

2400.259
3484

Xic

调式和声及20世纪音乐概述

TONAL HARMONY

With an Introduction to
Twentieth-Century Music

STEFAN KOSTKA
DOROTHY PAYNE

TONAL HARMONY

**With an Introduction to
Twentieth-Century Music**

**STEFAN KOSTKA
DOROTHY PAYNE**

The University of Texas at Austin

Consulting Editor in Music
ALLAN W. SCHINDLER
Eastman School of Music



Alfred A. Knopf

New York • 1984

First Edition

98765432

Copyright © 1984 by Alfred A. Knopf, Inc.

All rights reserved under International and Pan-American Copyright Conventions. No part of this book may be reproduced in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from the publisher. All inquiries should be addressed to Alfred A. Knopf, Inc., 201 East 50th Street, New York, N.Y. 10022. Published in the United States by Alfred A. Knopf, Inc., New York, and simultaneously in Canada by Random House of Canada Limited, Toronto. Distributed by Random House, Inc., New York.

Library of Congress Cataloging in Publication Data

Kostka, Stefan.

Tonal harmony, with an introduction to twentieth-century music.

Includes index.

I. Harmony. I. Payne, Dorothy. II. Title

MT50.K85 1984 781.3 .83-22260

ISBN 0-394-32830-2

Manufactured in the United States of America

PREFACE

Tonal Harmony, with an Introduction to Twentieth-Century Music deals with the resources and practice of Western music from the eighteenth century to the present day. In a single volume, accompanied by a one-volume Workbook, the text covers all of the factual material included within freshman and sophomore theory study at most schools.

Theory curricula vary considerably from one institution to another. Some courses are structured around the traditional study of harmony, while at other schools such topics as counterpoint, form, and popular music have been incorporated in basic theory studies. Ear training work, keyboard harmony, and other practical musicianship skills may be integrated with the study of harmony, or treated in separate courses. With these different approaches in mind, the authors have designed *Tonal Harmony* to be both flexible in usage and broad in its stylistic range and applications.

The text provides students with a comprehensive but accessible and highly practical set of tools for the understanding of music. Actual musical practice is stressed more than rules or prohibitions. Principles are explained and illustrated, and exceptions are noted.

The text begins with a thorough but concise overview of musical elements and rudiments. Part 1 includes chapters dealing with the fundamentals of music and with the spelling of diatonic triads and seventh chords in major and minor keys. The main body of the text then deals with voice leading and analysis in a diatonic context (Parts 2 and 3) and with chromaticism (Parts 4 and 5). Part 6 concludes the text with a survey of developments in the late nineteenth century and a thorough introduction to twentieth-century practices.

In its presentation of harmonic procedures, the text introduces students to the most common vocal and instrumental textures encountered in tonal music. Traditional four-part chorale settings are used to introduce many concepts, but two-part, three-part, and five-part instrumental and vocal textures are also presented in illustrations and drill work. To encourage the correlation of writing and performing skills, we have included musical examples in score and reduced-score formats, as well as charts on instrumental ranges and

transpositions. Some of the assignments ask the student to write for small ensembles suitable for performance in class. Instructors may modify these assignments to make them most appropriate for their particular situations.

The text employs a variety of techniques to clarify underlying voice leading and formal structure. These include the voice-leading reductions that follow many of the examples. Our goal has been to elucidate tonal logic at the phrase and section level as well as from one chord to the next. Abundant musical illustrations, many with commentaries, serve as a springboard for class discussion and individual understanding.

The book provides an extensive series of learning aids. A large portion of the text is devoted to Self-Tests, consisting of student-graded drills in chord spelling, part writing, and analysis, with suggested answers given in Appendix B. The Self-Tests can be used for in-class drill and discussion, in preparation for the Workbook exercises, or for independent study. Periodic Checkpoints enable students to gauge their understanding of the preceding material.

Exercises in the Workbook are closely correlated with the corresponding chapters of the text. In each chapter, the Workbook exercises begin with problems similar to those found in the Self-Tests, but also incorporate more creative types of compositional problems for those instructors who include this type of work.

