second edition

advanced harmony

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ADVANCED HARMONY

Theory and Practice

Second Edition

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Preface

Elementary Harmony: Theory and Practice and its companion volume, *Advanced Harmony: Theory and Practice,* are designed to meet the needs of college courses in basic music theory, including instruction in the four related areas: written harmony, keyboard harmony, ear training, and sight singing. The subject matter of each chapter and its application to each of these four areas are so presented that they can be taught successfully either in the correlated class (all four areas in one class) or in several classes, each devoted to one or more of these areas.

The texts are based on the techniques of composers of the seventeenth to nineteenth centuries. They include a comprehensive survey of the harmonic materials used in these historical periods, from the simple triad through seventh chords, altered chords, ninth, eleventh, and thirteenth chords, and simple and complex methods of modulation. The historical limitation in no way implies that teaching of music theory must be limited to this period. But for the undergraduate student, knowledge of the practices of the seventeenth and nineteenth centuries should serve as a point of departure for his study of both pre-seventeenth-century music and twentieth-century music.

In addition to the theoretical presentation, a comprehensive practical application of these harmonic materials is presented. Concurrent studies in melodic and rhythmic analysis and composition, in harmonic analysis, in instrumentation, and in analysis of form (small forms only) implement this application. With these materials, the student is not only asked to solve traditional figured bass exercises, but is led ultimately to accomplishments in arranging given melodies and in creating original music, in both vocal and instrumental styles. *Advanced Harmony* presents a comprehensive study of instrumental styles of writing, based on the principles of four-voice writing learned in the previous volume. This study is applied to the realization of Baroque figured basses for solo instrument or voice with keyboard accompaniment, to the harmonization of melodic lines in instrumental style, to setting texts for vocal solo and accompaniment, and to the composition of music for solo piano or solo orchestral instrument with keyboard accompaniment.

Continuing the policy begun in *Elementary Harmony* of placing these theoretical studies in historical context, Chapter 14 of *Advanced Harmony* offers a preview of the principal compositional techniques of the twentieth century,

and the relationship of these to techniques of the eighteenth and nineteenth centuries as covered in previous chapters.

There are several other features that will be of particular interest:

Part-Writing. The principles of part-writing are codified, making possible easy reference to any part-writing procedure. (See Appendix 1.)

Musical Examples. Hundreds of examples covering a wide range of composers, nationalities, and periods are presented. Examples early in the course are principally in four-part vocal structure. As the text advances, more of the examples are in instrumental style.

Terminology. Unfortunately, there is no standard terminology in music theory. Students often complete a theory course or even attain a degree in music but are unable to understand many articles in the literature of music theory or musicology. This text lists and describes at appropriate places the more important of these varying terminologies.

The method of identification of chords by roman numeral symbols is explained in Chapter 2 of *Elementary Harmony* and at appropriate places in later chapters. Teaching procedures and materials, especially in keyboard harmony and ear training, require chord symbols which, when stated alone and without reference to staff notation, will spell the given chord (diatonic or altered) when the key is known. Chosen for this purpose are the "quality" symbols, where the quality of the sound is reflected in the symbol (I = major, i = minor, etc.), combined with the "functional" symbols for certain altered harmonies (V of V, etc.).

Self-Help in Ear Training. Most chapters contain projects in self-help in ear training, enabling the student to work on this vital aspect of his theoretical training outside of class.

Assignments and Exercises. Material for student participation is divided into "Assignments"—that which can be committed to paper—and "Exercises" —that which can be demonstrated only by speaking or singing or at the keyboard.

Supplementary Materials. Assignments in sight singing and in melodic analysis and melody harmonization are made from the author's *Music for Sight Singing.* Many references besides those illustrated are made to the collection of 371 Chorales by Johann Sebastian Bach; also, a number of assignments in harmonic and melodic analysis are made from this collection.

In appropriate places throughout both volumes, assignments in harmonic analysis are made from these five additional collections of music: Beethoven, Sonatas for Piano (numbers 1–12 only); Chopin, Mazurkas; Mendelssohn, *Songs Without Words;* Mozart, Sonatas for Piano; and Schumann, *Album for the Young,* Op. 68. Many students will already own some or all of these.

