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THE FRAMING INTERVAL AND ITS ROLE IN THE INTEGRATION OF MELODY AND FORM IN FOUR EARLY WORKS BY AARON COPLAND

by

Charles W. Gamble

A dissertation submitted to the Graduate Faculty in Music, in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

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Abstract

THE FRAMING INTERVAL AND ITS ROLE IN THE INTEGRATION OF MELODY AND FORM IN FOUR EARLY WORKS BY AARON COPLAND

by

Charles W. Gamble

Adviser: Professor Joseph N. Straus

Several movements from four of Copland's early pieces are examined. The four pieces are the Piano Variations, the Piano Sonata, the Sextet, and Statements. In each case, surface melodic events can be understood at least in part as the embellishment of a particular interval. The same interval also serves a structural role in the large-scale coherence of the movement in which it appears. That is, in each case, musical form is generated by the long-term embellished unfolding of this interval. In some cases, this unfolding occurs at the deepest background level; in other cases, it appears only in a relatively shallower middleground.

These observations about the music are situated relative to recent developments in the theory of post-tonal music. An analytical approach inspired by Heinrich Schenker's reductional/ hierarchical approach to tonal music is employed, but without Schenker's insistence upon rigorous tonality, or traditional harmonic practice. The framing interval can play a role in post-tonal theory analogous to that of the tonic triad in Schenker's theory of common

practice tonality. That is, the framing interval is present at all or most of the hierarchical levels in the music. After a reductional analysis identifies and eliminates subordinate tones, what is left is the two tones of the framing interval. The framing interval may also be integrated into a transformational theory of post-tonal music: important transformational events in the music involve (possibly embellished) motion up or down by this same interval.

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CHAPTER ONE: INTRODUCTION

In this paper, I analyze a small number of pieces from what has been called Aaron Copland's second style period. In other words, I am talking mostly about works from the years 1930 to 1935. This period of works--sometimes described as "absolute," "difficult," or "abstract"--is said to have begun with the apparent end of Copland's interest in jazz as a compositional resource, in pieces such as his Piano Concerto and Music for the Theatre, and to have ended with his return to programmatic and more accessible works, often built around folk materials (El Salon Mexico, Billy the Kid). [1]

I shall be concerned with the three major works of this half-decade: the Piano Variations, the Short Symphony, and Statements. I shall also look at another important piece of absolute or abstract music by Copland: his Piano Sonata, which was not premiered until 1939, but existed in sketch form as early as 1935. [2] My goal here is to expand the study of post-tonal non-serial music to include that of Aaron Copland. I believe that many of the recent and fruitful theoretical approaches to the music of Stravinsky and other composers can provide useful and inspirational models of great relevance to Copland's music. Specifically, I feel that a reductional Schenkerian approach, first liberated from its initial insistence upon rigorous tonality, and then coupled with atonal linear analysis

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[1] Arthur Berger, Aaron Copland (New York: Oxford University Press,1953), 38ff. Neil Butterworth, The Music of Aaron Copland (New York: Universe,1986), 54. Julia Smith, Aaron Copland: His Work and Contribution to American Music (New York: Dutton, 1955), 497.

[2] Dika Newlin, "The Piano Music of Aaron Copland," Piano Quarterly 111 (1980): 11.

and some aspects of pitch-class set theory, may add to our understanding of this repertoire. [3]

My intention in choosing these four works as my "database" is to bracket and put aside those of Copland's works that overtly refer to pre-existing musical traditions, such as jazz (the Piano Concerto), folk hymn (Appalachian Spring), or Mexican dance music (El Salon Mexico), and concentrate my efforts on the remainder, those pieces without any obvious connection to vernacular styles. I also intentionally avoid the further complexities involved with Copland's later adaptation of the twelve-tone method. Perhaps this bracketing will make it possible to discover some aspects of the "pure" Copland, or at any rate, of the "pure" early Copland. Most writers on Copland describe several style periods, but then go on to describe some of his major works as being exceptions to any scheme where the composer's stylistic development can be equated with his chronology. Lawrence Starr reminds us further that any comparison of Copland's "serious" pieces, as a group, to his more "popular" ones only creates more complications for any scheme of periodization. [4] In fact, Copland admitted to a "split personality" as far as his approach to style (serious or popular) was concerned. [5] Arthur

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[3] Important discussions of this theoretical perspective appear in James M. Baker, "Schenkerian Analysis and Post-Tonal Music," in Aspects of Schenkerian Theory, ed. David Beach (New Haven: Yale University Press,1983), 153-186; and in Roy Travis, "Towards a New Concept of Tonality?" Journal of Music Theory 3 (1959): 257-284. Further discussion and an extensive bibliography appear in Joseph N. Straus, "Voice Leading in Atonal Music," in Music Theory In Concept and Practice, ed. James M. Baker, David W. Beach, and Jonathan W. Bernard (Rochester: University of Rochester Press, 1997), 237-274.

[4] Lawrence Starr, "Copland's Style," Perspectives of New Music 19 (1980): 70f.

[5] Aaron Copland, The New Music, 1900-1960 (New York: Norton, 1968), 163.

Berger goes so far as to recommend that one should study Copland "without recourse to chronology." [6] In any case, I do not propose to resolve the issue of periodization, but just to bear it in mind. By the same token, I do not address Starr's interesting contention, following Berger, that Copland's compositional procedures were consistent across his many stylistic shifts. [7]

The music: a closer look

The Piano Variations (twenty variations and a coda) were composed in 1930, and first performed in 1931, with Copland himself at the piano. This eleven-minute work generated both critical acclaim and condemnation. Copland said in 1977:

> The Variations somehow filled a special niche in my production. I think it was one of the first works where I felt that "This is me"--that somebody else taking the same theme, would have definitely written something different. That's only natural, but in my mind, the piece had a certain "rightness" about it. The Variations seemed to flow one after another--varied of course, each one different--but each one seemed to follow on the other. [8]

For British critic Wilfrid Mellers, "there has never been a work more decisive in its originality" than the Variations. "The ragbag of the past is no longer relevant." [9]

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[6] Berger, Aaron Copland, 37-38.

[7] Lawrence Starr, "Ives, Gershwin, Copland: Reflections on the Strange History of American Art Music," American Music 12/2 (1994): 181f.

[8] Butterworth, The Music of Aaron Copland, 57.

[9] Mellers, Wilfrid, Music in a New Found Land (New York: Stonehill,1964), 84.

The Short Symphony (also known as Symphony #2) was written in 1932 and 1933. It is in three movements and was first performed in 1934 in Mexico City under the baton of Copland's friend and fellow composer Carlos Chavez, to whom the work is dedicated. It was however deemed "unplayable," (because of its rhythmic complexity) at least in the USA, by both Stokowski and Koussevitsky.[10] In 1937, in order to facilitate its performance, Copland rescored the Short Symphony as a sextet for string quartet, clarinet, and piano; this version was premiered in 1939. For simplicity's sake, I will focus my analysis on the sextet version.

Statements is a set of six short pieces for orchestra: "Militant," "Cryptic," "Dogmatic," "Subjective," "Jingo," and "Prophetic." These pieces were composed between 1932 and 1935; the set was first performed in its entirety in 1942. Each movement requires a different set of forces. "Cryptic," for example, is scored for winds only--flute, bass clarinet, bassoon, and brasses-- while "Subjective" calls only for violins, violas, and cellos. "Dogmatic" quotes the theme of the Piano Variations. According to Copland,

> The title of "statement" was chosen to indicate a short, terse orchestral movement of a well-defined character, lasting about three minutes. The separate movements were given suggestive titles as an aid to the public in understanding what the composer had in mind when writing these pieces.[11]

Copland's 1941 Piano Sonata is seen by many commentators as belonging stylistically if not chronologically to the period with

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[10] Aaron Copland and Vivian Perlis, Copland: 1900-1942 (New York: St Martin's Press, 1984), 209.

[11] Julia Smith, Aaron Copland, 156.

which I am concerned. Both Michael Haberkorn and Douglas Young detect the influence of Gabriel Fauré on this piece, which is a reasonable supposition, since Copland's teacher, Nadia Boulanger, had studied with Fauré. [12] Arthur Berger and Neil Butterworth both assert that the Sonata represents a return to the language of the Variations. [13] It seems to me that Copland must have put aside the sketches for this work in 1935 in order to work on more "accessible" pieces such as El Salon Mexico, returning to the Sonata later on. Copland wrote that he felt an "increasing dissatisfaction" with his relations with the public at this time, and that pieces such as El Salon Mexico "embody [a] tendency toward an increased simplicity."[14] His return to the Sonata and its more dissonant language appears in turn to represent dissatisfaction with his previous turn toward simplicity, and also prefigures his later tendency to alternate between "advanced" and simpler styles.

The literature: Scarcity and Inadequacy of Previously Published Analyses of Copland's Music

There is a large body of biography and style criticism dedicated to Copland; some of it is several decades old. There is, however, very little solidly analytical literature that provides the type of in-depth examination one can find in recent studies of Stravinsky or

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[12] Michael H Haberkorn, "A Study and Performance of the Piano Sonatas of Samuel Barber, Elliott Carter and Aaron Copland" (Ed.D. Dissertation, Columbia University Teachers College, 1979), 8,14. Douglas Young, "The Piano Music," Tempo 95 (1959): 18.

[13] Arthur Berger, "Copland's Piano Sonata," Partisan Review 10/2 (1943): 187. Butterworth, The Music of Aaron Copland, 84.

[14] Aaron Copland, The New Music, 160.

Bartók, for example. This seems quite surprising, given that Copland's music is so widely performed, and so widely known through recordings. There are at least two reasons for this situation. First, I think that scholars are somewhat uneasy with the idea of subjecting the work of still-living composers to this type of dissection and close study. Perhaps the composer's recent death will clear the way for a historical and analytical scholarly appraisal of his work as a whole, with an intensity and depth of focus appropriate to the magnitude of his achievement.

The second reason that scholars have neglected Copland is perhaps that it has been, until recently, just too difficult to get a grasp on his style and methods of composing. This difficulty is due to an almost debilitating lack of fit between the music and the various theoretical/analytical concepts, tonal or atonal, which were previously in use. It comes as no surprise that music theories valuing (and assuming) either strict tonality on the one hand, or rigorous atonality (not to mention serial procedures) on the other, would fail to produce convincing results when applied to Copland's works, since Copland's music of this period falls into neither of these categories. In his 1980 article Lawrence Starr points out that

> the very extent and diversity of Copland's achievement may tend to obscure any systematic and comprehensive evaluation of his real stature . . . [and] . . . may seem to invite superficial charges of eclecticism and lack of aesthetic direction or commitment, while it poses substantial problems to a conscientious investigator. [15]

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[15] Starr, "Copland's Style," 69.

These problems are only exacerbated by rivalry between adherents of mutually exclusive schools of music theory. The gap between older tonal and newer atonal theory corresponds to the historical position occupied by Copland the composer, among others. In this paper, I try to bridge this gap in order to better appreciate the work of this composer.

Some analyses have labeled some of Copland's pieces as "tonal," and as being in a certain key, but only at the cost of ignoring hosts of "wrong" notes. One 1979 dissertation, for example, labels the second movement of Copland's sonata as being in B major. [16] The conventional minimum definition of tonality requires at least the presence of functional triads with key-defining cadences and some kind of contrapuntal design which clarifies the meaning of dissonant tones. The movement in question clearly fails both of these tests. On the other hand, it does indeed evoke or refer to B major in some ill-defined way, although G# minor (the relative minor of B major) seems to me to be more strongly suggested. In either case, the simple assignment of this movement to a single key hides more than it reveals about the music, and betrays insufficient epistemological reflection. Specifically, it seems a logical error to enlarge (or dilute) the concept of tonality enough to label this movement as tonal. (See below, on the work of Roy Travis, for discussion of another example of this kind of error.) Little is gained by means of

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[16] Haberkorn, "A Study and Performance," 16.

such terminological generosity. Far more useful, to my way of thinking, is a stricter use of terminology, one that allows us to speak with much greater confidence and precision, albeit perhaps with somewhat reduced scope. Although one might wish to subsume as much music as possible under a single analytical heading, analogous to the physicist's (so far unachieved, and seemingly unachievable) goal of a unified field theory, doing so at this point in the development of a theory of post-tonal music probably constitutes the sacrifice of any intellectual consistency and "rigor" in the name of an unobtainable and probably chimerical goal.

Other theoretical approaches to Copland's music have not evoked tonal organization, but rather some component of more recent ideas about post-tonai music, such as collections, sets or rows. These discussions unfortunately rarely transcend the merely descriptive level. The starkly dissonant Piano Variations has justly aroused the greatest amount of such commentary. One author speaks of a five-note row (E, C, D#, C#, F#) as providing the material for the variations. [17] This analysis seems to ignore an obvious phrase boundary, present in many of the variations, between the fourth and fifth tone of this row. In other words, the music fails to confirm the segmentation suggested by the ascription of a five-note row. Another author segments the theme into a four-note fragment "circling around an angular chromatic motif with the major-minor overtones of jazz," followed by a second part with a

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[17] Butterworth, The Music of Aaron Copland, 54.

"more diatonic outline." [18] My investigation of this piece confirms that many of the variations do indeed open with extended and "unimpaired" presentations of this four-note major-minor fragment, also known as (0134) or 4-3. [19] However, neither of these approaches is satisfactory. That is to say, while the latter approach offers a more correct account of the music than the former, they nevertheless share an analytical focus which does not offer an avenue into a deeper understanding of the piece, but remains restricted only to a description of the musical surface.

Some other studies have obscured their basically correct observations behind a scrim of ill-conceived and poorly applied theoretical jargon. Julia Smith's analysis of the Piano Variations is a case in point. [20] For Smith, the entire piece is based on a "motto" consisting of the first four notes of the theme. (This much is quite true, as my analysis below will show.) She notes the blues character ("shifting thirds between C major and C minor") of the first three notes, and relates this observation to a specific passage in Copland's Music for the Theatre, from 1925. According to Smith, the fourth note, C#, incompatible with the blues-in-C approach, "obliterates a sense of tonality and establishes the work's pan-diatonic character." Smith goes on to invoke both serialism and

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[18] Young, "The Piano Music," 15.

[19] Set names in parentheses, such as (0134), are prime form indications. Names such as 4-3 are Forte names. For more information, see Forte, Allen The Structure of Atonal Music (New Haven: Yale University Press, 1973).

[20] Smith, Aaron Copland, 268-269.

polytonality as aspects of the work. [21] Useful analytical concepts are distinguished from merely descriptive labels such as these by their ability to lead us deeper into the music. Smith's discussion of the Variations speaks unfortunately more about the early history of Copland studies than about the music. Reference to the blues serves to link the composer to alienated urban America, which amounts to "putting him in his place." Smith is not alone in doing this. [22] Invocation of serialism reflects mostly the prestige of this technique in early postwar musical academia. Smith is paying lip service to two contradictory traditions: putting Copland in a box (the "blues") to reassert the ideological centrality of the European musical mainstream, and simultaneously rescuing him from oblivion by labeling him as a serialist.

Much more useful is a small group of theoretical/analytical treatments of some of Copland's works published by several of the most important American theorists of twentieth-century music. In his 1953 book on Copland, Arthur Berger acclaims the Variations as the focal point of Copland's work. [23] He first compares Copland's theme to that of Stravinsky's Octet, and then examines some of the variations in depth, noting Copland's use of octave displacements of

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[21] Smith, Aaron Copland, 268-269.

[22] See Mellers, Music in a New Found Land, for more of this approach. There is a distinct and regrettable tendency among writers on music to subject American composers to this type of approach, where aspects of the composer's personality or biography are offered as substitutes for in-depth discussion of the music. I am thinking particularly of the relationship between Charles Ives and Emerson and Thoreau, or of the characterization of Carl Ruggles as a "mountain man" from Vermont.

[23] Berger, Aaron Copland, 43.

notes of the theme, and his "method of constructing longer melodic lines out of short, nuclear elements by interpolation or extension."[24]

Lawrence Starr discusses Copland's music and the critical reaction to it in two articles widely separated in time. [25] Citing Berger, Starr confirms that the "key" to Copland's style might be the way he extends his initially simple material "through repetition and the gradual accretion or interpolation of new elements." [26] This observation is basically true, but it plays little part in my investigation, which seeks to show the inner coherence of the music, and not the "spun out" character of its outer appearance. On the other hand, Starr's comment does suggest that the elemental character of the surface materials might pale in importance when compared to the ongoing processes which operate on a larger scale to organize the work, especially when one considers commonalities across two or more works. This suggestion is confirmed by my research, as will become apparent in what follows. Berger's and Starr's ideas about the Variations are discussed further in chapters two and four.

In his Structural Hearing, Felix Salzer includes a Schenkerian-type reductional graph of the conclusion of the first movement of Copland's Piano Sonata. [27] He argues that this passage features the

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[24]Berger, Aaron Copland, 46f.

[25]Starr, "Copland's Style," and "Ives, Gershwin, and Copland."

[26]Starr, "Ives, Gershwin, and Copland," 173.

[27]Felix Salzer, Structural Hearing: Tonal Coherence in Music (New York: Dover, 1962), 194.

prolongation of a polychord; that is, the prolongation of a musical structure that has no clear function in any strictly tonal context. Salzer's graphic analysis is useful as a starting point for thinking about a piece of this sort, and also as an example of how Schenker's graphic style of analysis can be redesigned for application to twentieth-century non-tonal music. Salzer's specific ideas about this movement are compared to my own in chapter four.

In his Contemporary Tone Structures, Allen Forte makes an argument about the third movement of Copland's Four Piano Blues (1948) which is somewhat similar to Salzer's ideas about the first movement of the Sonata. [28] Although this piece is outside my database, I think it's useful to see what Forte has to say, especially in light of the general paucity of any published analyses of Copland pieces. For Forte, "the entire work is heard as an expansion of [a] single sonority," a minor-seventh chord, which is another non-functioning entity, at least in a very strictly tonal context, and in any case is certainly not a viable substitute for the tonic triad in a tonal piece. [29] His analysis is also quite similar to my own analyses, in this paper, of several movements from Copland pieces. I return to Forte's ideas in the context of my discussion of the first movement of the piano sonata, in chapter four.

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[28] Allen Forte, Contemporary Tone Structures (New York: Columbia University Teachers College Bureau of Publications, 1955), 63.

[29] Forte, Contemporary Tone Structures, 63.

Theory: Importance of a reductional, hierarchical approach to non-serial, post-tonal music

An analysis of a piece of tonal music can potentially account for every note in the piece, either as a chord tone or as a specific type of dissonant tone. Dissonant tones are subordinate to some nearby consonant tone; in like manner, most consonant tones are subordinate to some nearby tonic. This hierarchical organization of pitch makes possible a straightforward, unambiguous and usually noncontroversial reductional understanding of the music. If a passage is all in the same key, then the tonic pitch of that key can represent the entire passage at a deeper level, and so on. This feature of tonal music is the basis for many of the tonal theorist's analytical concepts: modulation, sonata form, etc.

Heinrich Schenker formalized this idea for tonal music, describing the organizing principle of a well made tonal piece as the contrapuntal unfolding of the tonic triad at various hierarchical levels, and in certain prescribed ways. When such a piece of music is understood in this manner, its long-term musical coherence becomes evident, and thus its aesthetic identity as a well-shaped and self-fulfilled whole is more easily grasped. The great facility and prestige of Schenker's analytical methods have stimulated efforts to understand post-tonal music in similar ways. However, post-tonal music is quite different from tonal music, which militates against this project. Although we have a widely accepted system by which we can name any pitch-class set, we have no

accepted basis for choosing one of its notes as a "root." [30] Furthermore, in most non-tonal musical contexts, there is no clear and generally accepted way to distinguish "dissonant" embellishing tones from more fundamental "consonant" tones. Without the ability to make these distinctions, it becomes quite difficult to make any kind of reductional analysis of a post-tonal piece which is not purely arbitrary. [31] Nevertheless, many theorists, including some of Schenker's own students, have tried to extend his basic concepts towards an understanding of more recent post-tonal non-serial music. [32] In other words, they have tried to separate his reductional/hierarchical approach from his insistence on strict tonality and traditional harmonic practice, discarding the latter, while preserving the former.

The first aspect of this extension involves a crucial reinterpretation of the original concept. That is, what exactly is being unfolded in a piece of post-tonal music, if not the tonic triad? I have already discussed Felix Salzer's answer to this question. He speaks of a prolonged or unfolded polychord as the organizational principle for part of Copland's sonata. Roy Travis, a Salzer student, addresses this question further in a 1959 article. [33] Travis first describes the famous opening bassoon melody of Stravinsky's Rite of

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[30] I will use prime form indications and Forte's set-class labels more or less interchangeably. Beyond this useful nomenclature, I do not incorporate any other elements of Forte's set-theoretical concepts.

[31] Joseph N. Straus, "The Problem of Prolongation in Post-tonal Music," Journal of Music Theory 31/1 (1987): 4.

[32] For a concise survey of such work, see Baker, "Schenkerian Analysis and Post-Tonal Music."

[33] Travis, "Towards a New Concept of Tonality?" 257-284.

Spring as the embellishment of an interval, specifically a descending minor third. [34] He then integrates this interval into a three-note dissonant sonority which encompasses the accompaniment parts as well as the melody. This sonority acts as a "tonic" for the opening passage of the Stravinsky piece. In a conscious attempt to extend Schenker's basic concepts to non-tonal music, Travis discusses the more general possibility that a piece of music could be organized around a "musical motion which unfolds through time a particular tone, interval, or chord." [35] That is, some non-triadic and/or dissonant musical entity (such as Salzer's polychord, or the dissonant trichord of the opening of the Rite of Spring) could take the place of Schenker's tonic triad as the fundamental structure of a piece of music. (Unfortunately, Travis expresses his ideas in terms of "a new concept of tonality," when it would be less confusing and more parsimonious to speak of a new principle of musical organization.) This search for some non-triadic musical entity that is unfolded through time is an important part of my own analytical project. As it turns out, the unfolding of an interval, in a manner comparable to that in the melody of the Stravinsky passage, describes precisely the musical processes of the four Copland pieces under discussion in this paper.

The second aspect of this extension of Schenkerian principles to post-tonal music involves the nature of the process of unfolding itself. Specifically, how is this non-tonal unfolding different from

[34]Travis, "Towards a New Concept of Tonality?" 257.

[35]Travis, "Towards a New Concept of Tonality?" 261.

a tonal unfolding? For example, is there some post-tonal analog, different from, but equivalent in function to, the "embellishing" passing tones and auxiliaries of tonal music? This question has received little attention in the literature. [36] Fortunately, my investigation need not wait upon the resolution of this theoretical problem. Copland's compositional practice, and thus my analysis, is based on more familiar tonal prolongational technique, as discussed below.

Methodology: My analytical approach to the music

I have demonstrated that many of the published analyses of these pieces are inadequate because they inappropriately look for tonal or serial forms of organization where no such thing exists, or because they remain focused only on the surface of the music. At the same time, I have argued in favor of an approach which recognizes that music is often organized in hierarchical layers, and which values an understanding of the ways in which these layers are interconnected. A proper analytical study of post-tonal music, in my opinion, requires that the analyst seek some surface feature of the music which is used in some systematic or at least consistent manner, and also that this surface feature be related in some way to a deeper more fundamental structure. Bearing in mind that each piece of post-tonal, non-serial music presents its own particular analytical difficulties, and that in twentieth-century music

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[36] Joel Lester, "A Theory of Atonal Prolongations as Used in an Analysis of the Serenade, Opus 24, by Arnold Schoenberg" (Ph.D. dissertation, Princeton University, 1971) 1-22. See also Jack Boss, "Schoenberg on Ornamentation and Structural Levels," Journal of Music Theory 38/2 (1994): 187-216.

(postdating the end of the period of "common practice") we will thus most often discover that viable methods for determining the significance of a note, phrase, or passage are contextually generated, as opposed to universally enshrined *a priori*, I have used the following methods in this study: [37]

1) I have focused my attention here strictly on pitch events in the melodic realm, usually but not always in the top line. This melodic focus functions as the basis for further reductional analysis, and allows comparison among a number of movements and/or pieces. It also helps to eliminate many of the segmentation issues around "harmony," specifically, which notes are "chord tones" and which are not. Another problem that is eliminated is the issue of too many "wrong notes" that cannot be accounted for. I simply ignore accompaniment tones, since I do not have a clear context for labeling them as "consonant" or "dissonant," and without such a context, such notes cannot be connected to any deeper structure or process. (Note, however, that in many passages, especially in the Variations, many of the pitch classes in the melody are identical to those in the accompaniment, and thus that this problem becomes less pressing.) My approach also avoids the excessive fragility and the resulting lack of any clear hierarchical outlook associated with analytical methods built around rhythmic aspects such as hypermeter or structural downbeat.

37"The good composition will always reveal, on close study, the methods of analysis needed for its own comprehension." Edward T. Cone, "Analysis Today," Musical Quarterly 46/2 (1960): 187. That is to say, theory evolves out of investigation, not vice versa.

2) I analyze these melodic events in terms of a framing interval, which structures the top line at the phrase level, and which is embellished in ways which are more or less familiar from tonal music. (This is quite similar to Travis's approach to the opening bassoon melody of the Rite of Spring.) I look for passing tones, neighbor tones, and the filling in of the framing interval with either scalar or chromatic material. (For the purposes of this study, I define these terms simply as follows: A passing tone fills in the gap, either horizontal or vertical, between the two tones of the framing interval. A neighbor note is adjacent to one of the tones, either a half step or a whole step away. Any further meanings for these terms, such as those derived from theories of tonal counterpoint, are irrelevant to this study. These terms should not be burdened with such further significance.) Thus the framing interval serves as a reduction of the melody at the immediate sub-surface level. In some isolated cases (e.g., the opening of the second movement of the sonata), melodies might also be amenable to an analysis in terms of the centricity of one tone of the framing interval. While this centricity is undeniably present in some passages, it is lacking in other passages. That is, sometimes the framing intervals take on the form of centricity, and sometimes they do not. The framing interval concept controls more of the music, and thus offers a better avenue into the structures of the pieces. Specifically, when two superficially quite distinct and non-comparable passages in a post-tonal piece have each been reduced to a framing interval, any relationships between them can more easily be discovered. This process gives us a powerful analytical tool,

comparable to that which allows a tonal theorist to discover the relationship between, for example, two dissimilar themes in a sonata movement, related in terms of key motion alone. Chapters two and three explore the various ways in which the framing intervals are made manifest and embellished, at the level of the musical surface, in the various pieces.

3) After I have identified the framing interval as the first sub-surface structure in the music, I look for still deeper structures that unfold a similar interval (or a closely related musical entity) over a longer stretch of music, in some cases covering entire movements. These unfolded structures interact in each case in unique ways with formal plans inherited from tonal practice: theme and variations, sonata form, or rondo. Also changing from piece to piece is the exact relationship between the framing interval and the corresponding deeper structure. Chapters four and five explore these issues in detail.

I concede that this method does not account for every note, and fails to address many important and interesting aspects of the music. Any method that aspires to such grand goals, for this body of music, and on the basis of current theoretical knowledge, would suffer too much from vagueness and abstraction, sacrificing a clear and concrete understanding of the particular in the name of sweeping but unconvincing generalizations. I prefer to make stronger, defensible and meaningful statements about relatively limited aspects of the music.

CHAPTER TWO: MELODY (1): THE CONSTRUCTION OF A MODEL

The melodies of the Variations, movement one of the Piano Sonata, and movements two and three of the Sextet are organized in the following manner: A single interval (sometimes embedded in a slightly more complex figure) is stated at or near the opening of the movement. The upper and lower notes of this interval serve as boundaries or framing tones for the remainder of the important melodic material, which is built around variants of the opening musical unit, and ultimately around the framing interval itself. In this chapter I look in some detail at the processes, including various types of embellishment and transformation, by which these variants are derived from the framing interval. I show that for each of these movements, the main melodic variants are internally related as abstract musical objects, due to their shared source in the framing interval.

At the same time, I show how this process of derivation is made transparent to the attentive listener. This transparency involves at least two salient procedures. First, the musical building blocks (variants of the basic material) are introduced in a logical order so that the music is structured in a comprehensible manner. For instance, if a chromatic neighbor is to precede a diatonic passing tone, that passing tone is firmly established and clearly audible as such, before the neighbor is introduced. This preserves the listener's sense that the piece is being progressively constructed in forward-flowing non-reversible linear time, and at the same time confirms an abstract (out-of-time) unity based in the

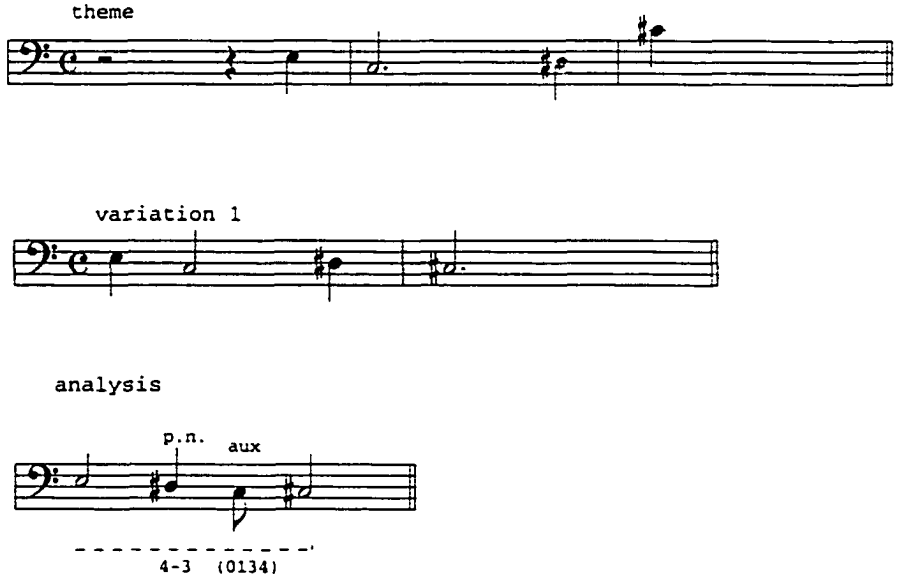
common source of each variant. In this regard, Copland seems unconcerned with hiding the evidence of his compositional labors.

A second aspect of this transparency, at least for the four movements discussed here, involves the front-orientation of the process of varying the basic motif. The beginnings of sections in Copland's music are the most clearly marked: the middles and ends of sections at the lowest structural level do tend to wander. (The very theme of the Piano Variations already has something of this character.) Each section tends to feature its own "head motif," which is a particular melodic presentation of the framing interval in a slightly enlarged or embellished form; the head motif is unambiguously stated at the beginning of the section, and sometimes subject to further development throughout the extent of the section. The statement of a new head motif serves the function of alerting the listener to important musical events ("this is a new section") on the largest structural level.

This sectionalization is equally marked in the Variations, with twenty-two sections, and the first movement of the Sonata, with seven. Audible marking of the beginning of each section becomes crucial when, as is often the case, events within a section depart from the mainstream of the musical argument. That is to say, each section may develop its head motif in some way that is <u>not</u> derived from, and does not contribute to, the relationship of that head motif to the overriding framing interval of the whole movement. Front-orientation helps to bridge this logical gap between a certain freedom or capriciousness at the musical surface, and clear progressively ordered events at an immediately deeper level.

