Reviews

J. Kent Williams,
Theories and Analyses of Twentieth-Century Music.
Harcourt Brace College Publishers, 1997.

Reviewed by Richard Bass

The special pedagogical problem with twentieth-century music analysis is that we must make decisions not only about how to teach the material, but also about what material to teach. With so many composers, and in the absence of a common practice, the stakes are high for the choices we make, both in the repertoire selected, and in the analytic tools with which we approach the music.

The publication of numerous theoretical and analytic studies during the past few decades has greatly increased our capacity for a deeper understanding of much of this diverse repertoire. Many issues concerning structural and conceptual aspects of twentieth-century music have yet to be sorted out, but how far we have come is strikingly evident when we compare textbooks of the last ten to twenty years with those that were popular just a short time before. Authors like Leon Dallin, Vincent Persichetti and Ludmila Ulehla, their intimate knowledge of contemporary compositional styles and techniques notwithstanding, lacked a well-integrated analytic approach, settling instead for a loosely connected and often flaccid set of descriptions and observations.[1] Only in the study of twelve-tone music, particularly as advanced in the text by George Perle, was there a degree of analytic rigor comparable to that which we have more recently come to expect as a matter of routine.[2] It is partly for

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[1]Leon Dallin, *Techniques of Twentieth Century Composition* (Dubuque: W.C. Brown, 1957); Vincent Persichetti, *Twentieth-Century Harmony: Creative Aspects and Practice* (New York: W.W. Norton, 1961); and Ludmila Ulehla, *Contemporary Harmony: Romanticism through the Twelve-Tone Row* (New York: The Free Press, 1966).

[2]George Perle, *Serial Composition and Atonality* (Berkeley: University of California Press, 1963, and five subsequent editions through 1991).

the very reason that serial pieces could be studied with such predictably successful results that this repertoire became so dominant in courses dealing with the analysis of twentieth-century music. Of greater difficulty were the pre-serial, atonal works by Schoenberg and his followers, and greater still the music of composers like Debussy, Stravinsky, Bartók and others who did not belong to the circle of strict serialists.[3]

Despite its inherent limitations, set theory (also "atonal" or "post-tonal" theory) as developed by Allen Forte and refined by numerous other practitioners, is principally responsible for opening the door to a more systematic study of a large corpus of twentieth-century works.[4] With set theory we can uniquely identify any pitch-class collection, study its properties, and categorize it in relation to other collections in a variety of ways that are at least potentially meaningful. One of the things that distinguishes modern textbooks from those noted above is their inclusion of set-theoretical techniques, and the most recent texts can be characterized largely by the extent to which they rely on these methods.[5]

Among the pedagogical choices to be made by the authors of such texts, then, are those that center around the degree of breadth desired—whether to restrict the study to a method (like set theory) that works well for a limited repertoire, or whether to take a more comprehensive approach, even at the risk of diluting the sense of focus. In this light, comparisons among recent texts, although never entirely fair, are unavoidable, and in order to place Kent Williams's *Theories and Analyses of Twentieth-Century Music* into perspective, particularly for instructors who have taught a course on this topic

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[3]For a more detailed discussion of the relationship between the Schoenbergian Viennese circle and other composers of the early twentieth century, see this reviewer's "Models of Octatonic and Whole-Tone Interaction: George Crumb and His Predecessors," *Journal of Music Theory* 38/2 (1994), pp. 155-6.

[4]Allen Forte, *The Structure of Atonal Music* (New Haven: Yale University Press, 1973) is the *urtext* monograph on atonal theory; the list of others who have contributed to the field is too long to include here.

[5]Among general texts, the earliest to offer a serious discussion of sets is Gary Wittlich, "Sets and Ordering Procedures in Twentieth-Century Music," in *Aspects of Twentieth-Century Music*, ed. Gary Wittlich (Englewood Cliffs: Prentice-Hall, 1975), pp. 388-476.

using a different text, I will refer also to three other books that have appeared within the past decade: *Analytic Approaches to Twentieth-Century Music* by Joel Lester, *Materials and Techniques of Twentieth-Century Music* by Stefan Kostka, and *Introduction to Post-Tonal Theory* by Joseph Straus.[6] Each of these four books is written in a similar, didactic style, and all are intended to be used, as Williams states in his preface (iii) "as a basic text for upper-level undergraduate and lower-level graduate courses."[7]