All the procedures and materials in these texts have been tested for many years through use in the music theory courses at North Texas State University. The author acknowledges his indebtedness to the many hundreds of

undergraduate and graduate students whose participation in the presentation and study of these materials has made the final form of the text possible. Particular thanks are due the members of the NTSU theory faculty, Frank Mainous, Alan Richardson, and William Gardner, for their cooperation in teaching these materials on an experimental basis and for their many able suggestions and constructive criticisms resulting from this classroom experience.

Robert W. Ottman

Contents

1

Modulation to Closely Related Keys

THEORY AND ANALYSIS[1]

A change of key occurs during the course of many musical compositions. The piece will begin in accordance with the key signature, progress to one or more different keys, often without change of key signature, and return to the original key before the closing measures. The study of modulation includes the relationship of keys used in a composition and the methods of progression from one key to another.

Relationship of Keys

In a modulation, a key may progress to any other key. The keys to which it may progress are divided into two groups:

1. *Closely related keys.* There are five keys closely related to any given key. These can be identified in several ways, three of which are as follows:

a) The closely related key has a signature the same as, or one accidental more or less than, the original key. The closely related keys to D major (two sharps) consist of all the keys with a signature of one sharp, two sharps, or three sharps—G major, E minor, B minor, A major, and F♯ minor.

[1]This chapter follows the elementary study of modulation as presented in Chapter 20 of the author's *Elementary Harmony: Theory and Practice,* 2nd ed. (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970). Included in Chapter 20 are (1) modulation from a major key to its dominant, (2) modulation from a minor key to its relative major, (3) the transient modulation, and (4) the supertonic major triad (II or VofV) in major and minor keys.

b) A closely related key is one whose tonic triad is found as a diatonic major or minor triad in the original key. In D major, the diatonic triads are ii, E minor; iii, F♯ minor; IV, G major; V, A major; and vi, B minor.

In a minor key, calculation of the diatonic triads is made on the basis of the natural (pure) minor scale. In D minor the closely related keys are III, F major; iv, G minor; v, A minor; VI, B♭ major; and VII, C major.

c) The tonic, dominant, and subdominant keys and their related keys produce the six closely related keys.

D major:	D	B
	G A	E F♯
	(major keys)	(minor keys)
D minor:	D	F
	G A	B♭ C
	(minor keys)	(major keys)

Modulation may be made from keys with seven accidentals to keys with eight accidentals, though no key signatures exist for the latter and such modulations are quite uncommon. For examples, see Bach, *Well-tempered Clavier,* Volume 2, Prelude No. 3, measures 1–6 for a modulation from C♯ major to G♯ major (eight sharps) and Beethoven, Sonata for Piano, Op. 13, second movement, measures 37–44, modulation from A♭ minor to E major, the enharmonic spelling of F♭ major (eight flats).

2. *Remote keys.* A key other than a closely related key is known as a remote key.

In musical practice, modulations to closely related keys are more common than remote modulations. The closely related modulations to the dominant key and to the relative major or minor are the most frequent.

Assignment 1.1. Write out, or name, the five closely related keys to each of the 15 major keys and 15 minor keys.

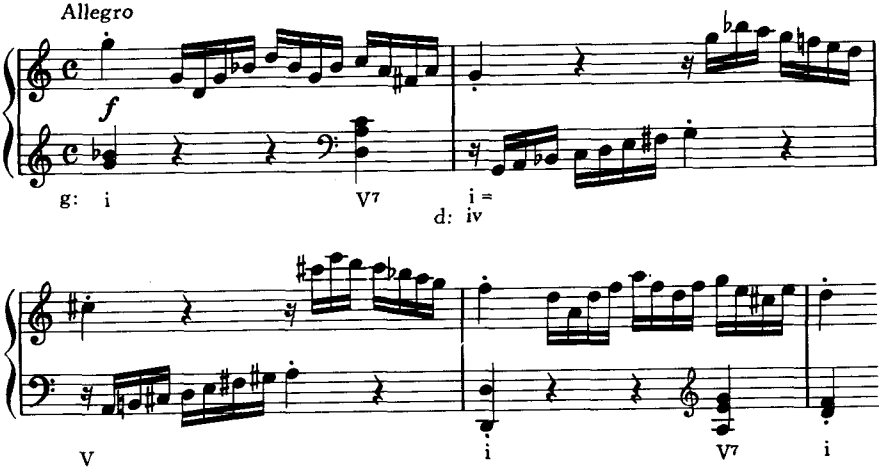
Methods of Progressing from One Key to Another