Many colleagues and friends provided assistance and encouragement during the development of this text, notably Professors Douglass Green, Jerry Grigadean, and Janet McGaughey. Reviewers of the manuscript contributed many helpful suggestions; our sincere thanks are extended to Judith Allen, University of Virginia; Michael Arenson, University of Delaware; B. Glenn Chandler, Central Connecticut State College; Herbert Colvin, Baylor University; Charles Fligel, Southern Illinois University; Roger Foltz, University of Nebraska, Omaha; Albert G. Huettelman, University of Massachusetts; Hanley Jackson, Kansas State University; Marvin Johnson, University of Alabama; Frank Lorince, West Virginia University; William L. Maxson, Eastern Washington University; Leonard Ott, University of Missouri; John Pozdro, University of Kansas; Jeffrey L. Prater, Iowa State University; Russell Riepe, Southwest Texas State University; Wayne Scott, University of Colorado; Richard Soule, University of Nevada; James Stewart, Ohio University; William Toutant, California State University at Northridge; John D. White, University of Florida. Finally, we would express gratitude to our respective spouses: to Marilyn Kostka for her years of patience and support and to Bill Penn for his unfailing encouragement.

Stefan Kostka
Dorothy Payne

TO THE STUDENT

HARMONY IN WESTERN MUSIC

One of the things that distinguishes Western art music from many other kinds of music is its preoccupation with harmony. In other words, just about any piece that you are apt to perform will involve more than one person playing or singing different notes at the same time—or, in the case of a keyboard player, more than one finger pushing down keys. There are exceptions, of course, such as works for unaccompanied flute, violin, and so on, but an implied harmonic background is often still apparent to the ear in such pieces.

In general, the music from cultures other than our own European-American culture is concerned less with harmony than with other aspects of music. Complexities of rhythm or subtleties of melodic variation, for example, might serve as the focal point in a particular musical culture. Even in our own music, some compositions, such as those for nonpitched percussion instruments, may be said to have little or no harmonic content, but they are the exception.

If harmony is so important in our music, it might be a good idea if we agreed on a definition of it. What does the expression *sing in harmony* mean to you? It probably conjures up impressions of something on the order of a barbershop quartet, or a chorus, or maybe just two people singing a song, one with the melody, the other one singing the harmony. Since harmony began historically with vocal music, this is a reasonable way to begin formulating a definition of harmony. In all of these examples, our conception of harmony involves more than one person singing at once, and the *harmony* is the sound that the combined voices produces.

Harmony is the sound that results when two or more pitch classes* are performed simultaneously. It is the vertical aspect of music, produced by the combination of the components of the horizontal aspect.

While this book deals with harmony and with chords, which are little samples taken out of the harmony, it would be a good idea to keep in mind that musical lines (vocal or instrumental) produce the harmony, not the reverse.

Sing through the four parts in Example 1. The soprano and tenor lines are the most melodic. The actual melody being harmonized is in the soprano, while the tenor follows along at a sixth below for a while and then ends with an eighth-note figure of its own. The bass line is strong and independent but

*Pitch class: Notes an octave apart or enharmonically equivalent belong to the same pitch class (all C's, B's, and D's, for example). There are twelve pitch classes in all.

less melodic, while the alto part is probably the least distinctive of all. These four relatively independent lines combine to create harmony, with chords occurring at the rate of approximately one per beat.

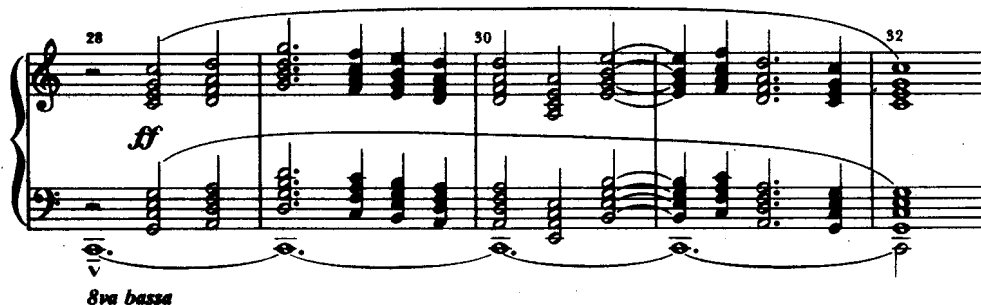
Example 1. Bach, "Herzlich lieb hab' ich dich, o Herr"



The relationship between the vertical and horizontal aspects of music is a subtle one, however, and it has fluctuated ever since the beginnings of harmony (about the ninth century). At times the emphasis has been almost entirely on independent horizontal lines, with little attention paid to the resulting chords—a tendency easily seen in the twentieth century. At other times the independence of the lines has been weakened or is absent entirely. In Example 2 the only independent lines are the sustained bass note and the melody (highest notes). The other lines merely double the melody at various intervals, creating a very nontraditional succession of chords.

