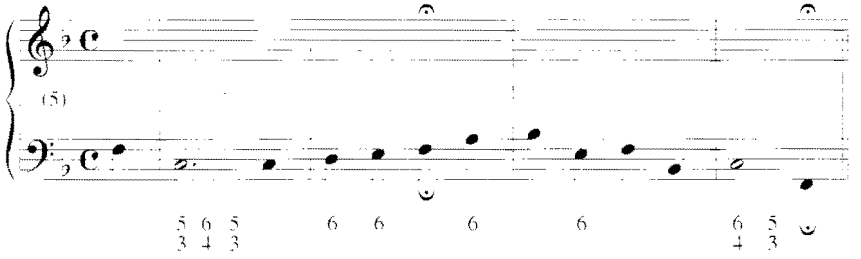


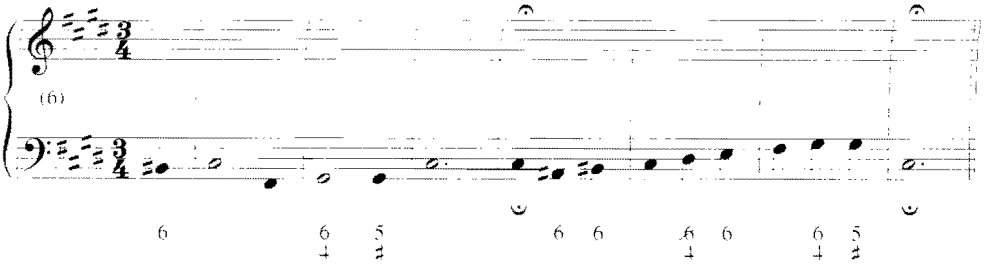


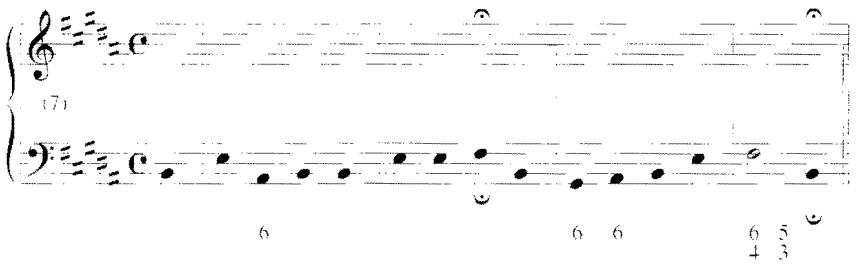
(Review Figure 9.26.)



(b) The bass only is given. Write the soprano line and fill in the alto and tenor voices. Make a harmonic analysis. When you write the melodic line, be sure to follow the procedures of good melodic writing as described in Chapter 7. Choosing a soprano note at random simply because it fits the designated chord rarely produces worthwhile results.



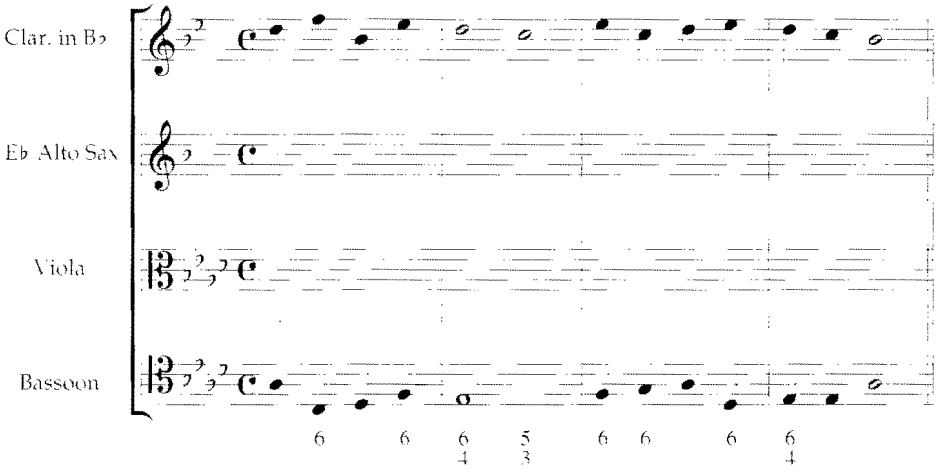




Alternative methods of solution

1. Write any exercise on four staves (open score), using correct transposition for the tenor voice. Don't forget to use correct stem directions when writing a single voice line on the staff.
2. Write any exercise in open score, using treble, alto, tenor, and bass clefs, reading from the top staff down.

ASSIGNMENT 9.7 *Part-writing for instrumental ensemble.* Add inner voices to the following example. For additional experience, rewrite exercises from Assignment 9.6 for instruments of your choice or as assigned.



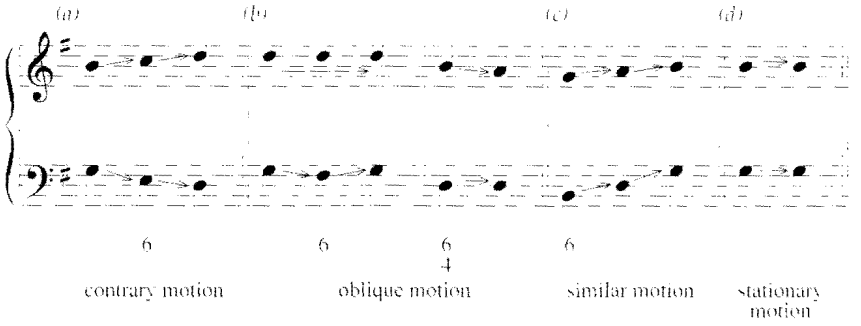
Melody Harmonization

When harmonizing a melody using inversions, you must decide which triads will be in inversion and which will have the root in the bass. Therefore, write the complete bass line first, *before* the inner voices.

When the bass moves with the soprano, their related movements can be in any one of four directions:

1. *Contrary motion* to each other
2. *Oblique motion*—soprano stays on the same tone while bass moves, or soprano moves while bass maintains the same tone
3. *Similar motion* to each other
4. *Stationary motion*—both soprano and bass repeat their tones

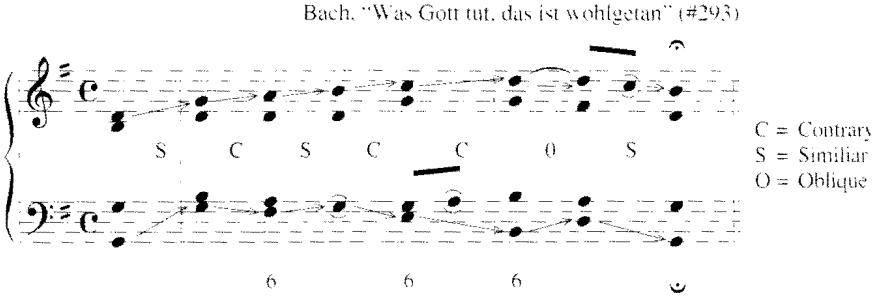
FIGURE 9.33



Of the four types of motion, contrary and oblique are the most frequently used. Similar motion is very effective for intervals of thirds or sixths between soprano and bass (see Figure 9.6, bracketed voices) but otherwise should be used with care, avoiding parallel or hidden octaves and fifths. Stationary motion, having no melodic or harmonic motion, is little used.

The chorale in Figure 9.34 uses I, IV, and V only. Here is the count of the motions between outside voices: contrary, 3; similar, 3; oblique, 1. Note that the similar motions occur during a repeated triad, as thirds between soprano and bass, and in the V–I cadence.

FIGURE 9.34 *Motion between Outside Voices*



As a final test of the chosen bass line, play or sing (two persons) your soprano and bass lines only. The sound of the two-voice composition should be musically effective, even without the inner voices, as already demonstrated in the Mozart example, Figure 9.5. Try this on Figure 9.34, or on any other Bach chorale.

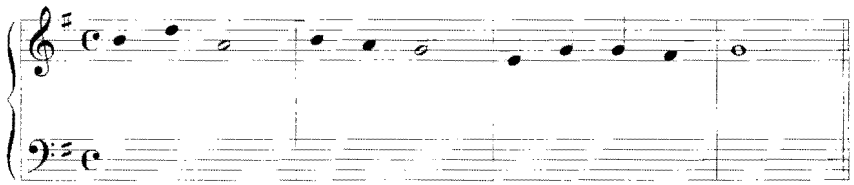
ASSIGNMENT 9.8 *Analysis of motion between outside voices.* Using music examples from this chapter, indicate each motion by C (contrary), S (similar), or O (oblique), as in Figure 9.34. Count the total number of each motion. Also count the number of similar motions involving parallel thirds or sixths. Be able to discuss the significance of these statistics.

		C	S	O	S: 3rds or 6ths
Example:	Figure 9.34	3	3	1	1
	Figure 9.5	___	___	___	___
	Figure 9.7	___	___	___	___
	Figure 9.11	___	___	___	___
	Figure 9.17	___	___	___	___

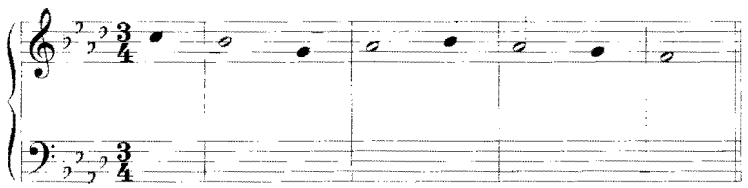
In Appendix E: Answers to the entire assignment are given.

ASSIGNMENT 9.9 *Melody harmonization.* Following directions from Assignment 6.11 (page 125), first write the bass line using roots only, then decide where use of inversions will be effective, with special attention to the motion between the outside voices. Each exercise asks you to use certain inversions, but you are not limited to these.

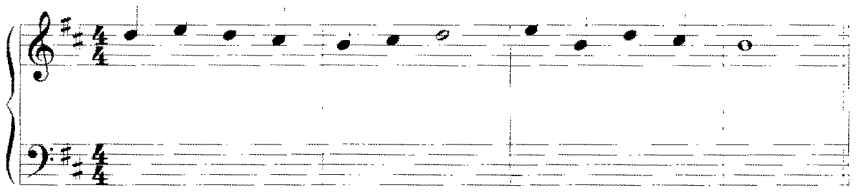
(1) Use two different six-four chords.



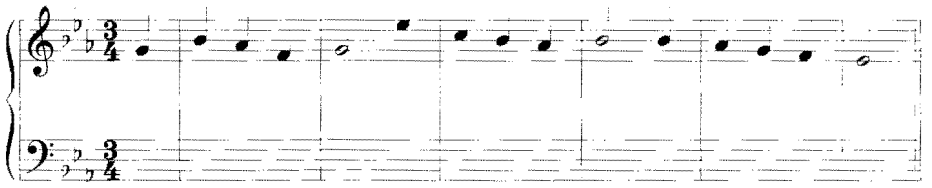
(2) Use $\hat{6}$–$\hat{7}$ in the bass.



(3) Use a pedal six-four and a measure similar to measure 1 of Figure 9.6 (page 171).



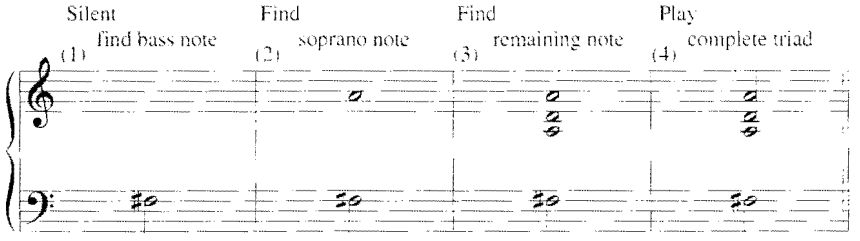
(4) Use a V_6–IV_6 progression and a cadential six-four chord on a weak beat.



Keyboard Harmony

ASSIGNMENT 9.10 Play any major or minor triad in first or second inversion, with any member of the triad in the soprano. As in previous keyboard performances of single triads, play each triad in inversion with three notes in the right hand and one in the left, using correct doubling. Example: Play the first inversion of the D major triad, with its fifth in the soprano.

FIGURE 9.35



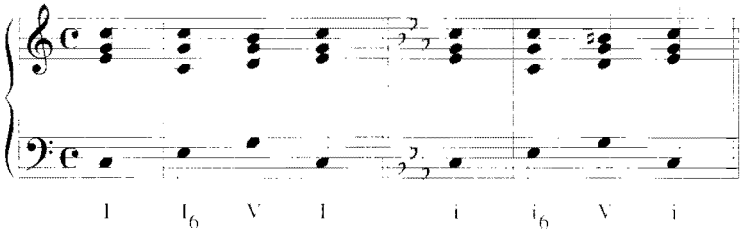
Play these triads or others as assigned. Soprano note is indicated in parentheses.

First Inversion: Major—C(1), E♭(5), A(3), B(1), D♭(5)
Minor—D(1), G(5), F♯(3), B♭(1), D♯(5)

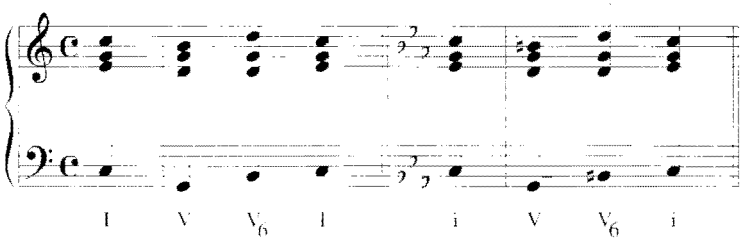
Second Inversion: Major—A(3), F(1), G♭(5), E(1), C♯(3)
Minor—A(1), F♯(5), B(3), G♯(1), E♭(1)

ASSIGNMENT 9.11 Play these progressions in each major and minor key. The first three are written out. Also, try each exercise beginning with one of the two other soprano positions of the opening tonic triad.

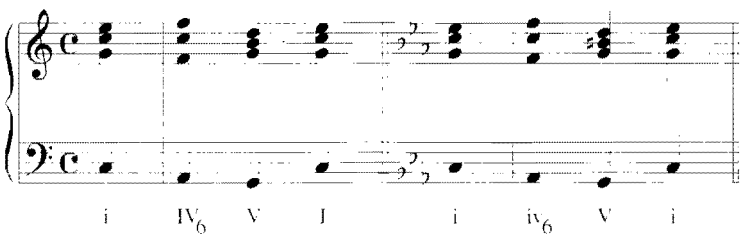
(1)



(2)



(3)



(4) I I_6 IV V I: i i_6 iv V i
(5) I IV_6 V_6 I: i IV_6 V_6 i
(6) I IV I^6_4 V I: i iv i^6_4 V i
(7) I IV_6 I^6_4 V I: i iv_6 i^6_4 V i

Summary

A chord in inversion is one in which some tone other than the root is the lowest tone: in first inversion, the third; in second inversion, the fifth.

