

The Twelve-Note Music of Anton Webern: Old Forms in a New Language by Kathryn Bailey. Cambridge: Cambridge University Press, 1991.

Review-Article by Andrew Mead

Kathryn Bailey's book *The Twelve-Note Music of Anton Webern* is the first full-length analytical study of Webern's adoption and adaptations of Arnold Schoenberg's epochal insight, the "method of composing with twelve tones which are related only with one another."¹ It is an extensive work, with the main body consisting of two sections of analytical chapters, the first covering Webern's instrumental music and the second, his music with voices. The chapters on the instrumental compositions group movements by formal type, including sonata form, variation form, rondo and ternary forms, and binary form, while the chapters on his vocal music are each devoted to a single work.

The analyses are preceded by a set of technical chapters on row construction, row deployment, and Webern's use of canon in his twelve-tone music, and are followed by several appendices containing tables of row characteristics, row matrices for op. 20 through op. 31, charts of row analyses for these same works, and comments on Webern's use of grace notes. The whole is complemented by a large section of endnotes, glossary of technical terms, chronological list of works, select bibliography, and an index of the names of people mentioned in the text (with sublistings of their compositions or writings where appropriate). The volume contains numerous tables and musical examples in addition to the analytical appendices, and is well produced, with a bare minimum of misprints.

The central thesis of the book is that Webern as a musician was deeply rooted in the traditions of the past, and his twelve-tone works, despite their radically new pitch language, manifest his sense of the continuity of compositional thought through their use of eighteenth- and nineteenth-century formal models. It is Bailey's goal to "examine the ways in which [Webern] preserves these forms and their essential arguments within a system whose

¹Arnold Schoenberg, "Composition with Twelve Tones," in Schoenberg 1975, 218.

imperatives would seem, on the face of things, inimical in many respects to those of tradition.” [3]

Bailey identifies two different analytical perspectives: the idiosyncratic, which draws attention to the particularities of an individual composition, and that approach which deals with a composition’s relation to a larger context, such as a composer’s work as a whole, or the tradition within which he or she worked. It is her contention that while a composition should be considered from both perspectives, Webern’s twelve-tone music has received too much attention of the former kind, and too little of the latter. It is a central purpose of the book to redress this imbalance. Nevertheless, the author has properly foreseen what could be a major stumbling block to an analytical approach that investigates Webern’s formal modeling solely in the light of tradition. As she states, “[A]ny attempt to rationalize formal structure without a knowledge of the row and its properties and of the way in which it is used is specious, since the two aspects of any twelve-note work are interdependent.” [5]

A secondary goal of the book involves the use of language. In the words of the author, “It has been my wish to produce a study of Webern’s twelve-note music that will be intelligible to anyone who is musically literate. . . .” [xi] She expresses concern about the limited readership of essays in musical analysis, adding that “This is particularly unfortunate in an age when the complexities of the music itself have already caused the composer and his creation to be isolated from the educated listening public.” [4] In light of this, the author has set herself the challenging task of writing about Webern’s music in a way that will be both familiar and informative to readers who are not specialists in music theory. To this end she has elected to “describe the music of Webern in conventional terms, using the English equivalent of the language that was current at the end of the nineteenth century and that Webern himself used, both in his scores and sketches and in the analysis and description of his works.” [5]

These are excellent goals. I am in total agreement with the author’s contention that Webern’s “reinterpretation of familiar structures [is] one of his most significant contributions to the history of atonal music” [3], and I thoroughly believe that one of the most interesting things an analysis of Webern’s music can do is to show how his individual approach to the twelve-tone system—both with regard to its general principles, the primitives

of the system, and with regard to the particularities of his chosen orderings, the rows and their relations—provides the mechanism through which he integrates compositional detail with large-scale form. I find it fascinating that Webern, like Schoenberg, in an act of radical conservatism, used the twelve-tone system to reanimate the formal processes he admired in the work of his tonal predecessors. I also believe that this extraordinary music deserves to be better understood, and that clear, straightforward writing about it can go a long way towards bringing this about.

While I am deeply sympathetic with the author's goals, I fear the book fails in its attempts to reach them. Unfortunately, the book is permeated by a host of theoretical misconceptions, misunderstandings, and confusions that ramify throughout its analyses, ranging from the author's use of simple terms to the book's overall organization. These are not minor quibbles that momentarily impede the flow of the discussion, but misunderstandings of a fundamental nature that affect virtually all of the author's analytical observations, and lead her to conclusions concerning the relationship between Webern's use of form and his approach to the twelve-tone system that are directly contradicted by what one may hear in his music.

The book's problems are most immediately apparent in its use of language. An avoidance of jargon is desirable, but not at the expense of understanding. If one is to write in a way that avoids highly specialized technical terms, one must be very careful to understand the distinctions that such language might have been designed to make, and then be on guard not to obliterate them in one's more familiar locutions. This is not the case here. Words take on a variety of meanings, and particular concepts are frequently expressed by a variety of terms. "Row," "row statement," "permutation," and "row form," for example, are used interchangeably to represent a wide range of meanings, from the most abstract to the most particular. The sense of a word can alter in midsentence, leading to such statements as, "Although five different row forms are used in succession on both occasions, each pitch class is played at the same octave level and by the same instrument in all the rows concerned, each member of the trio therefore playing a very limited group of notes over and over in spite of changing row forms and transpositions." [42]

The sense of most terms must be inferred contextually, but some are defined in the book, both in the *Glossary* and in the body

of the text. Even these, however, are not immune to problems of construal. Many of the terms in the glossary are familiar enough technical terms, but they are used here in a peculiarly idiosyncratic manner. “Aggregate,” for example, is defined in an extremely limited way as “a set of twelve discrete notes [*sic*] formed by the simultaneous progression of either the first or the second hexachords of two row forms with complementary hexachordal content,” [449] thus denying the author its common and useful meaning in much twelve-tone theory to refer in a general way to a presentation of the twelve pitch-classes without regard for their derivation. Other definitions, such as those for combinatoriality, invariance, or source set, are either vague or are contradicted by their actual usage in the text.²

Terms borrowed from tonal theory appear without consideration for the radical differences in the ways that tonal music and twelve-tone music work, and often suggest fundamental misunderstandings about both musical languages. In *Conventions in the Text*, for example, the author establishes certain terminology that she will employ:

When describing intervals I have preferred conventional terminology to the language of interval classes because I believe this is familiar to more people. In the context of twelve-note composition, . . . the qualifying *major* and *minor* take on their literal meanings: *large* and *small*. . . (The German manner, and therefore Webern’s, of identifying intervals—*kleine Terz*, *große Terz* and so on—avoids the tonal/modal association of the English names.) [xi] (*Bailey’s emphasis*)

While such an interpretation of minor and major might remove the affective associations that have accreted to these words in English, it does *not* avoid their tonal/modal associations. The implied equivalence of intervals of different sizes derives from

²In her definition of combinatoriality, the author’s differentiation between “semi-combinatorial” and “all-combinatorial” suggests a profound misunderstanding of what is usually meant by those terms, despite the inclusion of Babbitt 1955 in the bibliography. This is but one of many instances of her misinterpretation of cited texts.

their shared scale-degree difference in the diatonic modes, one of the primitives of tonal syntax. This is one of the most fundamental differences between tonal and twelve-tone music: as Schoenberg's own description has it, twelve-tone composition is based on the tones "related only with one another," and not to some prior mediating organization, such as the major scale. It is precisely this implication that interval-class terminology seeks to avoid.³

Even "tonal" changes its meaning, sometimes from one sentence to another on the same page (see pp. 147–9, for example). The word may mean "pertaining to common-practice tonality," or it may, very differently, mean "pertaining to tones." As it is frequently contrasted with "atonal" in both contexts, real confusion sets in. Since the thesis at the heart of the book depends on both a clear sense of twelve-tone composition and a strong notion of what constitutes tonal forms, the informal use of terms central to both of these issues obscures distinctions crucial to the author's argument.⁴

If it were merely a question of the author's desire to use an informal style of presentation, the issue of language would be of little consequence. But the problems are not just on the surface: the use of language is symptomatic of deep theoretical problems at the heart of the book. While Bailey makes it clear that she wishes to write analysis rather than theory, doing so depends on a firm grasp of theoretical issues: any analysis is predicated upon *some* sort of theory, whether that theory is articulated or not.⁵ In order for us to understand the problems in her analyses, we must examine their underlying theoretical premises, which in this case are the author's

³See Forte 1973 and Rahn 1980 for related discussions.

⁴The foregoing are just selected examples of the terminological problems in the book. Similar problems beset "pitch-class," "dyad," "set," "consonant," "dissonant," "inversion," "chord," "voice," and many other terms used to describe elements of Webern's music.

⁵Simply deciding what aspects of a piece to talk about depends on some theoretical criteria of what is *worth* talking about. An interesting discussion of the relationship between theory and analysis may be found in the exchange between Edward Cone and David Lewin in Lewin 1969 and Cone 1969; the article that provoked the exchange, Cone 1967, contains recompositions of portions of op. 27 movements I and III.

conceptions of the twelve-tone system, tonal form, and ultimately how the two interact in Webern's music.

Where twelve-tone theory and its related issues are explicitly dealt with, the formulations are deeply confusing, or simply incorrect.⁶ The more general sense that one receives from the book as a whole is that the author's approach to twelve-tone theory is decidedly out of date.⁷ This impression is confirmed by a look at her *Select Bibliography*, which does not reflect the current state of research either in Webern's twelve-tone music, or in the twelve-tone system in general. There is no mention of a large number of books and articles, some dating back more than thirty years, that deal directly with the topics of the present volume. Works

⁶At one point, for example, the author seems to be claiming that the tritone is the only possible interval that may be excluded from a six-note collection: "In order to produce all twelve notes of the scale [*sic*] with no repetitions, two similar hexachords must be separated by the interval of a tritone; any other transposition used alone (where tritone transposition does not also occur) will produce redundancies." [419]

⁷This is borne out, for example, by her discussion of row labelling. [9–11] The author has elected to use the older tradition of row identification which determines row labels from some particular row, labeled P_0 . Under this system, I_0 is that inverted form that starts on the same pitch-class as P_0 . Aside from creating labelling problems when compounding R and I, this system depends on the determination of some particular row as P_0 , which tends to give that row a certain a priori referential quality that might not be appropriate. The author makes much of this determination, chiding previous analysts for not finding the 'real' P_0 , which she has determined from Webern's sketches. She even chides Webern for "a casualness in [his] row identification [in his sketches] that [she] find[s] difficult to reconcile with his carefully systematic choice of transpositions and his obvious fascination with combinations of rows that complement and interact with each other." [11] More recent twelve-tone theory, such as Lewin 1977, Starr 1978 and Morris 1987 uses an approach in which no row is considered " P_0 ," but relations between rows are expressed as operations on those rows. This not only relieves the "RI problem" (in that the two operations commute with each other), not to mention seeming more in tune with even the author's notion of Webern's twelve-tone technique, but it allows whatever might be centrally referential to a twelve-tone composition, be it a row, a row family of some sort, a collection or a hexachordal area (naming a few possibilities), to emerge in the course of the analysis, rather than be imposed as part of the initial identification of materials.

specifically dealing with aspects of Webern's twelve-tone compositions by Milton Babbitt, David Lewin, John Rahn, and Daniel Starr among others are not to be found. And these writings do not merely contain passing references to Webern: Babbitt 1960 discusses the underlying principles of op. 27/II and their relationship to op. 22/I; Babbitt 1987 contains revealing insights about op. 21/II; Rahn 1980 contains a pedagogically valuable approach to hearing relationships in op. 21/II's theme; Lewin 1987 deals with a critical aspect of op. 27/III, to mention just a few.

More generally, the bibliography does not reflect the very extensive formulation of fundamental twelve-tone theory that has grown from Babbitt's pioneering work over the past thirty years. Powerful tools developed by the likes of Daniel Starr, Robert Morris, David Lewin, and Donald Martino would have been of invaluable help for dealing with a wide range of issues in the current work.⁸ If Bailey's own formulations had been more powerful, their absence would not be felt as strongly. Ironically, many analytical issues that seem idiosyncratic in the present context can be shown with these tools to be specific instances or aspects of Webern's more general twelve-tone compositional practice, a result very much in line with the author's original goals.