In the texts by Lester, Kostka and Straus, the study of pitch organization is paramount, a fact which should come as no surprise considering the pitch orientation of Western music generally. Lester and Kostka make at least some effort to deal with other aspects—specifically, rhythm and meter, timbre, and texture, which are discussed in separate sections—but it is an effort that at times seems rather perfunctory. Straus adheres principally to pitch constructions and relationships, drawing occasionally on events in other parameters to support points made in the course of his analyses. Within the study of pitch organization, both Lester and Straus rely principally on a set-theoretical approach, whereas Kostka deals with melody, harmony and pitch collections in other terms as well, reserving the discussion of set theory for a separate chapter. Both Lester and Kostka present their main topics within a kind of chronological frame consisting of an introductory chapter that contrasts

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[6]Joel Lester, *Analytic Approaches to Twentieth-Century Music* (New York: W.W. Norton, 1989); Stefan Kostka, *Materials and Techniques of Twentieth-Century Music* (Englewood Cliffs: Prentice-Hall, 1990); and Joseph Straus, *Introduction to Post-Tonal Theory* (Englewood Cliffs: Prentice-Hall, 1990). I omit from these comparisons texts with a predominantly historical-stylistic orientation, even though they may contain information that is useful for analysis. Among these are Bryan R. Simms, *Music of the Twentieth Century: Style and Structure* (New York: Schirmer Books, 1986); Robert P. Morgan, *Twentieth-Century Music* (New York: W.W. Norton, 1991); and Elliott Antokoletz, *Twentieth-Century Music* (Englewood Cliffs: Prentice-Hall, 1992).

[7]Citations that refer to the book under review here are given simply as page numbers in parentheses; footnotes are provided for all other sources cited. For a more detailed, comparative discussion of the texts by Lester, Kostka and Straus, as well as others, see Arnold Whittall, "Reviews," in *Music Theory Spectrum* 13/1 (1991), pp. 79-88.

common-practice tonal music with twentieth-century styles, and a concluding section describing more recent approaches to composition, like indeterminacy, minimalism, and various "eclectic" techniques. Straus, on the other hand, makes no such allowances for the uninitiated or skeptical student, moving directly into atonal topics at the outset and sticking with them to the end of the book.

Williams's *Theories and Analyses* likewise prioritizes the study of pitch organization, but it resembles the texts by Lester and Kostka in its separate treatment of non-pitch topics. It also is framed by an introductory discussion that examines some of the differences between traditional tonality and twentieth-century techniques, and a concluding set of chapters dealing with aspects of indeterminacy, minimalism, and eclecticism. These are the first and last of the book's five "Parts," each of which is subdivided into a number of chapters. Williams uses what has come to be called "spiral" organization for some of the topics (especially those that are pitch-related), presenting basic information in the early chapters, then returning to and building upon it in later chapters. His commitment to set theory as an analytic tool is greater than Kostka's, but not as nearly absolute as in the books by Lester and Straus.

Whereas the texts by Williams, Lester and Kostka all purport to take a comprehensive approach to the subject, the amount of space Williams devotes to the various topics and compositional procedures achieves a balance that is closer to Kostka than to Lester. As an example of just how different the emphasis can be, we might consider the portion of each book that is concerned with serial music: for Williams it is about 10% and for Kostka 15%, but Lester spends no less than six chapters on this material, which amounts to a full 40% of the total.

Williams begins with an introductory chapter comprising the whole of Part I, which defines and contrasts three types of pitch organization: tonality, atonality, and neotonality. He analyzes three songs—Berg's 1907 setting of "Schliesse mir die Augen beide," Berg's 1925 twelve-tone setting of the same text, and Copland's "The World Feels Dusty," respectively—to illustrate these approaches. Part II (Chapters 2-6) introduces set-theoretical terms and expressions, and seeks to familiarize students with basic operations and relationships. Part III (Chapters 7-9) covers topics outside the pitch domain, with

a chapter each devoted to rhythm and meter, texture, and "Form, Process and Time." Part IV (Chapters 10-15) returns to the study of pitch structures and proceeds to expand upon the concepts presented in Parts I and II through analytic demonstrations. Part V (Chapters 16-18) covers those "leftover" topics noted above, which Williams refers to as "Recent Developments;" here he gives a general discussion of indeterminacy, and offers some more specific ways of approaching selected works by composers who use minimalist techniques (Reich, Riley and Rzewski) and borrowing (Rochberg).