Example 2. Debussy, "La Cathédrale engloutie," from *Preludes*, Book I

Sonore sans dureté



Copyright 1910 Durand S. A. Editions Musicales. Used By Permission Of The Publisher, Theodore Presser Company, Sole Representative U.S.A. and Canada.

TONAL HARMONY DEFINED

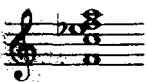
The kind of harmony that this book deals with primarily is usually called *tonal harmony*. The term refers to the harmonic style of music composed during the period from about 1650 to about 1900. This would include such

composers as Purcell, Bach, Handel, Haydn, Mozart, Beethoven, Schubert, Schumann, Wagner, Brahms, Tchaikovsky, and all of their contemporaries. Not that these composers all sound the same—they don't. They use different textures, timbres, ranges, rhythms, and ensembles, among other things. Even their harmonic styles differ. Yet they were all composers of tonal harmony.

And tonal harmony is not really limited to the period 1650-1900. It began evolving long before 1650, and it is still around today. Turn on your radio, go to a night club, listen to the canned music in the supermarket—it's almost all tonal harmony. Then why do we put the demise of tonal harmony at 1900? Because from about that time, most composers of "serious," or "legitimate," or "concert" music have been more interested in nontonal harmony than in tonal harmony. This does not mean that tonal harmony ceased to exist in the real world or in music of artistic merit.

Much of today's popular music is based on tonal harmony, just as Bach's music was, which means that both types have a good deal in common. First, both make use of a *tonal center*, a key pitch class that provides a center of gravity. Second, both types of music make use almost exclusively of major and minor scales. Third, both use chords that are tertian in structure. *Tertian* means "built of thirds," so a tertian chord might be C/E/G, a nontertian one C/F/B. Fourth, and very important, is that the chords built on the various scale degrees relate to each other and to the tonal center in fairly complex ways. Because each chord tends to have more or less standard roles, or functions, within a key, this characteristic is sometimes referred to as *functional* harmony. The details of these relationships between chords will be discussed more fully in the text; but to get an idea of what it's all about, play the chord of Example 3 on the piano.*

Example 3.



Play it several times. Roll (arpeggiate) it up and down. The "function" of this chord is clear, isn't it? Somehow, you know a lot about this chord without having to read a book about it. Play it again, and listen to where the chord "wants" to go. Then play Example 4, which will seem to follow Example 3 perfectly. This is an example of what is meant by the relationships between chords in tonal harmony and why we sometimes use the term *functional harmony*.

*If you cannot arrange to be at a piano while reading this book, try to play through the examples just before or right after reading a particular section or chapter. Reading about music without hearing it is not only dull, it's uninformative.

Example 4.



It is important to realize that not all tonal music makes use of functional harmony—especially a good deal of the music of the twentieth century—music by composers such as Bartók and Hindemith, for example.

From our discussion we can formulate this definition of tonal harmony:

Tonal harmony refers to music with a tonal center, based on major and/or minor scales, and using tertian chords that are related to each other and to the tonal center in various ways.

USING THIS TEXT

The information in this text is organized in the traditional chapter format, but there are several additional features of which you should be aware:

Self-Tests.

Most chapters contain one or more such sections. These Self-Tests contain questions and drill material for use in independent study or classroom discussion. Suggested answers to all Self-Test problems appear in Appendix B. In many cases more than one correct answer is possible, but only one answer will be given in Appendix B. If you are in doubt about the correctness of your answer, ask your instructor.

Exercises.