The following methods apply when modulating to closely related keys, as presented in this chapter, or to remote keys (Chapter 13).

a) *Common Chord* or *Pivot Chord Modulation.* This is the most frequently used method of accomplishing a modulation. The modulation pivots around a chord which functions in the old and new keys simultaneously. Measures 1–2 of Figure 1.1 clearly outline the progression i-V^7-i in G minor. If we play measures 2–4 only, the progression in these measures appears to be iv-V-i in D minor. The triad of measure 2 functions as i in G minor and as iv in D minor. It is the pivot chord, or the chord common to both keys.

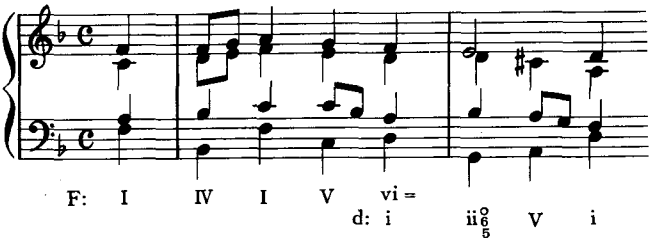
Fig. 1.1.[2]

Mozart, Sonata in C Major for Piano, K. 545



In this type of modulation, the pivot chord is so located that the harmonic progression leading up to it and the harmonic progression in the new key beginning with the pivot are both normal progressions[3] in their respective keys (in Figure 1.1: G minor, i-V^7-i; D minor, iv-V-i). Very often, as in Figure 1.1, the pivot is the chord immediately preceding the first V-I (or vii°-I) progression in the new key, though occasionally the pivot may be located two or even three chords ahead of this point. In Figure 1.2 the cadential progression ii°_{6}-V-i is so strong in D minor that the triad preceding this progression seems to be the logical location of the pivot.

Fig. 1.2. **Bach, *Herr Christ, der ein'ge Gotts Sohn* (#303)[4]**



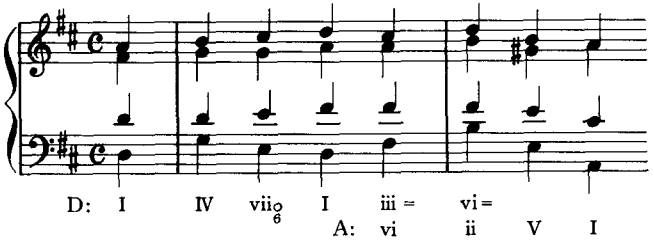
[2]In this and subsequent figures, a single capital letter refers to a major key (D = D major) and a small letter refers to a minor key (b = B minor).

[3]Review *Elementary Harmony,* Table 14.1 and accompanying discussion. This table is repeated as Table 3.1 in the present volume. The terms "normal progressions" or "regular progressions" as used in these texts refer to chord progressions from this table.

[4]The number in parentheses refers to the number of the chorale in the collected editions of J. S. Bach's chorales, such as *The 371 Chorales of Johann Sebastian Bach,* edited, with English texts, by Frank D. Mainous and Robert W. Ottman (New York: Holt, Rinehart and Winston, Inc., 1966).

On other occasions, two or more chords may bear equal analysis as the pivot.

Fig. 1.3.



In this example, no matter which pair of chords is chosen as a pivot, the resulting progressions leading up to and away from the pivot are normal.[5] In analysis, usually only one pivot is indicated.

Each of the diatonic major and minor triads in a given key can be used as a pivot in modulating to closely related keys. Only infrequently, however, is the major dominant triad or the leading tone triad found as pivot. The dominant function is usually so strong in one key that it cannot easily assume a function in another key. The only frequent exception is in the modulation to the subdominant where the pivot I = V is usually immediately followed by V^7 in the new key.

Table 1.1 shows how each of the available diatonic triads in a key may function as a pivot to other closely related keys; this is illustrated in the keys of C major and C minor. Table 1.2 shows the pivot chords available for a modulation from a given key to each of its closely related keys, again illustrated in C major and C minor.