Throughout the text there are exercises and review questions designed to reinforce concepts as they are introduced. There is also a list of works for listening and analysis given at the end of each chapter, although there are no specific instructions or questions to facilitate the study of these pieces. Most of the works cited are chosen from published anthologies that are widely available, and each citation gives the name of the anthology and the page number where the piece can be found.

One of the most remarkable and best aspects of the book is its seriousness and determination in the treatment of non-pitch topics, which nearly always transcends the standard descriptions proffered in other texts. In many instances Williams constructs his own analytic models based on recent research and supported by numerous references to the scholarly literature. The practical results of such efforts are exercises and assignments in which students can be asked to apply specific methods to the study of various musical parameters within individual pieces.

What most characterizes Williams's *Theories and Analyses* as a whole, in fact, and what sets it apart to a large extent from other textbooks, is the exceptionally wide range and sheer quantity of theoretical approaches it incorporates. These include, in addition to the customary numerical designations associated with set theory: Schenkerian voice-leading graphs for certain tonal and neotonal works, hierarchically organized graphs of metric frameworks, phrase-structure diagrams, notational representations of motivic transformations, analysis based on Hindemith's theories of tonality and consonance-dissonance relationships, flow charts to explore musical process, plus a number of references to findings based on studies in music psychology. Each topic is explained in a careful,

step-by-step manner, with the theoretical sources introduced and discussed in the text itself and in footnotes on the same pages, rather than appearing in separate, end-of-chapter bibliographies as is the case with most textbooks.

This emphasis on theoretical diversity stands in sharpest contrast to the Straus book, which is devoted exclusively to the systematic and effective application of a single analytic model. What can be said for Straus is that, however limited his mode of inquiry, the results are both insightful and musically convincing. Williams's analyses are also impressive, but in a very different way: if Straus's approach, with its sharp focus and singularity of purpose, is like that of a laser surgeon, then Williams's might more closely resemble that of an octopus brandishing kitchen gadgets and farming implements. As ungainly as this may seem, from a pedagogical standpoint it can be a good thing: it is less helpful, after all, to present students with finished analyses that are really just the residue of an analytic process than it is to show them what that process entails, with all its false leads and dead ends, and how choices made along the way can dramatically influence the results. Given enough time and students who are willing, such "no-stone-unturned" methods can be highly effective.

One of the realities of today's music curricula, however, is that there is usually no more than a single-term course allocated to twentieth-century analysis. Therefore it is difficult to knead together so many different concepts and procedures into a coherent intellectual experience for students whose knowledge of the repertoire is often limited at best. Despite Williams's obvious talent for organization, some of the disadvantages inherent in the approach are reflected as problems in the textbook itself. These problems stem either from the overaccumulation of material in too short a time or, in other instances, from overgeneralizations in presenting information.

Just how rapidly material can accumulate is evident even in the introductory analyses given in Chapter 1. For Berg's tonal setting of "Schliesse mir" (pp. 2-10) Williams discusses the form and melodic-motivic structure, then presents a complete Schenkerian voice-leading graph of the song. Although he includes a brief explanation of this analytic notation, it is likely that only students who have some experience with this approach (and there are still many who

do not) can fully appreciate what it reveals about the characteristics of tonal composition. The analysis of the atonal setting of "Schliesse mir" (pp. 11-17) focuses principally on pitch-class content, plus melodic motives and contours. Then the discussion of Copland's "The World Feels Dusty" (pp. 18-26) imports yet another set of tools to deal with elements of neotonality: non-functional ("jazz") symbols applied to chords (mostly ninths, elevenths and thirteenths) in various inversions, figured bass symbols for the same harmonies (e.g., 9-7-6-5-4), and identification of modes used in different phrases of the song with tonic notes (B, G and E♭) that divide the octave symmetrically as a cycle of major thirds.

The same sort of problem resurfaces at other points in the text as well—even where the topic is a narrow one. For example, Part II ("Fundamentals of Set Theory") begins with a chapter on pitch and intervals (Chapter 2: "Integer Notation," pp. 30-44) which generates a staggering number of terms and expressions that students must keep straight. For continuous pitch code (cpc), Williams presents both "Rahn" numbers (middle C or C4 = 0, with positive integers above and negatives below),[8] and MIDI numbers (0 is the hypothetical lowest C of a practical range, so that middle C = 60). In addition to pitch-class numbers (pcs), he gives name classes (ncs, where 0 = any C, C♯, C𝄪, C♭, or C𝄫). Students are then shown ways to express pitch through binomial representations of pitch class plus name class (br), pitch class plus octave designation (pc-octs), and through complete binomial representations (cbrs).[9] The text continues with a discussion of intervallic relationships (ordered and unordered pitch and pitch-class intervals and their attendant abbreviations) that closely parallels Rahn.[10] Williams also introduces the familiar mod-12 "clock" diagram here (p. 40), then concludes the chapter with various polynomial representations for intervals.