After each Self-Test section, we refer to a group of Exercises to be found in the Workbook. Most of the Workbook Exercises will be similar to those in the preceding Self-Test, so refer to the Self-Test if you have questions concerning completion of the Exercises. However, the Workbook will also often contain more creative compositional problems than appeared in the Self-Test, since it would be impossible to suggest “answers” to such problems if they were used as Self-Tests.

Checkpoints.

You will occasionally encounter a Checkpoint section. These are intended to jog your memory and to help you review what you have just read. No answers are given to Checkpoint questions.

CONTENTS

Preface v

To the Student vii

PART 1: FUNDAMENTALS 1

1 Elements of Pitch 3

- The Keyboard and Octave Registers 3
- Notation on the Staff 4
- The Major Scale 6
- The Major Key Signatures 9
- Minor Scales 12
- Minor Key Signatures 13
- Intervals 17
- Perfect, Major, and Minor Intervals 18
- Augmented and Diminished Intervals 20
- Inversion of Intervals 21

2 Elements of Rhythm 24

- Rhythm 24
- Durational Symbols 24
- Beat and Tempo 25
- Meter 25
- Division of the Beat 28
- Simple Time Signatures 29
- Compound Time Signatures 30
- Time Signatures Summarized 32
- More on Durational Symbols 33

Construction of Triads and Seventh Chords 39

Triads 39

Seventh Chords 41

Recognizing Chords in Tonal Music 44

Introduction 44

Inversions of Triads and Seventh Chords 44

Inversion Symbols 45

Recognizing Chords in Various Textures 46

Figured Bass Symbols 51

Diatonic Triads and Seventh Chords 54

Introduction 54

The Minor Scale 54

Diatonic Triads in Major 56

Diatonic Triads in Minor 57

Diatonic Seventh Chords in Major 60

Diatonic Seventh Chords in Minor 61

PART 2: DIATONIC TRIADS 65

Principles of Voice Leading 67

Introduction 67

The Melodic Line 68

Notating Chords 70

Voicing a Single Triad 71

Parallels 74

Root Position Part Writing with Repeated Roots 79

Root Position Part Writing with Roots a 5th (4th) Apart 81

Root Position Part Writing with Roots a 3rd (6th) Apart 84

Root Position Part Writing with Roots a 2nd (7th) Apart 87

Instrumental Ranges and Transpositions 91 *

Harmonic Progression 93

Introduction 93

Scale Degree Names 94

The I and V Chords 95

The Circle of 5ths Progression and the Sequence 96

The II Chord 98

The VI Chord 99

The III Chord 100

The VII Chord 100

The IV Chord 101

Common Exceptions 102

Differences in the Minor Mode 103

Conclusion 104

Triads in First Inversion 109

Introduction 109

Bass Arpeggiation 110

Substituted First Inversion Triads 111

Parallel Sixth Chords 112

Part Writing First Inversion Triads 114

Cadences, Phrases, and Periods 123

Musical Form 123

Cadences 123

Motives and Phrases 128

Mozart: "An Die Freude" 129

Period Forms 131

Triads in Second Inversion 142

Introduction 142

Bass Arpeggiation 143

The Cadential Tonic Six-Four 143

The Passing Six-Four 146

The Pedal Six-Four 148

Part Writing for Second Inversion Triads 149

11 Non-Chord Tones 1 154

- Recognizing Non-Chord Tones 154
- Classification of Non-Chord Tones 156
- Passing Tones 158
- Neighboring Tones 160
- Suspensions and Retardation 160
- Figured Bass Symbols 165
- Embellishing a Simple Texture 165

12 Non-Chord Tones 2 170

- Appoggiaturas 170
- Escape Tones 172
- The Neighbor Group 172
- Anticipations 173
- The Pedal Point 175
- Summary of Non-Chord Tones 176

13 Levels of Harmony 181

- English Grammar and Tonal Harmony 181
- Levels of Harmony 182
- Some Methods of Harmonic Embellishment 185
- Examples from a Chorale 185
- Conclusion 189

PART 3: DIATONIC SEVENTH CHORDS 191

14 The V⁷ in Root Position 193

- Introduction 193
- General Voice-Leading Considerations 194
- The V⁷ in Two Parts 195
- The V⁷ in Three Parts 195
- The V⁷ in Four Parts 197
- The V⁷ in Five Parts 201
- The V⁷-VI Progression 201