At the heart of the author's problems with twelve-tone theory is her failure to distinguish among relationships that are the result of the primitives of the system, those that are based on the properties of particular orderings and their transformations, and those that arise from the ways particular properties are selectively composed out on the musical surface. Most of the discussion in Chapter 1, *The Rows*, is hampered because of this. There are many anecdotal observations made about the various rows Webern used in his work, but no clear explanation is made about how these relationships are employed in the music, or from what properties they derive. Never, for example, is there any clear explanation of

⁸Works dealing with Webern's twelve-tone compositions or technique that are not in the author's bibliography include Babbitt 1960, 1971, and 1987, Haimo 1985–86, Lewin 1987, Pousseur 1966, Rahn 1980, Starr 1984, and Travis 1966; works dealing with twelve-tone structure or analytical techniques that could have contributed significantly to the study include, in addition to those cited, Babbitt 1961, 1962 and 1973, Cone 1967, Lewin 1977, Martino 1961, Morris 1987, Peles 1983–84, Samet 1987, Starr 1978, and Westergaard 1966. These lists are by no means exhaustive.

the fundamental role that inversion at an even index number plays in this music, and those few allusions that deal with the property either misrepresent its results, or fold them in with other relationships that are based on entirely different principles.⁹

Chapter 2, *Row Topography*, conflates two separate issues, the deployment of rows in a composition and how they are projected on the musical surface. This yields a number of false distinctions, and obscures some important continuities in Webern's practice. The concept of the array would have been useful here, along with the ideas of polyphonization and combination, all techniques for examining what happens when rows are compounded and projected, successively and simultaneously, in a musical surface.¹⁰

Just how limiting the author's approach can be may be seen in a passage from the final page of the *Conclusion*:

In my analyses I have deliberately avoided one area in which questions inevitably arise concerning Webern's—or any other—twelve-note music: What degree of restraint is exercised over the vertical ('harmonic') aspect of the music? Specifically, to what extent does Webern *care* about and seek to control simultaneities? . . . I have not discussed this problem for

⁹The fact that inversion at a given index number will yield either a fixed set of six dyads representing a particular type of partition of the aggregate for all odd index number values or a fixed set of five dyads and two singletons a tritone apart representing a different type of partition for all even values has been described in a variety of places, including Babbitt 1960 and 1961 (which originates the term "index number"), Perle 1962, Forte 1973, Lewin 1977, Starr 1978, Rahn 1980, and Morris 1987, to mention just a few. The global significance of inversion at an even index number in Webern's music is noted in Babbitt 1960 and 1987, and suggested in Perle 1962, as well as other places. Inversion at an even index number informs op. 27/II, op. 22/I, all of op. 21, and plays a significant role in a number of passages from other works.

¹⁰The term "array" originated in Winham 1970, and has been used in a variety of contexts since. One of the broadest generalizations of array theory may be found in Morris 1987. "Polyphonization," the partitioning of rows into several musical parts on the compositional surface, is explored in Starr 1984; "combination," related to Starr's more specific "derivation," is found in Westergaard 1966.

several reasons, among which one of the most important is that I see Webern's interests as almost entirely linear. . . . In the polyphonically conceived works it is difficult to determine—beyond a few basic decisions concerning consonant intervals and chords that had to be avoided—whether the vertical effect of the coincidence of parts was a matter of much concern. The sketches prove the fact of linear conception: parts are written in open score, and in subsequent revisions individual parts are often shifted horizontally or varied rhythmically so that they coincide differently. The method seems to be trial and choice; vertical collections do not appear to be a determining factor. [334] (*Bailey's emphasis*)

This attitude would seem to ignore the evidence of the very sketches she is invoking: Webern's "trial and choice" may well be construed as ample evidence that he was specifically trying to control the coincidence of parts, and analysis of his music clearly bears this out.¹¹ The author's attitude seems to arise both because of her apparent unawareness of the *systematic* constraints of the twelve-tone system, and from an extremely narrow notion of what it is we might follow in music composed to take advantage of them. She characterizes the concatenation of individual rows as follows: "This kind of presentation is perhaps the best possible for establishing and maintaining row identity, as it allows the listener to hear the same series of intervals over and over without the complication of extraneous intervals that are the inevitable product of two or more rows progressing simultaneously." [157] Such a

¹¹See, for example, the extraordinary care with which Webern has selected his rows and adjusted the rhythm of his canons in the first variation of op. 21/II so that the sonority formed by the four voices at the midpoint of the variation (the down-beat of bar 18) reproduces the pitch-class collection found *segmentally* at the analogous spot in the *Thema*; see also the similar care and concern employed in the construction of the opening of that work's fourth variation (bars 45–46): here the rows have been selected and composed so that their combination yields the first seven pitch-classes of the *Thema*'s accompaniment, which are also the last seven pitch-classes of its melody. These are but two anecdotal details from a movement that abounds in the careful, well-heard combination of musical lines, a critical feature of *all* of Webern's twelve-tone music.

way of thinking about twelve-tone relationships also yields the following remark about chords: “While two or more notes are often struck together, in the overwhelming majority of cases this is the result of the momentary rhythmic coincidence of two linear voices, something quite different from the articulation of a chord [presumably a row segment] as a distinct entity.” [45] Both these remarks and many others betray an ignorance of any but the most superficial ways rows may be used to compose and control events unfolding on the surface of a twelve-tone composition.¹²

The other major theoretical foundation of the study entails an understanding of tonal form. We can gain a sense of the author’s attitude towards this topic from a statement in the *Conventions in the Text*: “in most of his twelve-note music Webern consciously adhered in one way or another to the requirements of the conventional tonal structures into which he moulded his work.” [xi] Although the impression of form gained from the preceding as a set of requirements into which one molds one’s materials, as opposed to the ultimate manifestation of a particular presentation of the properties of one’s materials, might seem at this stage merely the result of a turn of phrase, such an approach to form is borne out by the subsequent use of language describing Webern’s use of formal models. References to what tradition demands or what convention requires abound, reifying forms as rigid codes to be adhered to, rather than as constantly evolving strategies for projecting musical narratives.