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[8]John Rahn, *Basic Atonal Theory* (New York: Longman, 1980); the rather formal presentation of material in this manual serves as the basis for discussions of set theory in most subsequent texts.

[9]The source for most of these expressions is Alexander Brinkman, *Pascal Programming for Music Research* (Chicago: University of Chicago Press, 1990).

[10]See Rahn, pp. 20-29.

At this early stage in the study of set theory, then, students have encountered an array of designations that is likely to be quite confusing: cpc, pcs, ncs, brs, pc-octs, cbrs, ips, ipcs, incs, iocts, ipc-octs, ibrs and icbrs. Whereas any of these concepts may be useful in particular situations, most instructors would no doubt appreciate more selectivity, or at least a clearer distinction between essential information and that which is more specialized. In fact, Williams never revisits some of these materials, and others reappear in situations where their usefulness is not entirely apparent (e.g., brs and ibrs in the examination of neotonal melodic models, p. 220). It is a direct consequence of this theoretical density that there is not enough room left in the book for the number of analyses needed to demonstrate effectively the relevance of all the concepts it introduces.

Generalizations, while unfortunate at some level, are necessary expediencies in teaching. In this book, however, they create a special dilemma, precisely because Williams tries to provide such rigorous theoretical underpinning for his methods: his desire for rigor inspires a broad-based approach, which in turn invites generalizations; points of exception to the general statements can then translate into inaccuracies that diminish the overall rigor of the method.

Problems of this kind arise in the discussion of symmetrical pitch-class sets in Chapter 11. Williams states first (p. 195) that "Most of the chords and scales used in functional tonality are *asymmetrical*, but one symmetrical type does occur: the diminished-seventh chord." Perhaps what he means here is not "in functional tonality," but rather "among the diatonic harmonies in the major and harmonic minor modes," because functional tonality also includes the diatonic scale itself (set 7-35, or [0,1,3,5,6,8,10], which is symmetrical at T6I), as well as symmetrical chromatic harmonies like the augmented triad (set 4-12, or [0,4,8]) as a dominant function, and the "French sixth" (set 4-25, or [0,2,6,8]) as a pre-dominant function.[11] He also writes (p. 198) that "Every symmetrical set has a balancing point called its axis of symmetry," a statement which is almost true,

[11]I exclude from this list of symmetrical functional harmonies the diminished triad (set 3-10, or [0,3,6]), which is a symmetrical subset of the diminished seventh sonority Williams mentions.

but only by default.[12] Having just discussed both inversional and transpositional indices for symmetrical sets, Williams neglects to note here that such an axis (the kind that can be illustrated on the clock diagrams that accompany his discussion) exists only for inversional symmetry, not for transpositional symmetry. It is true that most transpositionally symmetrical sets are inversionally symmetrical as well, but there is one set (6-30, or [0,1,3,6,7,9]—better known as the "Petroushka chord") that is transpositionally symmetrical only, and for which there is no such "balancing point."

Another misleading statement occurs during the pitch-class analysis of an excerpt from Schoenberg's *Second String Quartet* (p. 250), where Williams identifies a whole-tone collection that accrues in the violin parts, which also includes appoggiatura-like notes that lie outside the collection. He describes this type of construction, as well as others (pp. 271-2) in which whole-tone subsets are inflected by foreign pitches, as "nearly whole-tone" sets, citing Bryan Simms as his source. For Simms, however, this term has a very different meaning: it refers specifically to a whole-tone hexachord that is altered by shifting one pitch class a semitone up or down, which results in the familiar "Prometheus" or "mystic chord" sonority (set 6-34, or [0,1,3,5,7,9]).[13] By placing whole-tone sets and subsets with embellishing added notes in the same category with a unique set-type that is directly associated with a number of important twentieth-century works, Williams in this case dilutes the significance of Simms's observations as well as his own.