Melodic Aspects of the Piano Variations

The opening phrase (the one most subject to variation) of the theme of Copland's Piano Variations, is a filled-in and embellished descending minor third. This is heard clearly at the beginning of the first variation. (See example 2.1.) While the opening interval of the theme is in fact a descending major third, the consistent appearance of E and C# (and their transpositional analogs in later variations) as first and last notes respectively, argue both for the structural predominance of the minor third as a framing interval, and for the identification of the C♮ and D# as subordinate embellishing tones. (Example 2.1 shows these relationships among these four notes.) The interval of the descending minor third, with its associated embellishing tones, is the source of most of the head motifs in this

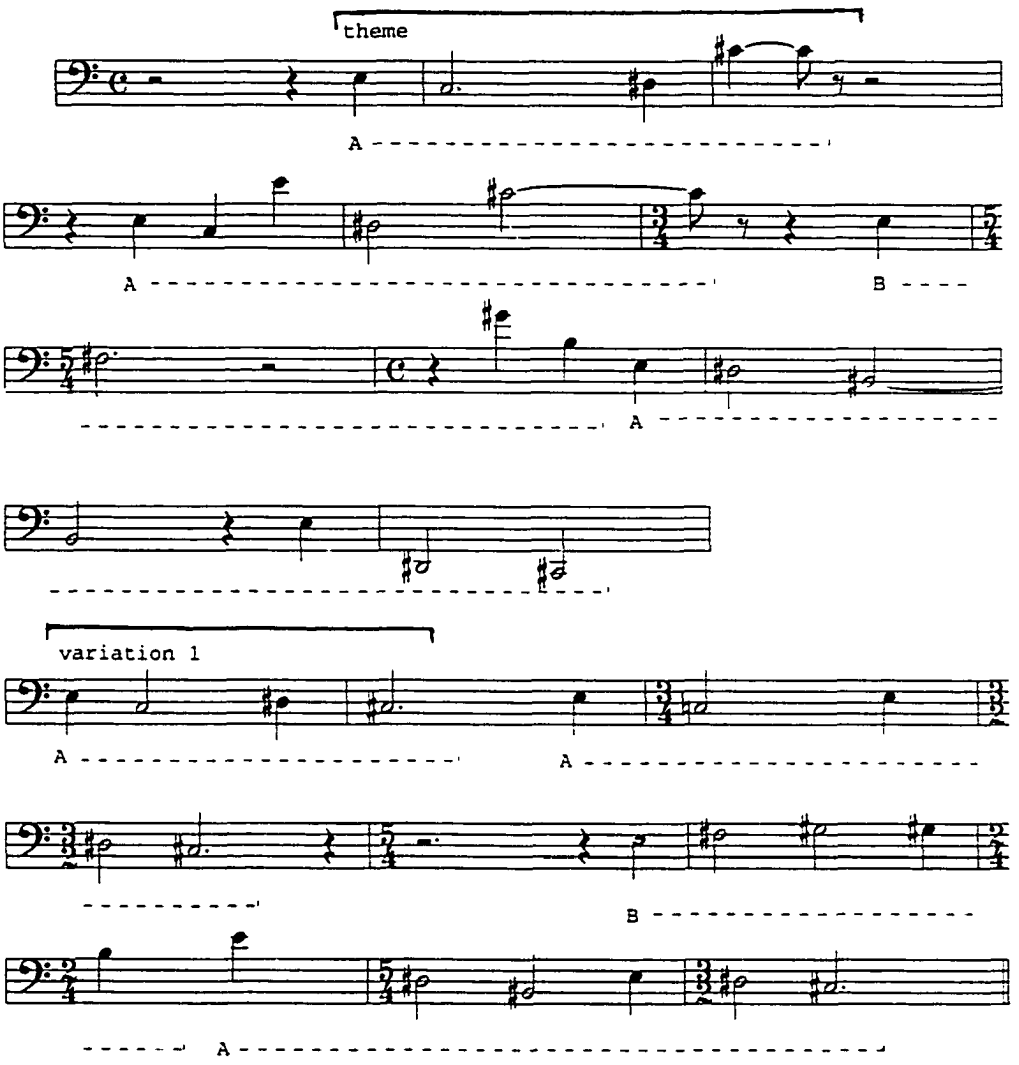


Example 2.1. First four notes of the theme, and of variation 1, with an analysis of both. A passing note lies between the tones of the framing interval. An auxiliary is applied to the lower tone of the framing interval. The four notes taken together equal a form of 4-3.

piece. (These four notes constitute a form of set class 4-3 (0134).) The head motifs are generated by registral, rhythmic, and contrapuntal processes, and by the simultaneous presentation of multiple versions of the theme. The abstract unity provided by an overarching framing interval is made concrete and perceptible by way of the cumulative development of the basic motif. That is, each head motif tends to build on something already heard in one or more previous variation. The audibility of this rootedness in prior events tends to group the variations into separate streams, which are interwoven and eventually combined. The following discussion demonstrates this process, revealing the subterranean connections among nominally equal and autonomous variations.

The theme and the first variation are given in example 2.2. The first variation is the clearest and least embellished version of the theme. That is, in variation 1 the notes of the theme are compressed into one octave, and embody traditional melodic rhetoric to a somewhat greater degree. In this and the following examples, the head motif is marked off by a solid horizontal bracket, usually above the staff.

The theme itself has its own basic shape, facilitating the "front orientation" discussed above. The form of the unadorned theme is AABA, where the A section is equal to the filled-in falling minor third. (This AABA organization is shown beneath the staves in example 2.2.) The second A section consistently features a repetition of the upper note of the framing interval. As might be expected, many of the variations feature B sections that are less ordered than the A sections. Nevertheless, most of the B sections

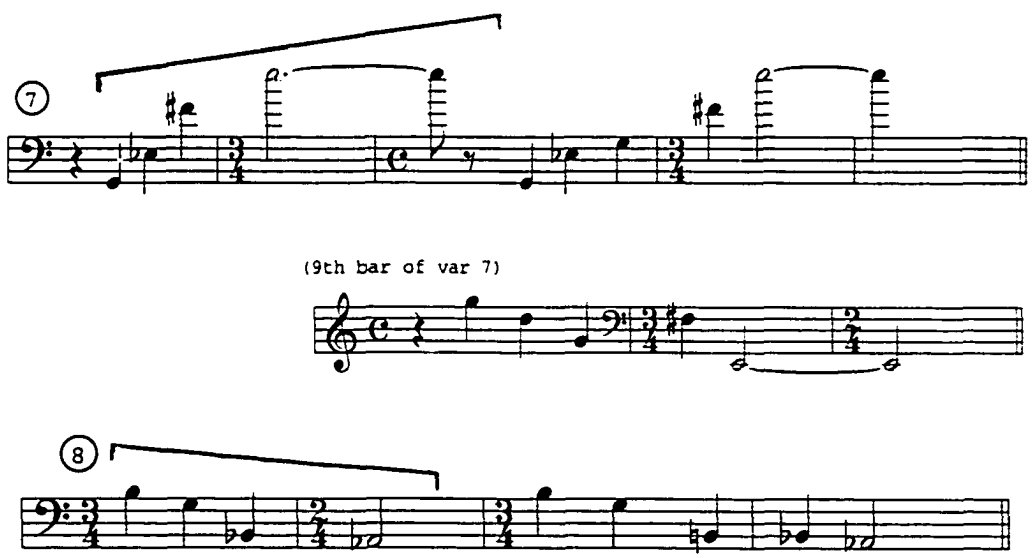


Example 2.2. Theme and Variation 1. The first variation, with the theme compressed into one register, is the simplest form of the theme. Letters and dashed lines show the AABA form of the theme.

tend to continue or extend the melodic and/or rhythmic templates already established within the A sections. This analysis is concerned with melodic events within B sections only when a particular B section participates in the main thrust of the musical argument, that is to say, when it lays the groundwork for an upcoming head motif. (On the other hand, do note the appearance, within the B section of the theme, of pitch classes F# and G#, the

fourth and fifth degrees of the key of C# minor. This connection, consistently transposed in many of the variations, is discussed further in chapter four.) The return to the head motif in the third A section at the end of each variation sometimes draws our attention to the beginning of the next variation. A good example of this phenomenon occurs in variation 7: while the first two A sections feature a head motif of rising arpeggios based on the basic motif, the final A section features a steeply descending arpeggio, which prepares us for the similarly descending figure in the next variation. (See example 2.3.)

In some of the variations, (e.g., 1, 3, 7, 8, 10) the basic motif is treated like an ordered melodic phrase, and embellished in simple and familiar ways such as rhythmic/metrical variation or the octave displacement of one or more tones. Rhythms, note order, and a general legato feeling are mostly similar to that of the theme.



Example 2.3. Rising and falling arpeggios in variations 7 and 8 provide an audible link between the two variations.

Example 2.3 shows, for example, that octave displacement in variations 7 and 8 results, respectively, in a rising, and then in a falling, arpeggiated treatment of the basic motif. Variations 11 and 14 become conspicuous due to their lack of any such octave displacement. (Variation 14 is especially conspicuous, because it returns both to the most basic registral deployment, and to the original pitch level, or "key". This is discussed further in chapter four.)

In some other variations (e.g. 2, 4, 15), the basic motif is treated more freely as a four-note collection, having shed some or all of the order relations among its members which might otherwise have served as constraints against certain possible combinations. A good example of the latter is variation 2. (See example 2.4.) All four pitch classes of the 4-3 tetrachord are present simultaneously in at least three registers: the set is stated horizontally and vertically, with scant regard for the order relations established previously. Lawrence Starr discusses this variation in terms of an "organic relationship between melody and harmony" and a "penetratingly dissonant texture, replete with bare cross-relationships and full, but equally astringent, chord types." [1] Many of the later variations will feature the theme accompanied by a varied and/or transposed version of itself, but only near the end of the coda will Copland return to this unordered but seemingly systematic distribution of the members of the set in several registers and voices.

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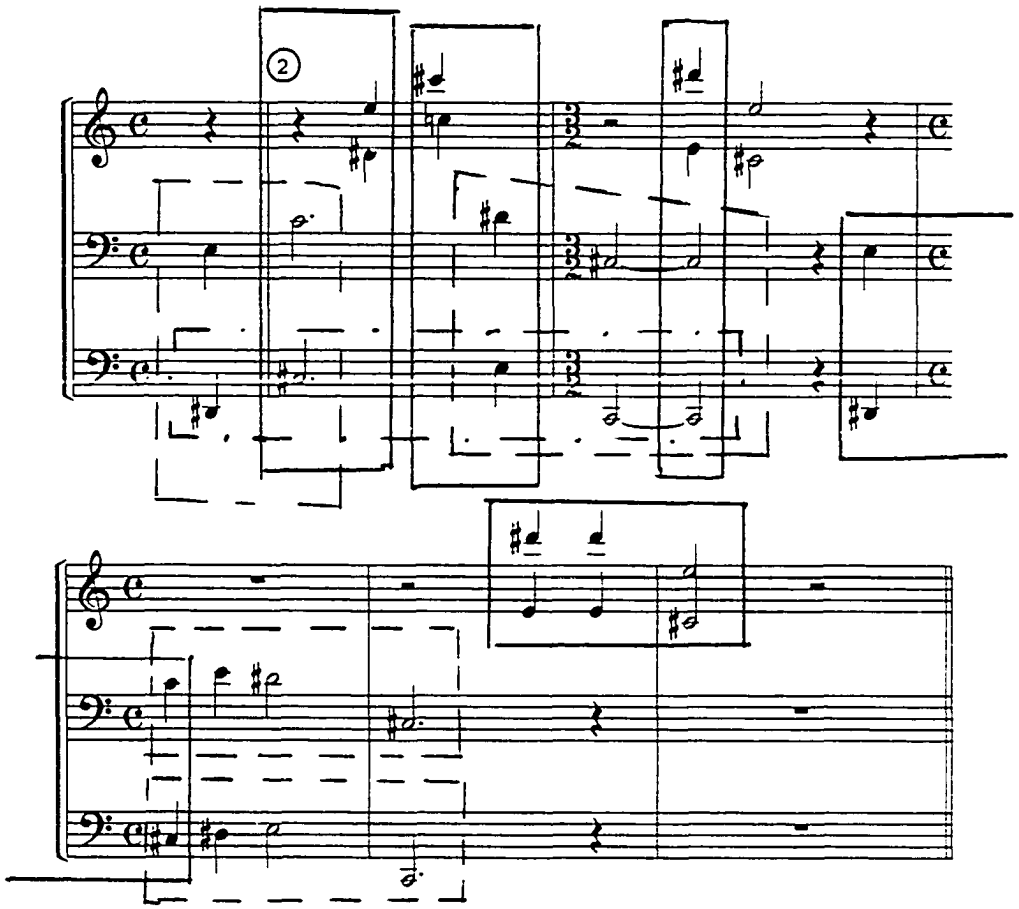
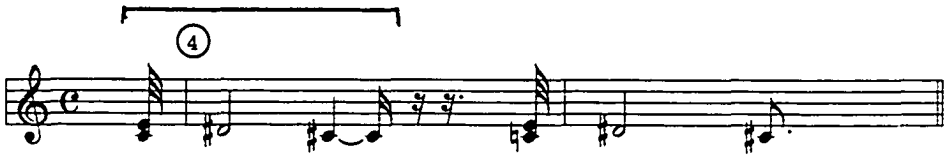
[1] Lawrence Starr, "Ives, Gershwin, and Copland: Reflections on the Strange History of American Art Music," American Music 12/2 (1994): 183-85.



Example 2.4. The opening of variation 2 presents 4-3 (0134) horizontally, vertically, and as a progression of consecutive dyads.

Several of the variations present rhythmic alterations of the basic motif. For example, while the head motif of variation 4 preserves both the original ordering of the notes, and the subordinate character (as lower neighbor) of the C♮, it also introduces the idea of short notes serving as an anacrucis or pickup, and combines with that the partial verticalization of the theme, as the first two notes are struck simultaneously. (See example 2.5.)

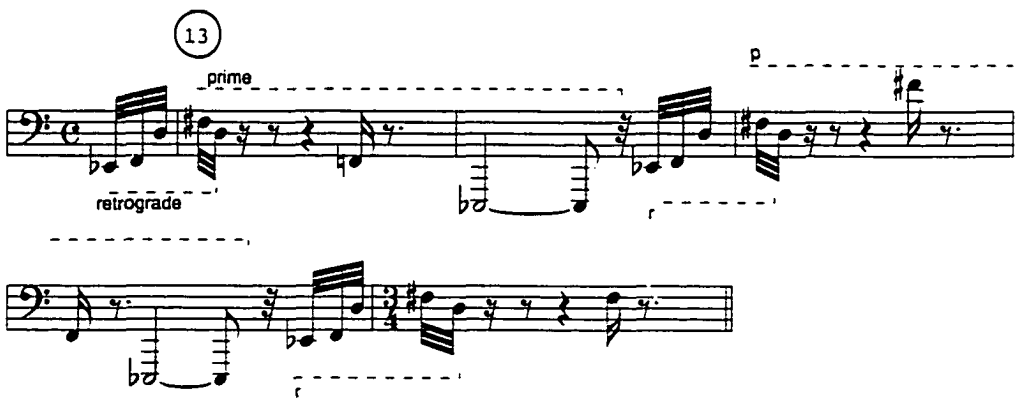
This exploration of shorter and faster notes in new rhythmic patterns continues. Variation 6 introduces groups of sixteenth



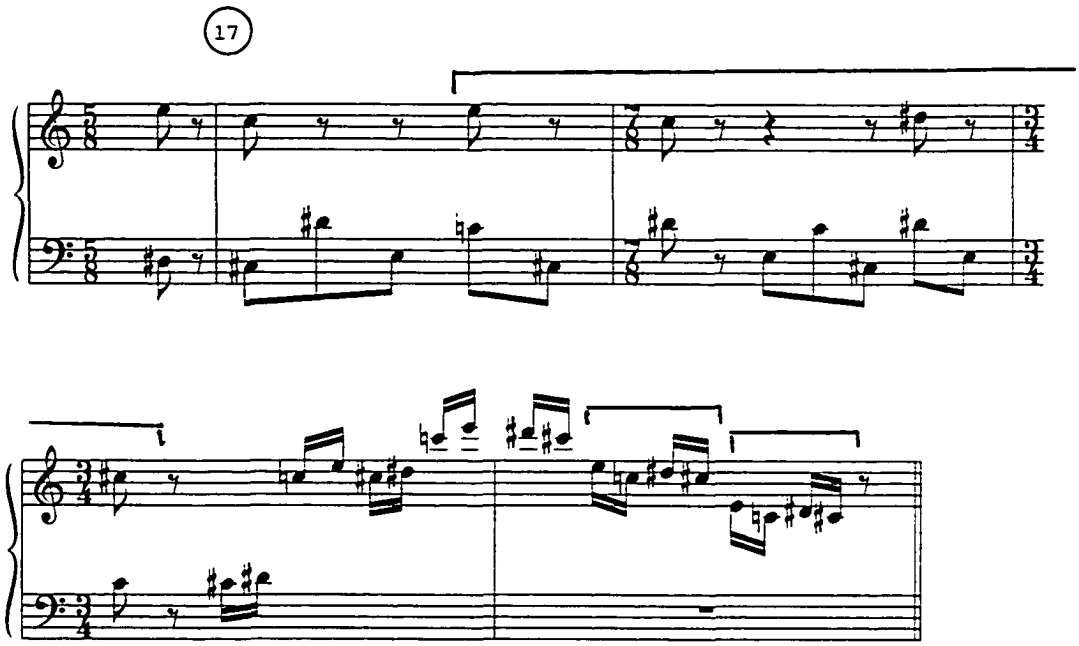
Example 2.5. Variation 4 introduces the verticalization of one of the dyads, which serves as an anacrucis.

notes, while Variation 12, marked "subito allegretto," marks the first appearance of staccato articulation in the piece, but with no change in note order. Variation 13 (see example 2.6) builds on the rhythmic precedent established in variations 6 and 12, and at the same time introduces one of the standard contrapuntal moves of twentieth-century music: the basic motif is heard first in retrograde, and then in the original ordering, (with the two forms overlapping: F# is the last note of the retrograde, and the first note of the original.)

The third and fourth bars of variation 17 feature more short fast notes. (See example 2.7.) The sixteenth notes from variations 6 and 13 reappear as a three-octave arching arpeggio on the four-note motif, which begins by presenting the notes out of order. After the registral peak is reached and then left, the notes finally sort



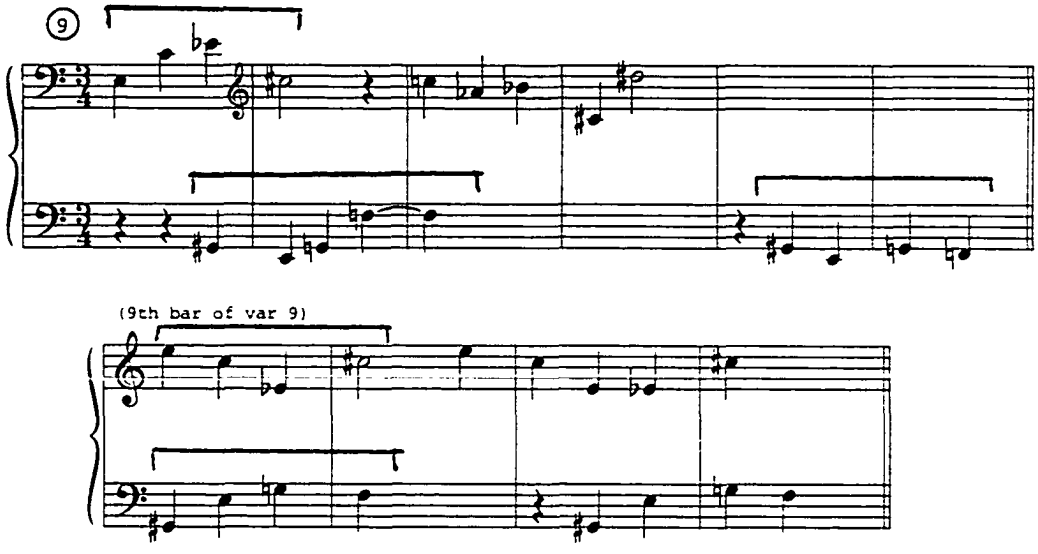
Example 2.6. Variation 13, with overlapping prime and retrograde forms of the head motif.



Example 2.7. Variation 17 presents its head motif in a three-octave arpeggio.

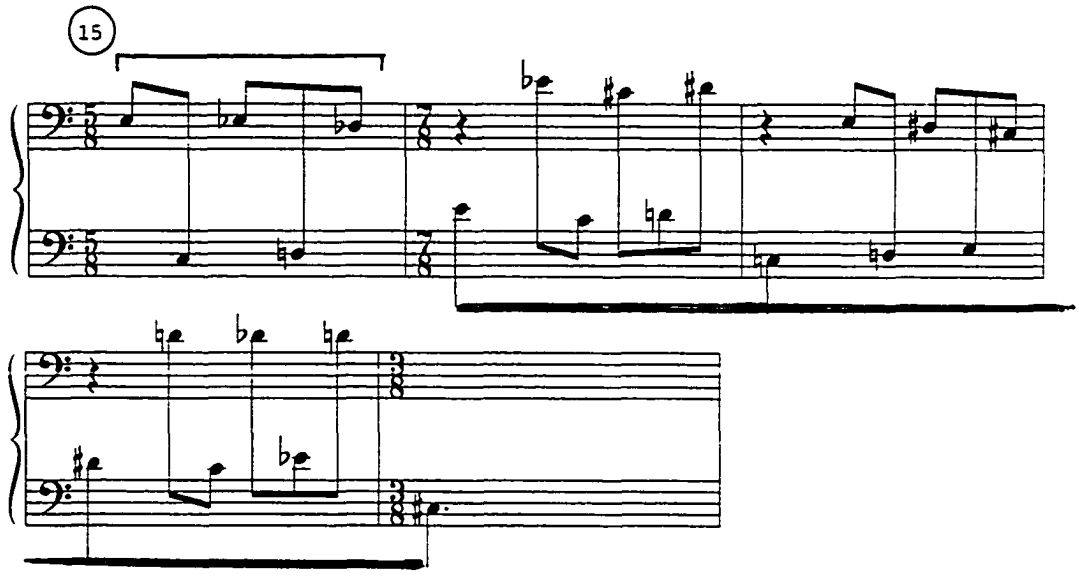
themselves out; the last two appearances of the tetrachord are in correct order. This is a multiple diminution on the first bar of variation 1. Note as well that the sixteenth-note figure does not present the notes in a random scrambled order, but preserves something of the original order. Specifically, the dyads are retained in their original ordering: E is still always paired with C, and D# with C#.

Several variations feature the basic motif in multiple forms simultaneously. In Variation 9, for example, the right hand presents the material at the original pitch level, while the left hand has it in a different key, starting a minor sixth lower. (See example 2.8.) At first the two keys seem to alternate; a few bars later they appear simultaneously. Both of these options will be used again, the former in variation 18, the latter in variation 20.



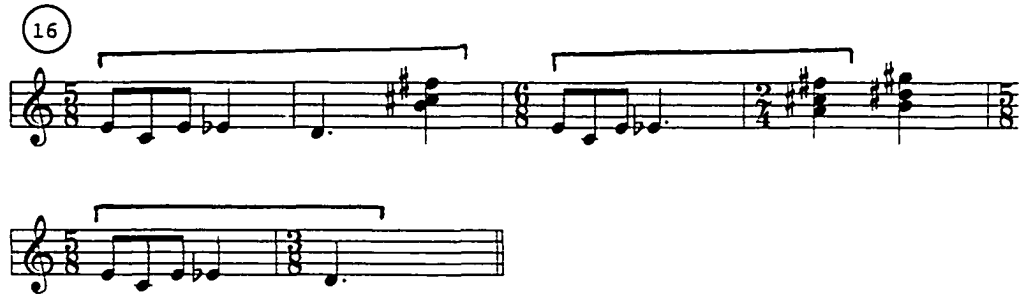
Example 2.8. In variation 9, the head motif is presented in two different "keys" simultaneously.

Variation 15 raises the basic motif to a new level of musical complexity, this time in the rhythmic realm. (See example 2.9.) The four-note theme is heard in quarter notes which sound at the beginning of each measure, accompanied by a faster version of the theme in eighth notes. (This accompaniment figure had first appeared in the B section of variation 14.) Thus the theme unfolds at two temporal rates simultaneously, encapsulating the type of organization characterizing the work as a whole, as discussed in chapter four. Each single note of the head motif at the slower tempo here lasts equally as long as the entire motif at the faster tempo, more or less in the same register. Variation 17 opens with a similar scheme: the basic motif is accompanied by a reordered version of itself at a faster tempo. (Refer back to example 2.7.)



Example 2.9. In variation 15, the head motif is presented at two speeds simultaneously.

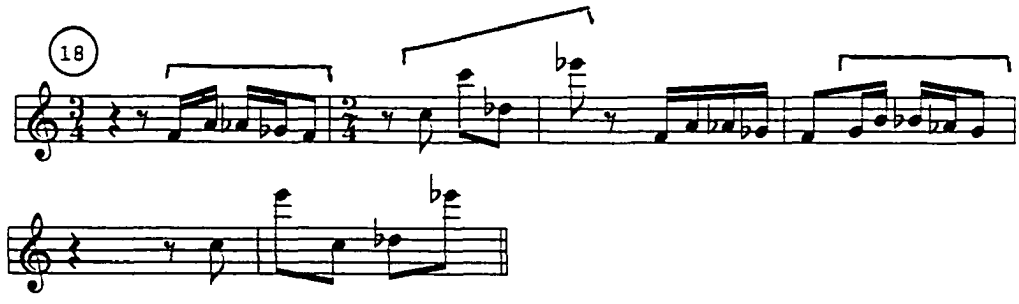
The various appearances of D♮ in variation 15 (shown in parentheses in example 2.9) mark the first appearance in a head motif of the fully chromatic filling in of the fundamental minor third, which raises in turn the possible appearance of new forms of the basic motif (without its heretofore obligatory minor third boundary tones) and, correspondingly, the possible salience of three new sets: 4-1 (0123), 4-2 (0124), and 5-1 (01234). The second of these possibilities is immediately realized in variation 16. (See example 2.10.) The new note is still D♮, since no transposition intervenes. The C# note, which "should" be the final note of the head motif, is indeed initially present, but somewhat obscured by virtue of being part of a five-voice chord, and not the highest voice in that chord. At the end of the third repetition of the head motif, the D♮ seems to have completely supplanted the more "correct" C#. This



Example 2.10. Variation 16 introduces a new pitch, and a new tetrachord into its head motif.

supplanting is confirmed by the repetition of these events at the end of the variation. In these two variations Copland has first hinted at a new development of his material, and then clearly demonstrated how that development could come about.

Variation 18 features two distinct head motifs, in three different keys, recalling melodic material from several previous variations. (See example 2.11.) The first bar features an almost seamless continuation of the sixteenth-note idea from variation 17, but in a new key. Bar two of the variation returns both to the opening key of the piece, and to octave displacement of the tones of the motif, with staccato articulation. As these two motifs alternate throughout the course of the variation, music reminiscent of variations 6, 13 and 17 alternates with music whose octave

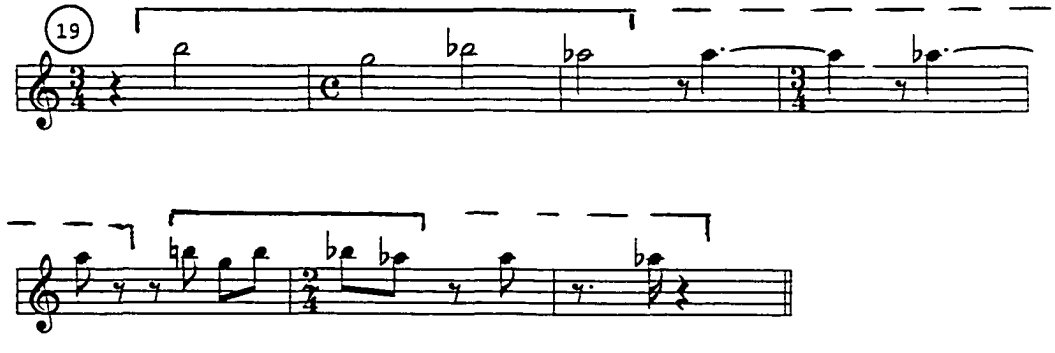


Example 2.11. Variations 18 presents two head motifs, in three different keys.

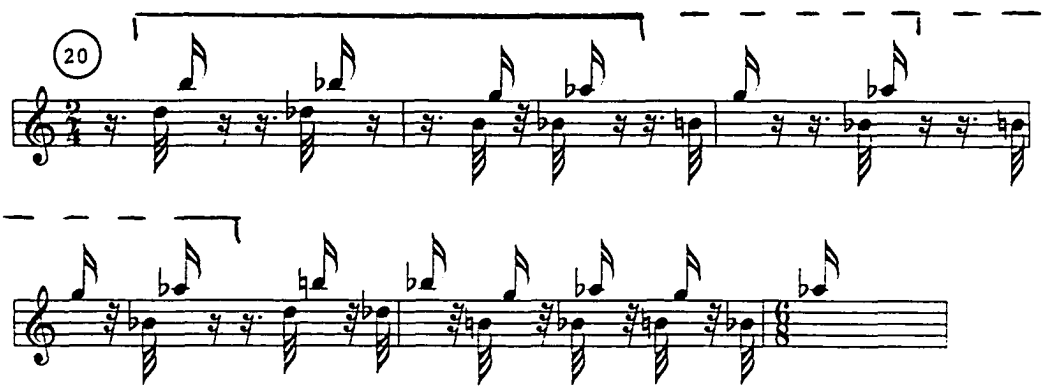
displacement idea reaches all the way back to the first statement of the theme. A complex interplay of various melodic, registral, articulative and harmonic events, marking the penultimate completion of tendencies present from the beginning, is heard as firmly grounded in previously heard material.

As if to accommodate his listeners, Copland returns to a slower tempo, and restricts his melody to a single octave in order to introduce a new and different transformation of his material. Variation 19 extends the basic motif by two repetitions of the final note, slowly at first, and then "subito allegro." (See example 2.12.)

Variation 20 continues with the idea of extension, but repeats, not the final note, but rather the final dyad (G and A♭) of the motif, twice. The motif is presented in an order permutation whereby the dependence of the lowest note upon the final note is made explicit: that G is only a neighbor note to A♭ is emphasized in this variation by the absence of any intervening pitch, and by the threefold repetition of this neighbor note event. (See example 2.13.) This final variation both introduces a new type of transformation of the basic motif, and reconfirms the falling minor third as the



Example 2.12. Variation 19 features a two-note extension of the head motif.