One of the author’s points is to illuminate the synthesis of forms in Webern’s music, but the choice of language seems at times at odds with a celebration of that synthesis. We are told, for example, “The first movement of op. 27 shows a similar confusion

¹²For example, any compositional realization of a row will inevitably project additional intervals between non-segmental elements (a point made in Haimo 1985–86, with regard to op. 20). Rows embody much more than their segmental intervals, but potentially can be composed to project intervals from between any pair of elements. Rows can be heard in terms of distributions of pitch-class collections as well. Changing rows changes the distribution of pitch-class collections, and these changes become a fundamental part of twelve-tone hearing. The analytical implications of the foregoing are found in Peles 1983–84 and Samet 1987. These are still only relatively local examples; the more global implications of row structure in a twelve-tone work are intimated in Babbitt 1987, as well as in Morris 1987 and elsewhere.

regarding its formal identity: it is clearly an ABA form, but it also incorporates all the essentials of sonata.” [152] And: “Altogether, the several components [ritornello form, sonata form, ABA ternary form and rondo] seem more compatible in op. 24[I] than they were in op. 22[I], though here, as there, the result must be seen as flawed if it is considered as representative solely of any of the contributing structures.” [179] There is a sense in this language that it is the *composition* that is called into question by not conforming to the prescriptions of pre-existing forms.¹³

A problem throughout the volume is that the implicit attitude towards form is prescriptive, a set of fixed designs to which compositions conform to a greater or lesser degree, rather than descriptive, an attempt by musicians over the years to express the perceived commonalities of a number of compositions that seem to behave in similar ways. This is not to deny that Webern’s twelve-tone music exhibits traits of formal modeling based on earlier music, but such a Procrustean approach cannot capture the intimate connections between Webern’s musical language and his large-scale forms.¹⁴

¹³The significance of hidden implications carried by the choice of language in musical analysis was explored by Marion A. Guck in “Analytical Fictions,” a presentation at the joint national conference of the Society for Music Theory and the American Musicological Society, Oakland, California, 1990.

¹⁴One of the most extraordinary pronouncements on form in the book may be found in a footnote to Chapter 4: “Repetition generated by repeat signs in the score—a convention of structural format—is to be distinguished from the reappearance of identical material written out as a part of the basic structure. The first can be seen as optional, while the second is essential.” [431] Leaving aside the obvious questions this raises about da capo arias, minuets, scherzos, and so forth, this still poses problems when applied solely to sonata allegros. If the author means that repetitions are not an essential part of sonata *form*, then one must conclude that their occurrence is an intentional compositional act, and therefore an essential aspect of those particular pieces that contain them: certainly Beethoven’s op. 59 would bear that out, but this interpretation still suffers from the author’s tendency to reify form. A second interpretation is even less tenable, that the *performance* of repetitions is optional. A look at the care with which Mozart, Beethoven, and Brahms all treated exposition repetitions disposes of this option. Even Schenker, while granting that repeats are not part of the underlying voice-leading, considered

Perhaps this exoskeletal notion of form is the result of the author's desire to adhere to the *Formenlehre* approach that she asserts was part of Webern's musical education. Certainly, that mode of thinking about form is implied by Webern's various remarks from talks and letters quoted in the book. That being the case however, one would have hoped for a greater familiarity with the terminology of the *Formenlehre* tradition. In discussions of the first movement of the *String Quartet* op. 28, and the *Variations for Orchestra*, for example, Bailey reads Webern's use of the terms "Adagio form" and "Andante form" as references to ternary structures, calling Webern's remarks about overtures by Brahms and Beethoven into question, and creating some forced readings of the works involved. To support her interpretation of Webern's phrase, she cites Schoenberg's *Fundamentals of Musical Composition*, where, as she points out, 'Andante form' is characterized as 'ABA' and 'ABAB.' But this latter interpretation, 'ABAB,' is, of course, the same as Schenker's four-part form, or, as older traditions would call it, "Slow-Movement form," a phrase commonly applied to slow movements in sonata form with either no development or only the briefest passage linking the exposition to the recapitulation.¹⁵ As Charles Rosen has pointed out (Rosen 1980), such forms are often found in overtures of the classical period. This interpretation far better fits both Webern's remarks about the two overtures he mentions, as well as his remarks about his own music.

The test of Bailey's underlying theoretical approaches lies in her attempts to reconcile Webern's use of traditional formal models derived from tonal practice with the radically new language provided by the twelve-tone system. Although she tends to emphasize the importance to Schoenberg and Webern of what she characterizes as "secondary features" in the various forms, such as thematic contrast or the use of specific textures or treatments in particular sections, she does acknowledge the importance of pitch relations as a motivating factor in their use of formal models.

their omission a "violation of form." (See the discussion in Schenker [1935] 1979: 128–129.)

¹⁵See Schenker [1935] 1979. For a discussion of "slow-movement form," see Webster 1980, as well as Rosen 1980.

One attempt to deal with the issue is through what she calls “tonal analogues.” This term is never formally defined, as what might be considered a “tonal analogue” varies from piece to piece. In principle, it is a useful concept, in that Webern’s music displays a great sensitivity to various ways of establishing points of reference based on pitch. Unfortunately, the author has once again brought along a great deal of unwanted baggage from tonal theory in her analyses. She is willing to be flexible in her application of the notion of tonal analogue, given the variety of ways that Webern establishes some sense of pitch-place in his music, but almost immediately she falls into a conceptual trap. Although at pains to assert that this music is not tonal, she nevertheless, without explanatory evidence aside from the sheer presence of the interval, offers us the notion of the “dominant analogue” as a perfect fifth above the tonic analogue (and similarly, a “subdominant analogue” a perfect fifth below). This decision does not take into account the source of those intervals from which she derives her dominant analogues, nor does it take into account the particular effect that transposition by such an interval might have on the underlying row structure, aside from the simple changing of labels.¹⁶

The big problem here, of course, is that the particular relationship of dominant to tonic in the common practice period depends fundamentally on the intervallic structure of the diatonic collection, and the role of ic 5 therein. In music based on orderings

¹⁶The importance of the notion of “traditional fifth-relationships” to the author may be seen in the following: “Many of Schoenberg’s twelve-note works show a similar concern [for traditional fifth relationships], though in his case the fifth-relationship is expressed through combinatoriality: the row form that complements the untransposed prime is the inversion a fifth above or, more often, a fifth below.” [150] This passage compounds conceptual confusion with factual error. *Any* pair of rows related by inversion at an odd index number will contain a pair of ic 5s at *some* two sets of order positions; this is an old mis-comparison with transposition that has been discussed at greater length in Babbitt 1960. Furthermore, while Schoenberg frequently ordered his rows so that the initial pair of elements in a combinatorial pair would be a perfect fifth apart, there is not a *single* major composition of his in which the interval between the initial element of what is generally considered “P₀” and its combinatorial counterpart is a fifth *above*. A possible exception is the Suite op. 25, but the relationship is not used in that composition, nor does the appropriate row ever appear in the work.

of the total chromatic, far different criteria are at work, and the significance of transposition by a perfect fourth or fifth will be largely determined by the specific properties of the particular ordering chosen for a given work.