Inversions are valuable for creating bass lines with melodic interest greater than that possible with chord roots alone. Specific devices made possible are melodic sequences in the bass and parallel thirds or sixths between the bass and an upper voice.

When first inversions are used in succession, any resulting chord progression is usable, including V–IV, not ordinarily found with roots in the bass.

In a minor key, the bass line ascending through $\hat{6}$ requires the use of the major subdominant triad, IV.

The use of second inversion is limited because the interval of the perfect fourth above the bass is considered a dissonance, requiring resolution to a third above the bass.

The second inversion is used principally as a *cadential* chord, resolving to V at a cadence. Other uses are the *pedal* six-four and the *passing* six-four.

Conventional doubling in first inversion is the soprano note; in second inversion, the bass note. Successive first inversions require differing doublings as needed to avoid parallels.

Part-writing inversions is best accomplished by writing to and from the doubled note first.

When inversions are used to harmonize a melody, contrary and oblique motion between the outside voices should be the most frequent. Similar motion is effective when soprano and bass move in parallel thirds or sixths.

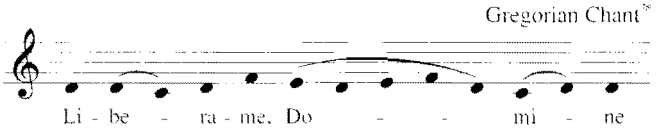
ARTICLE #8

The Theory of Inversion

The fact that a chord can be inverted—that, for example, E G C is the same chord as C E G, only inverted—appears so obvious to us now that we assume the concept must have been known to the very earliest composers. In reality, however, the seemingly "simple" fact of harmonic invertibility became formally established only in the year 1722 by Jean-Philippe Rameau (1683–1764) in his *Traité de l'harmonie reduite à ses principes naturels (Treatise on Harmony Reduced to Its Natural Principles).*

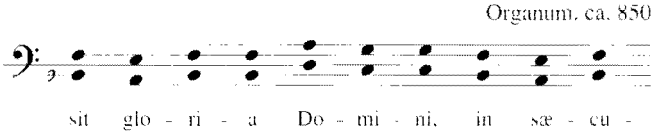
To understand why the concept of the chord and its inversion came so late, we must once again look back to the beginnings of composition in Western music. The earliest known music is melodic, that of the chants of the medieval church.

Gregorian Chant*



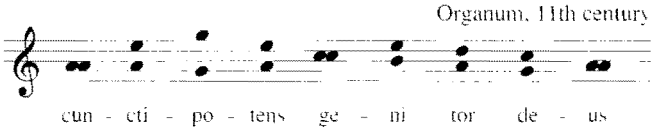
Music in two voices, two melodic lines together, appeared in the ninth century, with the chant also stated a perfect fifth higher than the original melody and with the two lines sung simultaneously.

Organum, ca. 850



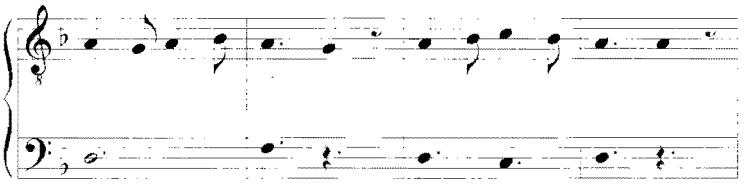
This simple device of sounding two melodies simultaneously, known as *counterpoint,* evolved first through independence of direction in the two lines,

Organum, 11th century



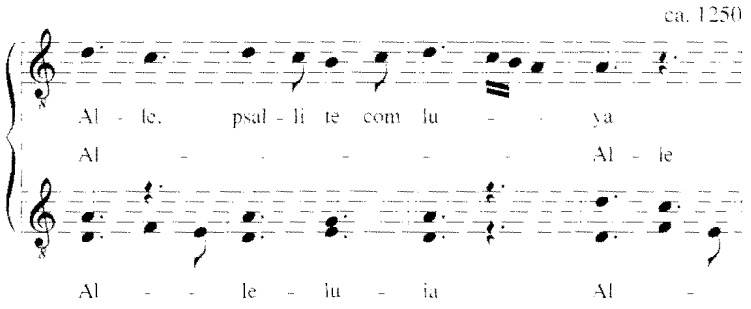
then with independence of rhythm,

ca. 1200

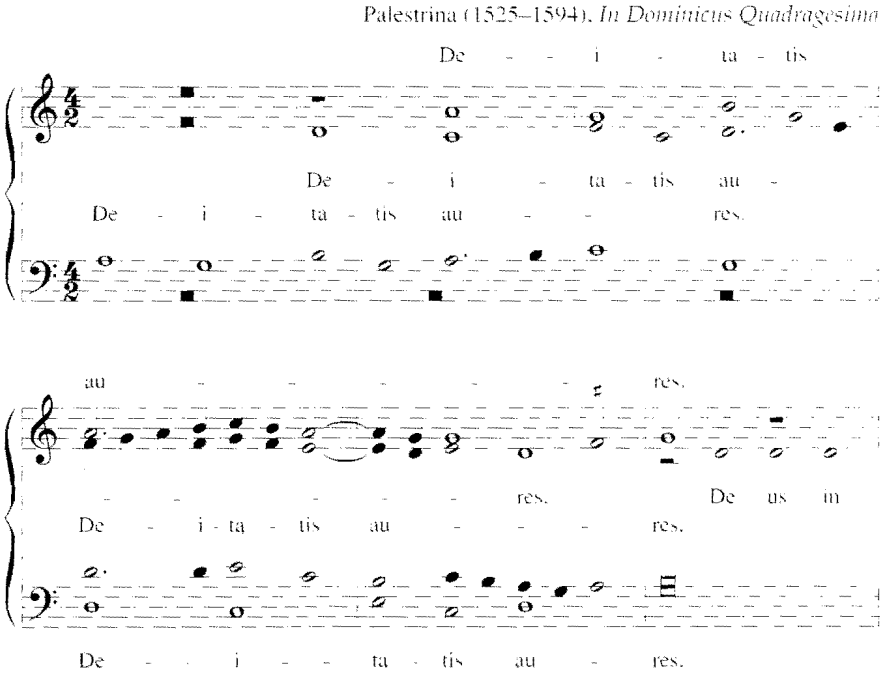


followed by the addition of more and more melodic lines,

*These first five excerpts are reprinted by permission of Harvard University Press, Cambridge, Mass., from Davison and Apel, *Historical Anthology of Music,* Vol. I (1949).



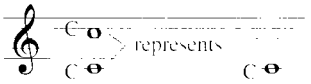
and reaching its culmination in the *polyphonic* (many-voiced) contrapuntal writing found in the masterworks of the late sixteenth century.



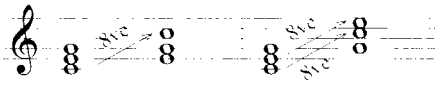
In all these developments, the primary compositional concern was the setting of voice lines against each other. The harmonic aspect was controlled exclusively by making sure that intervals above the lowest sounding notes were consonant with these notes (though specific dissonances in well-defined situations were allowed). Hence, the first vertical sonority in measure 4 of the Palestrina example we would call a D minor triad, but in the sixteenth century it would have been described simply as a minor third and a perfect fifth above the D in the bass. On the fourth beat of the measure, we see from the bass up the notes C E A, to us the first inversion of an A minor triad, but at that time a major third and a major sixth above the C in the bass. Only the

major triad occurring at the end of a composition was given an identity, and called the *trias harmonica* (harmonic triad).

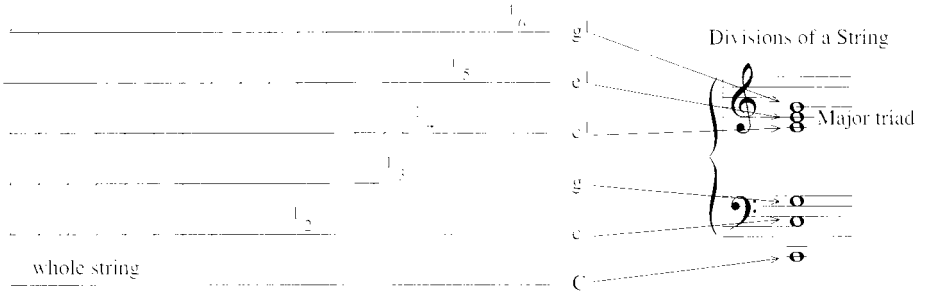
The impetus of performance and composition through the use of figured bass (see the article "Figured Bass" in this chapter) heightened awareness of the harmonic aspect of music. Many theorists during this time attempted a rational explanation of this new concept, but none was successful until the theories of Rameau appeared, approximately 125 years after the introduction of the figured bass. Rameau's proof of the invertibility of a chord or of an interval was arrived at through the principle of the "identity of the octave." In the interval of the octave, the two notes sound identically; therefore, the octave actually represents a single pitch of the same name. It should follow that any interval of a chord that is changed only by an octave transposition of one or more of its notes has not really been changed at all.



Thus, E G C is C E G, the same triad but in a different form, the first inversion; and G C E is C E G, but in second inversion.

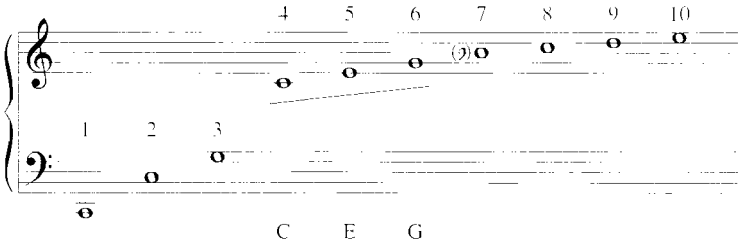


But why is C the fundamental note of this triad, rather than E or G? The answer to Rameau was based on an acoustical phenomenon well known as far back as early Greek times and said to have been discovered by Pythagoras (sixth century B.C.). We take a string that when played sounds C. If we press a finger at the halfway point on the string and play on one half of the string, the note produced is another C an octave higher. If we place the finger to divide the string in thirds and play on one third of the string, we get the pitch G an octave and a fifth above the original note. Here are the pitches derived from the first six divisions of a string sounding C.

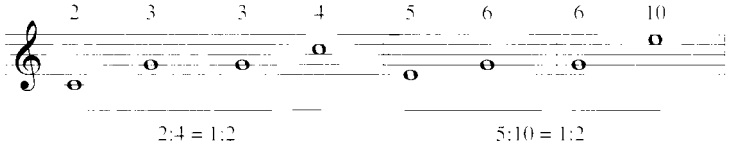


Rameau observed that each note created by dividing the string was directly related thereby to the entire string, the source from which the upper tones are derived. In our illustration, the triad c^1 e^1 g^1 is derived from the division of an original string sounding C. c^1 is in an octave relationship to the original C; it therefore represents the fundamental or generating tone and becomes the root or fundamental of the triad, no matter in what order the triad notes are arranged.

Another acoustical phenomenon, the *overtone series* (described in Appendix C), displays the same relationship of intervals as that found in the division of a string. Although it was discovered by Joseph Sauver, a blind and deaf music theorist, twenty years before Rameau's theories, Rameau, once he had become acquainted with it, pointed to the overtone series as further confirmation of his work. In the following overtone series on C, the C E G triad appears as partials numbered 4, 5, and 6, comparable to the fourth, fifth, and sixth divisions of the string.



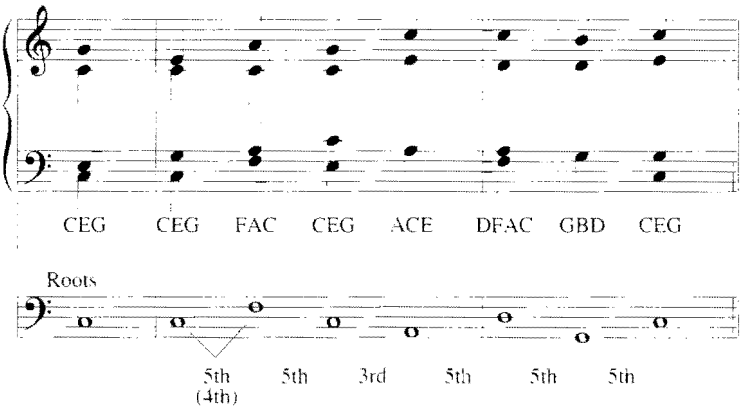
Intervals are invertible in the same manner. Moving the lower note up an octave or the upper note down an octave changes the interval only by the ratio of 1:2. Since this ratio indicates the octave, which in turn represents the fundamental, the two intervals are inversions of each other. Perfect fifths and perfect fourths are inversions of each other; minor thirds and major sixths are inversions of each other.



Having found that all chords have roots and that the root remains constant when the notes are rearranged, Rameau next sought to discover the underlying principle governing the progression of one chord to another. Rameau said that these progressions are based upon movement of the roots of chords, whether or not those roots are in the bass. In looking at the intervals from the division of the string and from the overtone series, he noted that the first interval to appear above the fundamental and its repetition, the octave, is the fifth. Therefore, root movement should be best when the roots are a fifth

apart. This can be shown by taking a piece of music and extracting the roots, placing these on a third staff, as in the following example. It should be kept in mind that there are three possible root movements: by fifth, by third, and by second. According to the theory of inversion, the effect of the fourth is the same as that of the fifth (C up to F is the same as C down to F), the sixth is the same as the third (C up to A is the same as C down to A), and the seventh is the same as the second (C up to B is the same as C down to B).

Hymn: St. Anne



In this part of his theory, Rameau was correct; subsequent analysis has shown that in the music of almost every composer during the years 1600–1900, the majority of root movements were by the interval of the fifth. Rameau's reasoning that root movement by thirds should be next best and root movements by seconds least best has been reversed by the practice of composers.

But on the whole, Rameau was eminently successful in discovering satisfactory principles of chord construction and chord progression. Chords have roots that may or may not be in the lowest sounding voice, and chord succession is a function of the movement of these roots, movement by the fifth being the best. These principles allow us to identify a chord by numbering the chord according to the location of its root in the scale and to study the relationship of chords through the movements of their roots.