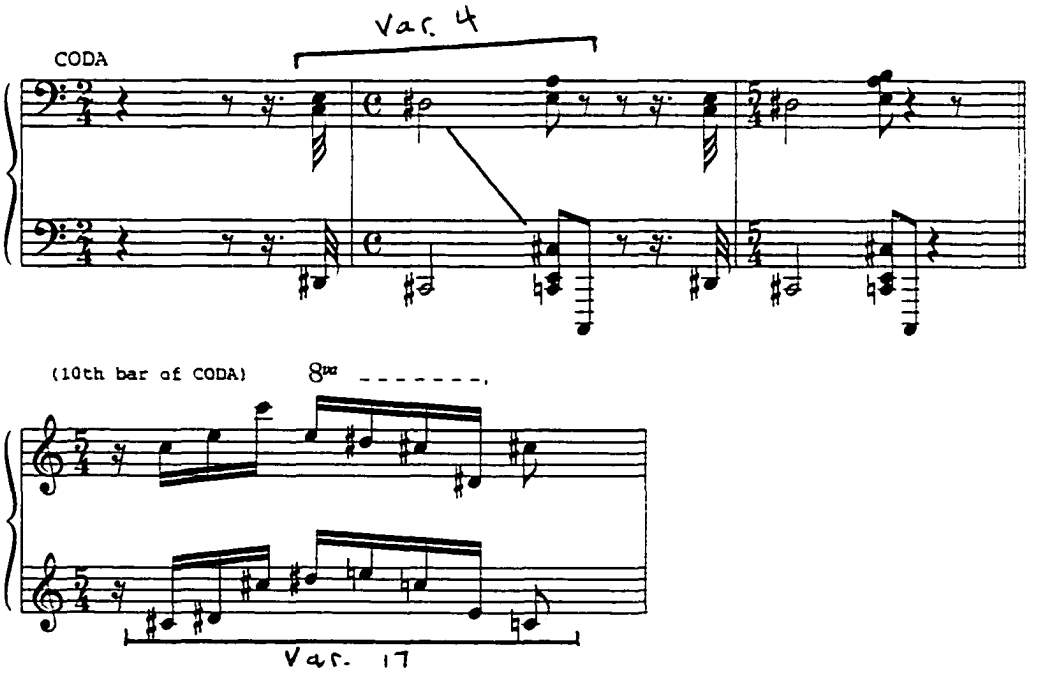
Example 2.13. Variation 20 extends its head motif by repeating the last two notes, twice.

structural boundary tones of that motif. The accompanying second voice here is also a form of the basic motif, reordered, and also with an extension of the final dyad, in a transposition whose principal pitch classes are D and B.

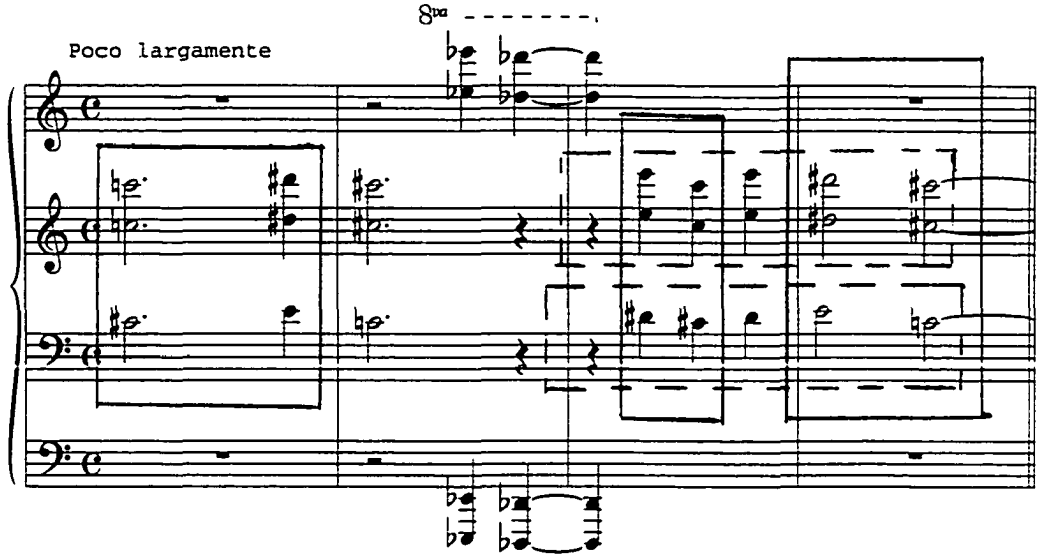
In the absence of variation 20, the "extension" in variation 19 could be heard as remaining in the lesser realms of rhythmic change, or mere rearticulation. After hearing the first part of variation 20, however, one is forced retrospectively to reconsider variation 19 as laying the groundwork for a transformation that is more distant from the original than anything else previously heard in this piece. Once again, Copland has taken us by the hand, and painstakingly unveiled the musical logic at work. Furthermore, that this relatively simple transformation of the basic motif is reserved for the final two variations (the nominal highpoint of the musical journey--that spot at which the most distant versions of the material are usually heard), underscores the remarkable restraint and discipline with which this piece was composed (Copland's famous "economy of means"), especially considering the more remote possibilities (melodic inversion, interpolation of other

material, sequence, imbrication, etc.) that were available, but not chosen. (This is especially so when the restricted range of the Variations is compared to that of the much more wide-ranging Piano Sonata, discussed below. Again, this difference could be the result of Copland's adherence to received ideas about theme and variations as one of the "forms," or, to put it another way, about variation as compared to development.)

The coda reviews and summarizes some of the head motifs previously heard, all at the pitch level of the opening theme. It starts with the head motif of variation 4. The head motif of variation 17 is suggested, but not actually stated, in the tenth bar. (See example 2.14.) Five bars later is a passage stating the basic motif in several ways at once, reminiscent specifically of the simultaneous multi-registral presentation of the motif in variation 2, and more generally of some of the earlier variations. (See



Example 2.14. Head motifs from variations 4 and 17 are reprised in the coda.



Example 2.15. The treatment of the head motif in variation 2 is reprised in the coda. Instances of the basic motif are enclosed in boxes.

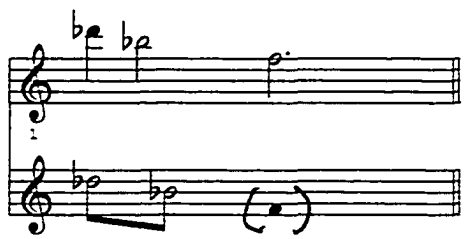
example 2.15.) The coda, and the piece, ends with a very low pedal tone on the C# note, preceded by its lower neighbor C♮, here spelled as B#.

The Piano Variations show Copland starting with a simple figure, a framing interval, filled in with a passing tone and embellished with an auxiliary (the four notes taken together alternatively hearable as an abstract set class), which generates a series of head motifs in a logical order. Later motifs build on the variants introduced in earlier ones: this process tends to group the variations into interwoven streams, each stream more or less devoted to developing just one musical idea, but tending to merge with the others toward the end of the piece. The head motifs serve as guideposts to musical developments that might in some cases be less organized than the head motifs themselves. The types of musical changes involved include rhythmic and articulative

variability, octave displacement, verticalization of the horizontal, transposition, order permutation, retrograde, diminution, phrase extension, the simultaneous presentation of the motif at two distinct tempos, or in multiple registers. Some of these play an important and constant role in the musical interplay (e.g., octave displacement), while some are introduced and then quickly dropped (e.g., retrograde). Copland initiates an exploration of the (unordered) collectional approach, then seems to abandon it in favor of more ordered developments, finally touching upon it briefly in his coda.

Melodic aspects of the Piano Sonata, movement one

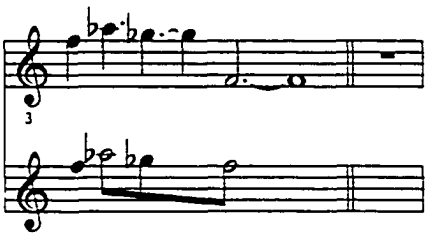
A falling minor third is stated in the top voice of the first bar of the first movement of the Sonata. (See example 2.16.) Music based on this framing interval recurs in the highest sounding register throughout the movement, as a series of variants altered by means of embellishing tones (passing tones and neighbors) and transpositions, with some unrelated material interspersed. Some of these variants act as head motifs, controlling sections of music, as was the the case in the Variations. Examples 2.17 through



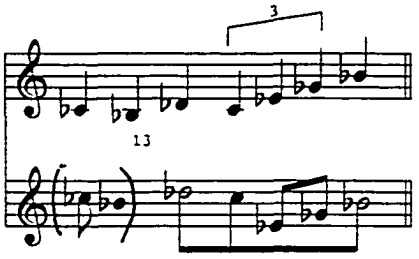
Example 2.16. Bar one presents the unembellished framing interval.

2.19, and 2.2 through 2.23, show the first appearance of selected variants of the minor-third motif, both as they appear in the score, and in analytical reductions which identify the function of each tone. In these reductions, the fundamental tones of the minor third are always shown as open noteheads joined by a beam. Passing tones that fill in the gap between the two fundamental tones, thus completing instances of set class 3-2, are shown as solid noteheads stemmed to the connecting beam. Other tones are shown with eighth-note flags, or as stemless notes. The variants are shown exactly as they appear in the score in each of the top staves of these examples; the lower staves show the analytical reductions in a "normalized" single register.

The first motivic variant (labeled as "variant 1" in example 2.17), appears at bar three. The basic dyad is filled in with a passing tone, and preceded by a (pre)statement of the final tone (which could also be heard as a repetition of the final tone of the previous figure.) The second variant at bar 11 is a further embellishment of the first, with an unprepared neighbor preceding the first note. Variant 3 (at bar 13, see example 2.18) features two pitches interpolated into variant two, and reaching up to a



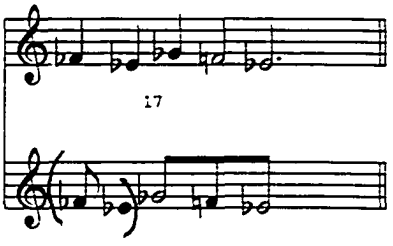
Example 2.17. Variant 1 features a passing tone.



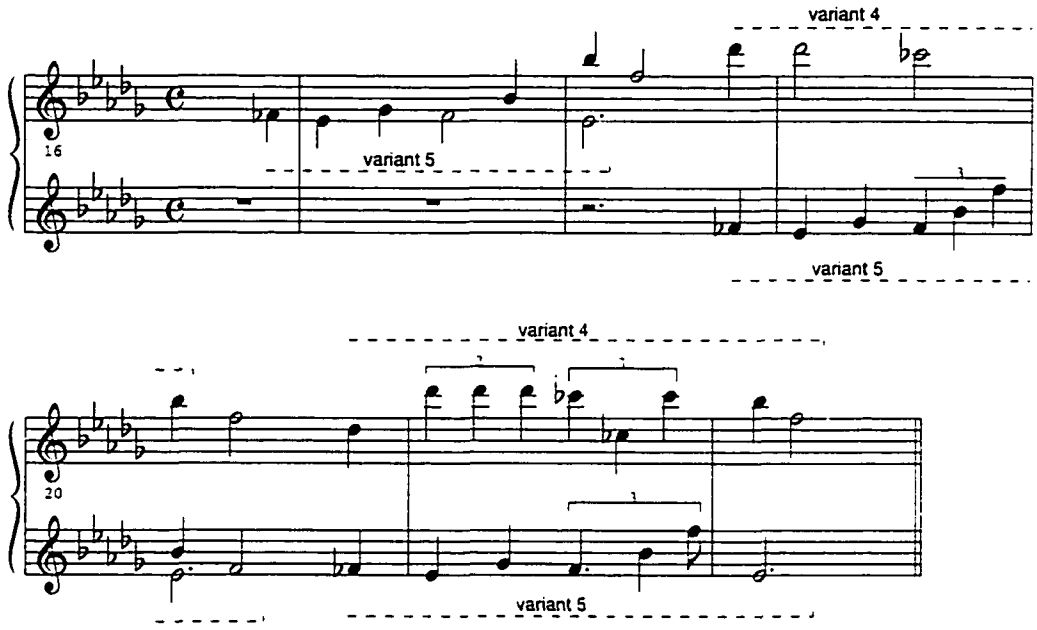
Example 2.18. Variant 3 features two interpolated pitches, reaching up into a higher register.

higher register. Variant 4 (bar 15) is just the original motif with an interpolated passing tone.

Variant 5 (at bar 17) is essentially the same as variant 2 (in bar 11), except for the precise identity of the passing tone. If bar 17 were an exact transposition of bar 11, we would expect the passing tone to be F♭. (See example 2.19.) Copland gives us F♮ instead. This is one of a few examples where he seems to violate the particulars of some non-tonal scheme in favor of preserving some aspect of a diatonic flavor. Usually the change in favor of diatonicism is a strictly local matter, and thus does not upset the larger scheme too much. In this case, the F♮ seems to be there to give the B♭ centricity some fifth support, or at least not to contradict the B♭ centricity. In any case, the resulting trichord (G♭,



Example 2.19 Variant 5 features a chromatic alteration of the passing tone.



Example 2.20. Entrance of the contrapuntal alto line.

F♮, E♭) is still a member of set-class 3-2, related to the set in measure 11 not by transposition, but rather by inversion.

At bar 18, an inner (alto) voice of equal melodic interest emerges, beginning with another statement of variant 5. (See example 2.20.) For several bars (18-22) we hear simultaneous melodies, with variant 4 featured in the right hand, and variant 5 in the left hand. This contrapuntal aggregation serves to create a gentle climax just before the three-bar cadence (23-25), which in turn marks the end of the first section of the music. As might be expected, a version of this passage is repeated in the recapitulation section, after bar 196.

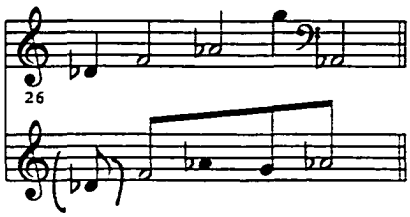
Music comprised of the basic motif and its first five variants makes up the thematic melodic statements in what I have called the exposition (bars 1-25), the recapitulation (bars 196ff), and a

Example 2.21. Form of Movement one of the Piano Sonata, in terms of the appearance of the variants of the framing interval.

Bars 1-25	Exposition. Theme composed of variants 1 through 5.
26-43	variations on variant 6.
44-57	transition
58-85	sequential variations on variant 7.
86-95	transition
96-122	Central reprise of theme
123-128	variations on variant 8.
129-132	transition
133-174	variations on variant 9.
174-195	transition
196-242	Recapitulation of theme.

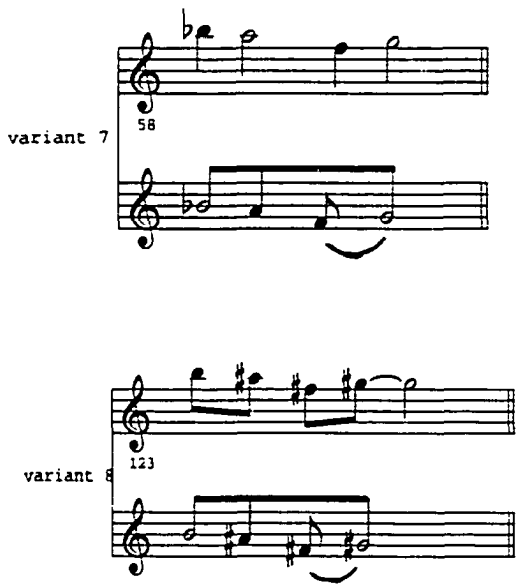
curious transposed reprise of the opening music, which occurs at almost the exact middle of the movement (bars 96-122), and suggests a comparison to rondo form. This is not an unusual procedure; in the next chapter, I will look at another piece by Copland which also features an extended melody composed of smaller melodic cells all having a certain feature in common.

The rest of the movement is structured in a different manner, which is reminiscent of the Piano Variations. Four of the variants (variants 6, 7 ,8 ,and 9) of the descending minor third serve as head motifs to introduce sections of music in which each variant is varied in turn. These passages of variation (beginning at 26, 58, 123, and 133) alternate with short transitional passages. (Example 2.21 provides a summary of the form of this movement in terms of

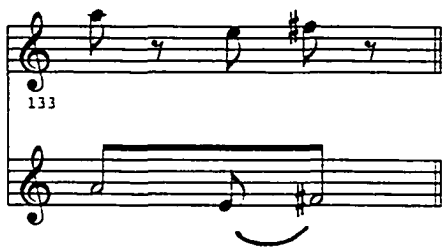


Example 2.22. Variant 6 inverts the framing interval.

the nine melodic variants.) As in the Piano Variations, the local variations here (bar 134-135 as a variation on bar 133, for example) do not feature the basic motif, but rather focus on some other aspect of their local head motif, such as its rhythmic or registral contour. Bar 26 (variant 6) features a rising minor third (inversion of the motif) with a passing tone and an extra (internal) statement of the upper member of the minor-third dyad. (See example 2.22.) Variants 7 and 8 (bars 58 and 123 respectively) both feature, in addition to the passing tone, an unprepared lower neighbor to the



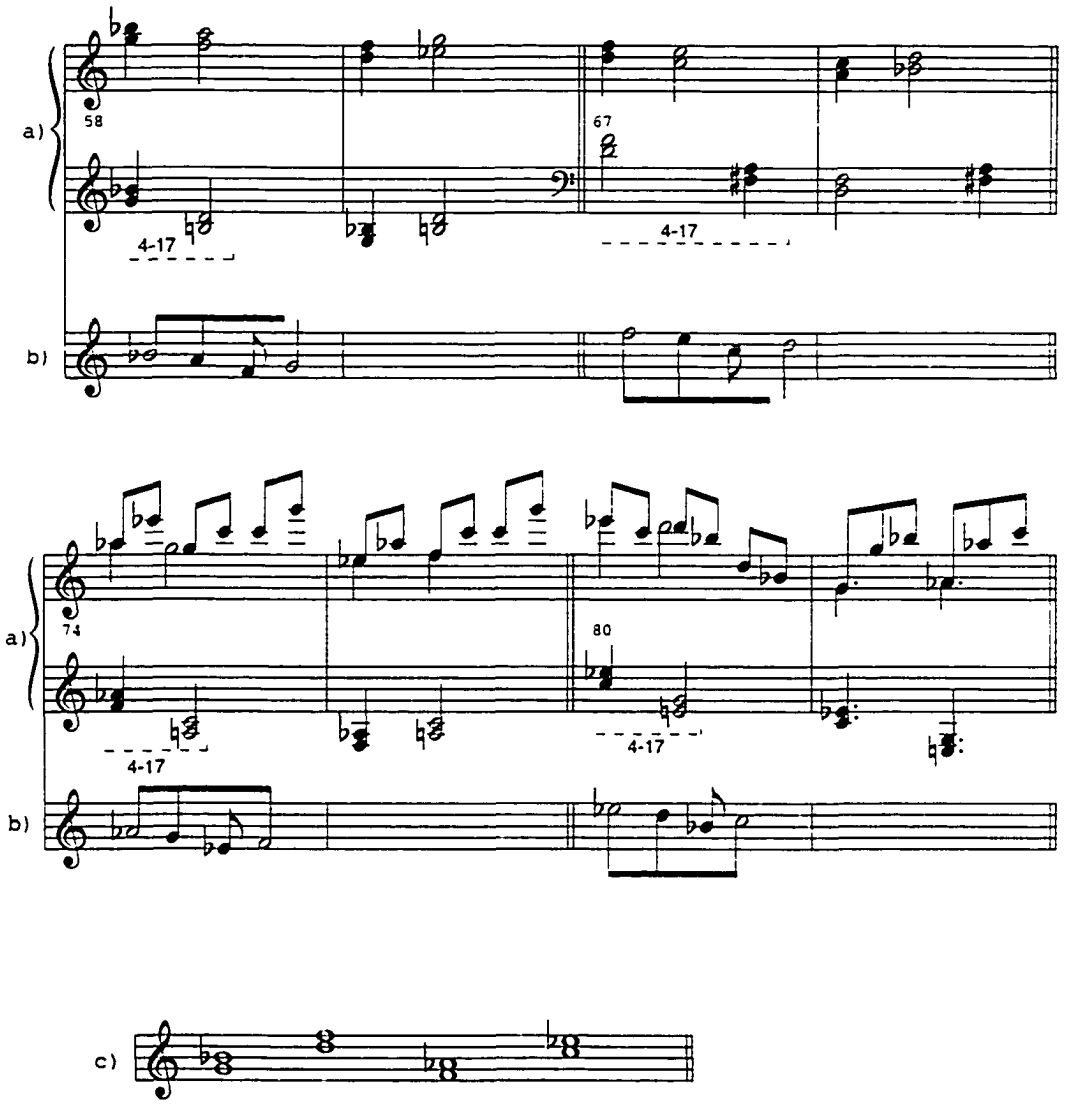
Example 2.23 Variants 7 and 8 both feature an unprepared lower neighbor to the lower tone of the framing interval.



example 2.24. Variant 9 features only a lower neighbor.

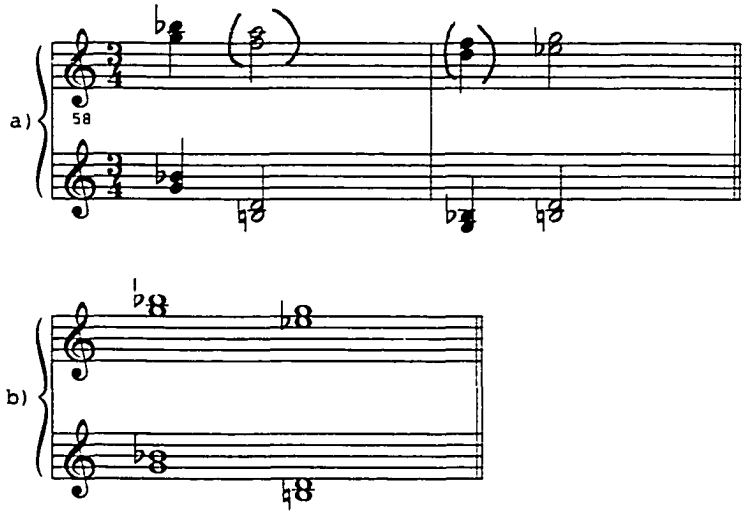
lower tone of the minor third. (See example 2.23.) The lack of any passing tone in variant 9 should serve as a reminder that these are variants, not only of set class 3-2, but ultimately of a simpler structure, the minor-third dyad. (See example 2.24.)

The music in bars 58-85 is a set of four internally related phrases, varying in length from six to nine bars. Stripped of confusing and irregular surface features, this passage can be reduced to a set of four sequential variations. The left hand is almost entirely composed of forms of 4-17, always presented as pairs of minor-third dyads. The right hand features the development of variant 7, initially harmonized in a pattern of major and minor thirds. Level a of example 2.25 presents the first two bars of each new sequential phrase. The example shows that the right hand becomes quite irregular at bar 74. In fact, the expected D♭ doesn't appear until two bars later. In contrast, the forms of 4-17 making up the left hand are subjected to a quite consistent and orderly transposition. Level b shows the transpositions of variant 7 which are embedded in the right hand of the music. Level c shows that the entire passage can be reduced to a string of minor-third framing intervals, transposed up a fifth, then up a minor third, and finally up another fifth.



Example 2.25. The music in bars 58-85 is a set of four internally related phrases, which feature variant 7 in a set of sequential variations.

All of the music in bars 58 and 59, not just the soprano voice, is derived from bar one of this movement, transposed down a minor third. Example 2.26 shows how this works. Level a shows the entirety of bars 58 and 59. If a pair of neighbor notes, and a pair of passing tones (in parentheses in level a) are both reduced out of the right hand, and repetition eliminated from the left hand, then a



Example 2.26. Derivation of bar 58 and 59 from bar one.

transposition (given in level b) of the opening bar remains. If this version of the opening bar (whose top voice is equal to variant 7) serves as a harmonized head motif for this whole 28-bar passage, then the music in bars 67-68, 74-75, and 81-82 serve as sub-head motifs for corresponding shorter and subordinate sections. This passage is very clearly structured, and also clearly derived from bar one, both melodically and harmonically, but it is difficult to understand why a closed set of sequential variations belongs in the middle of this movement, the rest of which is composed of open-ended phrases. This question is addressed further in chapter four.

Another aspect of this music can be discovered by examining the variants in the order of their appearance. Copland again presents his musical variants in a logical order, as if to emphasize some analog to the evolution of natural events (e.g. the evolution of plant or animal species). In many cases, these transformations build on preceding events, in such a way that if the order of events

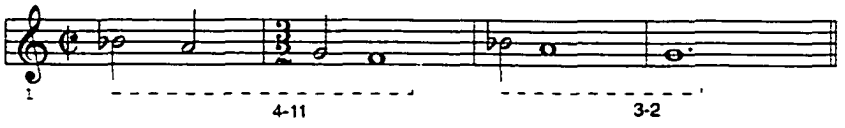
were reversed, musical coherence would be greatly diminished. For example, Copland adds an unprepared lower neighbor to the lower tone of the motif (in variant 7 and 8) only after variants 1 through 6 have familiarized us with the passing tone. He then gives the passing tone/lower neighbor combination further time to sink in before he takes the chance on letting the lower neighbor appear on its own, without the passing tone (variant 9). This series of events serves to establish in the mind of the listener the "autonomy" of this lower neighbor, allowing it finally to appear without any passing tone at all. A less coherent and less meaningful scheme would be to introduce both the passing tone and the lower neighbor in the first variant, and then to take them away or restore them capriciously. This latter is something Copland simply does not do. It is notable that this movement starts with a simpler basic motif (a bare minor third) than does the Variations, yet goes considerably further afield in its variants. On the other hand, octave displacement, often used in the Piano Variations, is almost completely missing here. These differences can perhaps be related to the composer's personal and intuitive response to the traditional forms employed.

This movement can be summarized as follows: nine variants of the minor third framing interval provide Copland with the bulk of his melodic material. Five variants combine with the original interval to yield thematic material for the exposition, recapitulation, and related sections. The remaining four variants serve as head motifs around which the developmental sections take

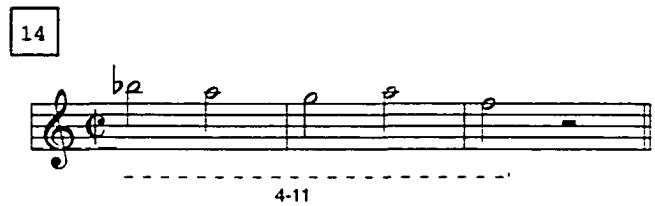
shape. As in the Variations, the head motifs serve as guideposts which orient the listener to the boundaries of large (front-oriented) sections of music which are otherwise composed with considerable freedom and novelty. This is quite a striking but by now familiar formula, here applied not to a straightforward theme-and-variations movement, but to a rather more complex scheme invoking aspects of rondo and sonata form. As before, abstract unity derived from the consistent source of the material coexists with a coherent linear narrative about the development of that material.

Melody in the Sextet, movement two

Like several of the movements under consideration here, the second movement of the Sextet opens with a clear statement of its principal motif. (See example 2.27.) A tetrachord (a form of 4-11) descends from B♭ to F, and is immediately followed by a partial repeat of itself, omitting only the final F, yielding a form of set class 3-2. The immediate repetition of this whole seven note figure confirms its initial salience. At this point, one could justly ask whether this phrase features a framing interval of a descending fourth (B♭ to F), incomplete at its second appearance, or of a descending minor third (B♭ to G) with a subordinate lower neighbor to the lowest pitch. This ambiguity is cleared up at RN 14 (see



Example 2.27. The seven-note theme fills in the perfect-fourth framing interval.

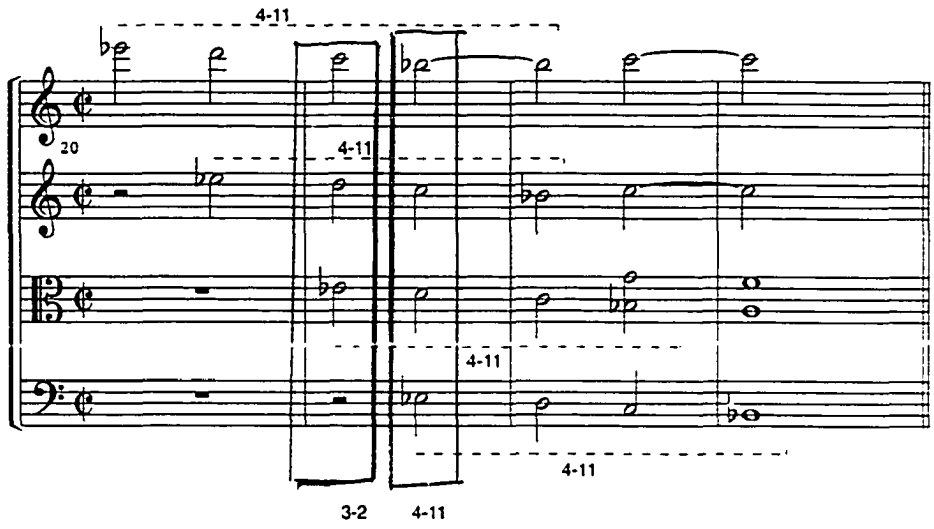


Example 2.28. The first variant fills in a perfect fourth, with one extra appearance of one of the tones.

example 2.28), where the melodic figure (the first variant of the head motif) clearly fills in a descending perfect fourth, albeit with a second out-of-order appearance of the second note, A. The 3-2 figure will appear three more times throughout the course of the movement, but only in a subordinate role in the context of the seven-note theme; the minor third has no further role as a possible framing interval.

This movement features three distinct streams of music. The first is characterized by a stepwise descending melody based on forms of 4-11, as described in the preceding paragraph. This melodic figure tends to act like a head motif, marking off sections of music. The second stream centers on the unfolding of an F-major triad, which tends to prolong the pitch F. The third stream features a bass line composed of larger dissonant leaps. Discussion here will be limited to the way that variants of the 4-11 stream are formed, and serve as head motifs which control passages of music composed of all three streams.

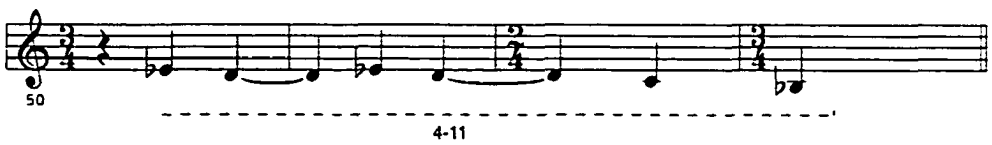
The second variant appears in a type of stretto at eight bars after RN 14, with entries on every beat. (See example 2.29.) The filled-in framing interval, a descending 4-11 tetrachord, is marked with a bracket in each of the string parts. The example also shows



Example 2.29. The second variant appears in a stretto with entries on each beat.