15	The Inverted V ⁷ Chord	205
	Part-Writing Principles	205
	The V _b ⁶ Chord	205
	The V ₃ ⁴ Chord	206
	The V ₂ ² Chord	208
	The Approach to the Seventh	209

16	The II ⁷ and VII ⁷ Chords	213
	Introduction	213
	The II ⁷ Chord	214
	The VII ⁷ Chord in Major	217
	The VII ⁷ Chord in Minor	219

17	Other Diatonic Seventh Chords	227
	The IV ⁷ Chord	227
	The VI ⁷ Chord	230
	The I ⁷ Chord	232
	The III ⁷ Chord	234

PART 4: CHROMATICISM 1 239

18	Secondary Functions 1	241
	Chromaticism and Altered Chords	241
	Secondary Functions	242
	Secondary Dominant Chords	243
	Spelling Secondary Dominants	244
	Recognizing Secondary Dominants	245
	Secondary Dominants in Context	246

19	Secondary Functions 2	258
	Secondary Leading-Tone Chords	258
	Spelling Secondary Leading-Tone Chords	259
	Recognizing Secondary Leading-Tone Chords	260

Secondary Leading-Tone Chords in Context	261
Sequences Involving Secondary Functions	267
Deceptive Resolutions of Secondary Functions	269
Other Secondary Functions	270



Modulations Using Diatonic Common Chords 279

Modulation and Change of Key	279
Modulation and Tonicization	280
Key Relationships	282
Common-Chord Modulation	285
Analyzing Common-Chord Modulation	287



Some Other Modulatory Techniques 296

Secondary Functions as Common Chords	296
Sequential Modulation	297
Modulation by Common Tone	300
Monophonic Modulation	304
Direct Modulation	305



Binary and Ternary Forms 312

Formal Terminology	312
Binary Forms	312
Ternary Forms	315
Rounded Binary Forms	319
Other Formal Designs	322

PART 5: CHROMATICISM 2 329



Mode Mixture 331

Introduction	331
Borrowed Chords in Minor	331
The Use of $\flat 6$ in Major	332
Other Borrowed Chords in Major	334
Modulations Involving Mode Mixture	338

- 24** The Neapolitan Chord 346
Introduction 346
Conventional Use of the Neapolitan 346
Other Uses of the Neapolitan 348
- 25** Augmented Sixth Chords 1 356
The Interval of the Augmented Sixth 356
The Italian Augmented Sixth Chord 357
The French Augmented Sixth Chord 358
The German Augmented Sixth Chord 360
- 26** Augmented Sixth Chords 2 371
Introduction 371
Other Bass Positions 371
Resolutions to Other Scale Degrees 373
Resolutions to Other Chord Members 374
Other Types of Augmented Sixth Chords 375
- 27** Enharmonic Spellings and Enharmonic Modulations 379
Enharmonic Spellings 379
Enharmonic Reinterpretation 383
Enharmonic Modulations Using the Major-Minor Seventh Sonority 384
Enharmonic Modulations Using the Diminished Seventh Chord 386
- 28** Some Other Elements of the Harmonic Vocabulary 394
Introduction 394
The Dominant with a Substituted Sixth 394
The Dominant with Raised or Lowered Fifth 397
Ninths, Elevenths, and Thirteenths 400
The Common-Tone Diminished Seventh Chord 403
Simultaneities 406
Coloristic Chord Successions 409

PART 6: LATE ROMANTICISM AND THE TWENTIETH CENTURY 419

29 Tonal Harmony in the Late Nineteenth Century 421

- Introduction 421
- Counterpoint 423
- Sequence 427
- Shifting Keys 430
- Treatment of Dominant Harmony 434
- Expanded Tonality 438

30 An Introduction to Twentieth-Century Practices 443

- Introduction 443
- Scales 444
- Chord Structure 452
- Parallelism 458
- Pandiatonicism 463
- The Twelve-Tone Technique 465
- Total Serialization 474
- Rhythm and Meter 477
- Aleatory or Chance Music 489
- Texture and Electronic Music 494

Appendix A: Instrumental Ranges and Transpositions 503

Appendix B: Answers to Self-Tests 505

Index of Musical Examples 599

Subject Index 602