Assignment 1.2. Name the available closely related keys to any chosen major or minor key when each diatonic triad of the original key is used as a pivot. Using Table 1.1. as a guide, spell each diatonic triad in the chosen key; for each triad indicate each possible use as a pivot chord and name the key to which each pivot progresses. For example, choose F♯ major and follow the list in Table 1.1.: I = VII in G♯ minor, I = VI in A♯ minor, I = IV in C♯ major, I = III in D♯ minor, ii = i in G♯ minor, ii = vi in B major, and so on.

[5]For an example from music literature, review *Elementary Harmony,* Figure 20.3 and accompanying discussion.

TABLE 1.1.

THE DIATONIC TRIAD AS PIVOT CHORD, ILLUSTRATED IN C MAJOR AND C MINOR

To Modulate from a Major Key		*To Modulate from a Minor Key*	
I (CEG)	= VII in D minor* = VI in E minor (VI-iv*; VI-ii$^{\circ}_{6}$) = V in F major = IV in G major = III in A minor*	i (CE♭G)	= vi in E♭ major (vi-IV*; vi-ii$_{6}$) = v in F minor** = iv in G minor = iii in A♭ major (iii-vi*; iii-IV) = ii in B♭ major
ii (DFA)	= i in D minor = vi in F major = iv in A minor		
iii (EGB)	= ii in D minor** = i in E minor = vi in G major = v in A minor* **	III (E♭GB♭)	= I in E♭ major = VII in F minor* = VI in G minor (VI-iv*; VI-ii$^{\circ}_{6}$) = IV in B♭ major
IV (FAC)	= III in D minor = I in F major = VI in A minor (VI-iv*; VI-ii$^{\circ}_{6}$)	iv (FA♭C)	= ii in E♭ major = i in F minor = vi in A♭ major
		v (GB♭D)	= iii in E♭ major* = ii in F minor** = i in G minor = vi in B♭ major
vi (ACE)	= v in D minor** = iv in E minor = iii in F major (iii-vi*; iii-IV) = ii in G major = i in A minor	VI (A♭CE♭)	= IV in E♭ major = III in F minor (III-iv*; III-VI)
		VII (B♭DF)	= IV in F minor** = III in G minor*

*These analyses are seldom used; the chord following this pivot (when using regular progressions) can also act as the pivot chord, as explained in Figure 1.3 and accompanying discussion. When a triad has two regular resolutions, one of which falls into this category, the two possibilities are indicated in parentheses.

**ii, IV, and v: (1) ii and IV in the new minor key contain the raised sixth scale step, which must be resolved upwards by step; (2) v in the minor key progresses best to VI, allowing the lowered seventh scale degree to resolve downwards.

TABLE 1.2.

AVAILABLE PIVOT CHORDS IN MODULATING TO A CLOSELY RELATED KEY

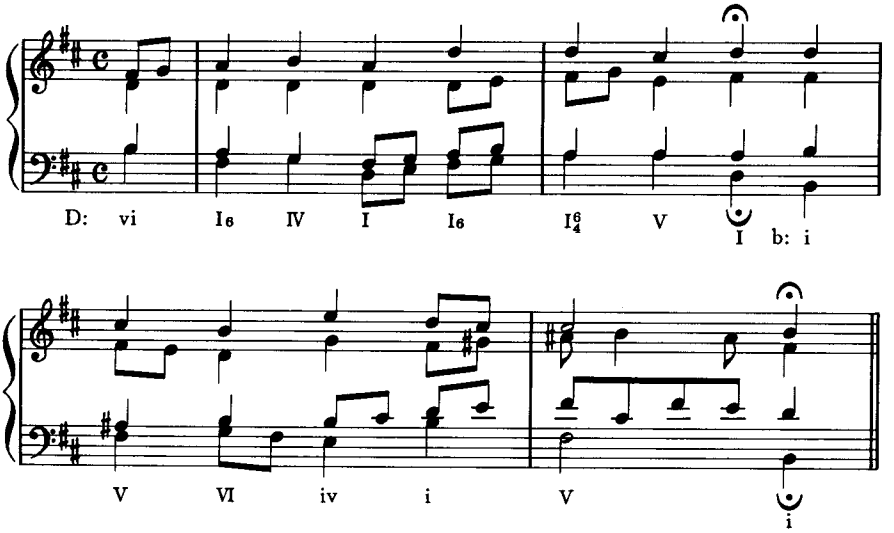
Modulation from a Major Key to its		*Modulation from a Minor Key to its*	
Supertonic key (C major–D minor)	I = VII* ii = i iii = ii** IV = III vi = v**		
Mediant key (C major–E minor)	I = VI* iii = i vi = iv	Mediant key (C minor–E♭ major)	i = vi* III = I iv = ii v = iii* VI = IV
Subdominant key (C major–F major)	I = V ii = vi IV = I vi = iii*	Subdominant key (C minor–F minor)	i = v** III = VII* iv = i v = ii** VI = III* VII = IV**
Dominant key (C major–G major)	I = IV iii = vi* vi = ii	Dominant key (C minor–G minor)	i = iv III = VI* v = i VII = III*
Submediant key (C major–A minor)	I = III* ii = iv iii = v* ** IV = VI* vi = i	Submediant key (C minor–A♭ major)	i = iii* iv = vi
		Subtonic key (C minor–B♭ major)	i = ii III = IV v = vi