Music written after the time of Rameau and up to about 1900 can, for the most part, be studied and analyzed by the principles first outlined by Rameau. It is because of this fact, and in spite of the large number of composers and diverse styles in this three-century span, that we can study the music of this period under the single subject heading of harmony.

ARTICLE #9

Figured Bass

In its four-hundred-year history, figured bass has functioned in three distinct areas of musical endeavor. It began as a solution to a performance problem; then, during the Baroque era, it became an important compositional device; and, finally today, it serves as a widely used aid in the learning of harmony and part-writing.

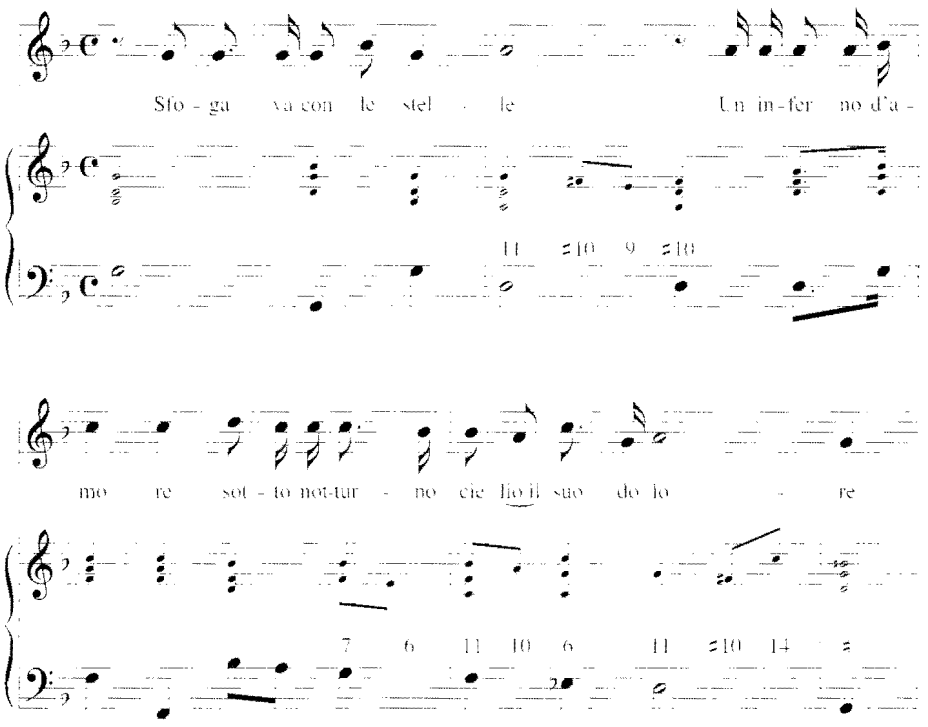
Its history dates from the late sixteenth century. You will read in the article "Another Metrical Concept," in Chapter 15, that vocal music of the time was written on separate pages for each of the voices. And although much of this music was written without accompaniment *(a cappella)*, it was the custom of the time to include instrumentalists informally, playing any or all of the vocal parts or even playing them without singers. The performance problem we have spoken of arose when the keyboard player tried to read all the separate parts of a work simultaneously when performing it with the ensemble. The problem was compounded by the fact that in this pre-seventeenth-century music, each line was a melodic line, and all the lines were superimposed on each other to create a contrapuntal composition (as we will see in the Palestrina excerpt in the article "Another Metrical Concept," previously mentioned).

A solution to the keyboard player's dilemma came when someone thought of using the bass part only and writing numbers under or over certain bass notes to indicate the intervals above those notes. The performer quickly calculated the intervals above the bass and played these notes as a group—as a *chord*. As the music evolved, the succession of chords harmonized with the contrapuntal composition, even though it was in direct contrast to the melodic intent of the composition.

Although a concept of harmony, as opposed to one of counterpoint, was stirring in the sixteenth century, this practice of playing from a figured bass—of preparing a solo line and a figured bass line—actually provided composers with the impetus to write chordally. The first such music in this style was written by Lodovico Viadanna, in or about the year 1596. The style was eagerly accepted and practiced by most composers, and thus harmony soon replaced counterpoint as the predominant characteristic of music.

The following example is taken from Caccini's *Le Nuove Musiche (The New Music)*, published in 1601. Only the vocal solo line and the bass line with figuration, called *continuo* or *basso continuo*, were written by the composer. The rest of the notes represent one possible interpretation, called a *realization*, of the figured bass.

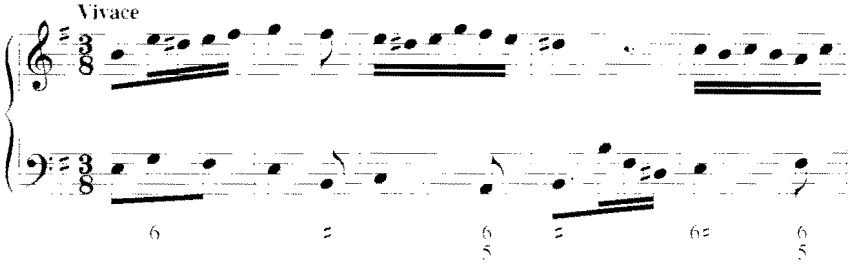
Giulio Caccini (1550?–1618), *Sfogava con le stelle*

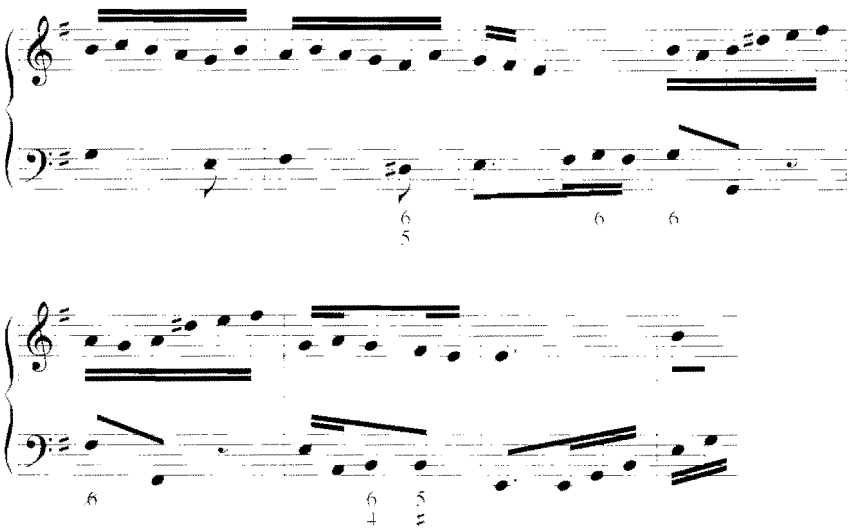


Early figured bass examples, such as that of Caccini, often used numbers higher than 8 to indicate compound intervals (10 = 8ve + 3rd). Except for 9 in certain circumstances, these large numbers were soon discarded. The player seeing 6, for example, could play the sixth above the bass in any convenient octave.

Composition using figured bass continued throughout the mid–eighteenth century and included many of the great vocal and instrumental works of Bach, Handel, and their contemporaries.

Geminiani (1680–1762), Sonata for Oboe or Flute or Violin





Whereas keyboard performers of this period improvised freely over the given figured bass lines, today's performers prefer to purchase a copy of the score with the keyboard part already written out. Thus, if one purchases the Handel violin sonatas in two different editions, one gets two different keyboard realizations. There is no reason, however, why any player cannot improvise or write out a keyboard part for any figured bass composition.

When looking at original figured bass lines, one notices that the method of writing for figured bass varied from composer to composer. For example, the markings ♮6, 6♮, 6+, and ♯ all mean the same thing. Symbols are often missing when the composer thinks the harmony is obvious, but at times they are present when they seem unnecessary. The figured bass symbols shown in examples in this book are authentic to their historical period, but of necessity their style cannot be attributed to any one composer.

With the end of the eighteenth century, figured bass, together with improvisation and casual interpretation of the music score, became a thing of the past. Composers now wrote exactly what they wanted played, and since that time it has been considered an artistic necessity for the performer to reproduce as exactly as possible the composer's intentions. But the twentieth century has seen a revival of the improvisatory and casual aspects of music, particularly in jazz groups and in scores for aleatoric music, which give both performers and conductors choices of what to play and how to play it.

Harmonic Progression; the Leading-Tone Triad and the Supertonic Triad

By "harmonic progression" we mean the order in which chords follow one another. A harmony once sounded is, of course, followed by another, but which one should it be? Is there any particular order? Are some progressions favored over others? Does it really make any difference?

Root Movement

Progression of chords, one to another, is always described in terms of root movements—that is, the intervallic distance between the roots of the two successive chords in question, regardless of the actual bass notes (inversions) used. Intervallic distances between chord roots can be only three: the fifth, the third, and the second. The fourth, the sixth, and the seventh are merely inversions of these (a root movement C up to G, a fifth, is the same as a root movement C down to G, a fourth).

Root movement *down by a fifth* accounts for a large percentage and often a majority of the chord progressions in the music of most composers. This is the movement of the authentic cadence (V–I), which is so effective in establishing a sense of key. It has been surmised by many theorists that the basic quality of the downward fifth lies in its relationship to the first interval (other than the octave) in the overtone series: a fifth, the third partial descending to the second.

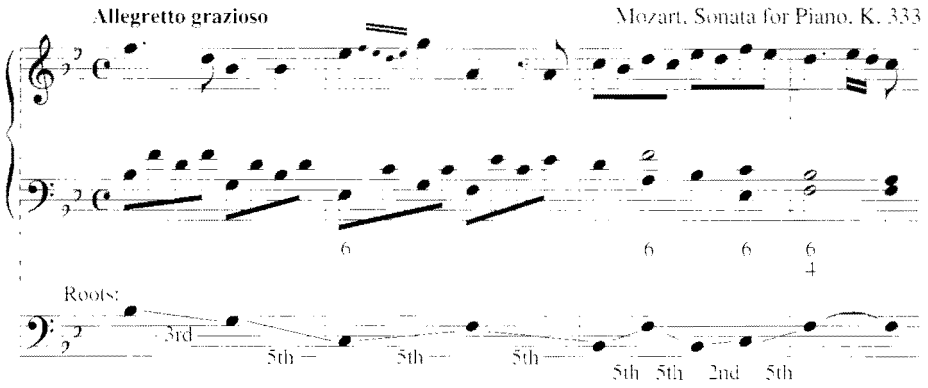
In Figure 10.1, the pattern of root movement in an excerpt from Mozart is shown on the third staff. Note that when the roots move a fourth, the progression is labeled "5th," and when a chord is in inversion, the root, rather than the bass note, is shown.

See Appendix C.

Counting the root movements (considering the root of the six-four to be F), we find

by fifth—6
by second—1
by third—1

CD FIGURE 10.1 *Root Movements*



The preponderance of root movement by fifth in this example is typical of tonal harmony in general, though not always in this same proportion, of course. But it bears out our earlier statement that "root relationship by fifth . . . is probably the most significant element delineating the character of tonal harmony."

Harmonic Progression

Having established a system of root movements, we still need to know what specific chords are used and in what progression we would find them.

If we made an extensive survey of thousands of progressions in tonal music, probably any chord progression imaginable would show up. But in such a survey, we would notice that certain progressions occur over and over again, others less frequently, and still others rarely. It is obvious that composers have not chosen to utilize all chord progressions equally. We will discover these choices through analysis of root movements.

Root relationship by fifth has already been considered in the study of the authentic cadence, V–I, in which the root of V descends a fifth to the root of I. What root, then, descends a fifth to the root of V? It is, of course, ii. Counting back by descending fifths, we arrive at this succession, any pair of which is a commonly used progression.

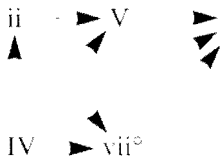
FIGURE 10.2 *Harmonic Progression by Fifths in Major*

(IV → vii°) → iii → vi → ii → V → I
IV vii°

But you will note that IV and vii° seem to be misplaced. In movement by fifths, vii° should precede iii. However, vii° usually functions as a dominant, progressing to I. Why? The three tones of the vii° triad are the same as the upper three tones of V^7 (C: vii° = B D F; V^7 = G B D F). Because of its urgency to progress to I, and because its spelling is so similar to that of V^7, many theorists define vii° as an incomplete V^7 with root implied (V^7).[2] In this sense, the *implied* root is a fifth above the tonic. However, IV–vii°–iii is useful in a harmonic sequence (Chapter 17).

We have already studied the remaining triad, IV, in its movement to V and to I. As stated in Chapter 6, the IV–V progression is commonly implied in folk melodies, and this harmonization is common in amateur performance. It is interesting to note that in composed music, the progression ii–V is much more frequent than IV–V.

So we have a cluster preceding I; the arrows indicate these useful progessions.[3]



ii: to V or vii°

IV: to ii, V, or vii°

vii°: to I

In a minor key, ii and IV in the above list will be ii° and iv. But when $\hat{6}$ in either triad progresses to $\hat{7}$ in the following triad, ii (minor) and IV (major) will be used to avoid the interval of an augmented second.

The progression ii°–vii°, two successive diminished triads, is not useful.

These two additional common progressions remain:

1. When a triad skips in the direction of tonic (sometimes called *elision*): vi–V, iii–IV (actually more common than iii–vi), and iii–ii_6[4]
2. When a triad moves away from the tonic (sometimes called *retrogression*): V–vi, vi–iii–IV (vi–iii is uncommon except when followed by IV)
3. A common progression interrupted by a tonic triad: ii–I–V, for example

Harmonic Progressions in Minor Keys

In minor, iv and VII *are* included in the series of progressions by fifths. Since these two are minor and major triads respectively, they can progress by perfect fifth, iv to VII and VII to III, continuing as in Figure 10.3. The entire series can be seen in G minor in the Haydn example, Figure 10.6

[2] In this text, the designation vii° is used rather than V^7 because of significant differences in part-writing the two chords (page 224).

[3] For study of the common progression IV–ii (shown in the cluster), see page 310.

[4] Why ii_6 and not ii? See page 304.

FIGURE 10.3 *Harmonic Progression by Fifths in Minor*

iv → VII → III → VI → ii° → V → i
iv → vii° → i

Note that:

VII is built on ♭$\hat{7}$ (C minor: B♭ D F).*

vii° is built on ♯$\hat{7}$ (C minor: B D F).