Technical problems are rare in this book, but they do show up occasionally as typographical errors (e.g., p. 177, Ex. 10-9: the second row of numbers is really "ncs," not "pcs" as printed), word substitution (e.g., p. 161, penultimate paragraph: the parenthetical "stems down" referring to Ex. 9-13 should read "stems up," in contrast to the down-stems noted in the next paragraph), and mislabeled cross-reference within the volume (e.g., the reference to an octatonic set on p. 192 directs the reader to Chapter 13, whereas the collection is actually discussed in Chapter 11).

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[12]A similar statement appears in the chapter summary (p. 212): "Every symmetrical set has axes of symmetry."

[13]See Simms, pp. 39-40.

The book includes two appendices, the first of which is a standard table of pitch-class sets like the one given in Rahn. The second is a glossary of chord symbols used in jazz, taken from Dan Haerle.[14] The chord constructions given in the second appendix are not explained in the text, so their inclusion here is helpful. Not all these symbols, however, agree with those used in the analysis of the Copland song in Chapter 1: for major seventh chords, Williams uses a triangle (e.g., C^{Δ} = C-E-G-B), but the appendix gives only the options with the abbreviation and the poetic breve (C Maj^7 and C$^{\smile}$); also, Williams uses the circle with a slash for half-diminished seventh chords (e.g., $C^{\varnothing}$ = C-E$\flat$-G$\flat$-B$\flat$), whereas the appendix shows it as an inverted question mark (C¿).

In its choice of repertoire, *Theories and Analyses* is very conservative, perhaps surprisingly so in light of the broader, more inclusive regard it exhibits for different theoretical perspectives. There is considerable variety in the supplementary listening and analysis lists, but the pieces that are the objects of Williams's more in-depth discussions tend to be those that have become a kind of "standard repertoire" for twentieth-century analysis (bearing no particular relationship, incidentally, to a list of often-performed works). Schoenberg, Berg, and Webern completely dominate the atonal and serial sections; and with the exceptions of Copland's "The World Feels Dusty" in Chapter 1 and a single piece from Bartók's *Mikrokosmos* (Dance No. 2 in Bulgarian Rhythm), Hindemith is the representative composer for the neotonal analyses. Even in Parts III and V, where the topics and available repertoire are more diverse, recent music is eschewed in favor of works by better-established composers. Only one piece by a woman composer is mentioned (Kaija Saariaho's *Vers le blanc* for electronic tape, p. 160), and there is no serious consideration of works that have been influenced by music of non-Western cultures, or of Western popular culture, even though such styles and techniques (including quotation and allusion) have steadily increased in number as a kind of extension of the aspects of borrowing Williams explores in detail in the analysis of Rochberg's *Sfumato* (Chapter 18, pp. 322-334).

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[14]Dan Haerle, *Jazz Piano Voicing Skills* (New Albany, IN: Jamey Aebersold Jazz, 1994).

Overall, *Theories and Analyses of Twentieth-Century Music* is an excellent pedagogical reference, and I expect that instructors as well as students will consult it often for its succinct expositions of theoretical models and concepts. The section on neotonality, for example, presents as clear and concise an explanation of Hindemith's theories as can be found anywhere. Another of Williams's accomplishments in the teaching of twentieth-century analysis is his incorporation of aspects of the Meyer-Narmour "implication-realization" model into some of his discussions.[15] His application of this method to melodic analysis in particular is done in a way that is practical and simple enough for students to use in their own work.

There is much to recommend this book as a supplementary resource for a course in twentieth-century analysis. It has many strengths as a primary text as well, but in this capacity it places more than the usual amount of responsibility on the instructor—to sort out from among the oceans of technical information those points that require special emphasis, to help students translate methodologies into analyses that are well focused, to incorporate works by a more heterogeneous group of composers (especially if broad coverage of a representative repertoire is one of the course objectives), and to fit all this material into the time allotted to such a course. Still, it is apparent throughout the book that Williams has given careful consideration to the "critical issues" noted in his preface (iii): "the importance of acknowledging one's assumptions, the inevitable trade-off between specificity and generality, the necessity for methodological rigor, and the gulf between musical conception and perception." In deriving methodologies from theories, in constructing innovative models for the analysis of unique repertoire, and in using the scholarly literature in specific ways to support pedagogy, Williams offers us a textbook that goes a step beyond any other that is currently available.

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[15]See Leonard B. Meyer, *Explaining Music* (Chicago: University of Chicago Press, 1973) and Eugene Narmour, *Beyond Schenkerism: The Need for Alternatives in Music Analysis* (Chicago: University of Chicago Press, 1977).