Ultimately, the book fails to integrate its two theoretical domains, the twelve-tone aspect of Webern's music, and his use of large-scale traditional forms. This is not because of the nature of the music itself, but arises from the nature of the author's grasp of twelve-tone theory. Her approach to twelve-tone structure seems to be fixed at the level of the rows in a piece, with relatively little insight into what they are doing there. The problem is twofold: her approach to twelve-tone relations extends neither deeply enough into the relational primitives of the total chromatic nor near enough to the musical surface and its specific compositional projection of rows to offer the support it could give to her basic thesis.

This problem is reflected in the book's overall organization. The chapters dealing with Webern's rows and their deployment precede the analyses themselves. Many of the points made in the chapter on the rows are dropped in subsequent sections of the book, and so readers are left to infer the consequences of the rows' properties for themselves. In the chapter on row topography, we are frequently offered little more than statistics on the sheer numbers of rows used in a work, with additional remarks on specific aberrations of row order, or the frequency of overlaps. Occasionally we are given anecdotal instances of certain row properties, but these are not drawn into a picture of how the row structure in a movement works as a whole. When we come to the analyses, many of the issues of row structure are dropped in favor of other aspects of the score, so that we never receive an integration of form and row structure. From a conceptual standpoint, we are still left with a big gap between the form and the sounding pitch structure that might articulate that form.¹⁷

¹⁷From a more practical standpoint, we must constantly be flipping back and forth through the book to try to fill that gap on our own. Information about a single movement can be in as many as six locations: the chapter on the rows, the chapter on row topography, the chapter on canon, the analysis itself, the row matrix, and the analytical chart. This is compounded by the author's frequent use of endnotes to remind us where in earlier chapters she had discussed other aspects of a movement. Furthermore, her analytical charts consist of lists of order numbers, rather than pitch-classes. Thus in order to

Most critically, this same problem leads the author to draw conclusions about Webern's music that set her analyses at odds with some of its most immediate aspects. The following example is drawn from her chapter on sets of variations, but is representative of her approach. In this chapter, Bailey unfolds a thesis regarding Webern's approach to writing sets of variations:

Schoenberg wrote variations on a theme; Webern did not.

Just as the secondary features of sonata form predominated when the underlying tonal dialogue was taken away, the most obvious surface aspects of variation form become, in the absence of a theme, the only way of distinguishing this form from any other. Thus we find movements that consist of a string of sections of equal length, each stylistically consistent within itself but contrasting with its neighbors, passing as theme and variations, even though no feature of the first section is reiterated in subsequent sections. Sections are the same length, not as the inevitable result of their treatment of material of that length, but arbitrarily, in order to give the aural impression of a theme and variations where the basic premise of the structure no longer exists. The careful clothing of a movement in the conventional attire deceives the listener into presuming the presence of the usual basic lines, an assumption which is frequently unfounded. The ease with which we are led to make this mistake demonstrates the importance of secondary features in the process of distinguishing conventional forms. Those features responsible for our perception of these movements as variations are a sham; the format exists for its own sake, the cause-effect relationship of form and content having been inverted. For this reason, Webern's use of variation form represents an irony. [196]

gain insight into a work's pitch-class structure, readers must make their own charts by substituting rows from Bailey's row matrices.

I have quoted the author at length, as this seems a clear presentation of one of her central conclusions about the way Webern integrated twelve-tone structure and traditional forms: it would seem that in the author's view there is a dramatic discontinuity between the underlying language of Webern's twelve-tone music and the ways surface configurations lead us to parse it into formal shapes. In the case of his sets of variations, we are supposedly seduced into hearing them as such by illusory surface manipulations, unrelated to the underlying pitch structure.

This simply does not fit the case. The author's assertion that "no feature of the first section is reiterated in subsequent sections" in Webern's sets of variations is the result of the failure of her analytical apparatus, not a revelatory insight about Webern's compositional practice, and more seriously, is symptomatic of her failure throughout the volume to hear some of the most obvious features of his work.¹⁸ This can be shown in a brief analytical sketch of portions of the final movement of his *Variations for Piano*, op. 27.

This movement is for Bailey the most extreme case of Webern's sets of variations; in her opinion, this work contains no theme at all: the " 'variations' are not based in any way on

¹⁸Examples abound, but I will restrict myself to two. In her discussion of op. 20/II [155–163], the author misses the presence of a motivic "false recapitulation" in the development section (bars 95–98) that would help explain the way the return of the sequence of rows from the exposition in the recapitulation proper does not line up with the return of its motivic material: the motivic material picks up exactly at that point where the "false recapitulation" breaks off motivically. (This brief a discussion does a disservice to the richness of the passage: much more is going on here, involving motivic and row references that span the whole movement.) Secondly, in her discussion of op. 22/II, the author expresses skepticism that one could perceive a particular return of a set of rows, related by T_6 to a set of rows that are centrally referential. [248] The partitions of the rows in the passages in question, however, are invariant under T_6 , and thus the actual music in the two passages bears a lot of similarities, despite certain rhythmic differences. This latter example is part of an analysis that frequently suggests that the movement's row structure is dissociated from its musical structure, but the author seems unaware of both the collectional invariance relations at work in the movement, and of Webern's use of shared embedded orderings in members of the work's row-class to create a rich web of cross-references and connections.

material introduced at the beginning.” [197] However, I find this to be directly at odds with how the music goes, and this is particularly unfortunate as this work provides a wonderful opportunity to lead the designated audience for the book, the musically literate reader, from some very clear surface aspects of the music into the more far-ranging consequences of its twelve-tone structure.