The triad on ♯$\hat{6}$ is seldom seen (C minor: A C E♭).

iv appears twice, preceding VII as well as the dominant

Figure 10.4 consolidates all the information about common harmonic progressions and refers to both major and minor keys, except as noted. You should use this table for future reference.

FIGURE 10.4 *Table of Common Progressions*

I, i	(1) May progress to any other triad (2) May interrupt any progression, such as ii–I–V		
Major keys		*Minor keys*	
ii	ii–V, ii–vii$^{\circ}_{6}$	ii$^{\circ}_{6}$	ii$^{\circ}_{6}$–V
		ii	ii–V, ii–vii$^{\circ}_{6}$
iii	iii-ii$_{6}$, iii–IV, iii–V, iii–vi	III	III–ii$^{\circ}_{6}$, III–iv, III–VI
IV	IV–I, IV–ii, IV–V, IV–vii$_{6}$	iv	iv–i, iv–ii$^{\circ}_{6}$, iv–V, iv–VII
		IV	IV–V, IV–vii$^{\circ}_{6}$
V	V–I, V–vi	V	V–i, V–VI
		v	v–VI
vi	vi–ii, vi–IV, vi–V, vi–iii–IV	VI	VI–ii$^{\circ}_{6}$, VI–iv, VI–V, VI–III–iv
vii$^{\circ}_{6}$	vii$^{\circ}_{6}$–I	vii$^{\circ}_{6}$	vii$^{\circ}_{6}$–i
		VII	VII–III

*ii and IV in minor used with ascending ♯$\hat{6}$; v in minor used with a descending ♭$\hat{7}$.

*Discussed on page 350.

ASSIGNMENT 10.1 After sufficient study of Figure 10.4, place an X before those of the following progressions that appear in the table. Do not refer to the table until you are finished.

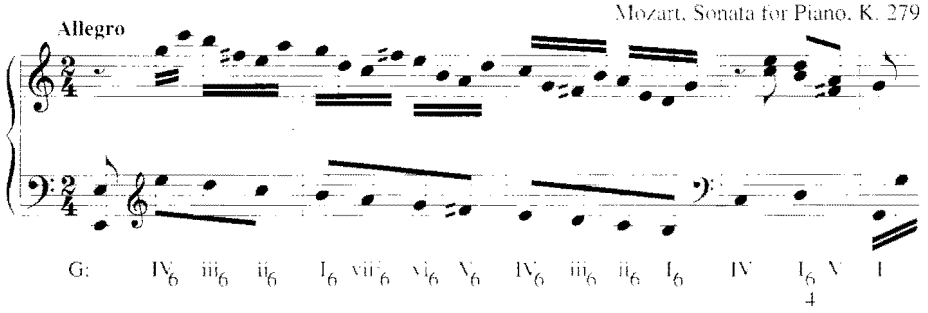
(1)	_____	ii–V	(6)	_____	iii–I–IV
(2)	_____	IV–vi	(7)	_____	vii°–V
(3)	_____	vi–iii–V	(8)	_____	iii–vii°
(4)	_____	V–vi	(9)	_____	vi–iii–IV
(5)	_____	I–iii	(10)	_____	VII–III (minor)

Other Common Types of Progressions

There are three additional categories of harmonic progression. In these, the progression standing alone is infrequently used, but in special situations it can be considered equally deserving of use as any common progression.

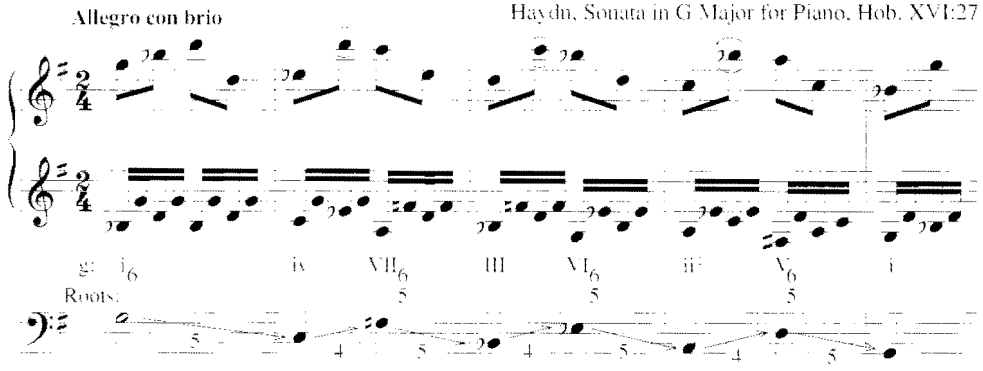
1. *First inversions in succession.* When a bass line moves by step and each note is the third of a chord, any resulting succession of chords is acceptable.

CD FIGURE 10.5



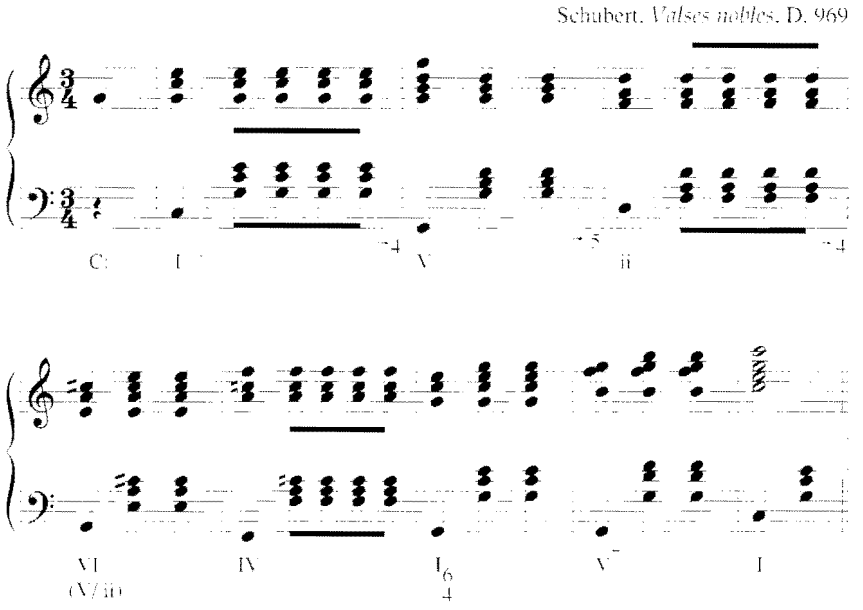
2. *Harmonic sequence.* A harmonic sequence is a series of chords, four or more, with a regularly recurring pattern of root movements, a series in which any resulting pair of triads is acceptable. In the most common harmonic sequence, the roots alternately descend a fifth and ascend a fourth, which, of course, is the same as the series in Figures 10.2 and 10.3. In Figure 10.6, which shows the complete series, first inversions and root positions alternate, but this does not affect root movement.

CD FIGURE 10.6 *Harmonic Sequence*



A harmonic sequence can display any other pattern of root movements. In Figure 10.7, roots descend a fourth and ascend a fifth, just the opposite of Figure 10.6. A major triad built on $\hat{6}$ is used here rather than the diatonic vi. The progressions V–ii and ii–VI are a result of the sequence, and otherwise they are not ordinarily encountered.

FIGURE 10.7

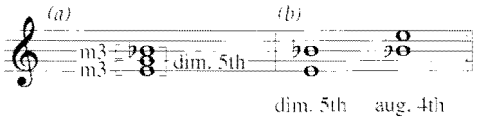


3. *Chromatic bass line.* When the bass line ascends or descends by a series of half steps, any resulting chord succession is usually satisfactory. Further discussion and illustration of this type of chord movement will be presented during the study of altered chords in *Advanced Harmony*.

The Diminished Triad

The diminished triad consists of two successive minor thirds. Together, these produce the interval of the diminished fifth (d5), which when inverted becomes an augmented fourth (A4).

FIGURE 10.8

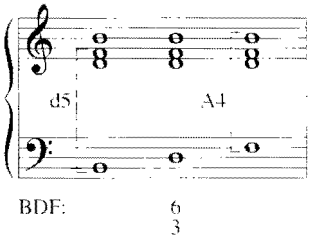


Because of the interval of the diminished fifth, the diminished triad is classified as one of the dissonant triads. Both the interval of the diminished fifth and its inversion, the augmented fourth, are known commonly as a tritone, referring to the fact that the interval is composed of three whole steps (six half steps). The interval under either name equally divides the octave.

FIGURE 10.9 *The Tritone*

Only in the first inversion is there no tritone above the bass note. For this reason, the diminished triad is used almost exclusively in the first inversion. (See the article "The Devil in Music," in this chapter.)

FIGURE 10.10 *Tritones in the Diminished Triad*



As a diatonic triad, the diminished triad is found on the leading tone (vii°) in both major and minor, and on the supertonic (ii°) in minor.

ASSIGNMENT 10.2 Spell these diminished triads by spelling two minor thirds.

(1) C _____ _____

(2) _____ B♭ _____

(3) F♯ _____ _____

(4) _____ _____ A

(5) E♯ _____ _____

(6) _____ _____ A♭

In Appendix E: Answers to the entire assignment are given.
In the Workbook: Answers to the entire assignment are given.

The Leading-Tone Triad

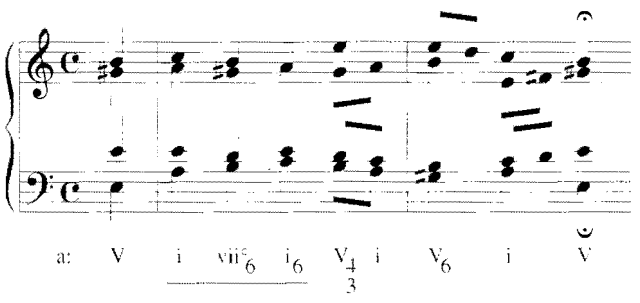
The leading-tone triad is diminished in both major and minor. For example, in either G major or G minor it is spelled F♯ A C. It functions as a dominant triad, since it almost invariably progresses to tonic.

The leading-tone triad, vii°, has two principal uses:

1. Between the tonic and its first inversion, or reverse.

CD FIGURE 10.11

Bach, "Schau, lieber Gott, wie meine Feind" (#3)

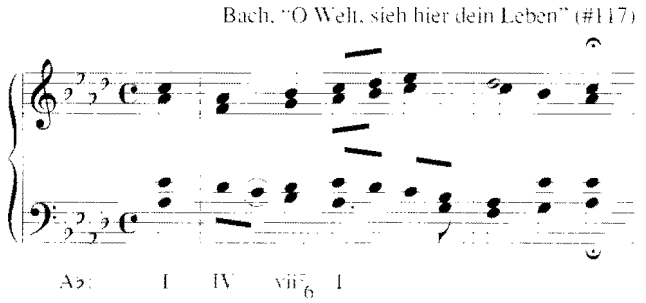


The aural effect is similar to the passing six-four. The use of I–vii$^{\circ}_{6}$–I$_{6}$ is much more frequent and can be considered the preferred choice.

2. Following the subdominant triad when the melody ascends. You may remember that in the progression from IV to V, contrary motion between the upper voices

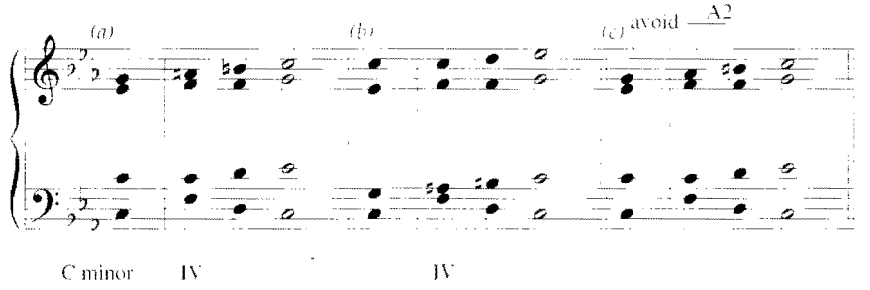
worked out best. But when the soprano ascends, parallel motion is almost inevitable, except for the infrequently used progression shown in Figure 6.14. Using IV–vii°_{6} instead of IV–V avoids any real or implied parallels and so is the usual choice in this circumstance.

CD FIGURE 10.12



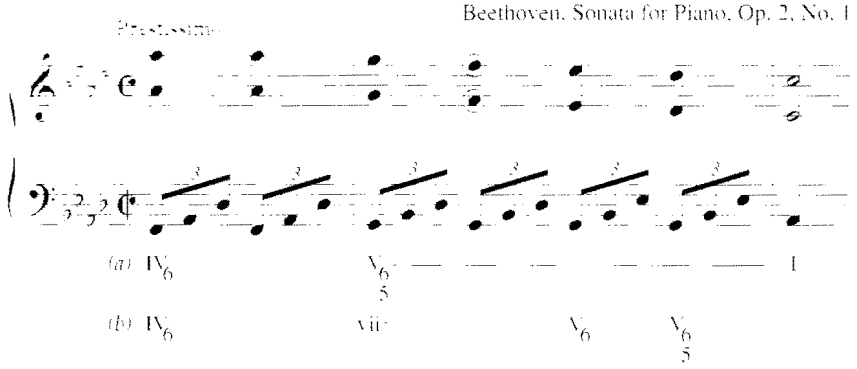
Should the progression be found in a minor key, the major IV triad is necessary to avoid the augumented second interval between ♭$\hat{6}$ and ♯$\hat{7}$.

FIGURE 10.13



In the Table of Common Progressions (Figure 10.4), the progression vii°–V was not included. In our next example, Figure 10.14, there appears to be a clear-cut example of this progression, with the root of vii° in the bass. When the two chords vii° and V^7 are adjacent, as here, there is a better explanation. The entire measure, as in analysis *a*, is V^7, with all notes sounding, but not simultaneously. This is simpler than trying to account for every note change with a different chord number, as in *b*. As a general rule, when successive notes can be grouped together to make a single chord, that analysis is usually preferable.

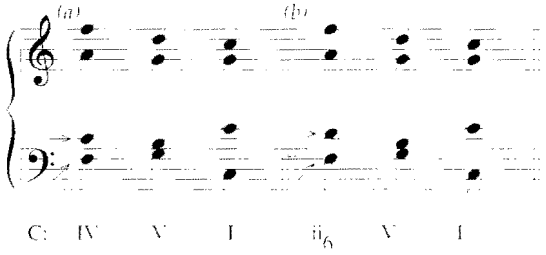
Beethoven, Sonata for Piano, Op. 2, No. 1



The Supertonic Triads

The supertonic triads (ii in major and ii° in minor) have much in common with the subdominant triad. Not only do ii and IV (ii° and iv) have two notes in common, but also, when ii and ii° are found in first inversion, which is most of the time, they have the same bass note as the root of IV. Figure 10.15*a* and *b* differ by only one note, the tenor note in the first triad.