* **See footnotes to Table 1.1.

b) Direct Modulation. A direct modulation is one which is accomplished without benefit of a pivot chord. There are two varieties:

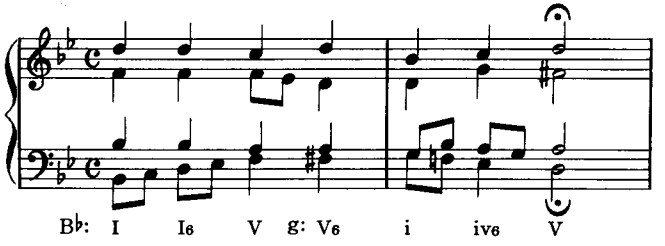
(1) Where the first chord of a phrase unmistakably functions in a key different from that of the cadence of the previous phrase. In Figure 1.4, phrase one begins and ends in D major; phrase two begins in B minor and remains in that key.

Fig. 1.4. **Bach, *Was mein Gott will* (#120)**



(2) Where, during the course of the phrase, and at the point of modulation, there can be found one melodic line (any voice part) that proceeds by chromatically altered half step (two notes of different pitch with the same letter name). In Figure 1.5, the chromatically altered bass line, F-F♯, indicates the location of the direct modulation. Ordinarily, and as here, choice of any chord as pivot will result in an awkward harmonic progression.

Fig. 1.5. **Bach, *Jesu, der du meine Seele* (#297)**



Terminology Variants

The terms "common chord" and "pivot chord" are standard. However, this type of modulation is often known as a *chromatic modulation* when the pivot chord is an altered chord in one or both keys. It is also known as an *enharmonic modulation* when the pivot chord is spelled one way in the original key and another in the new key, for example, D♭ F A♭ = C♯ E♯ G♯. Common chord modulations making use of chromatically altered chords will be studied in Chapter 13.

The direct modulation is also known as a *phrase modulation* when a new phrase starts in a new key, or as a *chromatic modulation* when the new key is established within the phrase by a chromatic half step in one voice part.

A remote key is also known as a *foreign key, distant key,* or *extraneous key.*

Analysis of Modulations

When making a harmonic analysis which includes a modulation, use these models:

a) Common chord modulation. Example: Mozart, Sonata, K. 545 (Figure 1.1)

g: i V^7	i =
	d: iv	V	i V^7	i

b) Direct modulation. Example: Bach, Chorale #120 (Figure 1.4)

| D: vi | I_6 IV I I_6 | $I_{6\,4}$ V I | b: i | V VI iv i | V i ‖

cadence

Example: Bach, Chorale #297 (Figure 1.5)

B♭: I I_6	V	i iv_6 V
	g: V_6	

bass: f-f♯

Assignment 1.3. Make a harmonic analysis of these excerpts[6] as assigned.

[6]Measure 1 of any composition listed is the first complete measure. Repeats indicated by repeat signs and first endings are not numbered. In the Bach chorales, "phrase" refers to the music leading up to a cadence. Each verse (line) of the poem corresponds to a phrase; in editions without texts, these points are usually marked by a fermata. See *Elementary Harmony,* Chapter 13, footnote 3, for sources of excerpts used in these texts.