Let us first dispense with the composer’s own notions about this movement. Peter Stadlen, the pianist who premiered the work, has published an edition of the score in which he has transcribed both Webern’s remarks to him as well as the notations and diagrams Webern made on the music. Each page of Stadlen’s original copy with Webern’s holographic additions is reproduced opposite the appropriate page of the new edition. Webern has marked nothing at the beginning of the third movement, but has indicated the subsequent sections with Roman numerals I through V, starting in bar twelve. This might at least suggest that the composer’s intentions included *some* sort of differentiation between the first eleven bars and the rest of the movement, but the evidence of the music itself is much more compelling.¹⁹

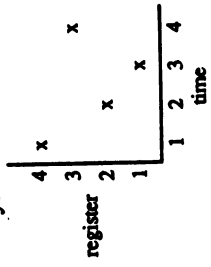
Bailey describes certain aspects of the first eleven bars in some detail: she notes the three members of the row-class present, and discusses the rhythmic and dynamic unfolding of small groups of notes (“cells”) separated by rests. Similarities and differences in the rhythmic presentation of the three rows prompt her to describe the passage as an AAB pattern. [207]

But it is also possible to read the passage in terms of long notes and short notes, the latter always occurring in quarter-note pairs, as shown in Example 1. Such a reading permits us to think of the passage (very generally) as a melody with an accompaniment, and Example 1 renotates the theme to illustrate this. Needless to say, a closer reading must differentiate between *forte* and *piano*—as Bailey does—as well as between slurred and staccato articulations, but the distinction based on duration will do for our current purposes. When we read the passage in this manner, we find that the six-note phrases of the melody extracted

¹⁹Although the author refers to this edition of the score (Vienna: Universal Edition, 1979) at one point [192], it is only with regard to a discussion of the *first* movement.

Example 1. Variations op.27/III, mm. 1—12 (Hands altered to show melody and accompaniment).

Contour y:



Webern *Variations*, op. 27. Copyright 1937 by Universal Edition. Copyright renewed. All Rights Reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian agent for Universal Edition.

from each row (from order positions {0,3,6,7,8,9} in the first row, P, for example) can themselves be interpreted as ordered hexachords from other members of the row-class.²⁰ The resulting pitch-class pattern, interpreted in terms of hexachordal areas, suggests interpreting the three portions of the passage as ABA', a little ternary shape with a varied reprise.²¹ (This last is not meant to supplant the author's AAB interpretation, but to suggest an additional way of hearing the passage.)

Both the ternary shape of this passage and its pitch structure have an enormous impact on the following variations. The most obvious example occurs immediately in mm. 12 and 13, where the initial six-note phrase of the melody of what I will refer to as the Theme is almost *literally repeated*, transposed up a minor ninth. Only one interval is replaced by its octave complement, and the final compound interval has been shrunk by an octave, but the sense of repetition is absolutely clear. Furthermore, this slight alteration allows the last four notes of the passage to reproduce the contour of the first four notes of the last phrase of the Theme's melody in measure 10. This contour permeates the first variation.²² Example 2 reproduces the first variation, renotated in

²⁰In the current context, a row is some particular ordering of the twelve pitch-classes, and a row-class is that set of rows equivalent under the classic twelve-tone operations.

²¹The embedded hexachords were first pointed out to me by Robert Morris in a course on twelve-tone theory and analysis at Yale University in 1975. They are also mentioned in Wason 1987, an article on the Stadlen edition of op. 27 found in the author's bibliography. Wason also credits Morris with the observation. See also Lewin 1987: 38–44 for an especially subtle and elegant reading of the opening of the theme, connecting pitch and rhythm in wonderfully deep ways. It is also worth paying attention to the different degrees to which the ends of rows intersect in the theme, as this effects a sense of pitch-class overturn ("harmonic") rhythm. While the beginning of the second row maximally intersects with the end of the first, the beginning of the retrograde of the first row at the end of the Theme minimally intersects with the end of the second row, on pitch-class A♯. Wason treats this issue as well.

²²Bailey notes the recurrence of these four pitches at the end of the variation, but does not include them as part of the six-note melodic phrase, or draw out the contour relation between them and the central motivic material.

Example 2. Variations op.27/III, mm. 12-23 (Hands altered to show melody and accompaniment).

Webern *Variations*, op. 27. Copyright 1937 by Universal Edition. Copyright renewed. All Rights Reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian agent for Universal Edition.

the same manner as the Theme. Example 3 summarizes the row structure of both the Theme and the first variation: segmental hexachords are enclosed in horizontal braces; motivic partitions, in square brackets.

Superficially, we can see that Variation I bears out the general tripartite shape of the Theme, with a modified return to the opening of the variation in its last bars. Some interesting things emerge when we look more closely. First, the continuation in mm. 14 and 15 in effect confirms and extends the strategy of the Theme. It does so by employing a new motivic partition which yields a hexachord that is both equivalent in content to segmental hexachords of the row-class, and represents only a slight variant of the segmental hexachordal ordering *not* motivically generated in the Theme. Here, the first hexachord of T_3P , (with the internal order of the first trichord reversed), is extracted from a statement of RT_6IP ; this may be contrasted with the extraction of the first hexachord of RT_6IP from P at the opening of the Theme, as illustrated in Example 3. (I take Webern's added tenuto mark over the D in m. 14 of Stadlen's edition as permission to absorb it into the melody; in effect, we are taught to handle this very pitch-class that way at the close of the Theme.) Second, the central portion of the variation takes up a set of three dyads used in the accompanimental layer of the Theme ($B/B\flat$, $C\sharp/C$, $F\sharp/F$ in m. 18), along with the aforementioned contour from the end of the Theme's melody. For our present purposes I will simply point these out as another example of motives taken up from the Theme, but a lengthier analysis would address their relative positions and derivation, in both the Theme and first variation.²³

Third, and worth spending a bit more time on, is the row structure of the variation and its relationship to that of the Theme. As a look at any member of the row-class will illustrate, the rows of the work are based on the chromatic all-combinatorial hexachord. Because of this, the row-class may be divided into six families of eight rows each, with each family representing a

²³These dyads represent the first and last pair of dyads, as well as the central dyad, in the accompanimental layer of the Theme. Wason 1987 notes the return of these dyads, along with certain other more subtly varied motives from the Theme in the first variation.

Theme:

P: ^{*}
 .. E^b B B^b D C[#] C F[#] E G F A G[#]

Compare with RT₁IP: E^b D F[#] E G F B B^b A C[#] C A^b

T₆IP: E^b G G[#] E F F[#] C D B C[#] A B^b

RP: G[#] A F G E F[#] C C[#] D B^b B E^b

Var. 1:

First Section:

T₁P: E C B E^b D C[#] G F A^b F[#] B^b A

RT₆IP: B^b A C[#] B D C F[#] F E G[#] G E^b
 (new motivic partition)

New Motivic Partition:

Compare with T₃P:

F[#] D C[#] F E E^b (etc.)