FIGURE 10.15



In addition, both triads commonly resolve to V or I, and consequently both are considered to be subdominant in function.

Like V as opposed to V^7, ii and ii° are used far less frequently than ii^7 and $ii^{\circ 7}$, but the basic principles stated here set the stage for the presentation of the seventh chords in Chapter 13.

FIGURE 10.14

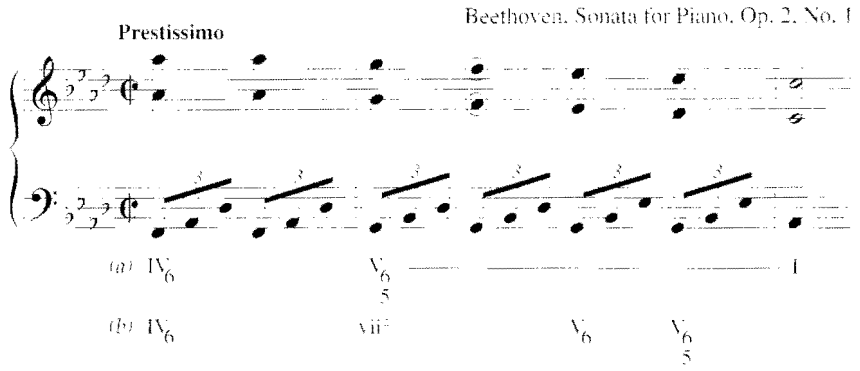


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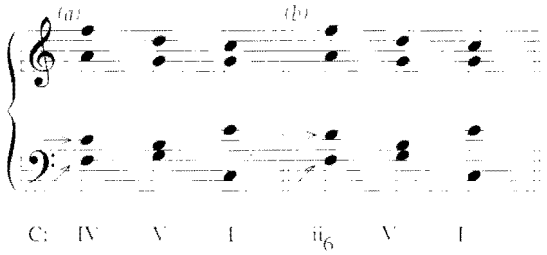
FIGURE 10.15



In addition, both triads commonly resolve to V or I, and consequently both are considered to be subdominant in function.

Like V as opposed to V^7, ii and ii° are used far less frequently than ii^7 and $ii^{\circ 7}$, but the basic principles stated here set the stage for the presentation of the seventh chords in Chapter 13.

ASSIGNMENT 10.3 *Spelling and identifying diminished triads built on the leading tone or the supertonic.* Each answer will be one of these: vii°, ii°, or a key name.

a. D♯	F♯	A	is _____ in _____ major and ii° in _____ minor.
b. _____	_____	_____	is _____ in A♭ major and ii° in _____ minor.
c. _____	_____	_____	is _____ in _____ major and ii° in G♯ minor.
d. C	E♭	G♭	is _____ in _____ major and _____ in _____ minor.
e. F♯	A	C	is ii° in _____ minor and _____ in _____ major.
f. _____	_____	_____	is _____ in _____ major and ii° in F♯ minor.
g. E♯	G♯	B	is ii° in _____ minor and _____ in _____ major.
h. _____	_____	_____	is ii° in b minor and _____ in _____ major.

In Appendix E: Answers to the entire assignment are given.
In the Workbook: Answers to the entire assignment are given.

Here are typical uses of the supertonic triad.

1. In first inversion. This is the most common use of the supertonic triad. It usually leads to V–I or to I. As a preparation for the dominant, it is used much more frequently than IV (iv).

CD FIGURE 10.16 $ii^{\flat}$–I^{6}_{4}

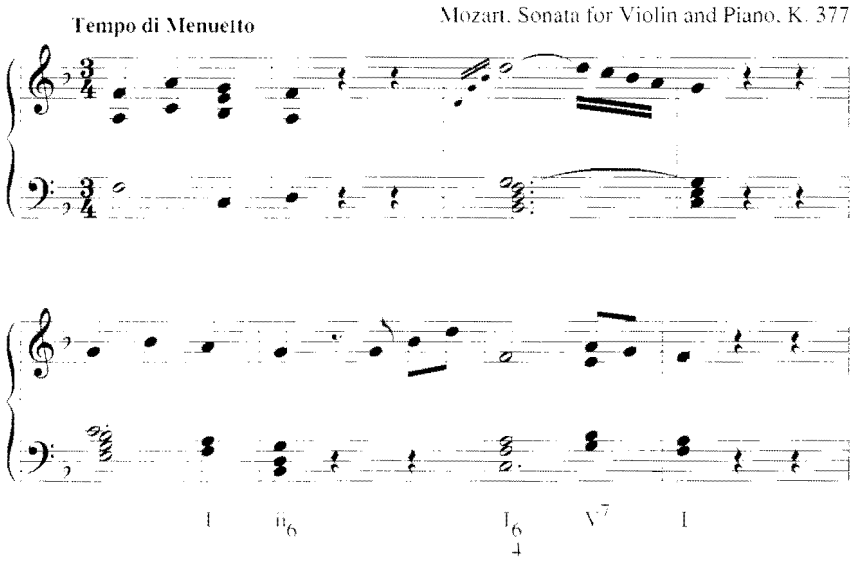
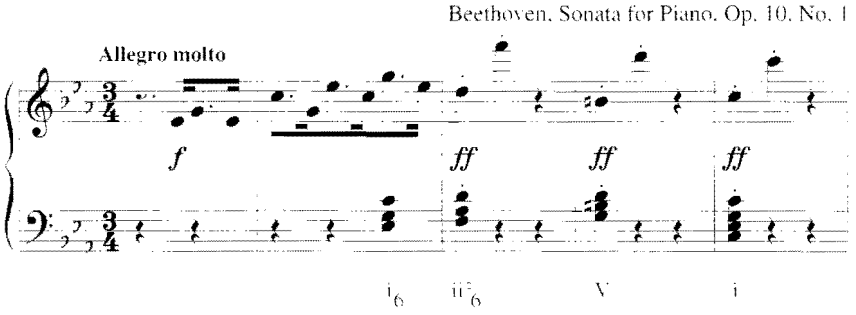
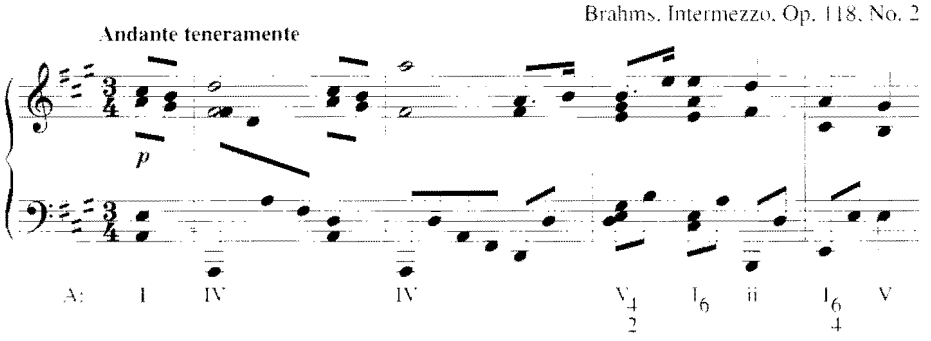


FIGURE 10.17 ii_6–V



2. With root in bass. The supertonic triad with its root in the bass is useful only in major keys, but still much less so than in first inversion. Root position in minor is rarely used (except in harmonic sequence; see example in Figure 10.6), since it is a diminished triad. Figures 10.18 and 10.19 show root position movement to I^6_4 and V, respectively. Observe in Figure 10.18 how easily Brahms could have used a IV triad simply by changing the bass note B to D.

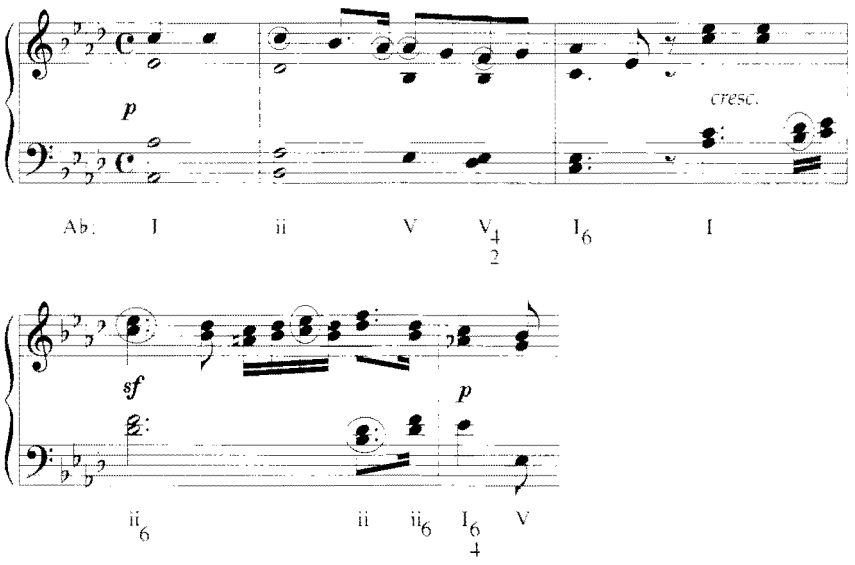
CD FIGURE 10.18 ii–I^6_4



CD FIGURE 10.19 *ii–V*

Beethoven. Sonata in C Minor. for Violin and Piano. Op. 30. No. 2

Adagio cantabile



3. The ii triad in a minor key. When a voice line ascends at the point where a supertonic triad is used, $\hat{6}$, the fifth of the triad, must be raised to ♯$\hat{6}$ to progress to ♯$\hat{7}$ without incurring an augmented second. In Figure 10.20*a*, the alto line is 5 ♯6 ♯7 8 (C♮ D♮ E♯ F♮) of the F♯ melodic minor scale. Note that three analyses are given.

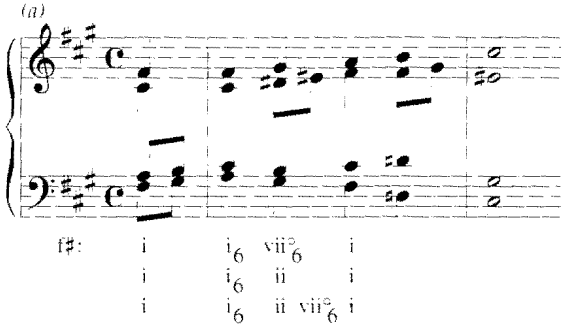
   In (1) is D♮ a passing tone in the vii° triad?
   In (2) is E♮ a passing tone in the ii triad?
   In (3) are there two triads, ii followed by vii°?

   When ambiguous passages such as this are encountered, analysis depends upon the tempo of the composition and upon the aural effect on the listener.

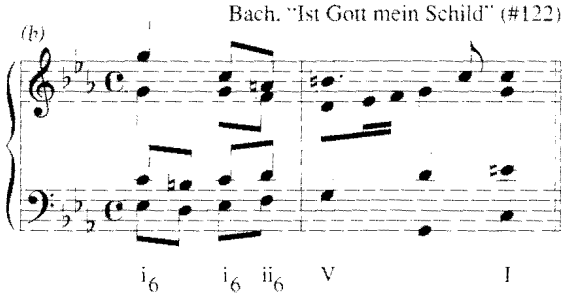
   In *b*, the use of ii (C minor: D F A) is clearer, even though it appears on the second half of the beat. Its appearance and sound indicate an independent sonority.

FIGURE 10.20

Bach, "Wo soll ich fliehen hin" (#25)



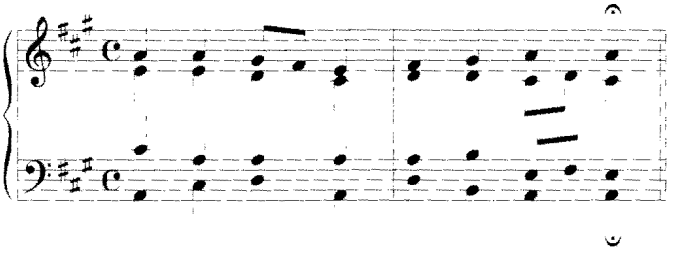
Bach, "Ist Gott mein Schild" (#122)



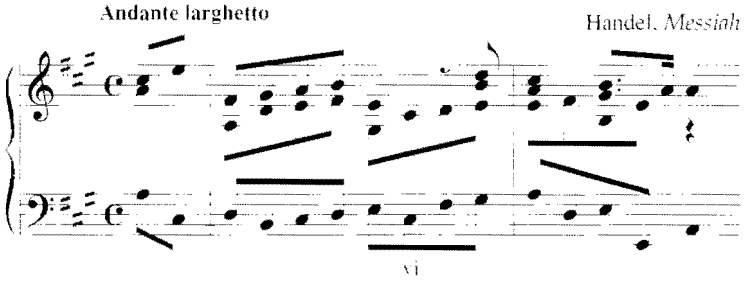
ASSIGNMENT 10.4 *Harmonic analysis.* These examples include leading-tone triads and supertonic triads. Write chord numbers below the staff and circle all nonharmonic tones. Included with the examples of vii° are the ♯6̂–♯7̂ scale line and the "vii°–V" (Figure 10.14). Indicate the location of these.