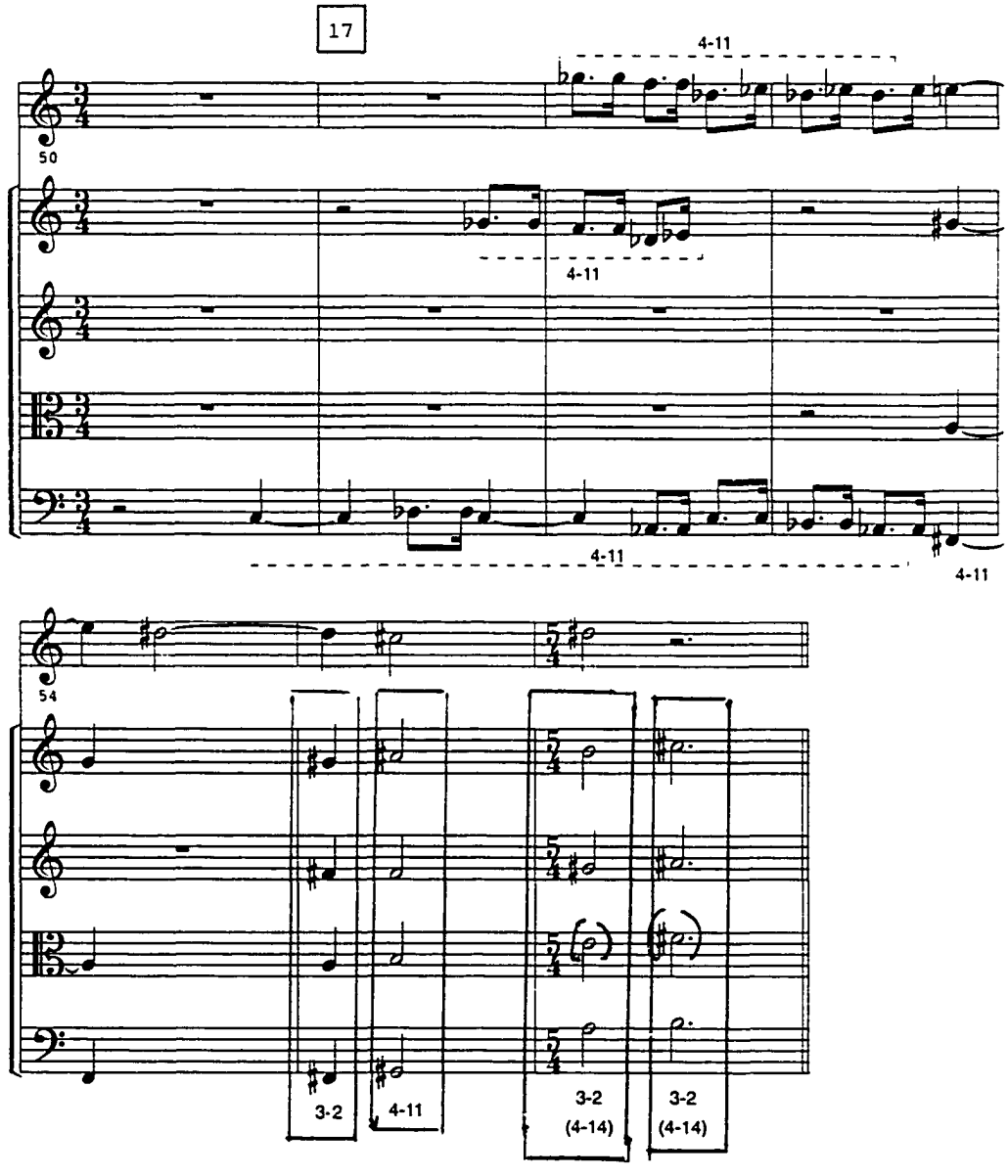
two of the many spots where the motif, as 4-11, or as its subset 3-2, is verticalized to form a chord. Further instances of this verticalization exist, but are not shown. At the end of section 14, the clarinet restates the opening seven note phrase, with the basic filled-in descending perfect fourth, followed by its truncated 3-2 second half, transposed up a perfect fourth from its earlier appearance. (Again, not shown in any example.)

The basic motif returns at four bars before RN 17. (See example 2.30.) This third variant spans a descending perfect fourth, from E♭ to B♭, with a complete lower neighbor motion appended to the beginning. The fourth variant follows immediately,



Example 2.30. The third variant begins with a complete lower neighbor motion.

featuring a dotted-eighth-and-sixteenth rhythm in an irregular canon. (See example 2.31.) The latter example also shows several verticalizations of 4-11, 3-2, and 4-14. (The latter is related to 4-11 by way of a shared subset, namely 3-2. If one omits the parenthesized viola notes in the last bar of example 2.31, two verticalized forms of 3-2 remain.) Section 17 ends with yet



Example 2.31. The fourth variant appears in an irregular canon.

another statement of the main seven-note theme (not shown in either example).

In a sort of recapitulation, bars 81 through 90 are saturated with the descending 4-11 tetrachord, as if to emphasize that this is the main motif of this movement, and that the perfect fourth is the significant framing interval. Nevertheless, Copland restores a hint of ambiguity at the last moment: the last notes to be heard are B♭, A, G, the 3-2 figure in its original transposition, and still in the context of the seven-note theme.

This movement features several melodic figures derived from the framing interval of a descending perfect fourth; these figures have many of the characteristics of a head motif, acting as a guidepost leading the listener through passages of disparate material. This function in the music is quite clear, and relates this movement to many of those under discussion here. This function is not attenuated by brief hints of ambiguity about the identity of the framing interval (perfect fourth or minor third?), and its corresponding p.c. set (4-11 or 3-12 ?).

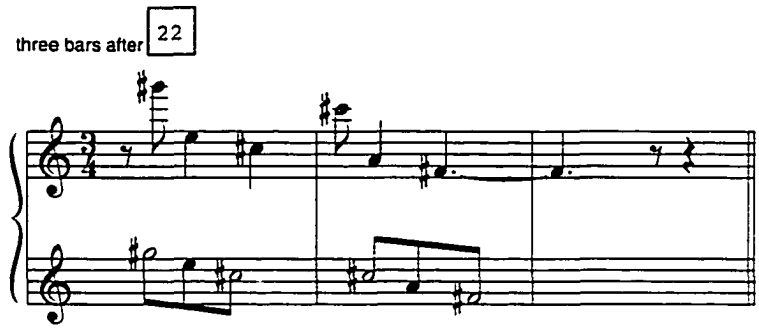
Melody in the Sextet, third movement

The third movement of the Sextet features melodic organization quite similar to that discussed above. However, in this movement the basic motif is not conspicuously stated at the very start, but rather emerges over time. Also, in this movement the front orientation of the sections is less pronounced, the variants of the basic motif permeate throughout the sections to a greater degree, and consequently the guidepost function of the head motifs is

somewhat attenuated. The melodic content (usually heard in the highest line, but sometimes in a lower part) of this movement features the partial or complete filling-in of a framing fifth, initially a descending perfect fifth. As we have come to expect, the several variants, all derived from the same basic motif, are also presented in a logical chronological order which allows us to hear the inner relations among the variants. This analysis will focus only on these main melodies, regardless of the register or context in which they sound.

The opening section (at RN 21), which is perhaps best heard as a transitional section between movements played without pause (attacca), does not explicitly feature the descending fifth, but does prepare the ground for this turn of events by featuring arpeggiated (both ascending and descending) major triads on G, A, and D♭. The latter, of course, do include perfect fifths, even if they are not highlighted in this passage.

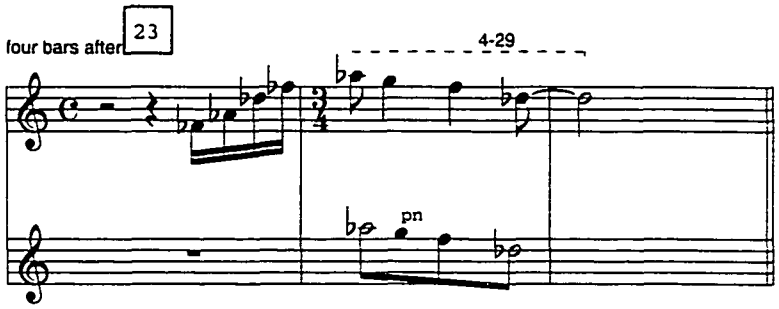
At RN 22, the framing fifth is filled in with a middle pitch, which creates minor triads on C# and F#. (See example 2.32.) In this and following examples, the music in the upper staves appears as it does in the score. The lower staves show an analytical reduction in one octave, where the framing interval appears as a pair of beamed-together open noteheads. The middle pitch is shown as a stemmed and filled-in notehead. Passing notes and auxiliaries appear as stemless notes. The C# and F# minor triads, alternating with another phrase which is not triadic, but which is similar in contour and rhythm, are heard as conspicuous solos in the strings



Example 2.32. The framing interval is partially filled in, producing arpeggiated minor triads.

and clarinet, against a background tremolo in the piano, on the pitch classes C#, E, and F. (This music is repeated, two semitones lower, at RN 32.)

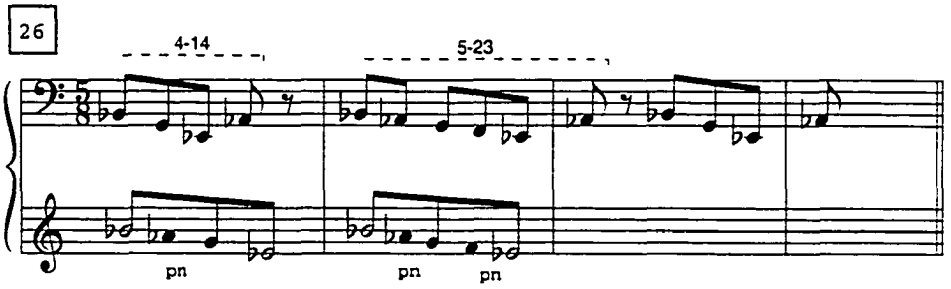
This new middle pitch, dividing the fifth roughly in half, is present in all of the following variants. The resulting arpeggiated triads (set class 3-11 or 037) represent the first and simplest embellishment of the basic motif of a filled-in fifth. Further, these melodic triads provide a sonic link to the many triadic harmonies throughout the accompaniment in this piece, which should be heard as manifestations of the basic motif, and not as tonally functioning triads. As an alternative to my filled-in fifth idea, one could argue that the basic motif in this movement is actually a filled-in arpeggiated triad. This idea gains some support from the fact that sets like 4-23 (0257) (a fifth which is partially filled in but still lacks the third of the triad), never appear in the melody. I choose to focus on the fifth, rather than on the triad, simply in order to relate events in the music to the simplest possible structure.



Example 2.33. A passing tone is added to the descending triad.

At RN 23, a passing tone is added to the descending triad, yielding a tune which is destined to become one of the main themes of this movement: a sequence of forms of 4-29, or 4-14, depending on the exact chromatic nature of the passing note. (See example 2.33.) In both cases (the three-note form at 22, or the four-note form at 23), the fifth that frames melodic fragments on the surface is echoed on an immediately deeper level by the circle-of-fifths transpositions of these same melodic fragments. This is discussed further in chapter five. Section 24 is substantially similar to section 23, while section 25 is a brief transitional area to a new form of the descending-fifth tune, in a new register. The head motif here reverts to a triadic figure without a passing tone.

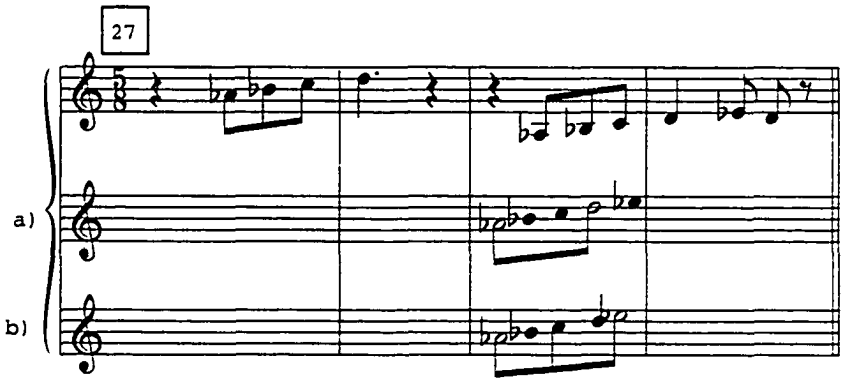
At RN 26, melodic interest is centered on the lower register. (See example 2.34.) The cello, and then the piano, have a tune that is an order permutation (with p.c. repetition, and another passing tone) of the previous material. Forms of 4-14 and 5-23 are the result. While a filled-in fifth is still present, the notes involved are ordered such that a quasi-tonal attention is directed toward the last note of the phrase, which is not one of the boundary tones of the



Example 2.34. Two different forms of the motif direct attention to the final note, A♭.

filled-in fifth. The music at RN 29 is a further development of this idea.

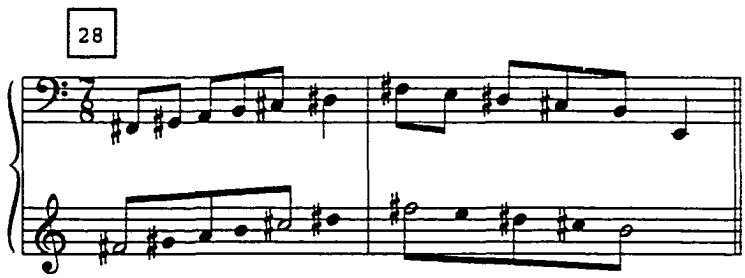
Section 27 returns to a higher register and begins with an ascending whole-tone tetrachord (A♭, B♭, C ,D), which is framed by an (enharmonic) diminished fifth. This interpretation is shown in example 2.35 at level a. The E♭ which would serve as the upper member of a framing perfect fifth appears several times (yielding a form of set class 5-24), but always as a brief upper neighbor to the much more emphasized D♮. Despite the novelty (in terms of this movement) of both ascending line, and diminished fifth, I think that



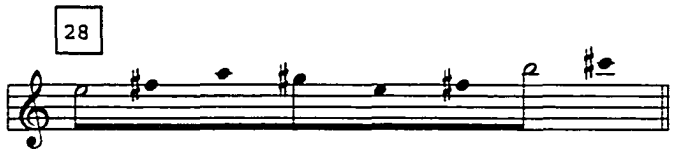
Example 2.35. An ascending version of the motif, subject to two alternative interpretations.

this tune can be heard as related to the falling fifths of earlier sections. The second of the reductions in example 2.35, shown in level b, suggests an alternative hearing: Is this a tritone (a new framing interval) that has been filled in and embellished in ways already familiar from the preceding music, or is it still an ascending major pentachord whose tones have been given new functions (unfamiliar in context) via rhythmic weight? To choose definitively between these two options seems unnecessary, as both can be derived from the basic motif of the movement.

Section 28 features scale fragments and repeated notes drawn from the E major scale. Example 2.36 shows the two most prominent string figures, as they appear in the cello part, highlighting two different framing fifths. The salience of the framing interval is here somewhat attenuated in favor of the scale-fragment passages which have been heard as arising from that interval, now latent in the background. That is, previously heard material, which presented scale fragments clearly within the context of the framing fifth, functioned as a kind of transition or pivot, allowing us to hear the scale fragments in this section, without benefit of any conspicuous framing fifth, as nevertheless



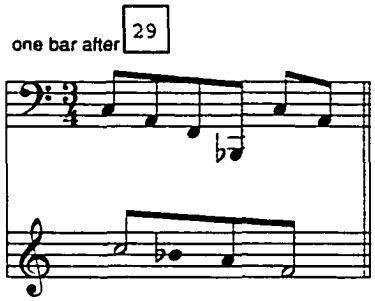
Example 2.36. Two string figures highlight two framing intervals.



Example 2.37 A 10-bar figure states the framing interval over a longer time frame.

emerging from that previous material. Example 2.37 is a reduction of a 10-bar repeated note figure which appears in the clarinet and first violin, beginning simultaneously with the cello figure given above. Although the tones sound in an altered order, this figure nevertheless presents a filled-in fifth, with the by-now-familiar upper neighbor to the upper note of the fifth, and also suggests a third candidate as a possible framing fifth for this section. Section 28 is another instance where Copland has stated two forms of the basic motif, simultaneously, but at different tempos. The section closes with a repeated chord in the piano, consisting of the notes E, F#, B, and C#, that is, a pair of perfect fifths which is composed of the tones involved in the three possible framing intervals for this section.

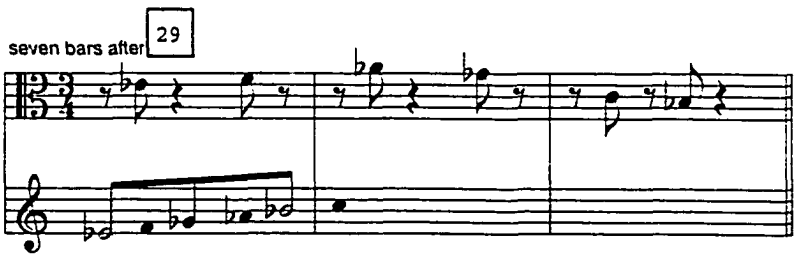
Section 29, as illustrated in example 2.38, opens with a six-note ostinato in the left hand of the piano. It is derived from the 4-14 figure heard at RN 26 (by lowering the last note one octave, and then repeating the first two notes), and thus represents another example of the filled-in fifth principle, and also demonstrates again that Copland is very careful to present his musical transformations in a logical order, as discussed above. At the seventh bar of this section another version of the filled-in fifth motif enters, played



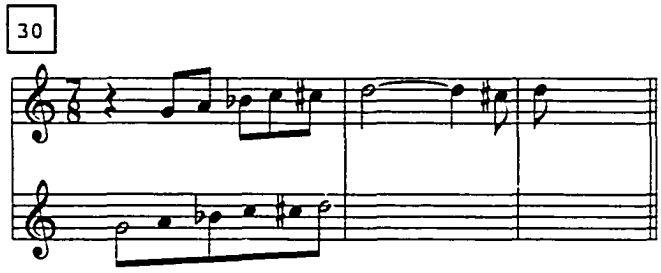
Example 2.38. The partially filled-in framing interval appears as a six-note ostinato figure in a low register.

simultaneously by the viola, in a simple version, and the clarinet in a highly embellished version. (See example 2.39, which gives the simple version.) Shorn of embellishment, this line reads E♭, F, A♭, G♭, C, B♭. This is an ascending fifth, filled in diatonically, with an upper neighbor (C) to the upper note of the framing interval; it seems to follow the rule for section 29: all B♭ notes will sound one octave lower than where they might be expected.

At RN 30 a chromatic passing tone is added to a melodic form heard earlier (sections 27 and 28) to yield an ascending filled-in fifth as a form of 6-11. (See example 2.40.) At the third repetition of this phrase, it is extended upward to E by way of another chromatic passing tone (E♭, or D#).



Example 2.39. A diatonically filled-in fifth, with an upper neighbor, expresses the framing interval.



Example 2.40. Adding a chromatic passing tone to the filled-in fifth yields a form of 6-11

The music at RN 31 does not feature any explicit filled-in fifths. Perhaps the two eight-bar approximately scale-wise descents of the clarinet and first violin (not shown) can be heard as extreme but logical extensions of the filled-in fifth, especially in light of previously heard neighbor notes which extended fifths into sixths, such as sections 28 and 30. The accompaniment here is made up of the tones of the B♭ major triad, perhaps another weak link to the filled-in fifth motif.

While this movement is only a distant relatative of sonata form, it does have a recapitulation of sorts, beginning at RN 32. The melodic events from here on are quite similar to what has already been heard, except for a curious reprise of the theme of the first movement at RN 38 and 39. No further variants of the filled-in fifth idea are introduced, although most of the variants heard earlier are revisited. The movement ends with the simultaneous presentation of music derived from both first and last movements. This is another movement where Copland's melodies originate from the consistently logical and orderly development of a basic motif, in

this case a partially or completely filled-in perfect fifth. Variants of the basic motif, which function weakly as head motifs, are presented in an order that makes it easier for the listener to hear their internal relationships, as well as their ultimate original source.

In this chapter, I have described some aspects of Copland's melodic writing, drawing examples from four different movements. I have shown that the development of his melody often proceeds by way of the embellishment or transformation of a relatively simple basic motif, featuring a framing interval, and that the embellishments themselves are subject to logical restrictions that help the listener to apprehend both the chronological relationships among the variants, and also the origin of the variants in the basic motif. The listener's attention is often drawn, by the relative prominence of these variants as head motifs, to the sectional boundaries in the music. I have thus far restricted my focus to melodic events mostly on the musical surface, in an attempt to show both abstract coherence and logical musical flow at that level. In the next chapter, I take a similar look at three more movements, whose melodies share some but not all of the features of those discussed here. In chapters four and five, I shall look at melodic events in greater depth, as part of an explication of deeper formal organizational unity in this music. This latter task will be facilitated by the understanding of the melodic musical surface developed here and in chapter three.

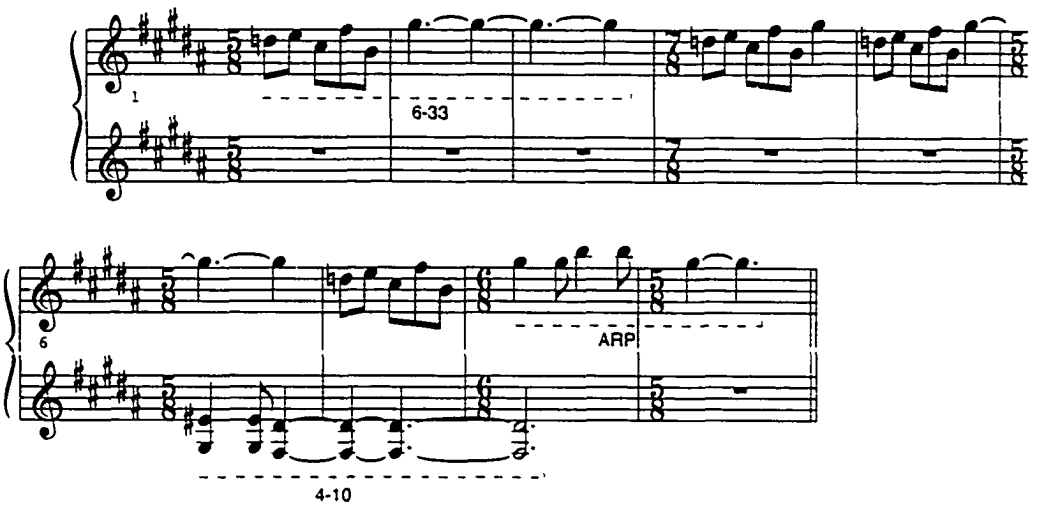
CHAPTER THREE: MELODY (2): SOME DEPARTURES FROM THE MODEL

In chapter two, I discussed several movements all of which feature a simple melodic motif that serves to highlight a framing interval; variants of either the interval or the motif could be heard to structure some if not most of the melodic foreground in the respective movements. These structuring variants tended to take the form of head motifs, which marked off sections of music in which each variant was developed in turn.

In this chapter, I shall examine the melodies of three movements that were not covered in the previous chapter. These movements also feature basic simple structures, out of which variants are generated. They are similar to the movements discussed previously in that variants of the simple motifs comprise most of the melodic material, although the motifs may be different kinds of musical structures, and the variants may be produced by different types of operations. They were omitted from chapter two either (1) because the variants here do not function as head motifs controlling sectionalized form, but rather take some other role in the music, or (2) because the basic motifs are radically different in shape or type from those simple framing intervals discussed above.

Melody in the Piano Sonata, movement two

The melodic events in this movement all fall into one of two independent streams, which alternate throughout the movement. The first of the streams, which will tend to split into two sub-streams, as we shall see, consists of music derived from the opening seven



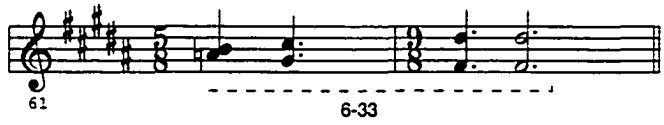
Example 3.1. The main components of the second movement of the Piano sonata are all introduced in the first nine bars.

bars, where a form of set class 6-33 (023579) fills in the interval of a major sixth (B to G#). The second musical stream is launched in bars 8 and 9, where a rising minor third, from G# to B, is answered by a return to G#. The second stream is labeled "ARP," (short for arpeggiated figure), in example 3.1, and elsewhere. I return to this below. Note that the minor third is the inversion of the major sixth, and that therefore these two streams, at least in their first appearances, both highlight members of the same interval class, or, to put it another way, they both highlight G# and B as boundary tones, and thus are not as independent as they seemed to be at first glance. As was true in those movements discussed in chapter 2, variants of the basic motifs here are generated in an audibly coherent and easily understood manner. This is true regardless of the fact that the variants here are not produced by the same familiar means used in the movements discussed in chapter 3 (embellishing tones such as auxiliaries and passing tones, etc.), but

by other means, more appropriate to the specific character of the material itself, as discussed below.

In this movement, the variants of the basic motif do not serve as head motifs in a sectionalized front-oriented context, as discussed above. Rather, immediate repetitions of the variants of the smallest melodic cells are grouped into thematic statements that are then arranged in a manner somewhat reminiscent of the treatment and development of themes in a tonal sonata movement. (This was also the case with variants 1-5 in the exposition section of the first movement of the sonata, bars 1-25.) In what follows, I shall look closely at these variants, and how they are used in the music, focusing initially on each stream as an independent entity and tracing its course through the movement, for now without reference to the inter-relationships among streams.

The first stream of music features an ostinato-type figure that is immediately repeated several times at each of its appearances. This is a form of set class 6-33, encompassing a major sixth. (See example 3.1.) Set-class 4-10 (0235), a subset of 6-33, which will assume greater importance and some autonomy as the movement proceeds, at this point provides only a left-hand accompaniment figure. For now, note that 4-10, as presented in example 3.1, can be heard as a pair of incomplete neighbor-note motions, E# to D#, and G# to F#, and thus also as highlighting a major sixth, but not the same one as in the right hand. (In other words, this particular transpositional level of 4-10 is not a subset of this level of 6-33. More on this below.) The first variant of the 6-33 figure is hardly a

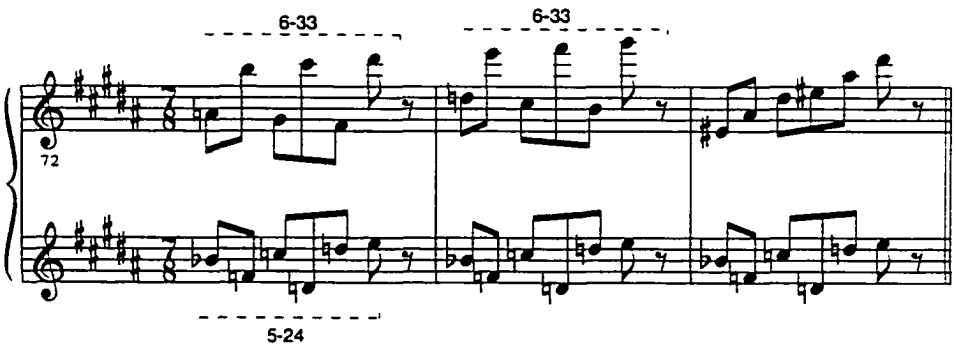


Example 3.2. 6-33 appears in a variant which reveals its inner structure as three dyads.

variant at all, but rather a canonic presentation, which features imitation at the fifth below (intensifying the presentation of the variant and foreshadowing transpositional events to be heard at bar 57). Eventually the canon gives way to the simultaneous sounding of both voices.

The music at bar 57 features a straightforward transposition of the opening figure (which has already appeared as the following voice in the canon at bars 28-34) filling the major sixth between F# and D#, and accompanied by an unrelated new chord. The first real melodic variant appears in bar 61, as shown in example 3.2. Here we see the 6-33 figure in a layout which makes explicit its inner structure as three dyads featuring stepwise voice-leading in wedge-like contrary motion. In other words, each originally linear dyad has been verticalized to produce a series of two-voice chords.

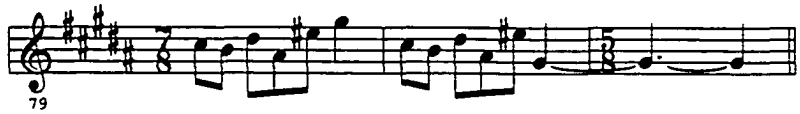
The right hand of example 3.3 shows appearances of the two previous transpositional levels of the 6-33 motif, and portions of a third level, one which is about to become important. However, the interesting variant here is in the left hand. This figure, a form of set class 5-24 (01357), is related to the 6-33 figure not by precise transposition, but by similarity of contour. That is, both figures are wedge shapes which expand outward in register, and each



Example 3.3. 5-24 appears in a left-hand accompaniment.

contains six eighth notes. (Note that the 5-24 figure does not assert any form of interval class 3 as a framing interval.) Further audible similarity arises due to the similar stepwise ascent of the upper "voice" in each figure. That is, the highest four notes in each figure constitute a rising whole-tone scale fragment (4-21 (0246)), and thus suggest that the two figures are related by partial or inexact transposition. (Another ascending whole-tone figure plays a minor role in the transitional passage at bar 54-56, as discussed below.)

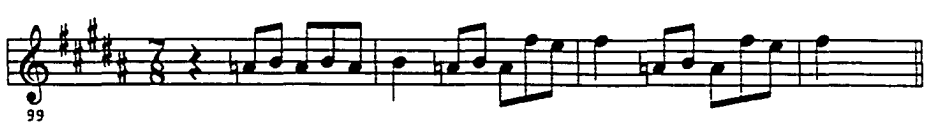
Contour similarity, as a relatively weak type of relationship, needs several repetitions to become established, which is what happens here. Later in the piece, especially in the developmental areas, variants related only by (even less exact) contour similarity will become more prominent, and thus this 5-24 figure can be heard as foreshadowing later events. At this point, however, the framing interval as an organizational principle is supplanted by a weaker, but still audible relationship. The continuity of Copland's logical and orderly chain of events is somewhat threatened by this development, since there are no pitch classes or framing intervals



Example 3.4. The 6-33 figure appears with dyads reversed, confirming its dyadic inner structure.

made prominent in any clear contextually defined way. This threat is ameliorated by the simultaneous presence of one "proper" 6-33 variant in the right hand, and by the quick return of another at bar 79. Further exploitation of weaker relationships such as contour similarity is reserved for the developmental areas, which seems consistent with the very definition of the idea of development.

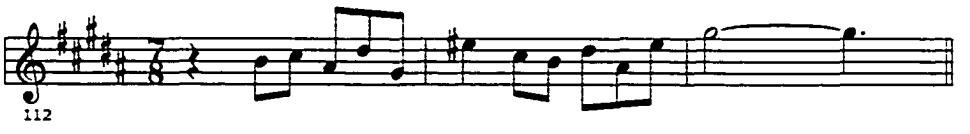
Example 3.4 shows the 6-33 figure in a variant that confirms its dyadic inner structure. The rhythm and overall contour of the opening figure is retained, but the linear order within each dyad is reversed. This is another example of Copland's attention to chronological ordering, and his tendency not to omit necessary steps in logical chains. The relationship between the original 6-33 figure, and this one (with each dyad reversed), is made less mysterious due to the fact that the verticalized variant at bar 61 lies between them, both in time and in reference to an abstract logic. That is to say, only after the second of these three variants has grouped the figure into dyads, does the third of the variants re-order each dyad. Note that the figure continues to fill in a major sixth (G# to E#).



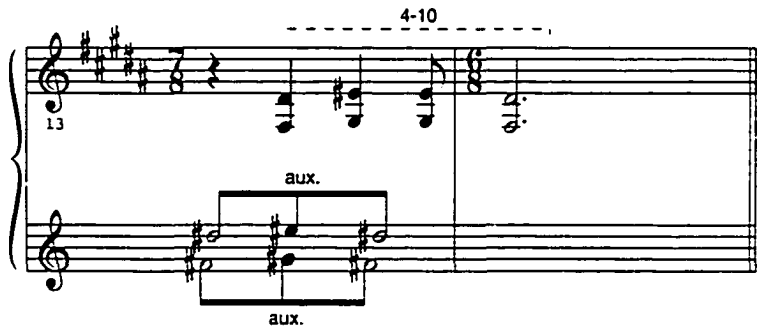
Example 3.5. The 6-33 motif stripped down to four notes continues to span a major sixth.

Bar 90 marks the beginning of a transition to the first developmental area. This passage combines the canonic approach of bar 28 with the verticalization of bar 61, and then adds a sequential pattern of transposition. Note that of the five transpositional levels presented here, three have previously appeared. The variant shown in example 3.5 spans a major sixth (A to F#), as before, but contains only four pitches. This is a variant formed by omitting some of the notes of the original figure. Example 3.6 shows an octave-spanning figure formed by the combination of the original motif plus the motif with dyads reversed.

Other variants show that the basic 6-33 motif can be altered to span larger intervals (a minor seventh, and then an octave) by simply raising the pitch of the last note. Further into the movement, this principle is combined with the contour similarity principle to result in a figure, appearing several times, which arpeggiates a minor seventh chord through several repetitions of the by-now familiar rhythmic contour. The 6-33 motif, and its variants, are subject to further sonata-like developmental treatment, by way of contour similarity and further fragmentation of the motif, in bars 137-169. However, no melodically significant new variants are introduced in this passage, or throughout the rest of the movement.