Central Section

P:	E ^b B B ^b D C [#] C	F [#] E G F A G [#]
RT ₇ IP:	B B ^b D C E ^b C [#]	G F [#] F A G [#] E
RT ₁ IP:	F E G [#] F [#] A G	C [#] C B E ^b D B ^b
RT ₇ IP:	B B ^b D C E ^b C [#]	G F [#] F A G [#] E

Closing Section:

RT₀IP: E E^b G F A^b F[#] C B B^b D C[#] A

* _____ = segmental hexachord.
 _____ = motivic partition.

** indicates both pc content and order.

Example 3. Row Structure of Theme and First Variation.

different hexachordal region. The underlying rows of the Theme represent two regions; their surface partitions represent two more.

When we look at the row structure of the first variation, we observe the following. The two hexachordal regions represented by the first row and its motivic partition reproduce the same pair of areas as the second row of the Theme, while exchanging their roles. In other words, the pcs found as a hexachordal row segment in the second row of the Theme are extracted motivically at the opening of the first variation, while the long tones derived motivically from the central row of the theme are found together in the first segmental hexachord of the variation (see Example 3). The second row of the variation is the retrograde of the second row of the Theme, whose hexachordal segments thus immediately reproduce the hexachordal region of the preceding motivic partition.

The central section of the variation is comprised of a repetition of the initial row of the Theme, P, followed by three rows whose segmental hexachords replicate those of P (RT₇IP, RT₁IP, RT₀IP, m. 22ff.) returns to the motivic partition scheme used at the opening of the variation and throughout the Theme, and reproduces the initial two hexachordal regions of the variation with reversed roles: what had been the segmental hexachordal area is now the motivic area, and vice versa. This is illustrated in Example 3.

We can draw several points out of the preceding. First, while the underlying row structure echoes the tripartite structure of the Theme it exchanges the roles of its particular hexachordal areas: the hexachordally-determined ABA of the Theme becomes BAB in the variation. Second, the first appearance of the motivic partitioning not only alerts us to the initiation of the variation through a very clear reproduction of two aspects of the Theme's melody, but also verifies the identity of the unordered hexachordal type between the segmental hexachord and that drawn out motivically, by reproducing in exchanged roles the two regions found in the middle of the Theme. Third, and perhaps most important, the varied reprise of the beginning of the variation makes clear the *ordered* identity of the motivic hexachord, by employing the row that contains *segmentally* the same ordered hexachord as was produced *motivically* at the beginning of the variation—one more instance of the strategy of exchange permeating the variation.

I will not continue with a full examination of the rest of the movement, except to mention a few points. The remaining variations in various ways continue to employ both motivic aspects of the Theme, and, in one way or another, to embody the Theme's tripartite shape.²⁴ It is perfectly true that the underlying row structure sometimes crosses the boundaries of the variations, but this should not be viewed as problematic. One of the interesting challenges of writing music in general, and sets of variations in particular, is to create levels of musical continuity that cross boundaries established by other musical means; this occurs repeatedly in the tonal repertoire.

In the present work, we can see a chain of rows each related to the next by RI at such a value as to permit the elision of the end dyads, moving from the last two rows of the third variation (Webern's III), and concluding with the initial row of the last variation (Webern's V).²⁵ This chain encompasses a presentation of the initial row of the movement at the close of Variation III, and again at the opening of the final variation, but it also includes the unique presentation in the movement of the member of the work's row-class that was invoked by the motivic partitioning of the very opening of the Theme. Furthermore, this presentation occurs at the initiation of the passage marked "Höhepunkt" by Webern in Stadlen's score, the climax of the movement and of the composition as a whole! This is illustrated in Example 4.

Several things about the movement and the whole work coalesce in this passage. Not only do the accompanimental dyads return, initially as segments of the row we have been discussing, but Webern's highpoint is on A ♯, a pitch-class of enormous importance throughout the entire composition.²⁶ The sense of completion and conclusion of the work as a whole is reinforced in the following final variation by its use of a vastly slowed version

²⁴See, for example, the use of the accompanimental dyads in Webern's Variation II, and the middle-register production of a referential chromatic hexachord over the span of the final variation.

²⁵See Lewin 1987, 182, as well as Wason 1987.

²⁶It is another instance of this pitch-class, for example, that forms the axis of inversion of the second movement.

Example 4. Measures 52–53.

The image shows a musical score for two staves, likely piano and right hand. The top staff is in treble clef and the bottom staff is in bass clef. The key signature has one sharp (F#). Measure 52 is circled in black. Above measure 52, there is a circled 'X' and the marking 'RT₂P'. Above measure 53, there is a circled 'X' and the marking 'T₂P'. The tempo and dynamics marking 'molto ff' is placed between the staves. The score includes various musical notations such as notes, rests, and dynamic markings.

Webern *Variations*, op. 27. Copyright 1937 by Universal Edition. Copyright renewed. All Rights Reserved. Used by permission of European American Music Distributors Corporation, sole U.S. and Canadian agent for Universal Edition.

of the rhythmic presentation of the opening of the first movement, a feature pointed out in Lewin 1987.

The preceding points are not arcane abstractions, but concrete aspects of the way one may hear this music, based on such traditional musical values as pitch and rhythm, interval and motivic contour, melody and accompaniment. Nor can they be dismissed as the minutiae of yet another idiosyncratic analysis. Analyses that seek to relate a composition to a larger context hinge upon their hearing of the composition, and Bailey's conclusions about the ironic relation of Webern's sets of variations to traditional practice are directly contradicted by the hearing of op. 27/III developed above. I cannot agree with her that the sectional nature of the movement is arbitrarily imposed upon its pitch structure, or that its various sections, the variations, are in no sensible way related to the opening eleven bars. On the contrary, the way this music works seems to spring from the subtle integration of relations from throughout the levels of the twelve-tone system, from its deepest general principles to the details of sounding surface, bodying forth the music's formal shapes. Moreover, Webern has composed his variations in a manner that draws one's ear from the obvious events of the surface, ever deeper into the structure of the music. These are all points that could be easily communicated to musically literate but theoretically untrained readers, and could be well used to entice them into a deeper and richer understanding of Webern's work.