CD (1)

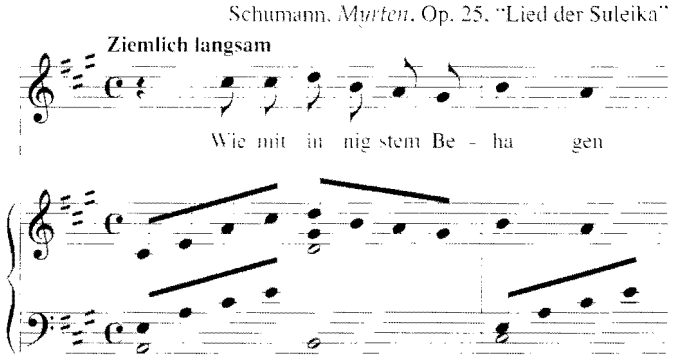
Anon., "Alle Menschen müssen sterben"



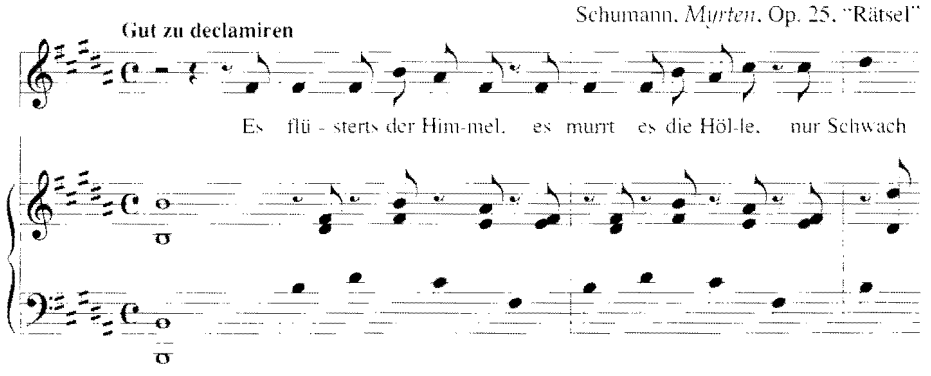
(2)


Andante larghetto
Handel, *Messiah*
vi

CD (3)

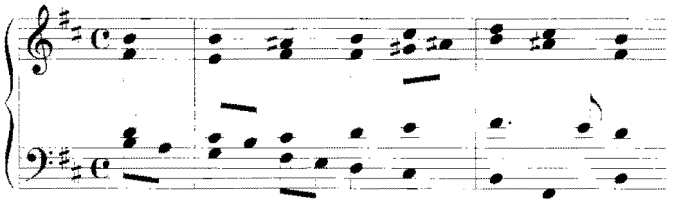

Schumann, *Myrten*, Op. 25, "Lied der Suleika"
Ziemlich langsam
Wie mit in nig stem Be - ha gen

(4)


Schumann, *Myrten*, Op. 25, "Rätsel"
Gut zu declamiren
Es flü - sterts der Him-mel, es murrt es die Höl-le, nur Schwach

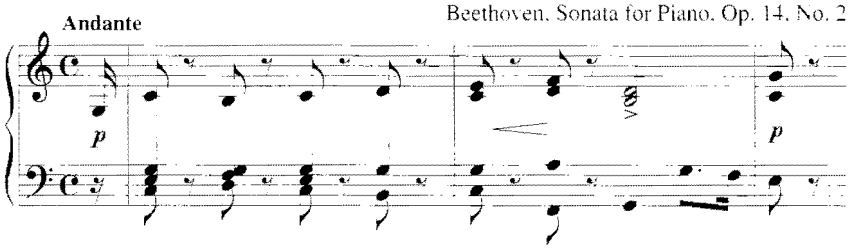
(5)

Bach, "Herr Jesu Christ, du höchstes Gut" (#294)



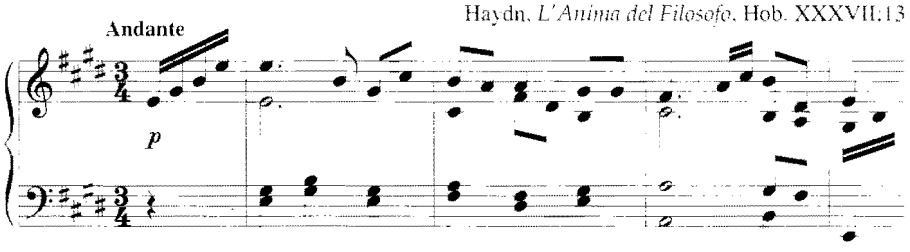
(6) Could Beethoven have used a IV triad instead of ii?

Beethoven, Sonata for Piano, Op. 14, No. 2



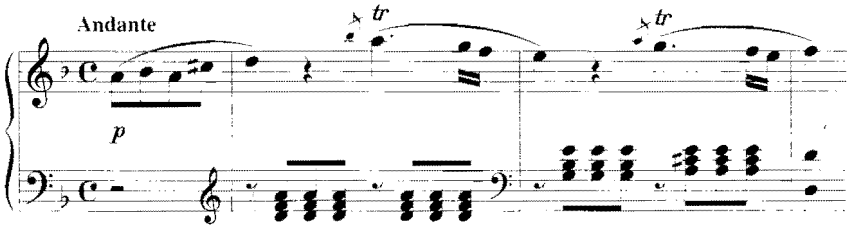
(7) The second triad of measure 2 appears diminished, but it could be a V^7. Can you explain why Haydn would omit the root?

Haydn, *L'Anima del Filosofo*, Hob. XXXVII:13



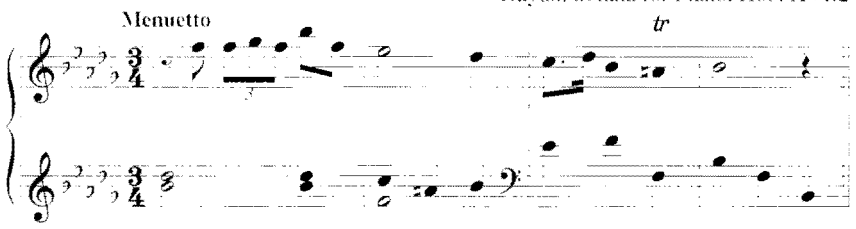
(8)

Mozart, Sonata in D Major for Piano, K. 284



(9) Only two notes of the supertonic are used. What is the complete spelling?

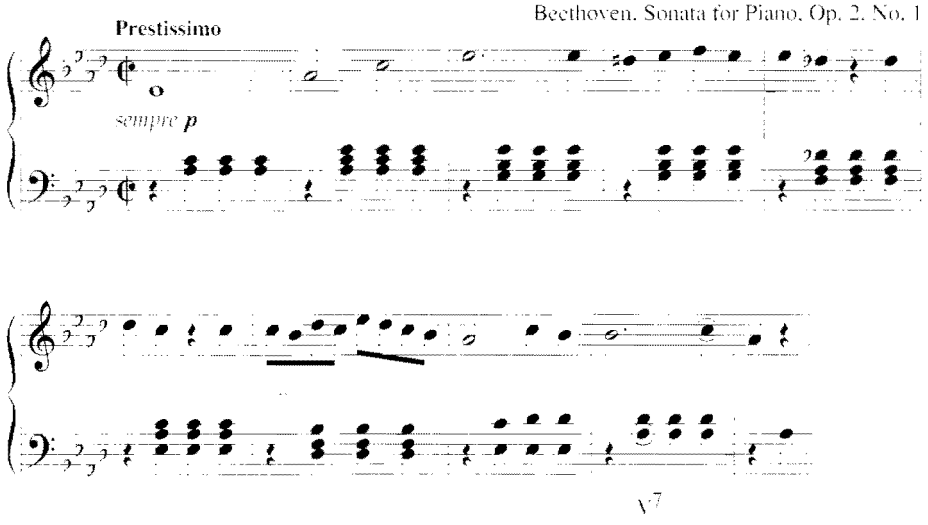
Haydn. Sonata for Piano. Hob. XVI:2



CD (10) The series of first inversions can easily be seen, but it is interrupted in measure 6. What chord interrupts the series, and what would its spelling have been had Beethoven continued the series through this measure?

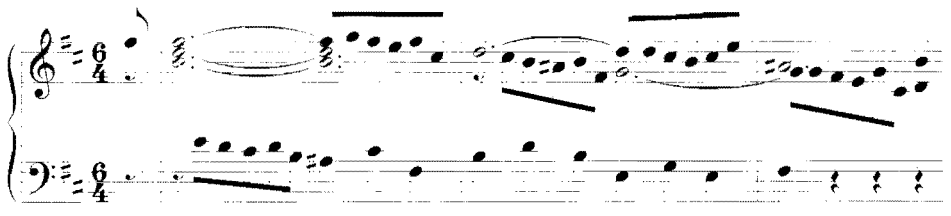
In the cadence, the notes B♭ and D♭ imply E♭ G B♭ D♭, an implied V^7. Sounding simultaneously with an A♭ implying tonic, the dominant seventh chord functions as an *appoggiatura chord* (see page 272).

Beethoven. Sonata for Piano. Op. 2. No. 1



CD (11)

Bach. *French Suite III*. Courante. BWV 814



Writing the Diminished Triad

Only the use of the first inversion of the diminished triad will be considered at this time. Root position is used in harmonic sequence (see the ii° in Figure 10.6). Use of second inversion is very rare.

The common voice distribution for any diminished triad in first inversion is two thirds, one root and one fifth (bass note doubled), except that when the triad is found with the fifth in the soprano, the fifth is usually doubled (two fifths, one root, one third).

FIGURE 10.21 *Root (or Third) in Soprano*

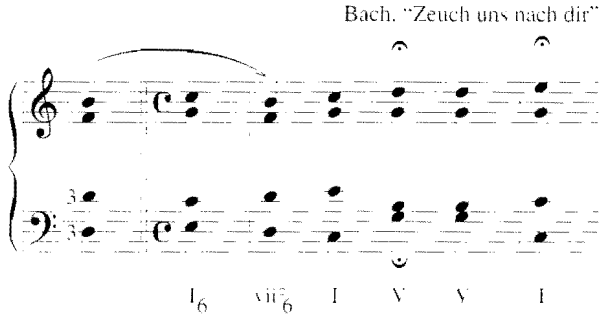
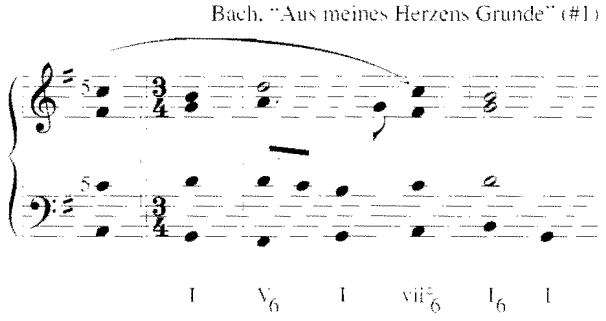
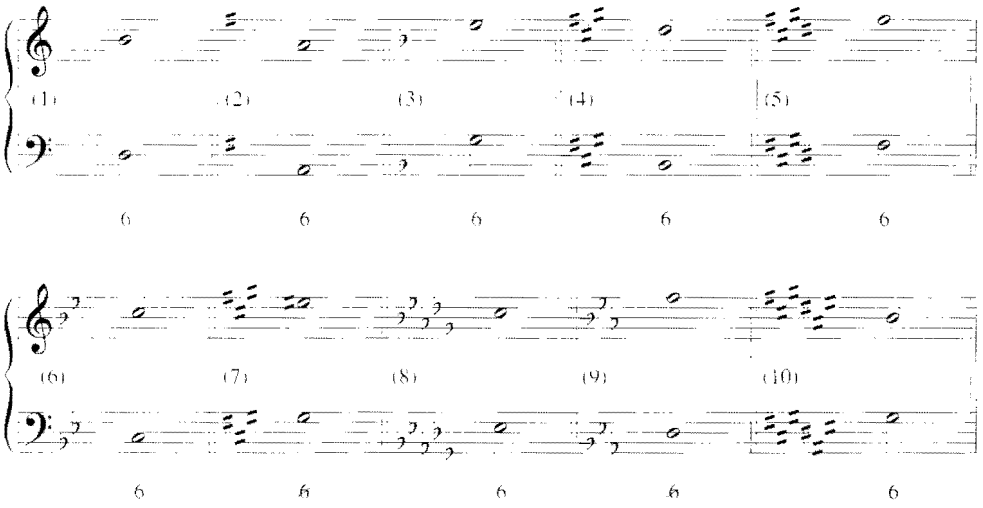


FIGURE 10.22 *Fifth in Soprano*



The fifth of ii° is infrequently used in the soprano. The doubled soprano is the lowered sixth scale degree: resolving both down by step results in octaves, and resolving one upward to the leading tone results in an augmented second. Any other doubling usually is aurally ineffective.

ASSIGNMENT 10.5 *Writing diminished triads.* Double the third when the root or the third is in soprano; double the fifth an octave lower when the fifth is in the soprano.

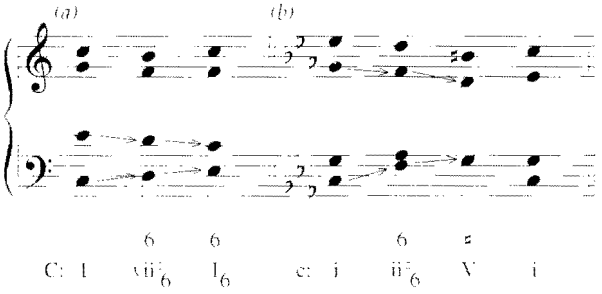


In Appendix E: Answers to (1)–(5) are given.
In the Workbook: Answers to the entire assignment are given.

Writing to and from the Diminished Triad

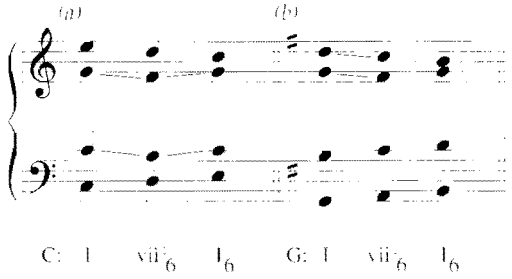
1. Doubled notes. Since the diminished triad is usually found in first inversion, the main part-writing consideration is the same as that for other triads in inversion: *Approach and resolve the doubled note whenever possible by contrary or oblique motion.*

FIGURE 10.23



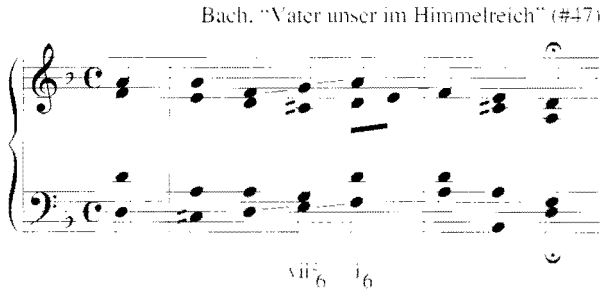
2. Unequal fifths. This term describes a diminished fifth preceded or followed by a perfect fifth in the same pair of voices. The visual effect is that of parallel fifths, but since they are unequal in size they are acceptable, except between the two outer voices.