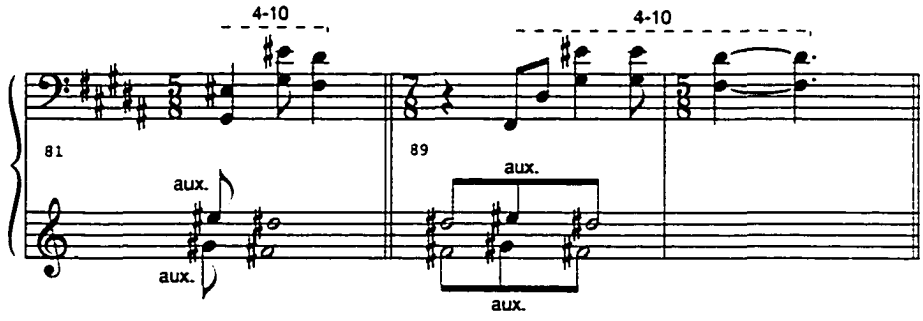


Example 3.6. An octave-spanning figure formed by the combination of the original 6-33 motif plus the motif with dyads reversed.

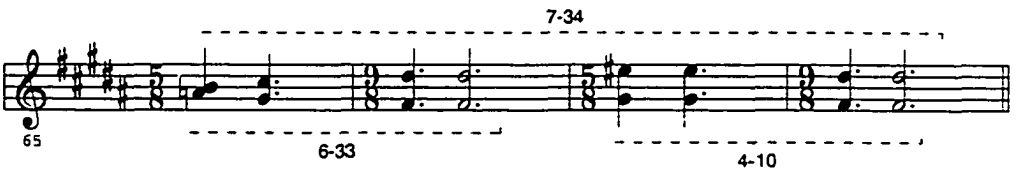


Example 3.7. 4-10 is initially presented as a pair of neighbor notes.

Example 3.7 shows the first appearance of the 4-10 figure. As shown in the lower (analytical) staff, this figure can be heard as a pair of complete neighbor-note motions, retrospectively confirming my suggestion above that this figure highlights the lower of its two major sixths: in this example, G#/E# is clearly established as a pair of subordinate embellishing tones to the F#/D# interval. Example 3.8 shows two later appearances of the 4-10 figure. In bar 81, the embellishing tones are embellished in turn by octave leaps. In bar 89 the first dyad is horizontalized. In all three of these appearances, the 4-10 figure plays a subordinate accompanying role.



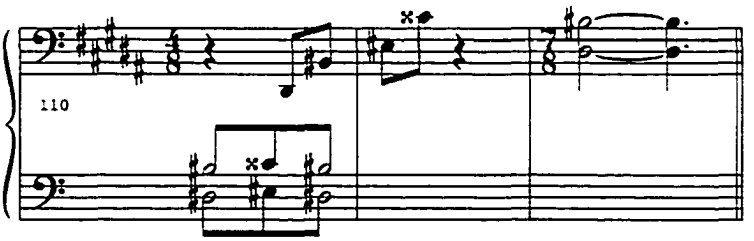
Example 3.8. Further appearances of 4-10 embellish the neighbor note relation by means of horizontalization and octave displacement.



Example 3.9. 4-10 merges with 6-33 to form 7-34, which continues to highlight a major sixth.

As suggested above, the 4-10 figure is initially subordinate to the 6-33 figure. This interpretation is (misleadingly, as we shall see) confirmed at bar 65 (see example 3.9), where 4-10 is incorporated into one of the main variants of 6-33, to yield a form of 7-34, which can nevertheless still be heard to span a major sixth, when the subordinate status as auxiliaries of the G#/E# interval is recalled. Note also that this merger of the 6-33 and 4-10 motifs is only possible here because they both appear at transpositional levels which highlight the same major sixth (D#/F#), which previously has not been the case.

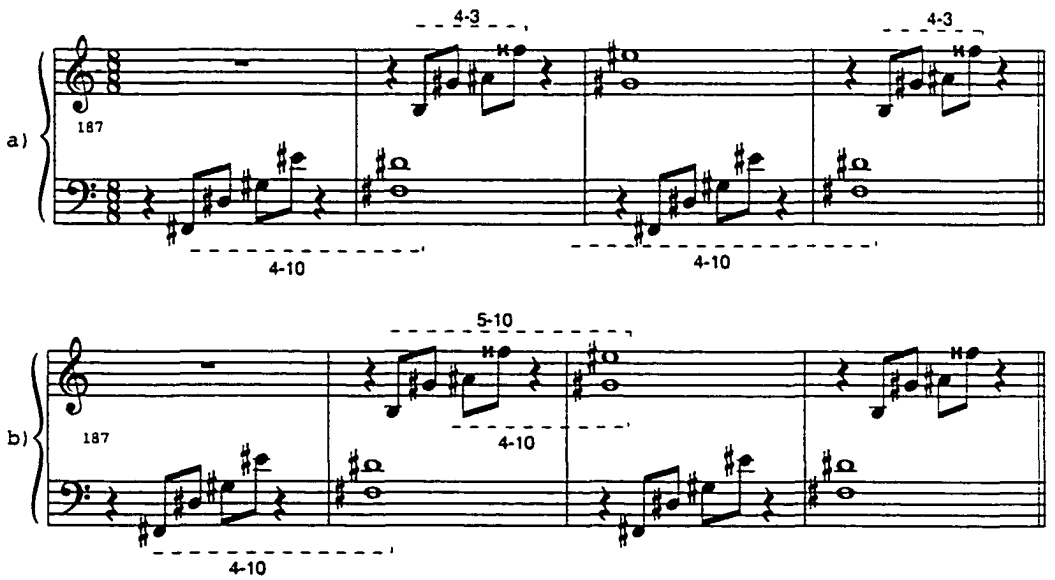
Example 3.10 adumbrates the future melodic independence of the 4-10 figure. The middle component of the neighbor-note pair is horizontalized, while the first component is both horizontalized and subject to octave displacement. This particular rhythmic and registral deployment (a rising figure of four eighth notes) is the



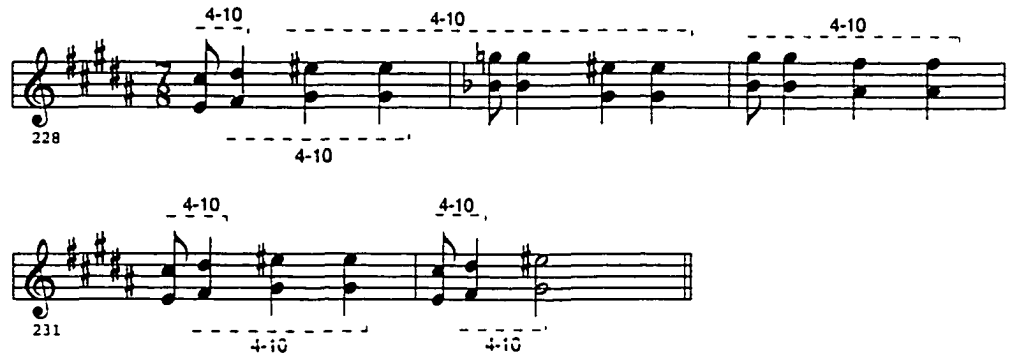
Example 3.10. 4-10 appears as a figure of four rising eighth notes.

form in which the 4-10 figure gains its independence from any connection with 6-33. The beginning of an extended melodic development of this rising eighth-note figure is shown in example 3.11. Part a of the example shows one possible segmentation of this passage: the figure of four rising eighth notes in the right hand of bar 188 is seen as a form of 4-3, related to the previous 4-10 only by similarity of contour.

Another more interesting segmentation is shown in part b of example 3.11. Here, all six notes in the right hand of bars 188 and 189 are grouped together as a form of 5-10. The last four notes of this set turn out to be another form of the 4-10 motif, transposed up two semitones from the previous bar. Thus, the highlighted framing pitches in the right hand of bar 189 (G#/E#) equal the upper neighbor notes in the left hand. (One weakness of this second interpretation is of course that B natural, the first note in the right hand in bar 188, is unaccounted for.) This relationship, that the



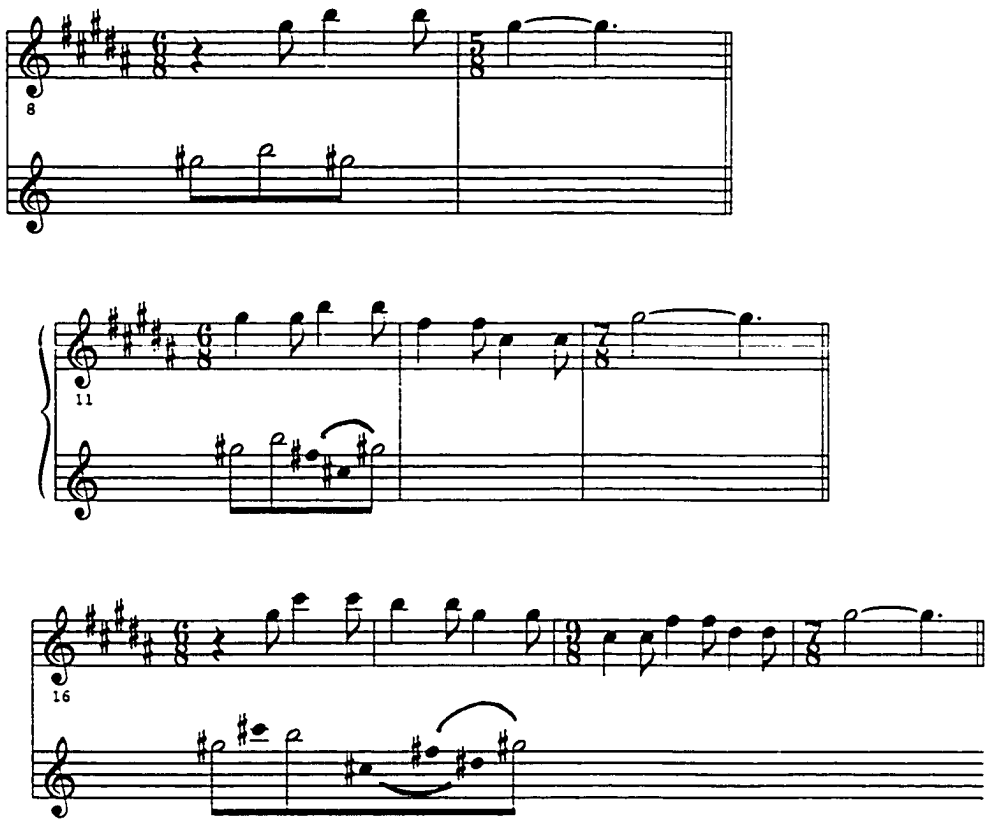
Example 3.11. Two interpretations of the developmental treatment of the 4-10 figure.



Example 3.12. A developmental passage on forms of 4-10.

neighbor tones in one appearance of this motif are identical to the framing interval tones in another appearance of the motif two semitones higher, is explored further in a developmental passage in bars 187 through 232. This passage is dedicated to overlapping variants of the 4-10 motif, especially this last one, and the one introduced in bars 13-14, to the exclusion of either the 6-33 stream, or the ARP stream. Again, no new variants are introduced. Example 3.12 shows the end of this passage, which after bar 223 increasingly takes the form of a self-contained closed ostinato, featuring chains of overlapping forms of 4-10, accompanied in the left hand by a three-octave pedal on the pitch-class D.

The second stream of music, which I have labeled ARP, first appears in bars eight and nine, as was shown in example 3.1. Example 3.13 returns to this passage, in greater detail. At bar eight, a minor third upward leap is answered by a minor third downward. In bars 11-13, two new embellishing tones are inserted into the figure. At bar 16, more inner notes are added, but the sense of arpeggiation of a fundamental unit is preserved. One way of

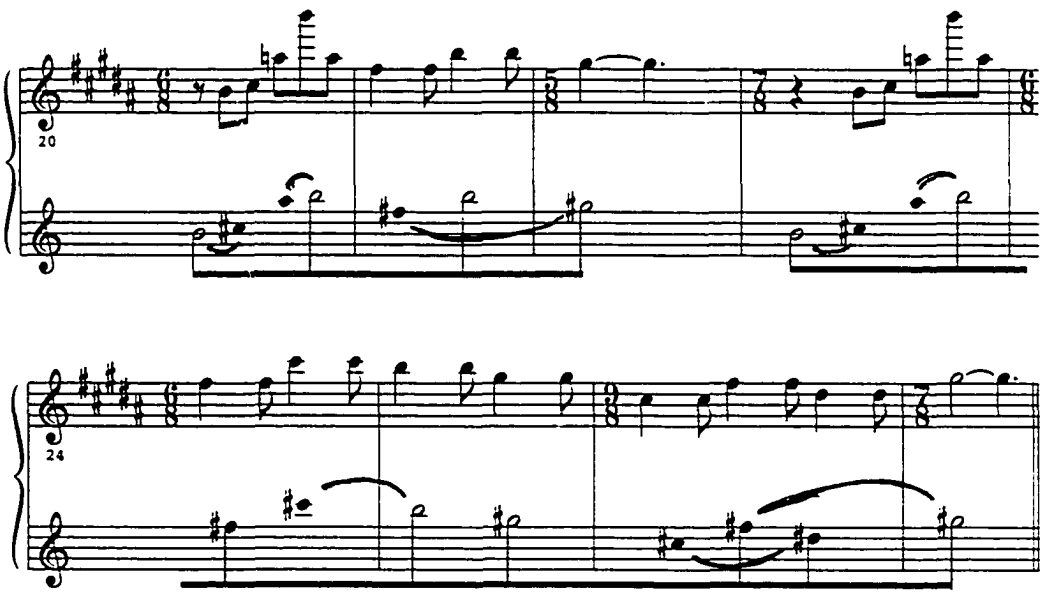


Example 3.13. The ARP process generates increasingly complex phrases in groups of three.

hearing this music is suggested by the reduction of bars 16-19: as the unfolding of a minor seventh chord, with C# as an upper neighbor (in two registers) to the fifth of this chord. One unfortunate implication of this interpretation is that the C# in bar 12 must thus be heard as appearing before its context (as an auxiliary to D#) has been established. Although the ARP figure at bar 16-19 does not in fact fill in, or even necessarily highlight a minor third, it is clearly derived from a figure that does. Such a derivation is made audibly explicit by the close proximity in time of members of this series of progressively longer and more elaborately embellished passages, both here and elsewhere in the score. Additionally, this example

demonstrates the different function of the variants in this movement, as compared to those in the movements discussed in chapter 2, for example the first movement of this sonata. Here, the variants do not serve as head motifs, but form thematic groups composed of phrases of increasing complexity, due to the insertion of more and more embellishing tones. Further complexity arises due to the alternation of ARP figures with 6-33 figures. This is discussed in greater detail below, in chapter four.

Example 3.14 shows two forms of the ARP figure where the initial (lower) tone of the minor third is replaced by a brief flourish on octave displacements of the upper tone, accompanied by auxiliaries. The analysis in the lower staff shows that these are still unfoldings of the minor third B/G#. A later passage (bars 40-52) featuring the ARP musical process functions as an analog to the



Example 3.14. A series of two versions of the ARP process, where the initial lower tone of the framing interval is replaced by multiple appearances of the upper tone, in two octaves.

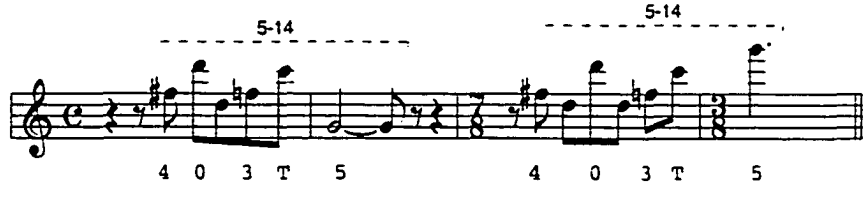
transitional passage between the first and second theme areas in this quasi-sonata movement. Only three elements of the original ARP idea remain in this variant: the structural minor third, and an upper neighbor to the upper note (G#/B, and C#, respectively). The transitional function here consists of the following: the passage arrives, via a type of melodic motion derived from the previous ARP passages, at a high F# in bars 50 and 52. This note is half of the upcoming highlighted major sixth (F#/D#) featured in what might be thought of as a second theme area, in bars 57-78. (The D# note is introduced via another type of transitional passage, related to the rising whole-tone scale fragment already discussed, in bars 54-56.) As might be expected, several developmental passages later in the movement (bars 117-125, and 132-136) feature music based on the ARP process, but no new variants are introduced.

To summarize melodic events in this movement: the second movement of Copland's sonata features two (or is it three?) nominally separate melodic streams. Each of these streams highlights in its own way a member of interval class 3 (a major sixth or a minor third), and each of the streams produces a limited number of variants. These variants, clearly rooted in the music of the first nine bars, are first combined into thematic statements, and then subject to development, each in turn. One of the streams (based on forms of set classes 6-33 and 4-10) tends to take shape as ostinato passages, while the other stream tends to appear as a series of three repeated passages unfolding a minor third, each one longer and more embellished than its predecessor. Of course, both

streams tend to lose these basic shapes in the course of their respective development sections. Variants here are the result of transposition, canonic or sequential treatment, contour similarity, "dyad verticalization" followed by "dyad reversal," as well the by-now familiar displacement of tones by one or more octaves. On the other hand, due to the specific character of the 6-33 and 4-10 motifs, standard embellishing strategies such as passing tones or auxiliaries would not make much sense in these motifs, and consequently these traditional embellishment-types appear only in the ARP stream.

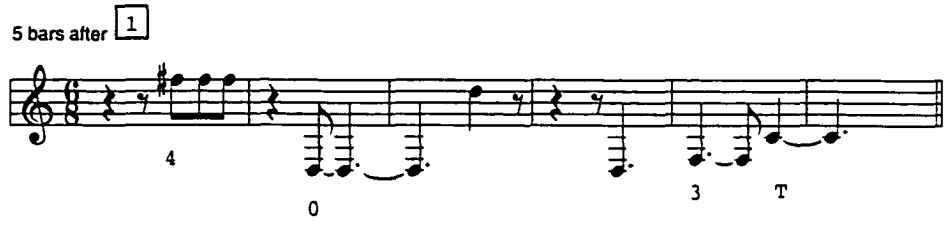
Melody in the Sextet, first movement

The first movement of the sextet differs from the other movements under consideration here in one important respect: its main melodic material is derived from a more complex fundamental motif, with more highly developed inner relations from the start. Nevertheless, this movement does display melodic variability conditioned by consistent and logical constraints similar to those operating in the other movements. The movement opens with the music shown in example 3.15. This is an example of set class 5-14 (01257). I have, however, chosen instead to label each new pitch



Example 3.15. 5-14 appears in a centric ordering, highlighting note 0.

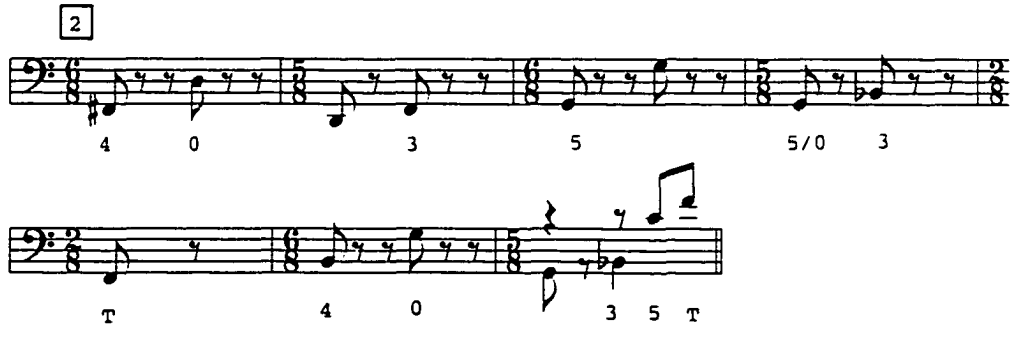
class with a number indicating its distance in semitones ascending from a normative "root," in this case, D. The purpose of this labeling is to invoke the centricity of this root, and to draw attention to the contextually created and audibly centric relationships among these five tones, which is preserved regardless of the various orderings in which they are presented in the music, including situations where four or three note sets are heard as standing in for the entire pentachord. It is this conspicuous relationship among these tones which allows musical passages featuring this pentachord (or its subsets) to function as head motifs. The simplest form of the "motif" which is the source of melodic variants in this movement is any arrangement of these notes which preserves this relationship. Note 0 usually gains its centricity simply by dint of repetition, including repetition at the octave. Notes 3 and 4 (initially, F and F#) gain a kind of weakly centric function as simultaneous minor and major third of a triad, respectively. These two notes often appear in the same register, and thus are sometimes heard as being in a neighbor note relation to each other, or possibly as alternatives to each other. This type of motion, suggesting the mutation of major triad into minor, or vice-versa, can both confirm and intensify the centricity of note 0. Notes 5 and 10 (labeled "T") also appear, serving both to enlarge the collection controlled by the centricity of note 0, and also to relate events at the musical surface to events immediately behind the surface, as we shall see. Under this labeling scheme, one can speak of the basic motif in example 3.15 as 4 0 3 T 5, omitting immediate pitch class repetitions. This scheme is useful as a way of



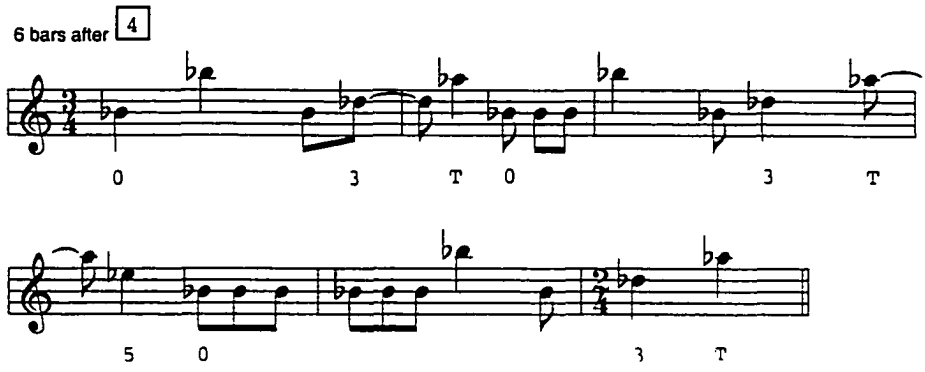
Example 3.16. The centric motif in its 403T guise.

highlighting the centric relations among the notes in this set-class, as they appear in this music, and facilitates comparisons between various transpositions of the motif. This movement features this kind of music interspersed with at least two other areas (or "streams"), which will not be considered here.

This melodic motif reappears in a variety of ways throughout this movement. In example 3.16, note 5 is omitted, leaving 4 0 3 T, with two-octave leaps. In example 3.17, the motif is transformed into a bass line accompaniment, yet retains most of its basic shape. The G in the fourth bar of example 3.17 serves as a pivot between two appearances of the basic motif, and thus has two functions: as note 0 of a new transposition of the motif, and as note 5 of the previous form. Example 3.18 preserves notes 0, 3, T and 5 in their proper centric relationship through three cycles of repetition. The



Example 3.17. Two forms of the motif appear as a bass line.

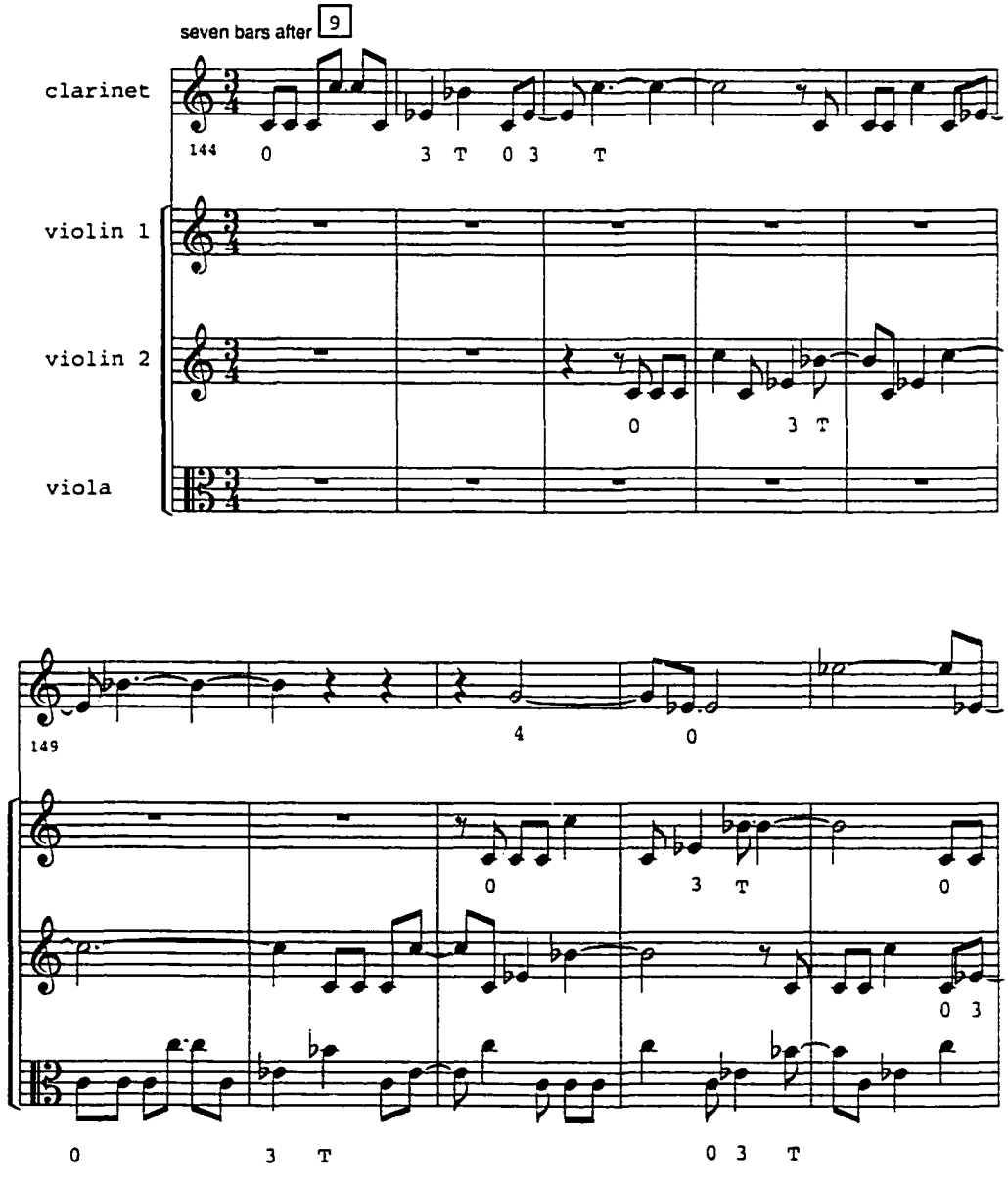


Example 3.18. In three presentations of the motif, note 0 is embellished by repetition, and by octave leaps.

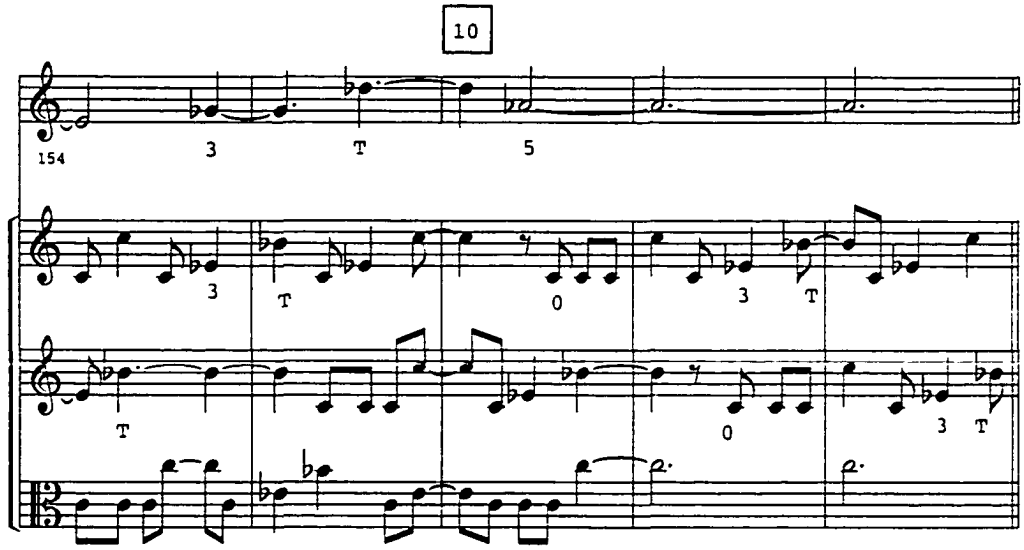
octave leaps and increasing rhythmic activity of note 0 at the beginning of each cycle guarantees sufficient melodic variation, and at the same time reinforces the perception of centricity. Melodic variability (especially via octave displacement) combined with consistent (in this case) centric relationships among the pitch classes of the motif is a link to the melodic procedures discussed above, especially in relation to the Piano Variations.

Example 3.19 shows the motif as it appears in a canonic passage, with several entries (of a 0 3 T form of the motif) at the unison, initially regularly spaced at a distance of fifteen eighth notes. After the first three entries, the canonic intervals become irregular. (Of course, in 3/4 time, a canonic interval of fifteen eighth notes will cause the second entry to be metrically quite different from the first and third, and thus seem also to be irregular. This is another example of Copland's typical rhythmic instability.) The canon becomes progressively less clearly structured; entries are obscured and/or overlapped in what might be called a stretto, if a somewhat disorderly one. In any case, the three

high strings continue with the pitch and rhythmic material of the canon through bar 159, at least. Meanwhile the clarinet, which had originally launched the canon, enters in bar 151 with a 4 0 3 T 5 version of the basic theme in an irregular augmentation, transposed up a minor third to E flat, with at least one note out of order. This



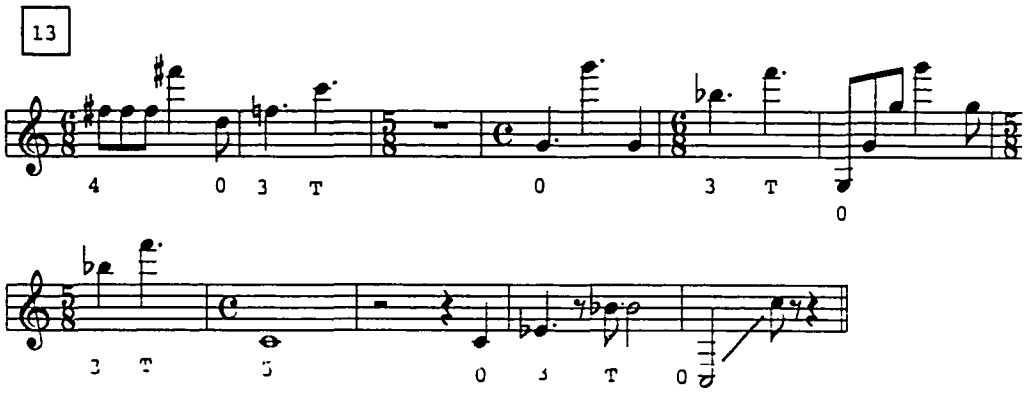
Example 3.19. (Part one.) The motif is subjected to canonic treatment.



Example 3.19 (part two).

is simply superimposed upon the other voices, which continue as before, so that we hear two independent versions of the basic motif, in different "keys", and at different speeds. It's worth noting that a very abbreviated version of this canon appears at bar 112, that is, before the substantial passage just discussed. Copland seems very concerned to present material in just the right order, so that each event is carefully prepared, flowing logically out of something already heard. Perhaps by the same token, yet another brief version of this canon is heard just prior to the end of the movement at RN 13, as a reminder of what has been.