As I suggested at the outset, I am deeply sympathetic with the author's goals. Webern's relation to traditional compositional practice is fascinating, and deserves to be presented and examined in ways that can be shared with a wide range of readers interested in twentieth-century music. But doing so requires a great deal of care in both conception and presentation. Despite their brevity, Webern's twelve-tone compositions take full advantage of a wide range of relationships drawn from the twelve-tone system to embody in very subtle ways a series of formal models whose outward appearance coincides with the outward appearance of tonal forms. The analogy between Webern's forms and those of tonal practice, however, is not best drawn at the surface, but at a deeper level, at which in both cases the relational properties of their respective grammars allow similar patterns to grow. The outward flourishing of such growth allows Webern's music to share with its tonal predecessors the sense of integrity that arises

from a wholeness of structure, in which the events on the surface reflect and are reflected by events unfolding over ever larger musical spans. This is an extraordinary achievement, and we owe it to ourselves to take the necessary time and develop the necessary tools to appreciate it.

References

- Babbitt, Milton. 1955. "Some Aspects of Twelve-Tone Composition." *The Score and IMA Magazine* 12:53–61.
- _____. 1960. "Twelve-Tone Invariants as Compositional Determinants." *Musical Quarterly* 46/2:246–59. Reprinted in *Problems of Modern Music: The Princeton Seminar in Advanced Music Studies*, edited by Paul Henry Lang, 108–21. New York: Norton, 1962.
- _____. 1961. "Set Structure as a Compositional Determinant." *Journal of Music Theory* 5/1: 72–94. Reprinted in *Perspectives on Contemporary Music Theory*, edited by Benjamin Boretz and Edward T. Cone, 129–47. New York: Norton, 1972.
- _____. 1962. "Twelve-Tone Rhythmic Structure and the Electronic Medium." *Perspectives of New Music* 1/1: 49–79. Reprinted in *Perspectives on Contemporary Music Theory*, edited by Benjamin Boretz and Edward T. Cone, 148–79. New York: Norton, 1972.
- _____. 1971. "Contemporary Music Composition and Music Theory as Contemporary Intellectual History." *Perspectives in Musicology*, edited by Barry S. Brook, Edward O. D. Downes, and Sherman J. van Solkema, 151–84. New York: Norton.
- _____. 1973. "Since Schoenberg." *Perspectives of New Music* 12/1:3–28.
- _____. 1987. *Words about Music*. Edited by Stephen Dembski and Joseph N. Straus. Madison: University of Wisconsin Press.
- Cone, Edward T. 1967. "Beyond Analysis." *Perspectives of New Music* 6/1:33–51. Reprinted in *Perspectives on Contemporary Music Theory*, edited by Benjamin Boretz and Edward T. Cone, 72–90. New York: Norton, 1972; and in *Music: A View from Delft*, edited by Robert P. Morgan, 55–76. Chicago: University of Chicago Press, 1989.
- _____. 1969. "Mr. Cone Responds." *Perspectives of New Music* 7/2: 70–72.
- Forte, Allen. 1973. *The Structure of Atonal Music*. New Haven: Yale University Press.
- Haimo, Ethan. 1985–6. "Secondary and Disjunct Order-Position Relationships in Webern's op. 20." *Perspectives of New Music* 24/2:406–19.
- Lewin, David. 1969. "Behind the Beyond." *Perspectives of New Music* 7/2: 59–69.
- _____. 1977. "A Label-Free Development for 12-Pitch-Class Systems." *Journal of Music Theory* 21/1:194–237.
- _____. 1987. *Generalized Intervals and Transformations*. New Haven: Yale University Press.
- Martino, Donald. 1961. "The Source Set and Its Aggregate Formations." *Journal of Music Theory* 5/2:224–73.
- Morris, Robert. 1987. *Composition with Pitch-Classes: A Theory of Compositional Design*. New Haven: Yale University Press.

- Peles, Stephen. 1983–4. “Interpretations of Sets in Multiple Dimensions: Notes on the Second Movement of Arnold Schoenberg’s *String Quartet #3*.” *Perspectives of New Music* 22/1–2:303–52.
- Perle, George. 1962. *Serial Composition and Atonality: An Introduction to the Music of Schoenberg, Berg and Webern*. Berkeley: University of California Press.
- Pousseur, Henri. 1966. “The Question of Order in New Music.” *Perspectives of New Music* 5/1: 93–111. Reprinted in *Perspectives on Contemporary Music Theory*, edited by Benjamin Boretz and Edward T. Cone, 97–115. New York: Norton, 1972.
- Rahn, John. 1980. *Basic Atonal Theory*. New York: Longman.
- Rosen, Charles. 1980. *Sonata Forms*. New York: Norton.
- Samet, Bruce. 1987. *Hearing Aggregates*. Ph. D. dissertation, Princeton University.
- Schenker, Heinrich. [1935]. *Free Composition*. Translated and edited by Ernst Oster. New York: Longman. 1979.
- Schoenberg, Arnold. 1975. *Style and Idea*. Edited by Leonard Stein, translated by Leo Black. London: Faber and Faber.
- _____. 1985. *Fundamentals of Musical Composition*. Edited by Gerald Strang and Leonard Stein. London: Faber and Faber.
- Starr, Daniel. 1978. “Sets, Invariance and Partitions.” *Journal of Music Theory* 22/1:1–42.
- _____. 1984. “Derivation and Polyphony.” *Perspectives of New Music* 23/1:180–257.
- Travis, Roy. 1966. “Directed Motion in Schoenberg and Webern.” *Perspectives of New Music* 4/7:85–89.
- Wason, Robert. 1987. “Webern’s Variations for Piano, op. 27: Musical Structure and the Performance Score.” *Intégral* 1:57–103.
- Webster, James. 1980. “Sonata Form.” *The New Grove Dictionary of Music and Musicians*, edited by Stanley Sadie. Vol. 17:497–508. London: Macmillan.
- Westergaard, Peter. 1966. “Toward a Twelve-Tone Polyphony.” *Perspectives of New Music* 4/2:90–112. Reprinted in *Perspectives on Contemporary Music Theory*, edited by Benjamin Boretz and Edward T. Cone, 238–60. New York: Norton, 1972.
- Winham, Godfrey. 1970. “Composition with Arrays.” *Perspectives of New Music* 9/1:43–67. Reprinted in *Perspectives on Contemporary Music Theory*, edited by Benjamin Boretz and Edward T. Cone, 261–85. New York: Norton, 1972.