FIGURE 10.24 *Unequal Fifths*



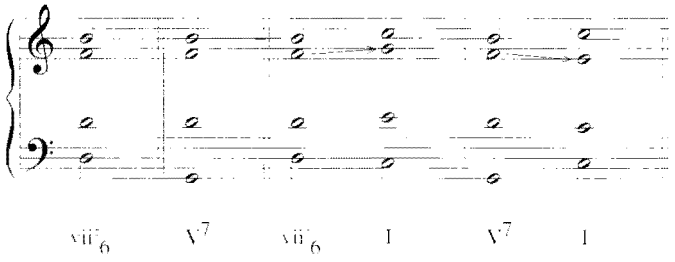
3. vii°6 with the fifth in the soprano. As a soprano tone, the fifth of the vii° triad (or any diminished triad) usually descends, as does the soprano line of Figure 10.22. But the fifth in the soprano may ascend when found in a melody line moving in similar motion with the bass at the interval of a tenth, as in Figure 10.25.

CD FIGURE 10.25



With this knowledge of the usual part-writing procedures for diminished triads, we can now explain why vii° should not be considered an incomplete V^7, even though it sounds and functions like a V^7. The difference is this: In progressing to the tonic, the seventh of the V^7 usually resolves down, whereas in the vii° triad, the fifth (the same note as the seventh of V^7) usually resolves up, allowing the doubled note to resolve by contrary motion (Figure 10.26).

FIGURE 10.26 *vii° and V^7*

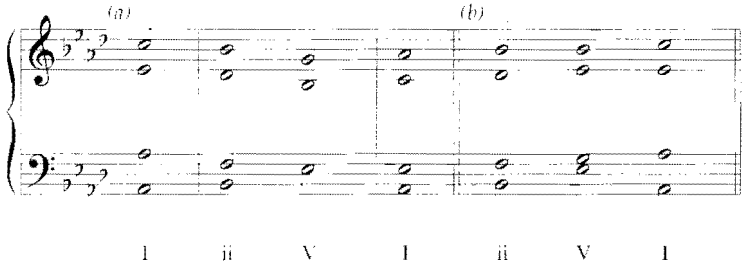


Writing the Supertonic Triad

In the commonly used ii and ii°, the third is usually doubled. This note is the subdominant scale step. Since this triad usually precedes dominant harmony and in first inversion uses the same bass tone as IV (in root position), the supertonic harmony is classified as having a subdominant function.

Progression to and from ii in root position (major only) uses conventional procedures already studied. Figure 10.27*a* is the basic part-writing of the Beethoven example, Figure 10.19.

FIGURE 10.27 *Part-Writing the ii Triad*

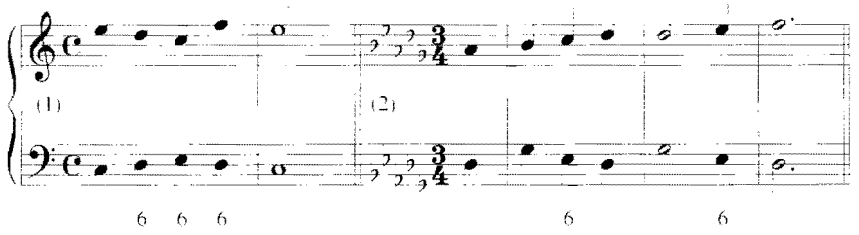


(a) I–ii and ii–V: Contrary motion between upper voices and bass.[6]

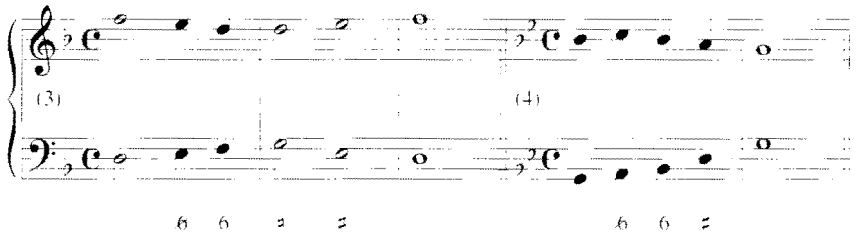
(b) ii–V: Hold common tone; other voices move stepwise.

ASSIGNMENT 10.6 *Part-writing leading-tone and supertonic triads.* These short examples illustrate most of the common uses of these triads. Add inner voices and harmonic analysis.

(a) Leading-tone triads

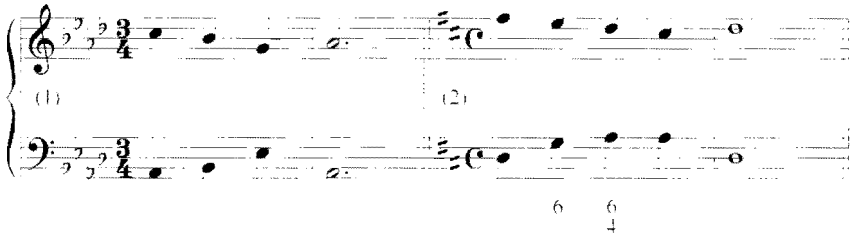


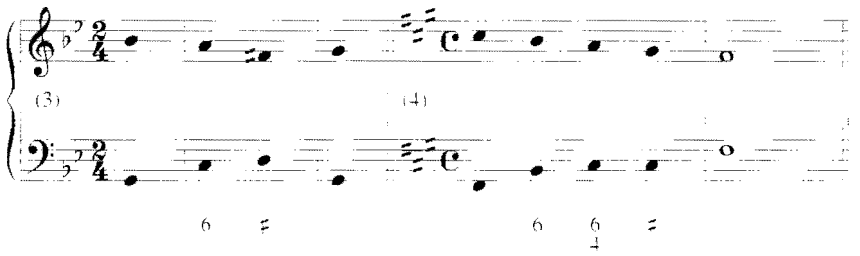
[6] I–ii (soprano and bass ascending) and IV–ii will be discussed in Chapter 14.



In Appendix E: Answers to (1) and (3) are given.
In the Workbook: Answers to Assignment 10.5a are given.

(b) Supertonic triads

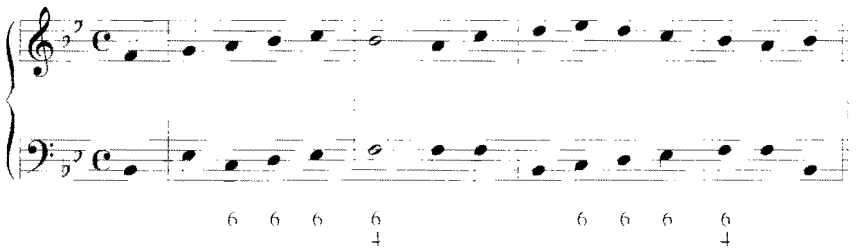




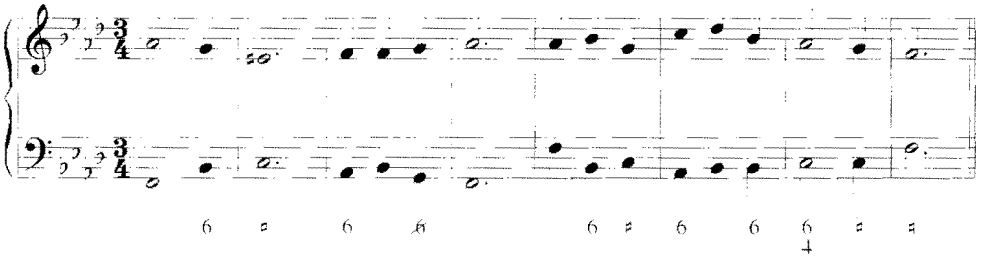
In Appendix E: Answers to (2) and (3) are given.
In the Workbook: Do Assignment 10.6b, c. Answers are given.

ASSIGNMENT 10.7 *Part-writing leading-tone and supertonic triads.*

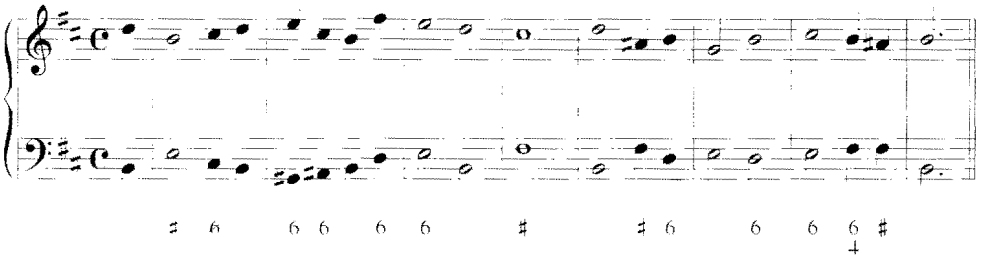
(1)



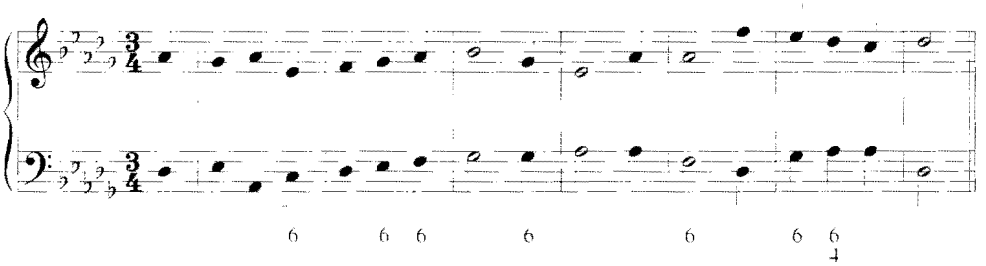
(2)



(3)



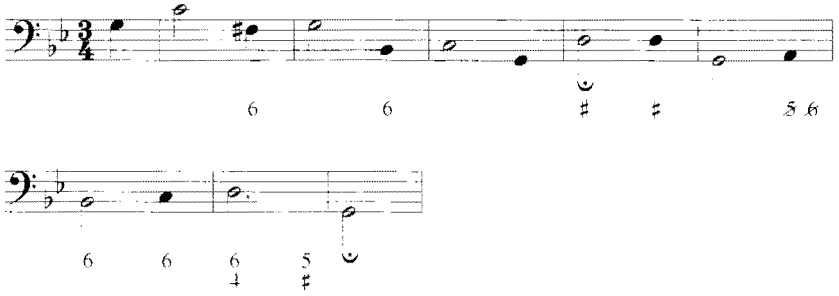
(4) See Figure 10.25 for help.



ASSIGNMENT 10.8 Add soprano, alto, and tenor voices when bass line only is given. Make a harmonic analysis.

(1)

(2) See Figure 10.20 for help with $\frac{5}{3}$ $\frac{6}{3}$.



ASSIGNMENT 10.9 Write the following harmonic progressions in four parts. Choose a time signature and write a progression that is rhythmically interesting.

1. E♭ major — I ii_6 I_6 vii°_6 I IV V I
2. F minor — V i i_6 vii°_6 i ii°_6 V i
3. B major — V I_6 V_6 I I ii_6 V I
4. A♭ major — I IV vii°_6 I ii_6 I^6_4 V I

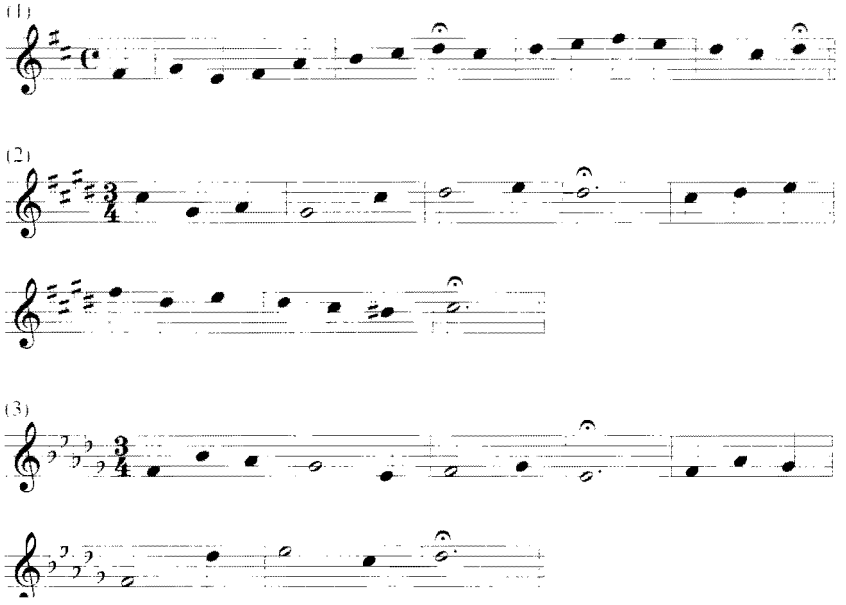
In the following progressions, no inversions are indicated. Choose inversions that will make a good bass line.

5. A major — I I IV vii° I vii° I ii I V I
6. B minor — i iv V i vii° i i V V i ii° i V I
7. D♭ major — V V I IV vii° I ii vii° I ii I V I

Melody Harmonization

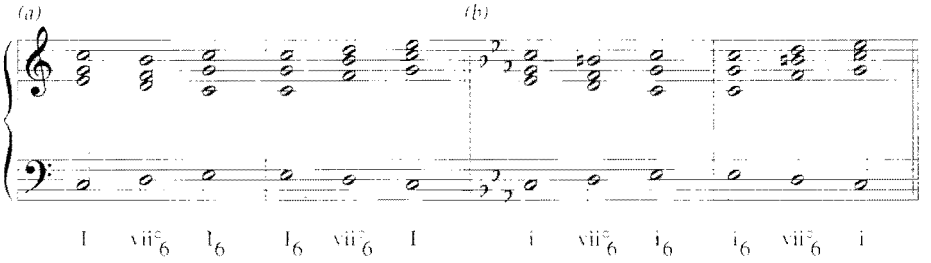
ASSIGNMENT 10.10 Harmonize these melodies, using supertonic and leading-tone triads where appropriate. Use either a two-stave score (piano score) or an open score with C clefs, as assigned. Look for places to use the progressions we have studied.