Example 3.20 shows the ending of the movement. In a kind of summation, the motif undergoes two transpositions through the cycle of fourths (starting with 0 = D, moving to 0 = G, and then on to 0 = C, in the process echoing the 0,5,T aspect of the motif at an immediately deeper level), restating both the important rhythms and



Example 3.20. At the end of the movement, the motif is transposed through three steps of the cycle of fourths, echoing the 05T aspect of itself, at a deeper level.

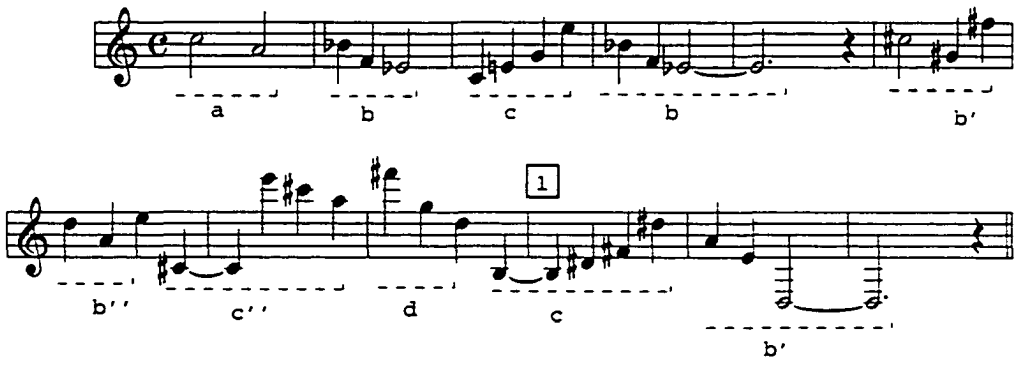
the octave leaps as well as the basic relations among notes, as the motif shrinks: 4 0 3 T, then 0 3 T 5, and finally just 0 3 T.

This movement shows Copland employing Variations-style melodic development in a more conventional multi-thematic context. As in variation 2 and the Variations coda, the basic motif here is varied as a collection, not as a filled-in interval, and it is not embellished in the usual sense. The form-generating function which embellishment usually serves is here fulfilled instead by the re-ordering of pitch classes within a retained centric context. The framing interval function of the basic motif is replaced by a situation where centricity itself, created in a consistent manner which is unique to this movement, serves as a "frame." In fact, moments where the centricity-generating 0,3,4,5,T motif predominate in the music do function to redirect the listener's attention to the distinction between the main stream of the music, and other relatively extraneous material. This further suggests a comparison particularly to the front orientation of the middle

sections of the first movement of the Piano Sonata (involving variants 6, 7, 8, and 9). In both cases, recurrences of variants of familiar material serve to guide the listener through longer stretches of the development of less familiar music.

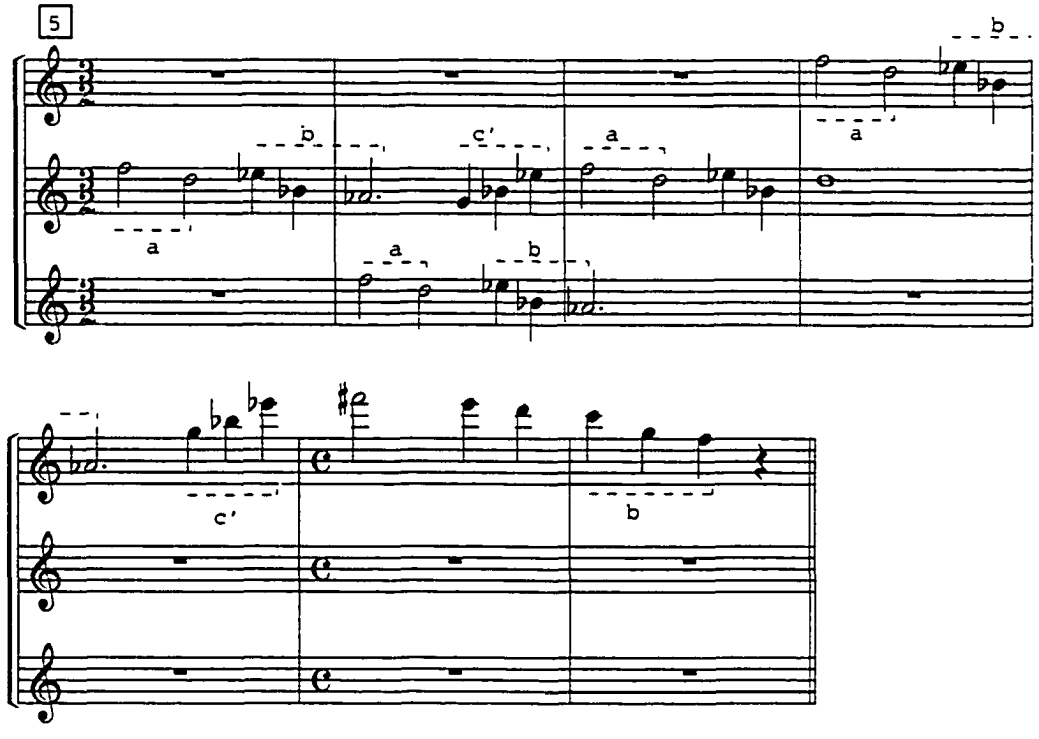
"Militant"

The opening melody of "Militant," the first of the six Statements for Orchestra, is constructed out of four basic melodic cells, and variants thereof, as shown in example 3.21. Cells b and c (trichords 3-9 (027) and 3-11 (037) respectively) each span a perfect fifth, abstractly, and in some cases, actually. Since these two cells are the most often used, in fact the only ones to be repeated within the opening statement of the melody, it seems reasonable to assert that this melody, in its own way, also asserts a basic framing interval, the perfect fifth. In this case, variants of the basic motifs are combined into a thematic melody, which is treated in a manner derived from traditional practice: specifically,



Example 3.21. The opening melody of "Militant" is mostly composed of melodic cells spanning a perfect fifth.

the expository section of the movement consists of a five-voice double canon, followed by freely contrapuntal passages for three and then two voices. After a brief non-contrapuntal middle section again featuring cells a, b and c, the reprise of the main theme, at RN 5, starts off with "Vorimitation," a device familiar to the Baroque composers. This consists of several canonic entries on the first two bars of the theme prior to the entry of the theme itself. (See example 3.22.) Throughout these canonic sections, the leading voice is mostly composed of variants of cells b and c. The following voices are composed partly of variants of these cells, but mostly of "neutral" scalar phrases.



Example 3.22. The beginning of the conclusion of the movement, featuring vorimitation, and the familiar melodic cells.

In examples 3.21 and 3.22, the variants of the basic melodic cells are labeled with superscripts. Variant b' features the octave displacement (either up or down) of the final tone of cell b. Variant b^* is an order permutation of the retrograde inversion of the original. Variant c' is an order permutation of motif c, which inverts the framing fifth, so that it appears as a perfect fourth. Variant c^* is the retrograde of motif c, with the first note displaced by three octaves. Other variants appearing in the movement but not shown here are related in similar ways (retrograde, inversion, permutation, octave displacement, and combinations thereof) to the original forms of cells b and c. Although the outward shape of this movement is distinct and unique, the inner pervasiveness of the perfect fifth, generating most of the melodic cells and their variants, argues for the inclusion of this movement as one of several movements which explore a single basic motif, bounded by a framing interval.

In this chapter, I have examined the melodies of three movements from three different pieces. Each is consistent in some ways with the model developed in chapter two, and inconsistent with the model in other ways. The theme of "Militant" is comprised primarily of melodic cells, and variants thereof, which tend to feature the perfect fifth as a framing interval. The three streams in movement two of the piano sonata all highlight a member of interval class three, either a minor third or a major sixth. Both of these two movements, then, assert a primary interval (or its inversion) as a fundamental melodic event, but both depart from the

model developed in chapter two in that neither features head motifs in a front-oriented context. Instead, they build thematic ideas as strings of interconnected variants, and treat them as themes, in some more traditional manner, either contrapuntally or developmentally.

In contrast, the first movement of the Sextet does tend to present variants of a single idea as head motifs or guideposts amongst diverse musical sections. It departs from the model due to the more complex inner nature of its basic motif: a particular type of centricity, created by the consistent deployment of a limited number of functioning scale degrees.

CHAPTER FOUR: FORM IN THE VARIATIONS AND THE PIANO SONATA

In this chapter I explore the form of the Variations, and of the first two movements of the Sonata. In previous chapters I demonstrated that the bulk of the melodic events in these three movements was derived from a framing interval (the minor third in all three cases), stated clearly at the very beginning of the music in each case. In this chapter I show that larger formal aspects are controlled by musical aspects related to this same interval. Specifically, the Variations compose out the minor triad implicated in the head motif and related scale of the theme. This prolonged minor triad is embellished with the second scale degree, which was also present in the theme. In the two movements of the Sonata, the minor-third framing interval at the musical surface is echoed by a deeper musical organization which features large-scale motion by minor third. Additionally, the second movement features a particular minor-seventh chord (also related to the framing interval) as a characteristic sonority. All of these musical objects are familiar to us as the basic building blocks of music of the tonal tradition, and yet none of them are used here in the manner of that tradition. In fact, in many of these cases these musical components appear in contexts specifically forbidden by the tradition. This chapter will serve to alert the reader to the details of Copland's reinterpretation of received musical materials, and to the significance thereof.

Form in the Piano Variations

I take it as axiomatic that the superficially repetitive or cyclical outward "form" of a well-written theme and variations movement is belied by the forward-moving inner nature of the music itself. (This is of course equally as true for the classical composers as it is for Copland.) My analysis focuses on finding and characterizing this inner nature, partly by bracketing away the repetitive aspects of the music.

In his 1953 book, Arthur Berger speaks of the "obvious C# minor implications" of the Variations theme. [1] (This is not to say that it is in C# minor. At the risk of misinterpreting Berger, I would assume that he is working toward the idea of "referential collection," a theoretical concept that he would make explicit in his ground-breaking 1963 article "Problems of Pitch Organization in Stravinsky." [2]) By consulting example 2.2 of chapter two, the reader can confirm that the pitches involved in the theme and its variations do indeed suggest C# minor, if one allows for enharmonic notation. The sense of this key is particularly strong in what I have called the A section, where the head motif (a filled-in minor third plus lower auxiliary, or a form of 4-3) suggests scale degrees $\hat{3}$, $\hat{2}$, $\hat{7}$, and $\hat{1}$. This sense of minor scale is confirmed in many of the variations, especially those where the neighbor motion $\hat{7}$ to $\hat{1}$ is contextually emphasized. The sense of C# minor is weaker, but still present, in the B section of the theme, where F# and G# represent scale degrees

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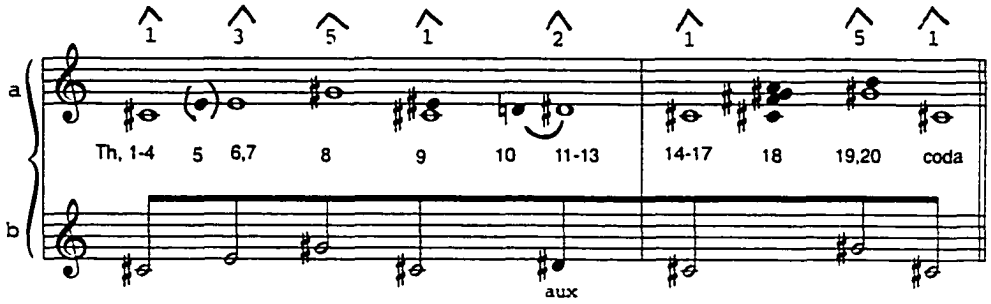
[1]Arthur Berger, Aaron Copland (New York: Oxford University Press,1953), 84.

[2]Arthur Berger, "Problems of Pitch Organization in Stravinsky," Perspectives of New Music 2/1 (1963): 11-42.

$\hat{4}$ and $\hat{5}$. Many of the variations feature these latter scale degrees as well. Berger's suggestion is confirmed: behind the surface of the melodic material is a reductional skeleton which can be heard as analogous to scale degrees $\hat{1}$, $\hat{2}$, $\hat{3}$, $\hat{4}$, $\hat{5}$, and $\hat{7}$ of a minor scale. Bear in mind, however, that outside of a clearly tonal harmonic context, this collection of notes is just that, a collection, and should not be burdened with any of the functional implications of "scale," or "key."

Following the implications of Berger's suggestion, I traced the transpositions of the theme as it appears in the variations and coda. Example 4.1 gives the result. Each note in the example represents the lower note of the minor-third framing interval, and thus the theme, or at least the head motif, at a certain transpositional level. Scale degrees in an overall C# minor are given above the upper staff. Figures between the staves identify which variation(s) correspond with which transpositional level. Level a gives every transpositional level actually heard. Level b shows that the entire piece can be heard as the large-scale unfolding of a C# minor triad, embellished with scale degree $\hat{2}$ as an upper neighbor (echoing its appearance, at another level, as a passing tone in the head motif). Of twenty-two appearances of the theme, seventeen or eighteen represent transpositional levels analogous to scale degrees $\hat{1}$, $\hat{3}$ or $\hat{5}$, and most of the remainder can be heard in some weaker relationship to C# minor. (I should note at this point that the C# minor quality of the example results from my decision to allow the lower note of the framing interval to represent the entire basic motif. This is the best choice due to its consistency with the



Example 4.1. The form of the Variations is generated by the embellished unfolding of a C# minor triad.

musical qualities of the head motif. Another choice would result in another "key" in example 4.1. In any case, the transpositional pathway retains its minor-triad quality, even if the foreground identification of the theme with a collection equivalent to C# minor is rejected.)

Motivic/thematic events reinforce this interpretation of the transpositional progression. Most dramatic in this regard is variation 14, which as was already mentioned serves as the beginning of a type of recapitulation. That is, this variation returns simultaneously to the opening pitch level and to the simplest form of the head motif. This sectionalization is indicated in example 4.1 by the barline just before variation 14. By the same token, even though variation 5 features the basic pitch collection transposed up three semitones, it does so in such a complex way that I have chosen to portray the arrival at scale degree $\hat{3}$ as happening instead at variation 6, where the melody asserts the basic motif much more clearly. Under this interpretation, variation 5 represents a transitional passage. In passing, note that my assumption about theme and variations as a "form" is confirmed. All variations are

not created equal: their merely cyclical surface appearance is belied by any analysis which can pick out one variation as a moment of recapitulation and another as merely transitional.

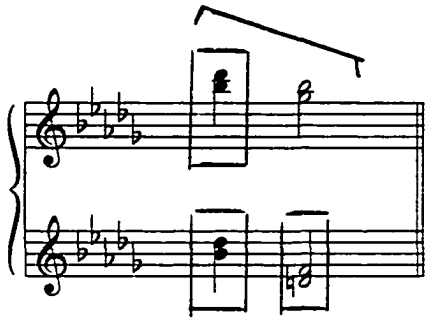
In chapter two I showed that most of the melodic material for this piece was derived from a basic interval: a descending minor third, which first appeared at the very beginning of the music. Furthermore, this interval often appeared with a passing note and a lower neighbor, thus as a form of 4-3. This was first heard at a pitch level suggesting scale degrees $\hat{3}$, $\hat{2}$, $\hat{1}$ and $\hat{7}$ of C# minor. The various head motifs offered an orderly development of these four notes. The B section of the theme extended this small collection to include scale degrees $\hat{4}$ and $\hat{5}$. My analysis of the large-scale form of the piece, in this chapter, reveals it to be the unfolding of a C# minor triad. Scale degree $\hat{2}$ appears as an embellishing tone in both levels: in the head motif as a passing tone, and in the large-scale triadic unfolding as an upper neighbor. All of these interpretations assert slightly different forms of an abstract quality, shorn of traditional functionality, referable to C# minor. It is not necessary to decide which form, large-scale triad or local six-note scale fragment, is logically prior to the other. They coexist easily, sharing an overlapping musical content, and both equally derived from the opening bars of the piece. Conflict does arise, however, between this abstract C# minor quality, and the actual musical surface in which it is realized. Where are the authentic cadences in C# minor? In fact, where is any significant harmony that can be identified as a functioning triad in this key? Can this piece really be said to have an underlying structure in any way related to a minor

triad, when the musical surface is almost entirely without reference to such traditional musical structures? Even the opening theme is accompanied by pitches foreign to C# minor, and unrelatable to functional harmony. This conflict cannot be analyzed away: this piece features the large-scale unfolding of a musical structure in a manner which is quite incompatible with that structure, as traditionally understood. In this music, a twentieth-century composer exploits a traditional pitch resource (a scale and its related triad) in thoroughly novel ways, stripping it completely of its traditional manner (tonality, harmonic progression, etc.) and in the process denying its received "meaning," both for himself and for his listeners.

Form in the Piano Sonata, first movement

In chapter two I demonstrated that the melodic material on the musical surface of the first movement of Copland's piano sonata is generated from and controlled by a basic motif (a descending minor third) and nine variants thereof. In this chapter I will expand on that understanding, to show that other aspects of this music, including its deeper formal principles, can be also be perceived in terms of this same basic interval.

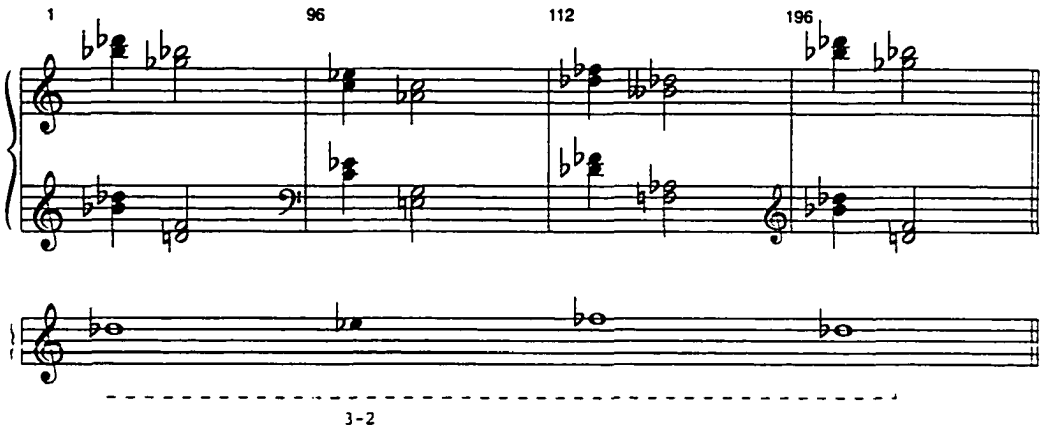
Example 4.2 shows that the minor third interval nearly saturates both vertical and horizontal dimensions of the first measure of this movement; bar one thus announces not only the function of this interval as the basic melodic motif or framing



Example 4.2. The first measure of the movement is saturated with minor thirds, both melodically, and as harmonic dyads.

interval ("variant zero"), but also its importance in the harmonic and formal aspects. I will first look at the pattern of literal (and transposed) repetitions of the first bar, and then integrate this into a larger picture incorporating several aspects of the form of this movement.

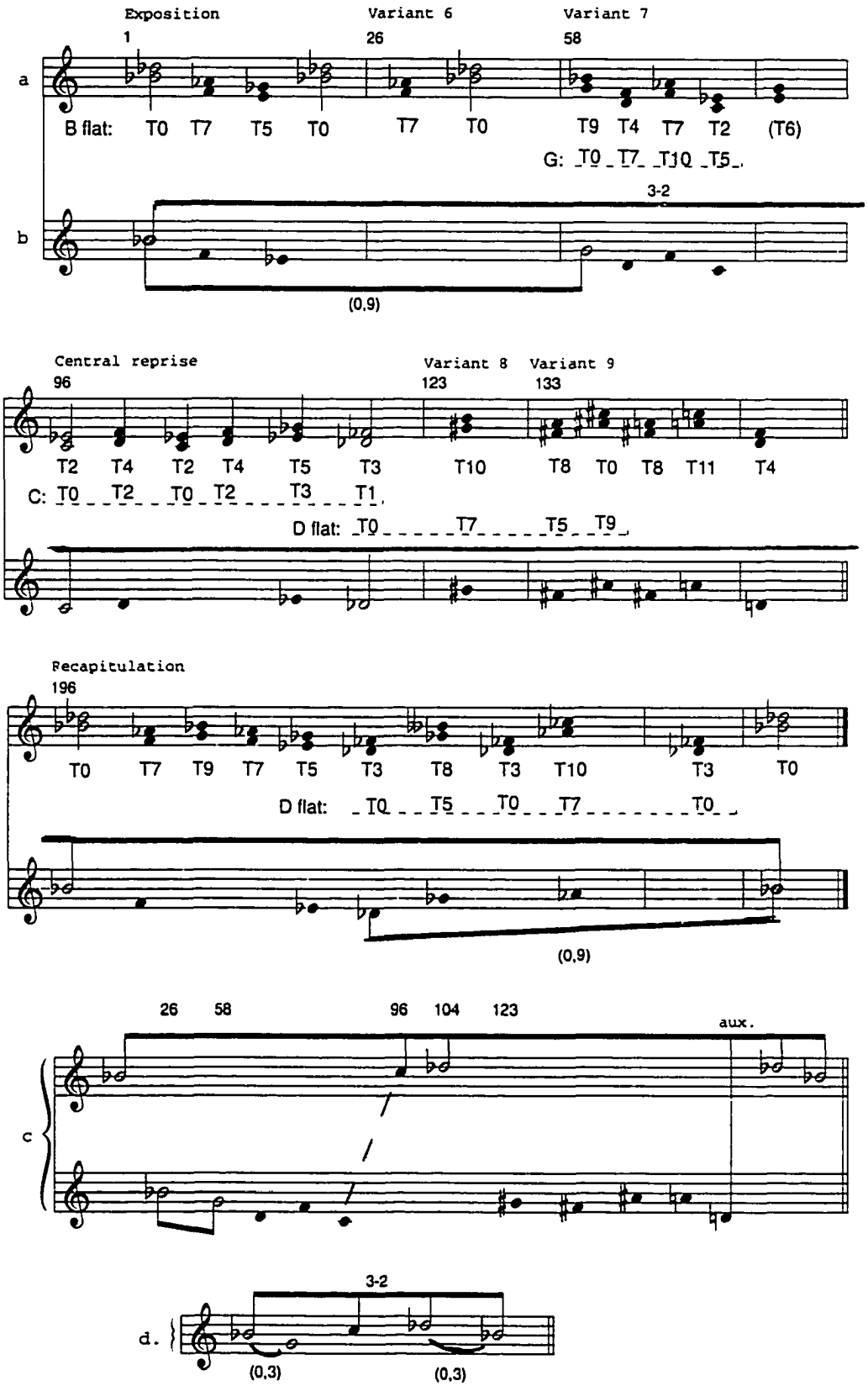
The opening bar of this movement recurs almost unchanged (with the same melody, and paired minor-third dyad simultaneities) at the same pitch level (with D♭/B♭ in the highest register) at several points in the piece (most significantly in bars 1, 6, 23, 25, 196, and 240), and constitutes a cadential formula or sectional boundary marker, contextually defined as such for this one movement only. It also appears transposed up two semitones in bars 96 and 100, and up another semitone in bars 112 and 114. (See example 4.3.) Thus the series of appearances of this two-chord cadential progression, marking both the beginnings and ends of important passages, also restates or unfolds the fundamental (filled-in) minor third at a higher level--a [0,2,3,0] overall plan. That is to say, the passing tone present in many of the variants is also present in this large-scale unfolding of the basic minor third.



Example 4.3. Several re-appearances of the opening bar restate set-class 3-2 at a deeper level.

These particular sonic guideposts appear only in those passages that I have labeled as exposition, central reprise, and recapitulation, that is, not in the passages for which variants 6, 7, 8, and 9 serve as head motifs. This suggests an interpretation of this music as two independent streams, partaking of initially separate formal schemes. One stream is marked by appearances of this cadential progression, always harmonized in the same way (and associated with the thematic statements built up out of variants 1-5), the other stream marked by appearances of variants 6, 7, 8, and 9 as head motifs limited to the melodic realm.

Example 4.4 shows how appearances of the cadential progression, plus passages controlled by variants 6, 7, 8, and 9, can be integrated into a more unified scheme. This example traces the appearances of all significant minor thirds in both of the streams: first, all of the melodic variants discussed in chapter two, as well as internal repetitions and transpositions thereof, and second, all of



Example 4.4

the appearances of the cadential progression, as discussed in the preceding paragraph. In level a of example 4.4, the important minor thirds are shown as abstract verticalized dyads. Taking the key signature at its word, I have spoken in terms of the "key" of B♭ minor, but the transpositional levels on the example are not bound to any particular pitches as functional roots. I have grouped the transpositional levels into larger "T-areas," demarcated with long horizontal brackets. The groupings at 58 and 96 are confirmed somewhat by Copland's key signatures. The grouping beginning at bar 104 is equivalent to the arrival on "3" in the first stream, the one composed only of cadential progressions. The appearance of T7 and T5 (corresponding to dominant and subdominant) within all but one of the groupings is another example of Copland having recourse to standard compositional moves enshrined by tradition, which here are of strictly local significance, and subordinate to a larger scheme concerned with the minor third. The example shows a rough correspondence for the first half of the movement between groupings based on transpositional levels and sections of music partitioned in terms of melodic variants, and that this correspondence tends to disappear between bars 123 and 189. Note that the alto voice at bars 19-22, and the sequential passage at 58-86 (with its "sub-head" motifs), both discussed in chapter two, are also represented in the sketch.

The two middlegrounds (levels b and c) of example 4.4 represent each of the minor thirds in level a by its lower tone only. Beams above the staff in level b connect members of 3-2 over the longest span; beams below the staff demarcate important moves by

minor third. The absence of beams and ties for bars 123 to 179 in level b confirms the weakness of structural ordering in this area. Especially in level c, I have tried to preserve my sense of two independent, simultaneous but related processes in this movement, as discussed above. Level c shows events in the passages oriented toward the opening melody (exposition, reprise, and recapitulation) in the upper staff, and events which occur in the passages controlled by variants 6, 7, 8, and 9 in the lower staff.

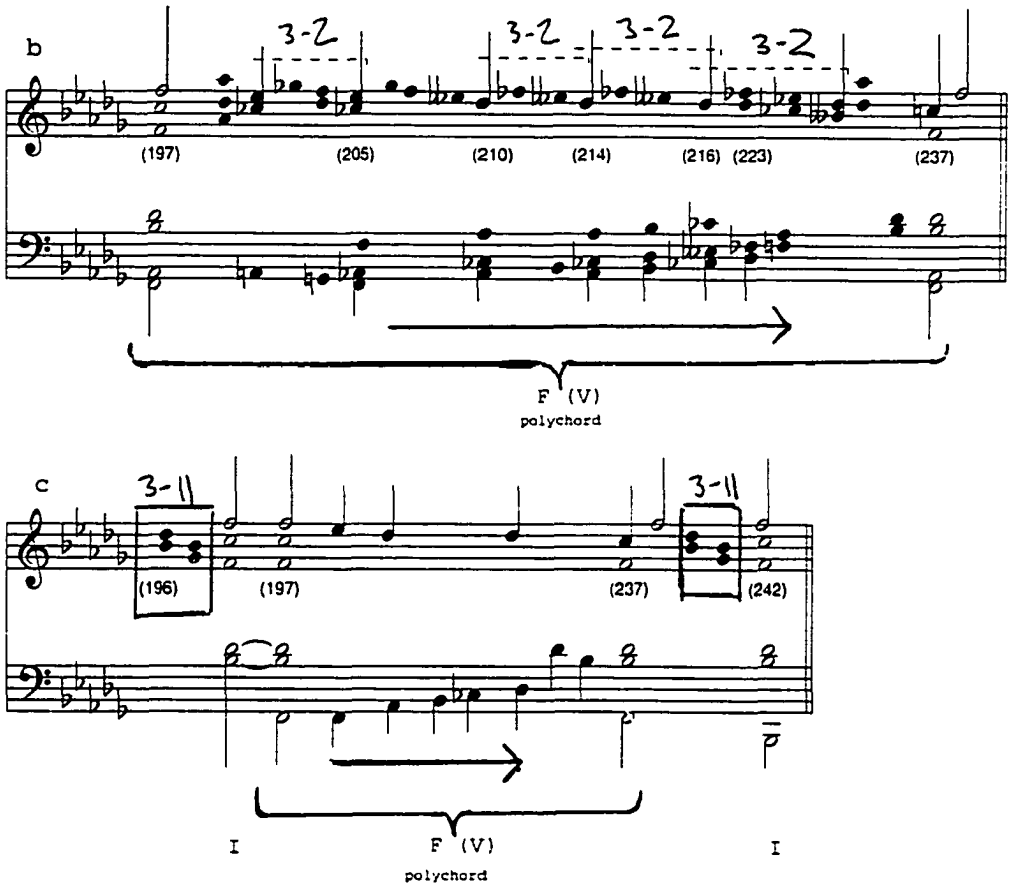
The deepest background level (labeled "d") shows that the initial move descending away from B♭ (down a minor third to G at bar 58) is balanced by a concluding move descending toward B♭ (from D♭ down to B♭, stretched out over the second half of the movement.) These two large moves are tied together by the (0230) scheme, with its passing tone C, generated by the cadential progressions. (This latter notion partially re-unites the two processes which appear as separate at the middleground.) At the deepest background, level d shows that the movement is framed by two large moves down a minor third. These two large moves are themselves related at the minor third (up), with a passing tone lying between. (Or perhaps better, two large minor-third motions are joined together by a 3-2 structure, involving a passing tone.) Thus, we can see that these events at the deepest levels echo both the harmonic features first presented in the opening measure, as well as the melodic principles that are present on the musical surface throughout the movement.

At this point, perhaps it becomes possible to answer a question that was left hanging in chapter two. Recall that the passage in bars 58-86 (represented in level d of example 4.4 by the note G)

seemed confusingly conspicuous, due to its nature as an extended but bounded set of four sequential canonic phrases, in a musical context of mostly open-ended "free" phrases. Furthermore, the high degree of formal organization at the local surface and middleground in this passage is seemingly independent of any ongoing deeper formal structure. Now that we know that this move down by minor third from B♭ to G serves to prepare a later move, at a deeper level, from D♭ to B♭, we have a context within which the seemingly unjustified compositional weight of this passage can make sense after all. Since the G appears at a relatively shallow level, when compared to the D♭, Copland needed to create the illusion that these two passages are formally equal at the deepest level, at least in retrospect. He did so by bolstering up the G passage with a canonic/sequential formal device. This ad hoc formal mechanism amounts to an arbitrary agogic accent at the middleground that papers over what might otherwise be seen as a gap in the deeper organization.

This movement is unified, not by a weakly tonal scheme with many "wrong notes," but rather by the compositional unfolding of a single interval, the minor third, which occurs throughout the course of the movement, at several different levels, various rates of speed, and in two distinct streams. Furthermore, the two streams--a series of cadential two-chord progressions, and a series of melodic variants--are internally connected by their shared source in the first bar of the movement.