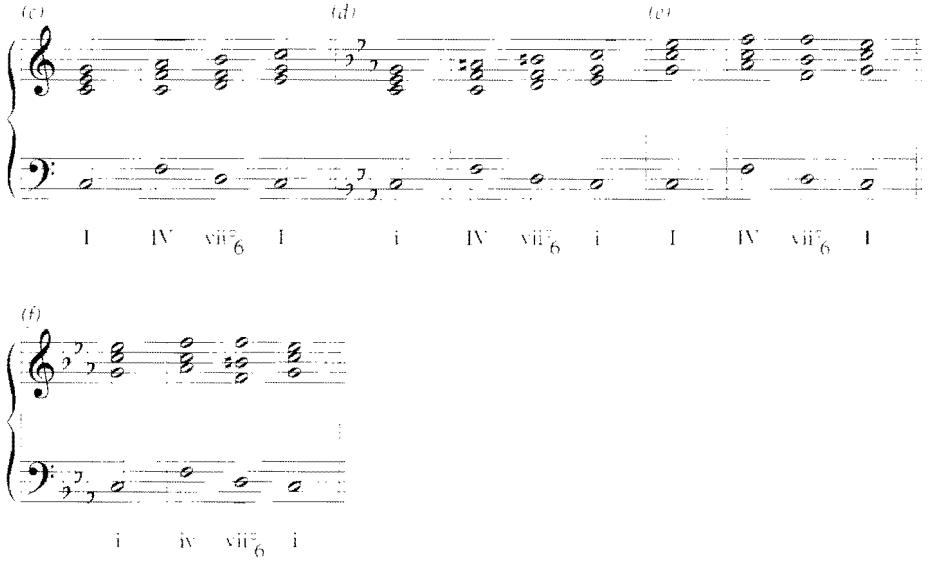
1. $\hat{2}$ and $\hat{4}$ can be harmonized with the supertonic triad, usually in first inversion, when the next chord is V or tonic six-four.
2. When a triad is repeated, one of them might be a good place for a first inversion.
3. Try V–I_6 or V_6–I rather than V–I at places other than the cadence.
4. After IV, use vii°_6 when the melody ascends.
5. Use vii°_6 between two positions of the tonic triad.
6. Use I^6_4 at the cadence when possible.



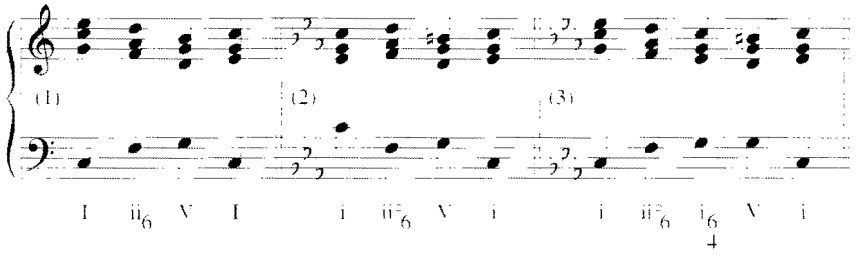
Keyboard Harmony

ASSIGNMENT 10.11 Play these progressions in any major or minor key.

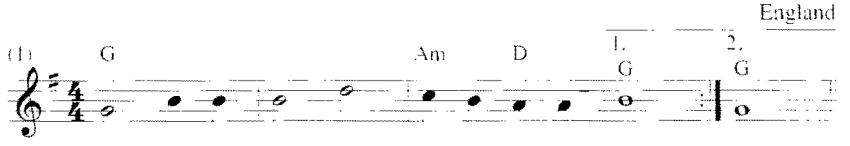


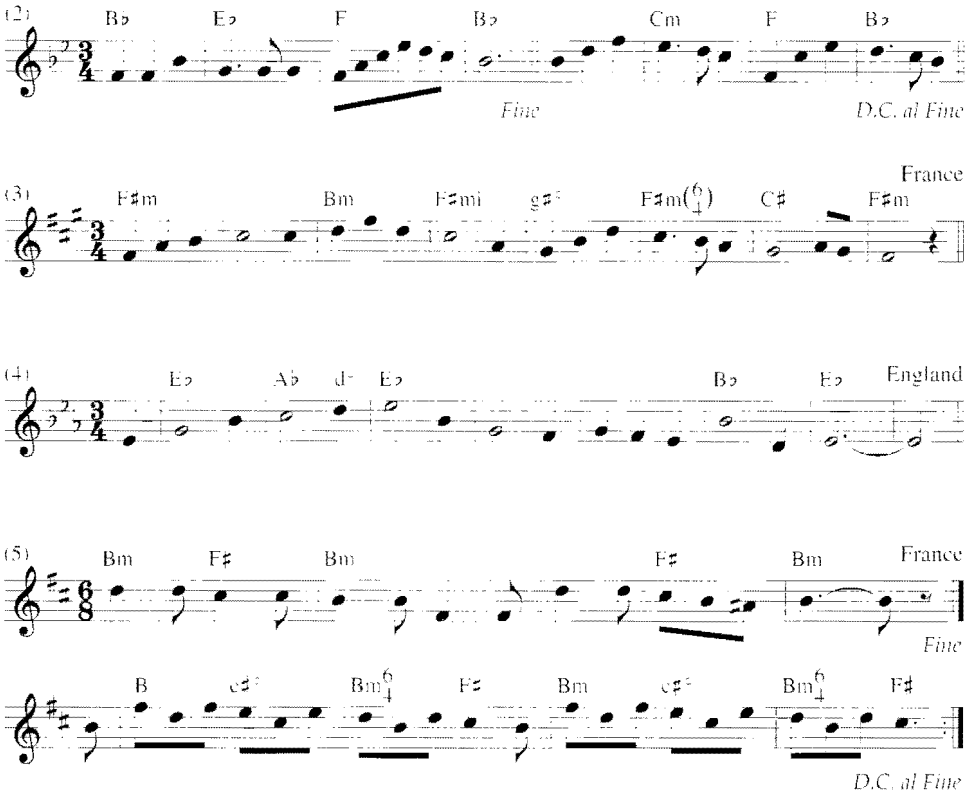


ASSIGNMENT 10.12 Play these progressions in any key. Play (3) in major as well, using ii_6 instead of ii°_6.



ASSIGNMENT 10.13 *Harmonizing a lead sheet melody.* The suggestions in Assignment 10.10 will be just as useful here. Triads marked with a °, such as g°, are diminished triads. Be sure to play these in first inversion. The symbol $\frac{6}{4}$ indicates a place to use the tonic six-four.





Summary

Harmonic progression refers to the order in which chords follow one another. Considering the progressions possible, their use ranges from very frequent to rare. Progressions with their roots descending a fifth are the most common, and a few by other intervals are also common.

A progression not common by itself may be freely used in a series of first inversions or in a harmonic sequence.

The supertonic triads, ii and ii°, usually resolve to the dominant and, therefore, like IV are considered chords of subdominant function.

The leading-tone triad, vii° in major and minor, "leads" to the tonic and therefore functions as a dominant. Because of its similarity to V^7, it is considered by some to be V^7 with its root missing.

vii° is particularly useful between I and I_6, or reverse, and after IV when the melody ascends.

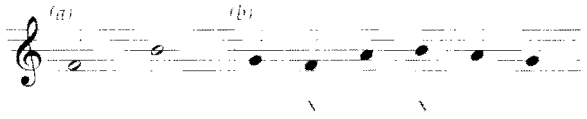
In part-writing, the third is commonly doubled in the ii, ii°, and vii° triads, except that the fifth of vii° in the soprano is usually doubled. The fifth as the soprano note of ii° is uncommon.

Part-writing these chords in a harmonic succession requires no procedures not previously studied.

ARTICLE #10

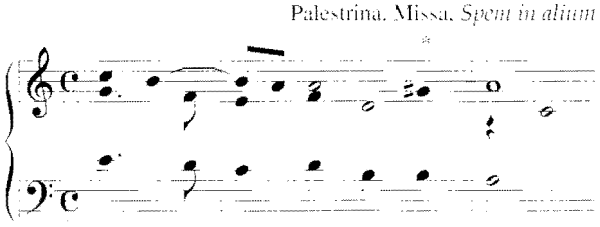
The Devil in Music

This uncomplimentary term (from the Latin *Diabolus in musica*) was applied in medieval times (ca. 1200) to the interval of the tritone. Composers and writers in music theory found it a difficult interval to understand or to use. Although it equally divides the octave (see Figure 10.9), in doing so it causes two different intervals to appear, each made up of the same number of scale steps (three whole steps). These intervals, the diminished fifth and the augmented fourth, lack the stability of the commonly used consonances: the octave, the fifth, and the thirds and sixths. As a consequence, their use in music was severely limited until the seventeenth century. Any melodic use was forbidden, either as a direct skip (*a*) or as the outward limit of a series of notes in one direction (*b*).

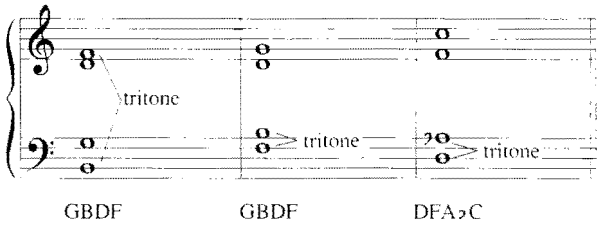


Harmonically, a tritone could appear between any two upper voices in music written for three or more voices. At that time, the consonance or dissonance of a vertical structure was determined by the consonance or dissonance of each upper note in relation to the lowest sounding note. At the asterisk in the following example, we find what looks like the first inversion of G♯ B D (diminished) triad. In pre-seventeenth-century terms, this sonority consists of a sixth above the bass (B up to G♯) and a third above the bass (B up to D). Both intervals are consonant, and therefore the vertical sonority is consonant. The resulting augmented fourth (D up to G♯) was not considered in this process.

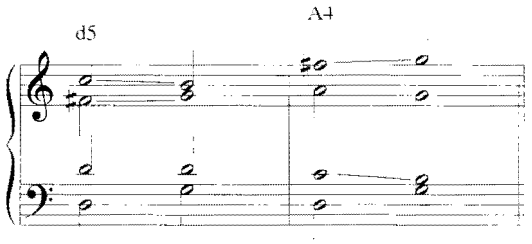
Palestrina, Missa, *Spem in alium*



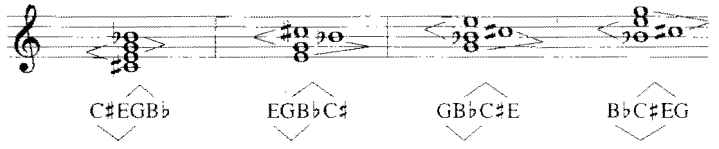
Restrictions against the tritone began to disappear in the seventeenth century, when the tritone emerged as a harmonic interval in its own right, even when found above the lowest sounding note.



The tritone is particularly important in the dominant seventh chord because the resolution of the tritone positively establishes a feeling of key.

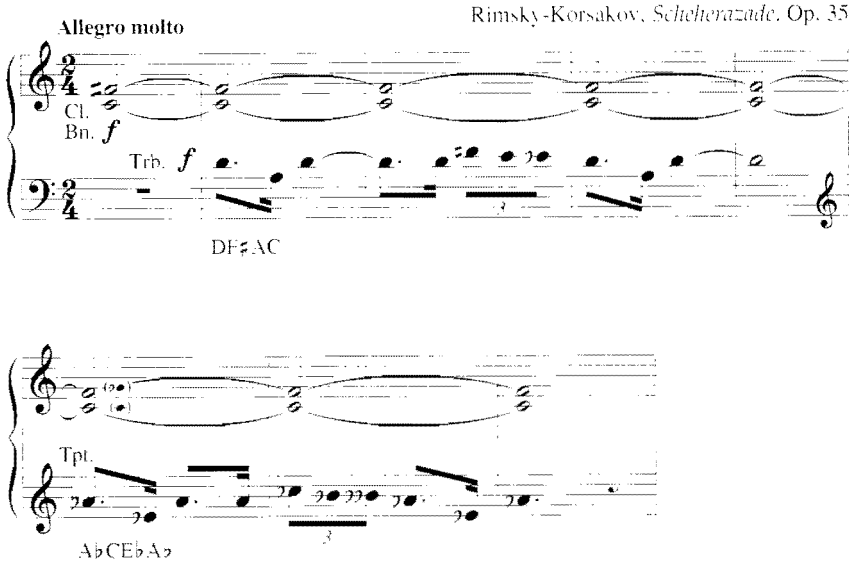


Made up of tritones, the diminished seventh chord became one of the most characteristic sounds of nineteenth-century music. When inverted, the chord continues to produce tritones, a property not exhibited by any other chord. The sound of these simultaneous tritones tends to destroy the feeling of tonality, especially when they are sounded at length or follow one another in succession.



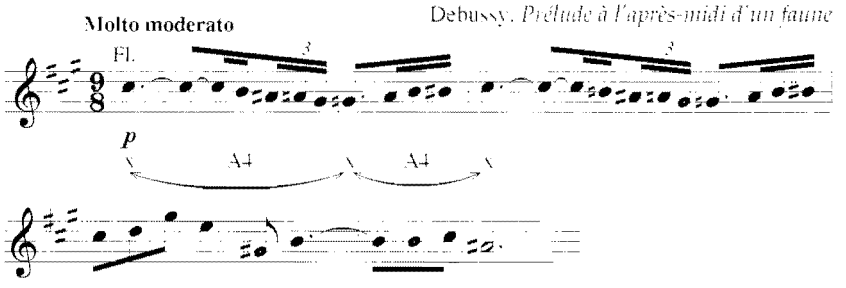
The ambiguity of the tritone in its diminished fifth–augmented fourth relationship (same sound, different spelling) was often capitalized upon by nineteenth-century composers. In the following example, the sustained tritone C–F♯ is first part of a D F♯ A C chord, then as an implied C–G♭, part of the A♭ C E♭ G♭ chord. (Since the tritone is tied throughout the passage, it is obvious that the composer, for performance reasons, has not changed the F♯ to G♭. The interval in parentheses shows the actual harmonic spelling.)

Rimsky-Korsakov, *Scheherazade*, Op. 35

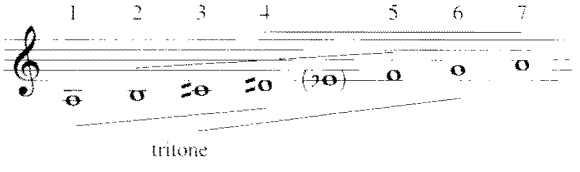


Twentieth-century music, in its quest for means to avoid the strong sense of tonic pervading music of previous eras, makes frequent use of the tritone. The opening of the following example shows the augmented fourth as the outer limits of the melody (C–G).

Debussy, *Prélude à l'après-midi d'un faune*



The ultimate application of the tritone is the whole-tone scale, new in the twentieth century. In this seven-note scale, all whole steps, the interval from any note to its fourth above is a tritone. In the first four measures of Bartók's whole-tone composition *Hagsorok egeszhangokbol*, there are four intervals of the tritone, plus two more when counting the first and last notes of the four-note scale lines.



Bartók, "Hagsorok egeszhangokbol"
("Whole-tone Scale"), from *Mikrokosmos*