Felix Salzer discusses the conclusion of this movement in his 1952 book, Structural Hearing. He argues that the passage beginning with what I have called the recapitulation (bar 196 to the



Example 4.5. Felix Salzer's middleground graphs, with my added set-class labels. From Felix Salzer, Structural Hearing: Tonal Coherence in Music (New York: Dover Publications, Inc, 1982) Volume 2, 186-187. Used by permission.

end) features the prolongation of a polychord; that is, the prolongation of a non-tonal musical structure. Furthermore, this is a "polychordal F chord which contains the B♭ tonic in its outline. . . From the point of view of chord grammar a fusion of tonic and dominant chords has taken place." [3] Salzer includes a set of analytical graphs that identify a series of several instances of what we would today call set class 3-2 (013) that form a middleground

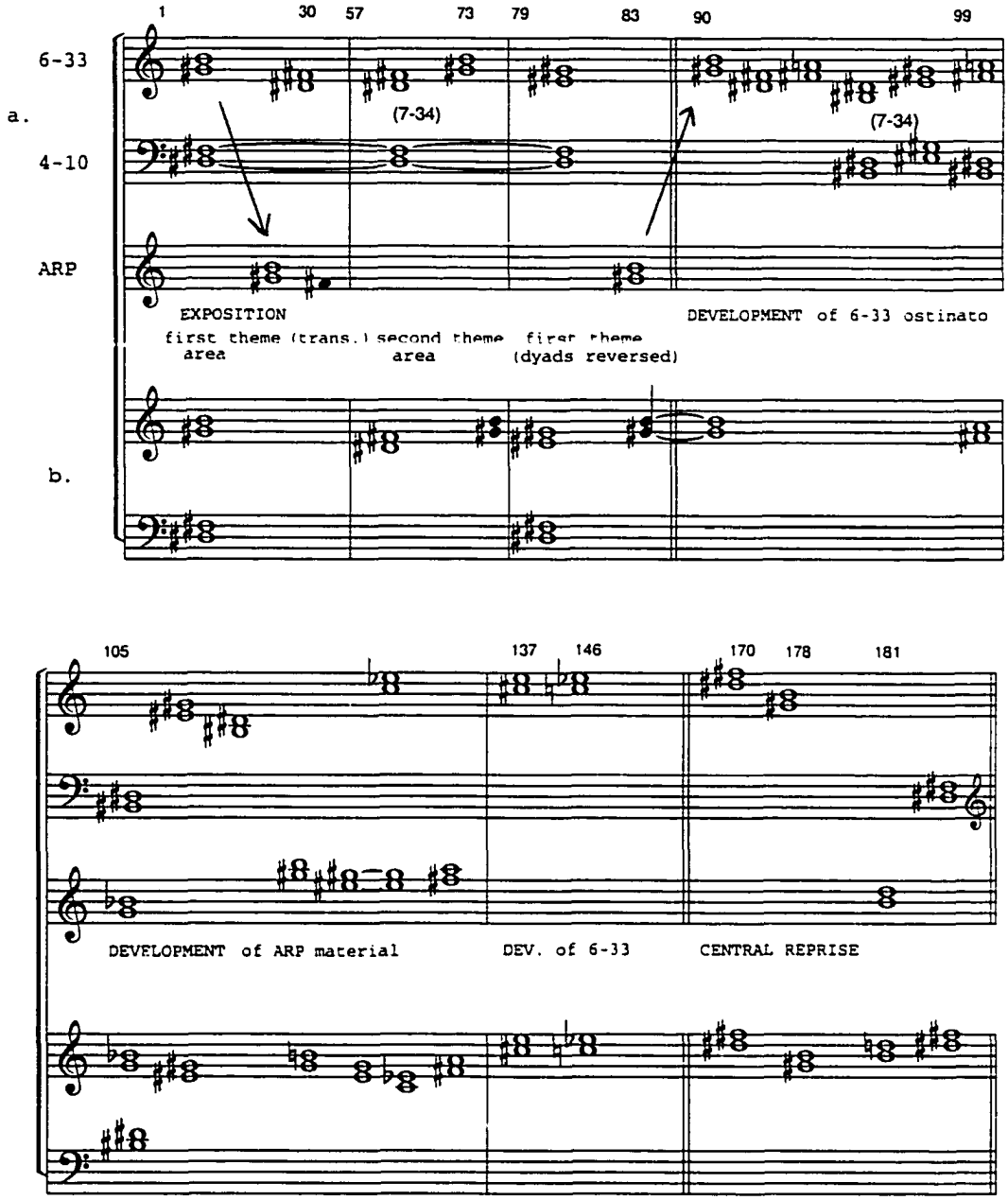
[3]Felix Salzer, Structural Hearing: Tonal Coherence in Music (New York: Dover Publications, 1952), volume 1, 194.

embellishment of the deep-middleground top voice in bars 197-237, as it "moves from F into the inner voice C." [4] Example 4.5 shows his middleground graphs (from volume 2, ex. 416), with my additional set-class labels. Salzer's invocation of concepts such as polychordal harmony stems presumably from an attempt on his part to account for every note, in the tradition of Roman numeral harmonic analysis of tonal music. My approach, limited to melodic events only, is freed from this burden, and consequently I prefer to abstain from evaluating his "polychord." Be that as it may, I find it interesting that, although he makes no direct comment about it, he also includes representative tones (adding up to set 3-11, a subset of 5-21) of the 5-21 motif, which I have called a "cadential marker," in bars 196 and 240 of his deep-middleground graph c. That Salzer's harmonic approach, and my melody-only approach, both lead to a focus on some of the same musical features, speaks strongly in favor of our shared central premise that this movement is formed around the long-term unfolding of some single musical sonority, however it might be described or named.

Form in the Piano Sonata, second movement

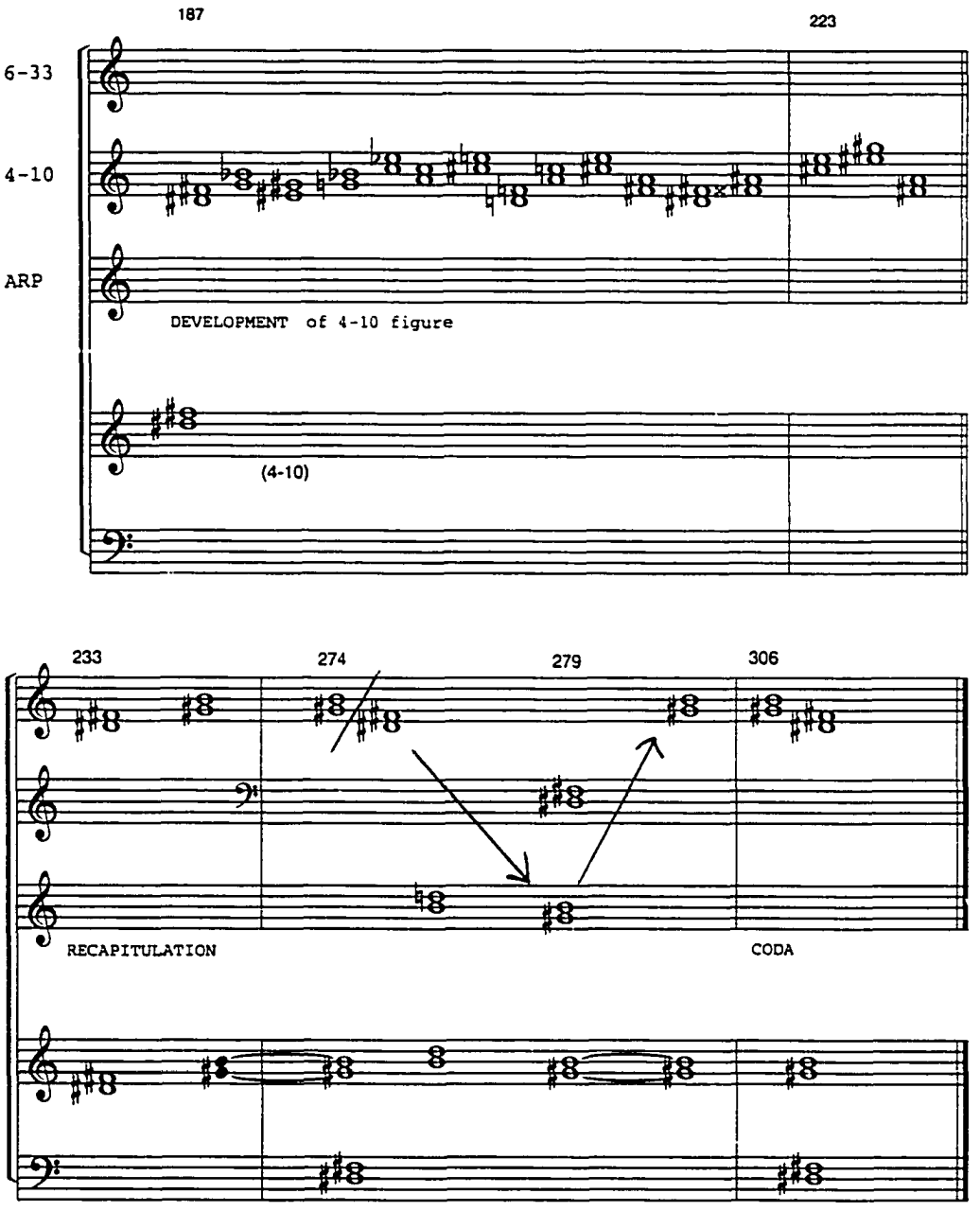
In Chapter 3, I showed that the second movement of Copland's sonata features two (or is it three?) nominally separate melodic streams, each of which highlights in its own way a member of interval class 3 (a major sixth or a minor third), doing so by subjecting a limited number of variants to developmental treatment

[4]Salzer, Structural Hearing, volume 1, 194.



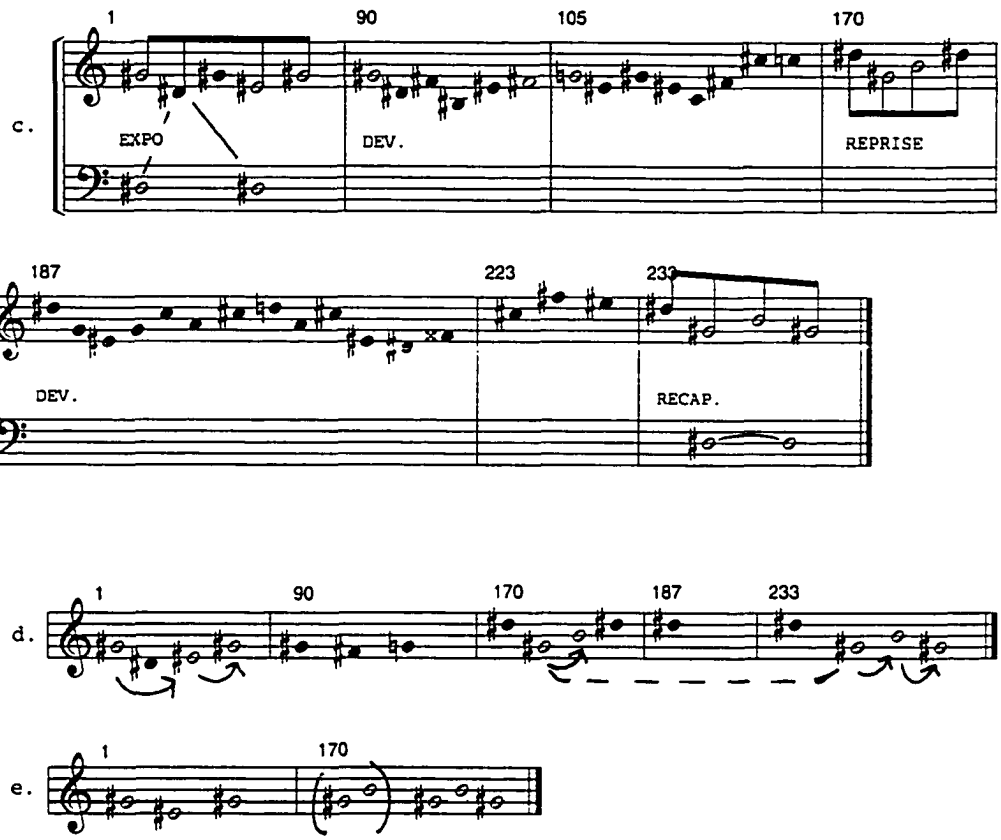
Example 4.6 (part one).

somewhat in the manner of sonata-allegro form, or possibly sonata-rondo. Here I focus more narrowly on the pattern of highlighted minor thirds and major sixths, ignoring differences among the musical streams. Level a of example 4.6 gives every instance of such highlighted framing intervals, sorted into streams, one staff



Example 4.6 (part two).

per stream. (To simplify the sketch, all framing intervals are written as minor thirds for levels a and b, even though they may originally have appeared as major sixths.) Straight lines with arrowheads in the beginning and end of level a show that highlighted



Example 4.6 (part three).

frames in the ARP stream either confirm or prepare the centricity of the same framing pitches in the 6-33 stream. Level b of the example (restating the content of level a) integrates the most important events in each of the three streams into one overall progression of minor thirds. Labels suggest analogies to traditional formal concepts.

Examination of example 4.6, especially level c, serves to point out the relative orderliness of the areas I have labeled as "exposition" (bars 1-89), "central reprise" (170-187), and "recapitulation" (233 to the end). Specifically, these areas feature large-scale motions by minor third (very important) and by perfect fourth or fifth (only locally significant, as I shall argue below),

while the other areas feature less focused developmental passages, moving through a greater number of "keys" in a less orderly way. Level a shows that each of the four developmental areas is dedicated to one of the three streams, to the exclusion of the others. Bars 90-104 feature the sequential and canonic development of two variants of the 6-33 figure. After some intervening material, this process begins again in bar 137, leading to a development of the motif from bar one which is so "free" that for about 14 bars, there are no longer any detectable framing intervals. The intervening material (105-136) features the development of the ARP figure. The music in bars 187 to 233 is mostly dedicated to the development of the various 4-10 figures, with some additional material that will reappear in the third movement. These developmental areas can be heard as derived from the minor-third framing interval, by way of the minor-third orientation of their basic materials. This formal pattern, thematic/tonal home areas alternating with more adventurous developmental sections, is of course relatable, but not reducible, to traditional concepts like rondo or sonata form. A unique formal feature here is Copland's relatively short central reprise section, which appears in both of the first two movements of the Piano Sonata. In this movement, one could also hear the events beginning at bar 178 as a false recapitulation, a reappearance of the melodic events (but with dyads reversed!) of the opening, but in the wrong key.

Levels c and d show further that the more orderly third- and fourth-oriented passages (exposition, central reprise, and recapitulation) contain within themselves a feature which connects

this movement to its predecessor. Specifically, each of these sections has a significant minor third move toward or away from the most important pitch class, G#. (These moves are marked by curved arrows in level d. The long dotted arrow is meant to suggest that the minor-third motion begun in the central reprise is left incomplete, going underground to reemerge and begin again only at the end.) The E# in the exposition (as shown in level d) is associated with the first appearance of the 6-33 motif with dyads reversed. The return to G# is effectuated by an ARP passage. The move to B in the central reprise is also associated with dyad reversal in the 6-33 motif, but left hanging as the 4-10 development section abruptly intervenes. The move to B begins again at bar 274, where the 6-33 motif in its original key states G#, and then moves to B, again via dyad reversal. An ARP passage follows, confirming the move to B, and then returning to G#. The salience of these minor-third moves is further confirmed by this close coordination, contextually unusual in this movement, of these two or three nominally independent streams of music. Note also the importance of dyad reversal, possibly as an analog to the relative major/minor relationship of traditional tonality: two identical collections can assert the predominance of pitches a minor third apart, when deployed in the music with this in mind. Level e summarizes this play of minor thirds at the deepest background.

Aside from abstract inter-movement connections, this deeply hidden relationship shows that interval class 3, dominating the musical surface, also has a formative influence on the musical structure. This motion (from G# down to E#, back to G#, up to B,

and finally returning to G#) spread out among three sections of the music, both reflects and confirms the minor-third focus of the main melodic events, while at the same time coexists with, conflicts with, or even subverts a more familiar form featuring traditional motion by interval class 5 (perfect fourth or perfect fifth). Note the similarity of this overall plan to that of the first movement, which also features minor-third motion above and below a central pitch. Note also that, on the foreground level, the first appearance of the ARP figure, at bar 8, is described as a move by minor third away from and then back to a given pitch.

Attentive readers may protest that in my haste to discover significant minor-third moves, I have unjustifiably slighted movement by interval class 5, particularly in light of the ubiquitous sounding of the D#/F# framing interval throughout the exposition section. That is, since this interval appears so often, first in the left hand as the 4-10 figure, then in the right hand in terms of 6-33, and then again in the left hand, why do I downplay its formal significance, as a framing interval at a distance of a perfect fourth from the opening frame? The answer is contained within the question: The D#/F# in question is not concerned with any motion from one pitch (or set of pitches) to another. It is simply a static background, almost a drone. I am convinced that musical form is generated mostly by motion from one sonic entity to another. The persistence of the D#/F# dyad as an accompanying figure in the opening bars undermines any possible significance of a right-hand motion to these pitches. Perhaps the concept of characteristic

sonority offers a better explanation of the function of this droning dyad, as discussed in the following paragraph.

Please refer again to levels a and b of the example. It is quite conspicuous that the pitches of the framing intervals in the "home" areas (exposition, central reprise, and recapitulation) tend to add up to a G# minor-seventh chord (G#, B, D#, F#). (The only pitches not so accountable are D natural at bar 181, and E# at bar 79, both associated with the minor third motion just discussed, and also the most "dissonant" structural tones in the piece.) At several spots, the two pairs of framing intervals which make up this chord are sounding simultaneously (e.g., bars 1-29, as discussed in the previous paragraph). The final sonority of the movement is this same chord, also arising from the simultaneous sounding of the framing intervals of two forms of the 6-33 motif. Recall further that the initial appearance of the ARP process can be described as the unfolding of a G# minor-seventh chord. To summarize, this four-note chord summarizes the important pitch content in various ways at various structural levels. (Note that important motion tends to occur within this chord, for example from G# to B, but that this chord never moves in its entirety to some other chord.) In his Contemporary Tone Structures, Allen Forte offers a similar analysis of the third movement of Copland's Four Piano Blues. For Forte, "the entire work is heard as an expansion of the single sonority: B♭, D♭, F, A♭, "[5] Note that in order not to open up irrelevant tonal issues, Forte avoids calling this chord by its traditional name.

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[5]Allen Forte, Contemporary Tone Structures (New York: Columbia University Teachers College Bureau of Publicaions, 1955), 63.

Forty years later, I'm not so worried about being misunderstood: it is a B♭ minor-seventh chord. Forte goes on to say that "the rationale of this expansion can best be understood in terms of the module of a third: hence the sequence of ascending thirds which results in the secondary aggregate: F, A♭, C, E♭." [6] Further explorations of Forte's ideas, and of the connections between the Four Piano Blues and the (earlier) Piano Sonata are beyond the scope of this paper. Do note however, that the idea of a "module" of a given interval and its interaction with, and movement within, a relatively static characteristic sonority can describe both this second movement of the Piano Sonata, and also the Piano Variations. In both cases, a framing interval generates melodic events, and the formal layout suggests the unfolding of a larger (originally diatonic) entity, closely related to the framing interval.

In this chapter, I have shown that the three movements under consideration are built around the minor third in more than one way. The bulk of the melodic events at the musical surface in each of these movements features this interval as a framing interval, which is in turn derived from the very opening bars. At the same time, the formal organization of each is also generated by this same interval, in terms of large-scale motion by minor third, the composing-out or prolongation of a musical entity related to this interval, or both. In the next chapter, I will look at some movements sharing some aspects of the model developed here, but featuring different structural intervals.

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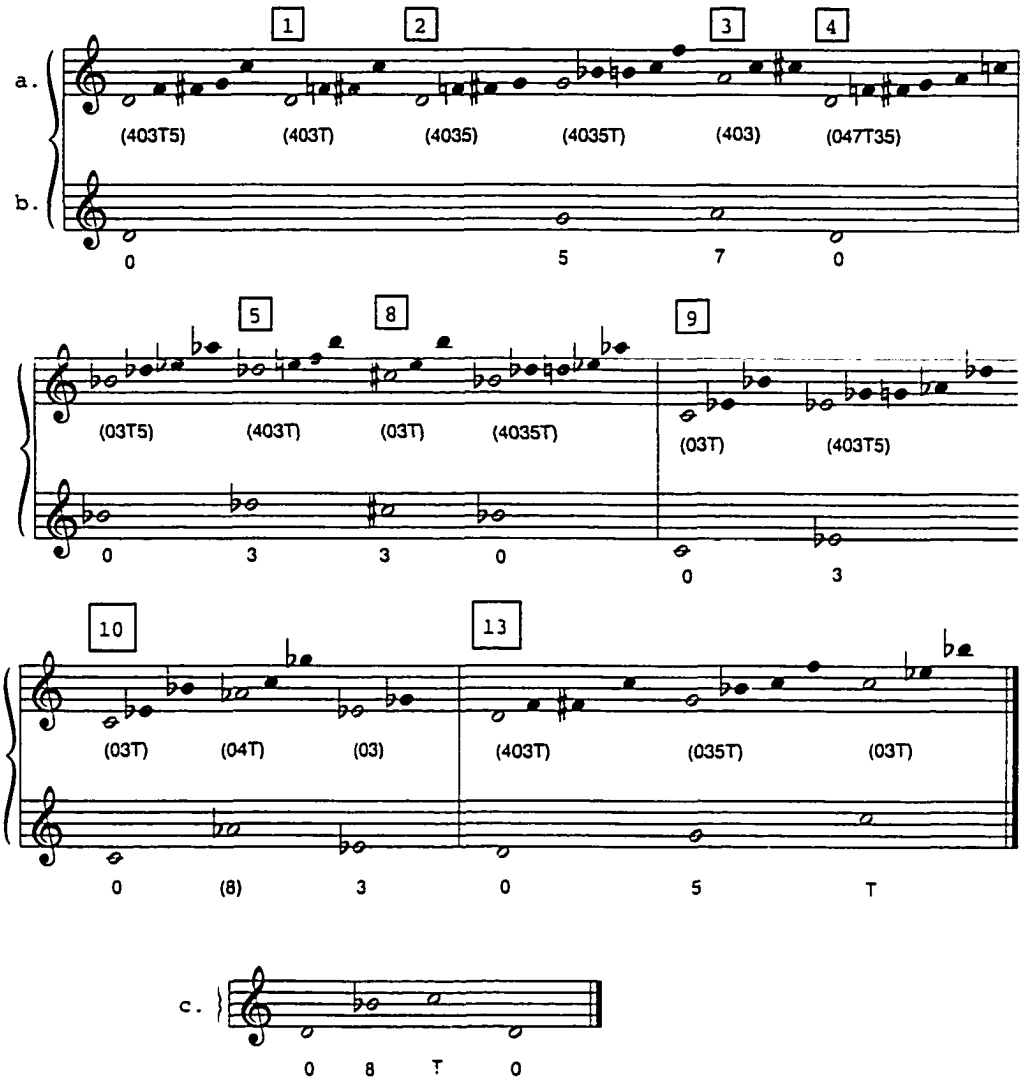
[6]Forte, Contemporary Tone Structures ,63.

CHAPTER FIVE: FORM IN THE SEXTET

In the previous chapter I showed that, for the Variations and the first two movements of the Sonata, the inner form in each case is internally related to the melodic surface, via the framing interval (a minor third in all three cases). In each of those cases, form is generated by the long-term unfolding of some musical entity closely related either to the framing interval or to the basic motif in which it is embedded. For each of those three movements, structural relationships extend throughout the entire form, and permeate all parts of the music. Any divergent material is clearly subordinate to, and controlled by, the main stream of musical events. In this chapter, I will look at three more movements, the three movements of the Sextet, in which this same musico-structural principle is somewhat weakened, but still present. That is, the same kinds of musical organization are present, but do not extend throughout the entirety of the movement, nor necessarily reach all the way to the deepest background level, and consequently do not control all of the melodic material. Nevertheless, an understanding of the framing interval and how it is unfolded over the long term can illuminate some aspects of the formal organization of these three movements. Such an understanding also helps to demonstrate how the third-movement quotation of material from movement one creates a sense of cyclical formal unity for the piece as a whole.



Example 5.1. Form of movement one of the Sextet.

Form in movement one of the Sextet

Level a in example 5.1 gives all appearances of the centricity-generating main motif in movement one of the Sextet, accompanied by analytical figures beneath the staff giving the particular permutation of the motif in each case. Level b, showing only the single centric tone in each appearance of the motif, groups these

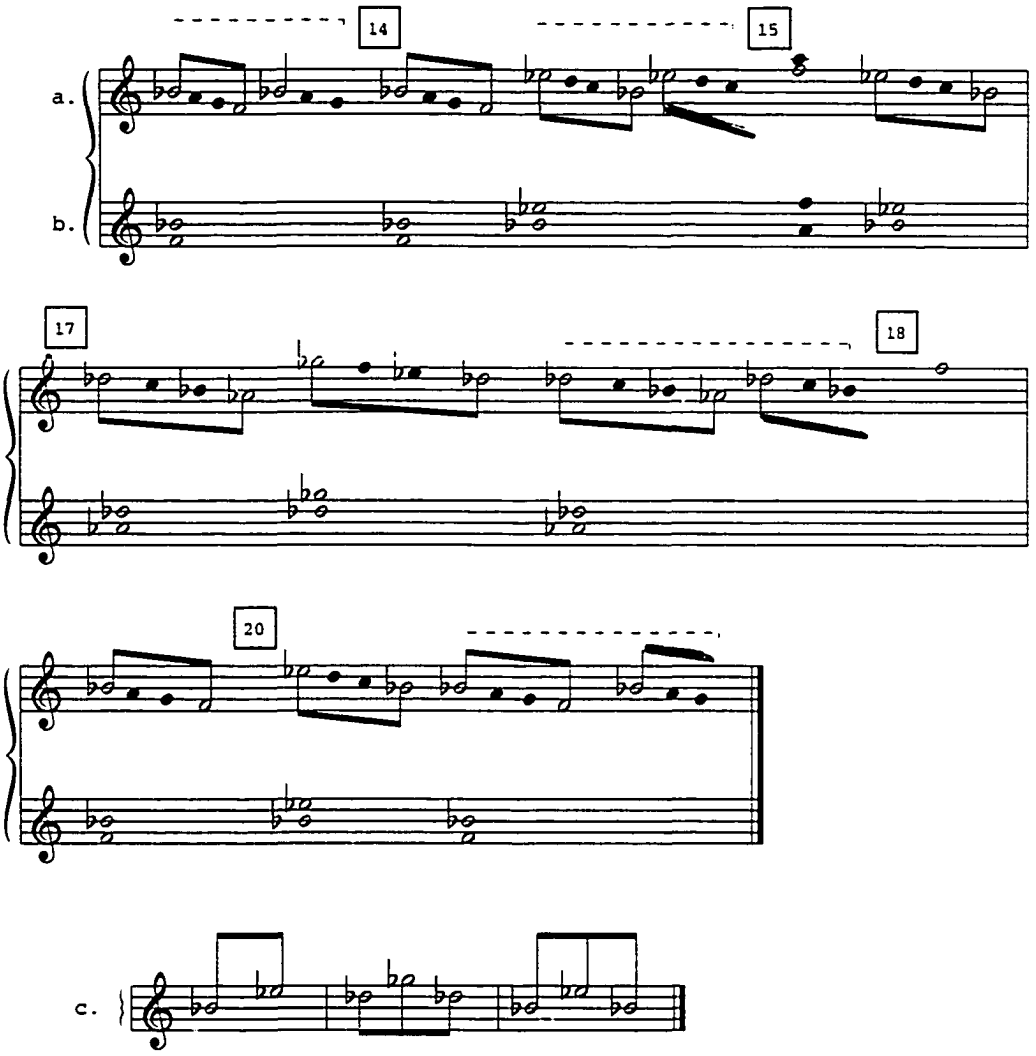
appearances into four larger areas, structurally analogous to the key areas of tonal music. Another set of analytical figures beneath the staff in level b suggests a connection of this level to level a: the figures in level b, 0570, 030, 0303, and 05T, are all possible forms of the melodic motif. In other words, the significant intervallic motion within each of the four sections of level b is also significant within the various appearances of the motif in level a. The most interesting part of level b comes at the end, where three consecutive forms of the motif are related by consecutive rising perfect fourths, echoing the 05T aspect of the melodic events. Level c suggests a four-part form for the movement as a whole, summarized as 08T0, admittedly not related to surface events, and thus not relevant to further discussion However, as we shall see below, the 05T ending of this movement (shown in level b at RN 13) foreshadows a similar ending for the third movement, generating some cyclic continuity for the piece as a whole.

Form in movement two of the Sextet

The second movement of the Sextet features three sharply differentiated blocks of music in a sort of formal (or structural) polyphony on a large scale. All three of these thematic blocks sound simultaneously at the beginning and end of the movement, and sequentially throughout the remainder of the movement. The first block of music features a stepwise diatonic descending melody (involving 4-11 and occasionally its subset 3-2), which highlights the descending perfect fourth as a framing interval, as discussed in

chapter two. The second block is basically an F-major triad, with interpolated G, D and B♭. This block features an elaborate melody which usually prolongs the pitch F. The third block is dominated by an atonal bass line featuring large leaps, with no obvious connection to either of the other two blocks. Since the first block takes up more than half of the music, events within this block tend to dominate the attention of the listener. This section of my discussion is limited to the ways in which appearances of the perfect-fourth framing interval serve to structure the music in block one, and consequently in the whole movement. Under this interpretation, events within blocks two and three are given independent or subordinate status, either not related to block one, or else dependent upon it as determinant of their significance.

Example 5.2 shows all melodic appearances of the perfect-fourth framing interval in level a. Also shown at this level are important appearances of block two at RN 15 and RN 18. (The four appearances of the seven-note main theme, as discussed in chapter two, are marked with horizontal brackets. Instances of set class 3-2 which take part in this theme are shown with open beams.) Level b shows that the perfect-fourth frames are themselves related in turn by perfect fourth. That is, the opening B♭/F frame is followed by an E♭/B♭ frame in section 14. At section 17, a move up a fourth away from the D♭/A♭ frame is answered by a return to that frame. In retrospect, perhaps the completeness of events in section 17 (a move away is answered by a return to the start) can allow us to hear the move in section 14 as incomplete. In any case, events starting



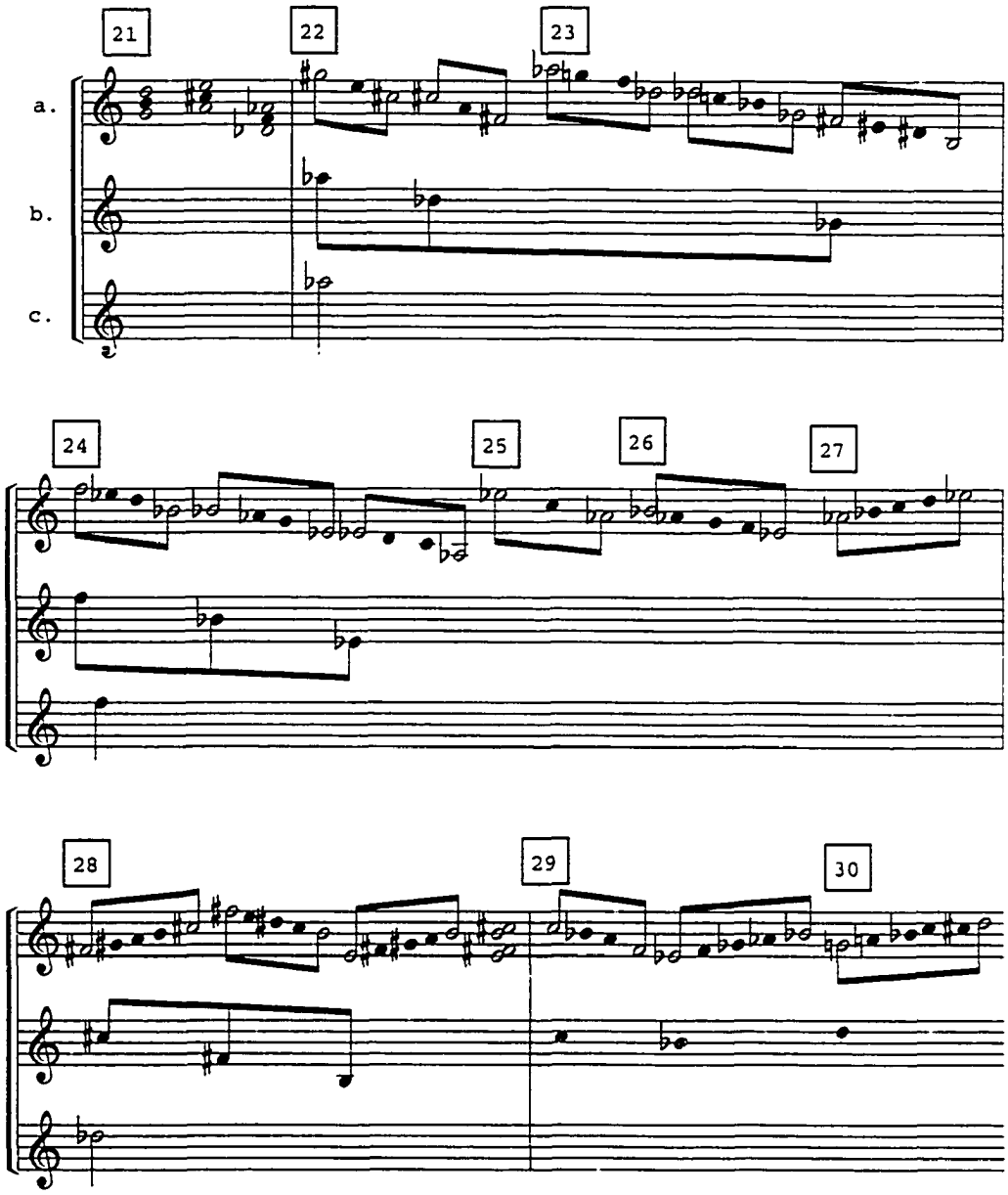
Example 5.2. Form of the second movement of the Sextet.

in the seventh bar of section 19 do reprise the opening large scale fourth, completed this time with a return to the B♭/F frame. Barlines divide the movement into three large sections, each of which features one of these large scale moves by perfect fourth. The first section also contains an appearance of block two, tentatively identified as a sort of large-scale auxiliary to the E♭/B♭ frame. The second large section ends with brief appearances of

both blocks two and three, which by postponing the events at seven bars past RN 19 (the beginning of the third large section), serve to enhance the dramatic function of those events as a sort of recapitulation. Level c (where the framing intervals are represented by their upper notes alone) shows that at the deepest level, an opening move from B♭ to E♭ is broken off before it can be answered by a move back to B♭. By contrast, the interrupting material, featuring another large scale fourth, does receive an answer. This formal "dissonance," whereby subsidiary middle-section events are completed while more important opening events are not, motivates a reprise of the opening of the movement. At its second appearance, the move away from the opening pitch material is answered by a return to that material, thus creating formal closure for the movement.

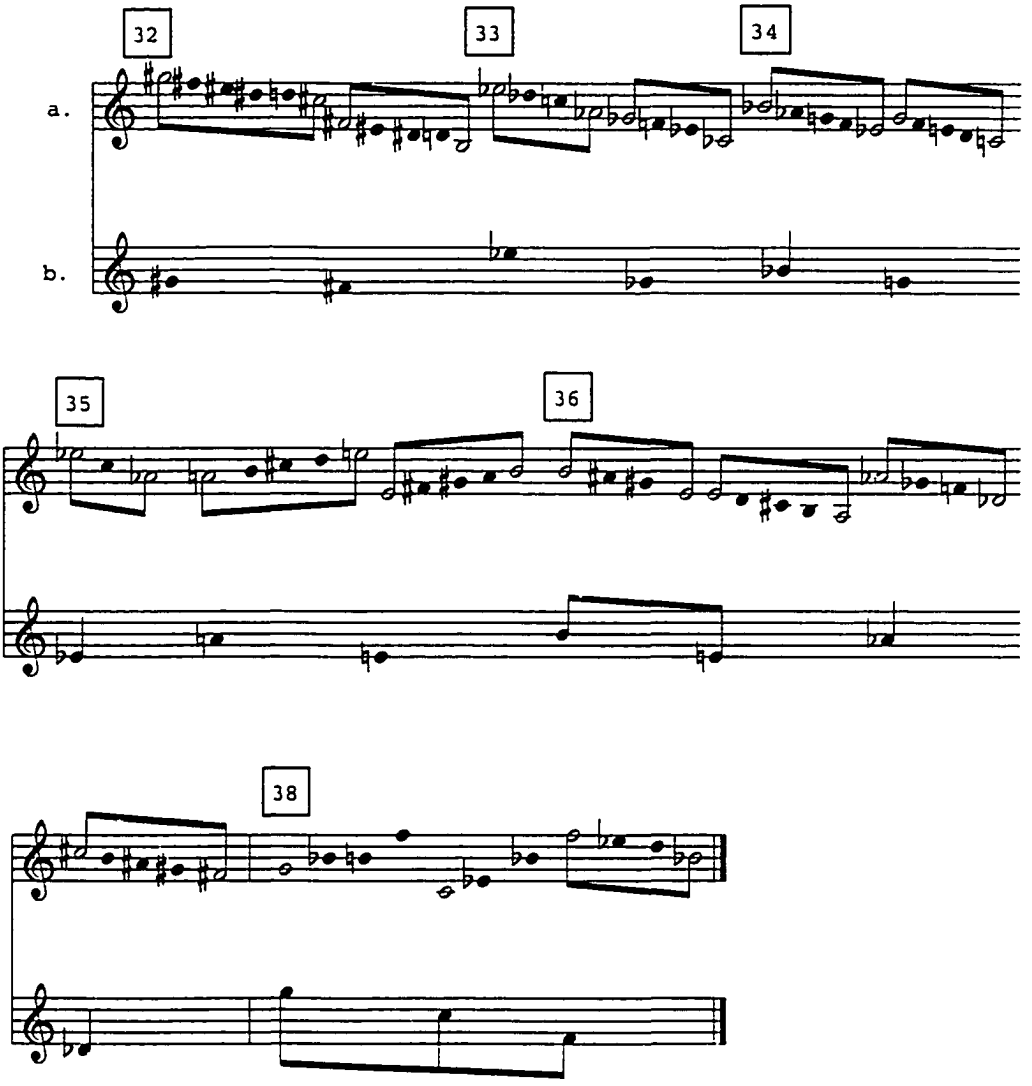
Form in movement three of the Sextet

As we saw in chapter two, a framing interval of a perfect (initially descending) fifth controls the music of the third movement of the Sextet at the surface level. These frames are filled both by triadic figures, and by figures composed of scalar and even chromatic fragments. Level a of example 5.3 shows all significant framing intervals as pairs of open noteheads connected by beams. Solid noteheads represent the various tones which fill in the gap between the framing pitches. Most of these melodic variants were already discussed individually, in chapter two.



Example 5.3 (part one). Form of movement three of the Sextet.

Level b represents each framing interval by its upper member, and omits immediate repetition of frames. Barlines in level b group the numbered sections into larger segments (22-23, 24-27, 28 by itself, and 38-39) which are characterized by further motion by descending perfect fifth at an immediately deeper level. That is,



Example 5.3 (part two).

within these segments, except for internal repetition of materials, the framing intervals themselves are related by descending fifths. The upper members of the framing intervals in these segments are beamed together, resulting in chains of two linked descending fifths.

Level c shows that the first three large segments in level b, transpositionally related first by a descending minor third, and then in turn by a descending major third, compose out, at a deeper level,

an important melodic figure for this movement. This figure, shown in level c, can be thought of as either a descending arpeggiated D♭ major triad, or as a D♭/A♭ framing fifth which is partially filled in with an internal passing tone. As a triad, this figure appears both melodically in an arpeggiated form, and as part of an accompaniment figure, in section 21, which serves as an introduction to the movement. The D♭ major triad is also clearly suggested by the first entry of the main theme of the movement, at section 23. Furthermore, the interpretation of this figure as an arpeggiated triad provides a formal similarity between this movement and the Variations. That is, both of these movements unfold on a large scale a triad which is suggested by the opening framing interval on the musical surface. (Coincidentally, these two triads share the same pitch class as root.) The background C# minor triad of the Variations is suggested by the E/C# initial frame, while this movement unfolds a D♭ major triad, derived from the initial A♭/D♭ frame.

More generally, and more consistent with the spirit of the framing-interval interpretation of the melody of this movement, the notes in level c can be thought of, not as some kind of triad, but rather as a partially filled-in framing fifth. This interpretation connects level c directly to level a, without the need to invoke any triadic structure, and thus allows us to see more easily the connection between level c and the first frame at number 22. That is, both are fillings-in of the same (enharmonic) framing interval.

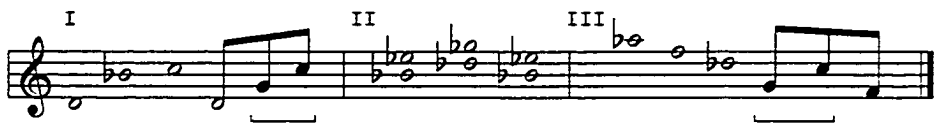
Under this interpretation, it becomes less important that the note that fills in the interval is F in the first case, and E in the second.

Beginning at section 29, there are no more entries in level c. This deepest level of long-term organization, suggested by the unfolding of a D♭ triad, is simply lacking after the end of section 28. Except for the last two sections, there are few entries after this point in level b, either. (The few instances of descending perfect fifths which are present here are of course labeled as such by means of beams. The fact that these are not chains but rather just pairs of notes seems to argue for their lesser significance, relative to the longer chains elsewhere in the movement.) The beginning of section 32 seems like a moment of recapitulation: some of the melodic content, as well as the accompaniment figure, from section 22 is conspicuously repeated, each transposed by a different interval. Melodic material from sections 23, 24, 26, and 28 is repeated in sections 33-37, in no particular order, and at no particular transpositional interval, aside from a slight tendency to repeat material either untransposed, or up a fifth.

The exception to this tendency toward weaker organization as the movement goes on is the last two sections, 38 and 39. Curiously enough, these are the sections where Copland brings back very clear references to the theme of the first movement. Level b shows that these two quotations, centered on G and C, prepare the final framing interval, F/B♭, by way of a parallelism to the three-part descending fifth structure, which occurs three times in sections 22-28, as previously shown in level b. Purists might

object that this is a case of post-tonal apples and oranges; that is, that the final frame (F/B♭) on the one hand, and the two quotes on the other, are quite different types of musical events, which are representable as single notes in level b as a result of quite different and thus incommensurable types of reductional acts. From this point of view, the apparent chain of descending fifths after RN 38 (G to C to F, as shown in level b), is merely an artifact of arbitrary reductional methods on my part. While this type of objection is often valid, I think that its force here is considerably attenuated by the clear contextual rootedness of these two manners of reduction. That is, the centricity of note zero in the basic motif of movement I, as discussed in chapter two, (and by extension its unexpected reappearance here) argues strongly in favor of its ability single-handedly to represent the whole motif. Similarly, the statistical tendency of the framing fifth in level a to descend, as opposed to ascend, and the lack of any ascending fifths in levels b and c, argue strongly in favor of letting the upper note of the fifth represent the whole framing interval as the first, highest, and most conspicuous of its two notes.

Seen in the light of this somewhat disorderly recapitulation, and the general tendency towards weaker organization as the movement progresses, this more organized ending (sections 38 and 39) might seem arbitrary and tacked-on as an ending to this movement. This is especially so as level b closes with the G-C-F descending fifth fragment, whose pitch-classes have not been important previously in this movement. It is as if the movement ended in a key other than that in which it began.



Example 5.4. Cyclical connections in the first and third movements of the Sextet.

On the other hand, quoting as they do from the first movement, the last two sections do provide the close of the entire three-movement work with a moment of cyclical unity, although not at the deepest level. Example 5.4 shows how this works. Open noteheads represent the tones from the deepest background in the three movements of this piece. Solid noteheads represent selected middleground events at the ends of the first and third movements. Tones participating in these two ending gestures are beamed together. Horizontal brackets show that the quotations serve to connect (or restart) an interval cycle (of interval class 5) which was started at the end of movement I (D-G-C), with its (overlapping) continuation at the end of movement 3 (G-C-F). Furthermore, note that the 05T, or cycle 5 motion was launched at two levels simultaneously at the end of movement one, and reappears in the beginning of level b of movement three. That is, the beginning of the middleground of movement three is related in a way to the middleground material at the end of movement 1. This relationship is hidden by transposition so as to involve new pitch classes, and further disguised by means of a different foreground melodic figure.

The cessation or liquidation of this middleground cycle 5 figure as movement three proceeds (this is the lack of organization noted

above), also helps to enhance the dramatic impact of the quotations when they finally do bring back the 05T surface figure. Only at the very end of both the movement and the piece do we hear the reprise of the 05T melodic passage, easily recognizable as such, and at the same pitch level at which it had appeared in movement one. In retrospect, the highlighted F at the end of movement 3 could also be heard, in a way, as the long-postponed ending of movement I. The apparent disorderliness of the deeper middleground in movements one and three, when they are considered as separate free-standing movements, must give way to a more subtle analysis of inter-movement connections, as follows. Movement one ends with a mild crescendo of middleground organization. Movement two offers a central plateau of sustained organization, but of a different sort than in the outer movements. Movement three starts with a high degree of organization, even in the background level c, which is followed by an organizational decrescendo, which seems to mirror the crescendo in movement one, and suggests that the middleground organization of the piece might simply peter out. Expectations about form thus aroused are contradicted in a deeply effective way by the quotations, which rather than acting as a terminating convenience for the final movement by itself, instead offer a remarkable and fitting conclusion to the whole piece.

In this chapter, I have shown that an understanding of the framing interval and its long-term unfolding can reveal the origins of formal structures, and of cyclical connections between movements, even thought the framing interval or the basic motif doesn't control the entirety of a movement. Furthermore, hidden

interconnections between superficially non-similar musical material can be discovered when analysis takes place at a suitable middleground level.

CHAPTER SIX: CONCLUSIONS

In the five previous chapters, I laid out an analytical framework and dug deeply into the inner workings of these pieces. In this final chapter, I shall work my way back up into the light of day. In the process, I shall reconsider each aspect in order: first the raw "data" as extracted directly from the scores, then my more general analytical model, followed by some thoughts on music theory itself, and concluding with some thoughts about Copland's biography and the meaning and significance of his music.

Data reprise

In chapters two and three, I showed that for each of seven movements from four pieces by Aaron Copland, the surface melodic content can be understood as the embellishment or filling-in of a single framing interval, or of a slightly more complex musical entity based upon such an interval. For the Variations and the first movement of the Sonata, this interval was a minor third, initially descending. The main melodic material of second movement of the Sonata spanned some form of interval class 3, either a minor third, or its inversion the major sixth.

The second and third movements of the Sextet highlighted some form of interval class 5, either a perfect fourth (initially descending) for the former, or a perfect fifth (also initially descending) for the latter. The melodic material of the first movement of the Sextet established a unique and contextual type of

centricity, which at first glance seemed mostly concerned with a form of set class 3-3 (specifically in its ascending 034 incarnation), but ultimately revealed its cyclical connection to the other two movements of this piece via an ascending cycle of perfect fourths. (That is, cycles of interval class 5 appear both in the centricizing surface melodic figure, and at deeper levels of the music.) Finally, the melodic content of "Militant" is constructed from a series of trichords, the majority of which feature the perfect fifth as a framing interval.

These seven movements embody and vary their respective framing intervals in a variety of ways. The movements discussed in chapter two (the variations, the first movement of the sonata, and the final two movements of the Sextet) each present a series of embellished variants of their opening melodic phrase. For the former two (as well as for "Militant"), these embellishments are the familiar ones from tonal music: passing tones, auxiliaries, octave displacement, and contrapuntal moves such as retrograde or order permutation. For the latter two movements, the framing interval is embellished by being filled in with triadic, scalar, or chromatic material. Taken together, these two groups of embellishment-types constitute one part of the basic model with which I am working.

As discussed in chapter three, the second movement of the sonata features a different way of highlighting its framing interval: one stream of music embodies the framing interval in a series of ostinatos, the other offers several repetitions of a series of progressive embellishments upon the framing interval.

Nevertheless, melodic variants here are equally reducible to a series of framing intervals. For the first movement of the Sextet, a valid representation of the "frame" is any arrangement of the five or six tones which preserves the contextual sense of centricity.

In chapters four and five, I have described a general model for the relationship between melodic events on the musical surface and deeper large-scale formal structures. This model works quite well for some of Copland's pieces and movements (chapter four), and less well for others (chapter five). My three strongest cases are the Variations and the first two movements of the Sonata. The Variations unfold, at the deepest background, the same C# minor triad which was implicit in the first four notes of the melody, and also in its corresponding framing interval. The two movements of the Sonata both feature large-scale motion up and down by minor third, the framing interval in both cases.

In my weaker cases, the three movements of the Sextet all feature events at the middleground (but not at the background) which restate some aspect of the foreground melodic material, in terms of the framing interval. In addition, the cyclical connections between the first and third movements here can be further understood in terms of the framing interval.

An analytical model

Part of my purpose in constructing the model described above is to better appreciate these pieces of music as unified wholes. I have found that the form of each of these pieces unfolds, to varying

degrees, some aspect of the music first heard at the very beginning of the piece. From a general aesthetic viewpoint, this is quite satisfying.

The model is based on the observation that the bulk of the melodic events in this repertoire can be understood as embellishments of a more basic entity, the framing interval. The relative unimportance of the various types of embellishing tones allows them to be reduced away, generating one or more deeper structural levels, where the framing interval can meaningfully represent a longer and more complex melodic passage. In turn, comparison of framing intervals in the middleground allows us to grasp the fundamental similarity among apparently dissimilar melodic surfaces. Despite differences among melodic phrases, and differences among types of embellishments, the salience of the framing interval leads us into the deeper structure of the music.

The analysis of hierarchical levels completes my general model for this music, revealing the formal organization of these pieces to be the background composing-out of the framing interval or of some musical structure closely related to the framing interval. This composing-out takes the shape of a pattern of transposition of the framing interval. All three of my strongest cases, as discussed above, feature formal plans involving the minor third. The shallower middleground structures throughout the three movements of the Sextet concern themselves with the perfect fourth or fifth.

I have demonstrated, for each movement, that many of the melodic passages are internally related due to their shared sources in the framing interval. To balance this hierarchical (non-

chronological) orientation implicit in my model, I was also concerned to show that Copland had composed these pieces so that the chronological process of embellishment, unfolding in a logical ordering through time, was readily and audibly apparent to the listener. Copland has accomplished this by insuring that each new variant tends to build upon something heard earlier, in a progressive and audible way.

This tendency toward meaningful chronological order is very strongly present in the Variations, and in the first two movements of the Sonata. (By way of contrast, this chronological ordering is almost completely lacking in "Militant," whose fifth-framed trichords are static and motionless. It should be no surprise that this static material is treated in a contrapuntal, i.e. static and non-progressive, manner, which does not repeat foreground events at any deeper level.) Some of the movements, such as the Variations, feature two or more initially independent musical streams, in which this progressively accumulating logic proceeds in parallel motion, before ultimately merging into one. This linear order coexists simultaneously with a top-down series of hierarchical levels. Many of the movements can be parsed in yet a third way: in loose reference to traditional formal concepts such as theme and variations, or sonata form.

The ability of the framing interval to carry out its structuring role in the music is greatly enhanced by the front orientation of the melodic phrase structure. That is, the framing interval (or the head motif in which it is embedded) is most often overtly stated at the very beginning of a melodic figure, thus emphasizing its function for

the listener. This is in sharp contrast to a situation commonly encountered in tonal music, where the strong feeling of arrival at the cadence which ends the phrase creates an overall impression of end orientation, and correspondingly draws the listener's attention to the pitch or harmony which is the goal of the cadence.

Just as important as what I have done, is what I have not done. First and foremost, I have not accounted for every note in these pieces. My reductional focus on melody alone excludes any exploration of harmonic or rhythmic events. Among these neglected topics is any analog to chord progression, any discussion of the relationship of melody to accompaniment, and any discussion of Copland's characteristic approach to foreground rhythmic and metrical events. Also neglected is any discussion of register, or of centricity as such. I have excluded these additional topics from my study in the interest of clarity and persuasiveness. I have no theoretical means by which to account for these aspects of the music, so I do not attempt to do so.

Theory: tonal/post tonal

Implicit in this paper is some notion of how Heinrich Schenker's ideas can be extended to cover post-tonal music. I have referred to the work on this topic of Salzer, Travis, Baker and others in previous chapters. Any attempt at this extension is dependent upon answers to two questions. The first question involves the identity of that which is prolonged or unfolded over the long term, if it is not the tonic triad. I have given several examples where the

foreground framing interval (or some slightly larger closely-related musical entity) is unfolded in the background, or in a deep middleground level.

The second question is: How is this prolongation or unfolding accomplished? I have suggested two answers. At the foreground level, the framing interval is embellished in ways familiar from tonal music: passing tones, auxiliary tones, arpeggiations, repetition of tones, octave displacement of one or more tones, and the scalar or chromatic filling-in of larger intervals. In a few instances, embellishments such as these can also be found at deeper levels. More common at deeper levels, however, is simply this: important intervals of transposition are the same intervals as those which are important at the surface. The framing intervals themselves are related in terms of the framing interval.

The analytical method used in this paper combines tonal methods (i.e., Schenker's reductional approach) with post-tonal methods (primarily some aspects of Forte's set theory). This is accomplished by concentrating on the framing interval, allowing us to focus our attention on important pitches stabilized in musical space (at least briefly), which control other nearby pitch classes. This relation of subordination between two groups of notes gives us both a good reason and an opportunity to ignore the subordinate notes (some of which are "wrong" by conventional definition).

In the head motif of the Variations, the concept of a framing interval allows us to segment or bisect the four notes of set class 4-3 into a pair of more important notes, those which make up the framing interval, and a less important pair, the two embellishing

tones. In other words, this four-note set has an internal structure. It is not just a collection of four undifferentiated notes. Even in nontonal music, tones within a given set can have functions which give them more or less weight, relative to other tones in the same set. Although these two embellishing tones cannot be considered to be "dissonant" by any conventional definition of the term (especially in light of the lack of any tonal context in which the term "dissonant" could achieve its precise meaning) they can function as analogs to dissonances. That is, they are subject to being reduced away at the next deepest level. This is the importance of the framing interval, at least for the pieces under consideration here: it allows a reductional analysis of nontonal music.

In the Sextet, the framing interval allows us to compare sets which are of different sizes, but which span the same interval. Drawing on the third movement, for example, the framing interval concept allows us to see that set classes 4-29 (in example 2.33), 5-23 (in example 2.34), and 6-11 (in example 2.40) are all roughly comparable. That is, all three of these sets highlight the same framing interval, the perfect fifth, but they are filled in with different numbers of notes. The tones which constitute the framing interval in each case can be compared to each other, while the filling-in notes are mere embellishments which are of lesser significance. Again, while these latter notes are not "dissonant," they play the same role in this analysis as dissonant notes would in an analysis of a tonal piece. The framing interval concept provides a post-tonal analog to embellishment tones and helps to integrate set theory into a neo-Schenkerian analysis which values a

reductional, hierarchical approach; it thus provides a means to penetrate the depths of at least this particular body of post-tonal music.

On the other hand, there lurks behind the neo-Schenkerian approach a conceptual difficulty which threatens to undo the whole project. That is, it may become impossible to hear some pieces of music as the long-term unfolding of some musical structure, which seems to be the minimum requirement if an analysis is to be called in any way Schenkerian. This difficulty can be summarized as a conflict between structure and process, or by analogy to the life sciences, as a conflict between anatomy and physiology. The neo-Schenkerian anatomists look for fixed musical entities (that is, structures) which are unfolded or prolonged at various levels in a piece of music. Under this point of view, the characteristics of, and relationships among, musical objects receive the greatest attention.

A contrasting viewpoint, one analogous to physiology, would on the other hand downplay the significance of fixed musical objects in favor of processes and events which serve to organize the music, and would interpret the same music in terms of various motions and the relationships among them. Joseph Straus summarizes this "transformational attitude," most closely identified with the work of David Lewin, as a model "in which the focus has been shifted from the objects to the transformations that connect them, in which a sense of linearity and movement . . . has been brought to the fore." [1]

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[1]Joseph N. Straus, "Voice Leading in Atonal Music," in Music Theory in Concept and Practice, ed. James Baker, David Beach, and Jonathan Bernard (Rochester, New York:

Note that the conflict between these viewpoints does not prevent either of them from valuing a reductional, layered approach. They both do, or at least can. It is quite possible that this conflict is less likely to arise within analyses of tonal music, due to the special character of that music. Post-tonal music, on the other hand, offers an enhanced opportunity for this conflict to arise. Although I do not consciously adhere to one viewpoint or the other, I find I have invoked them both to greater or lesser degree in this paper.

My analysis of the Variations is mostly anatomical in style. The framing interval and basic motif are thought of as musical structures giving to rise to another musical structure, the C# minor triad which is composed out in the background. On the other hand, my analysis of the second movement of the sonata has a decidedly physiological twist, especially when I get to the deepest background. I speak there, not of structures, but rather of motion up and down by minor third. A moment's reflection will reveal that a pair of minor third motions above and below a central pitch will generate a structure equal to a diminished triad. An anatomical interpretation of this movement, built around the long-term unfolding of a diminished triad, is nonsensical and completely unsupported by the music. (In particular, there are no significant diminished triads on the musical surface.) A careful analyst will stop well short of this particular leap into anatomy. These two examples shed some light

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University of Rochester Press, 1997), 244. Lewin's important works in this regard are as follows: Generalized Musical Intervals and Transformations (New Haven: Yale University Press, 1987) and Musical Form and Transformation (New Haven: Yale University Press, 1993).

on the divergences between the two schools of analysis, and on their application to various pieces. The Variations seem to call for anatomical treatment, while the second movement of the sonata requires a more physiological approach. The one resembles a composed-out structure, the other is characterized by motion by a consistent interval. One is an internally ordered musical object, the other is micro-universe where all significant motion is of limited kind. Further exploration of this issue is beyond the scope of this paper.

Biography, history and meaning in Copland's music

The four-note head motif of the Variations can be heard as an analog to a typical cadential melodic phrase (involving scale degrees $\hat{3}$, $\hat{2}$, $\hat{7}$ and $\hat{1}$) from any tonal piece in a minor key, but neutralized, and frozen into immobility by means of relentless repetition. (This immobility is made more pronounced by the repetition implicit in the choice of theme-and-variations form.) In this process the motif is stripped of any of the significance, meaning or function that such a figure might have had in a tonal context. This piece goes on to unfold a C# minor triad over a long span, but in a novel post-tonal way. Some aspects of triadic tonality are preserved but many other aspects are rejected. As a result, the Variations can no longer be heard as a piece in C# minor, but only as an ironic comment, from quite a distance and perhaps unconscious, about C# minor-ness, or about tonal organization more generally. Whatever "meaning" the

piece has is closely associated with this ironic or critical reference to earlier music. [2]

This ironic quality puts the Variations into a larger class of works by twentieth-century composers, works that can be understood as deriving their compositional logic or meaning in reference to another earlier work. This reference can be to a single work, or to a group of earlier pieces. In Remaking the Past, Joseph Straus offers Schoenberg's Concerto for String Quartet (based on a concerto grosso by Handel) as an example of the former, and two works by Stravinsky (Pulcinella, and The Fairy's Kiss, based on pieces by Pergolesi and Tchaikovsky respectively) as examples of the latter. [3] Pieces by Charles Ives that quote popular hymns and marches could be added to the latter category, for example, the two scherzo movements from the first piano sonata, where motivic aspects of the borrowed tunes play a structural role in the music. [4] More recent pieces, such as John Cage's Imaginary Landscape No. 4 carry this tendency toward ironic or critical use of pre-existing material to an extreme.

Copland's Variations, however, refer back not to any one particular piece, but to tonality itself, and to the melodic/cadential conventions of pieces in minor keys. At the same time, the piece involves dissonant harmonization and irregular phrasing which are forward-looking and innovative, and were widely recognized as such

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[2]Joseph N. Straus, Remaking the Past: Musical Modernism and the Influence of the Tonal Tradition (Cambridge, Mass: Harvard University Press, 1990). Straus makes similar arguments about a number of pieces by various composers.

[3]Straus, Remaking the Past, 48-64.

[4]Dennis Marshal, "Charles Ives's Quotations: Manner or Substance?" Perspectives of New Music 6/2 (1968): 45-46.

when the piece was new. It demands explanation when a careful composer like Copland looks backward and forward in the same piece. Critical commentary on this piece is nearly unanimous in invoking emotions such alienation, loss, and resignation when seeking to describe the Variations. For example, in a chapter subtitled "Aaron Copland and the American Isolation," Wilfrid Mellers describes the composer as "expatriated and alienated," and as one who "accepts the life of the big city and of a machine-made civilization." Further, Copland "starts . . . from the broken bones of a disrupted culture." [5] As a counterpart to this extra-musical interpretation, perhaps we can hear Copland offering a composer's commentary on his situation, in notes rather than in words. He is recognizing, if not bemoaning, the loss of tonality as a source of comfort and orientation to the composer. He feels lost without it. Perhaps his ironic and critical stance toward C# minor is in part also nostalgic or regretful. At the same time, he asserts innovations in other aspects of the music, revealing his determination to go forward despite the loss of the resources of tonality.

This ironic distance is clearest in the Variations, but in other instances Copland also uses the familiar components of tonal music, situating them in novel contexts, where they are deprived of their traditional significance, and subjected to the distortions of the new. Nevertheless, my analyses make the Sonata and the Sextet seem less ironic, and more concerned to make a "positive" contribution. For the second movement of the sonata, for example, both the ostinato-

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[5]Wilfrid Mellers, Music in a New Found Land (New York: Stonehill, 1975), 84-85.

like character of the musical surface, and that very same deeper, symmetrical, motion by minor third which threatened the Schenkerian model, are innovations which look forward to post-tonal music, rather than wistfully back toward the prelapsarian and familiar world of functional tonality.

The other side of the coin here, is that even though I was at great pains in chapter one to distinguish the four pieces in my data base from the rest of Copland's lifework, I have nevertheless discovered a commonality between the Variations, and the major pieces before and after it. That is, like the Piano Concerto (1926), which had its source in jazz, and El Salon Mexico (1937), with its source in Mexican dancehall music, the Variations also make significant reference to previous music, via this ironic reference not to a particular style, but to a more abstract notion, tonality itself.

Coda

I have described one way in which the surface melodic material and the deeper forms of some of Copland's music can be understood as being closely interrelated. I have situated this understanding in terms of contemporary music theoretical thinking about early post-tonal music. Further work on this repertoire might discover new and enlightening ways of understanding other aspects of the music, especially in the harmonic and rhythmic realms. Still more work might reveal interconnections among these different aspects of the music. On the other hand, we should not be surprised or dismayed if

the various strands of the musical fabric cannot be subsumed within a single over-arching interpretation. For twentieth-century works of art, this may be the norm, and not the exception. The aesthetic goal, which I raised earlier in this chapter, of hearing post-tonal works as "unified wholes" may simply have to be abandoned in favor of our recognition of the validity of simultaneous multiple listenings.

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