Language and Form in An Early Atonal Composition: Schoenberg's Opus 19, No. 2

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Introduction

As is well known, the twelve-tone collection establishes no specific pitch/interval hierarchies *a priori*. In this respect, such a collection does not constitute a language in and of itself but rather provides source material for the formulation of meaningful linguistic constructs which can only be formed contextually, in the act of composition.[1] Music based on the twelve-tone collection involves the formulation of a hierarchy of primary and secondary, or subordinate, intervals or interval complexes. Primary intervals are those which dominate the composition, bearing the burden of its argument. They are the intervals used with greatest frequency and which typically integrate the entire chromatic collection in some way as the composition unfolds. Secondary intervals are those which occur less frequently over the

[1]In this paper, language refers specifically to pitch/interval relationships. Of course, a broader definition of musical language can and should also incorporate time, timbre, and other attributes of sound as well as various aspects of their organization. However, I use the term *language* in its narrower, more conventional sense. For an excellent introduction to the concept of pitch/interval language, see Robert Cogan and Pozzi Escot, *Sonic Design* (Englewood Cliffs, NJ: Prentice-Hall, 1976), chap. 2.

course of the piece and act in one way or another as foils to the primary sonorities. The presence of secondary intervals is crucial to the process of language formation. As Robert Cogan and Pozzi Escot have noted:

> A single interval sounded unchangingly and forever does not convey great information, nor does it strongly define a language. It does so only when it is introduced in a *variety* of situations—that is, when it repeatedly resolves the uncertainty represented by the question, "What is the interval of importance here?" *Subordinate intervals are necessary because their presence raises this question.* Thus, subordinate intervals create entropy, thereby producing a situation in which the predominant intervals can convey their important information about the nature of the language.[2]

Typically, over the course of an atonal composition a hierarchy of intervals is established. As a result of the context in which various pitch/interval combinations are placed, some will achieve prominence over others. These will then take on different functions as the piece unfolds; a language system is formed as the hierarchy emerges. Possibly the most important stage in this process is the formulation of some sense of closure and a mechanism for actually achieving that closure. (It is at this stage, one suspects, that the language system finally crystallizes.) As a mechanism for closure is established, formal units are defined and the composition's design takes shape. Both language and form arise simultaneously. Indeed, they appear to bring one another into being as the composition unfolds. *The evolution of the work's language then becomes synonymous with its form*, which is impossible to conceive apart from the process of language formation.

Some of the clearest examples of this interdependence of form and language formation gleaned from the early decades of the twentieth

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[2]Ibid., 217.

century are the compositions from Schoenberg's well-known *Sechs kleine Klavierstücke*, Opus 19. Much of value has already been written about a number of these pieces, but much is yet to be synthesized regarding their linguistic/formal design. The second piece might well serve as a paradigm for the evolution of language and form in atonal composition in the early decades of the twentieth century. This particular piece has been the subject of much discussion.[3] In 1963 Allen Forte presented a set-theoretic analysis which differs markedly in approach from the present, strictly context-determined analysis. Indeed, such a set-theoretic approach is antithetical to the basic premise of the present paper: that, in an atonal composition, the principles of language formation employed in a composition never exist *a priori*, but rather evolve contextually, through the act of composition. Forte determines the structural meaning of a given note through his well-known "relational system" as formulated in this paper. This leads him to vastly different interpretations of the musical events of this composition. To take just one example, Forte sees the major 3rd G–B in m. 7 as a "resolution" of the minor 3rd C–E♭, whereas in the present analysis it will be clearly shown that C–E serves this function vis-à-vis C–E♭.

In 1966 Roy Travis took a different view of Op. 19, No. 2 and revealed the linear nature of the composition's evolution. However,

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[3]The following articles contain valuable analytical observations on Schoenberg's Opus 19, No. 2: Allen Forte, "Context and Continuity in an Atonal Work: A Set-Theoretic Approach," *Perspectives of New Music* 1, no. 2 (1963): 79-80; Roy Travis, "Directed Motion in Schoenberg and Webern," *Perspectives of New Music* 4, no. 2 (1966): 85-87; Deborah Stein, "Schoenberg's Opus 19, No. 2: Voice Leading and Overall Structure," *In Theory Only* 2, no. 7 (1976): 27-43; Fred Lerdahl, "Atonal Prolongational Studies," *Contemporary Music Review* 4 (1989): 79-82; Eric Lai, "The Harmonic Theory of Arnold Schoenberg: A Study of *Harmonielehre*," *Currents in Musical Thought* (forthcoming). In addition, there are several outstanding analyses of compositions in the Opus 19 set other than the second which bear interesting similarities to the approach taken in this paper: Cogan and Escot, "Musical Space: Arnold Schoenberg's *Six Little Piano Pieces*, Opus 19, No. 6," chap. 1 in *Sonic Design*, 49-59; Jonathan Kramer, "Analytic Interlude: Linearity and Non-Linearity in Schoenberg's Op. 19, No. 1 and Webern's Opus 29, First Movement," chap. 7 in *The Time of Music* (New York: Schirmer Books, 1988), 170-83.

Travis presented a tonal interpretation of the piece, which is contrary to virtually every aspect of the present analysis. Although Travis's study does contain some diagrams which bear a superficial resemblance to several examples presented in this paper (and I wish to acknowledge Travis's precedence in this regard), the diagrams are in fact quite different in numerous ways, especially with regard to the emphasis placed on primary and secondary intervals. For example, Travis makes no distinction between major and minor 3rds in his graphs and analyses and never traces the separate and opposing evolution of each of these interval classes—a distinction which is central to the present study.

In 1976 Deborah Stein presented an interesting and informative study of voice leading in Schoenberg's Opus 19, No. 2. In general, Stein extends several ideas first elaborated by Forte in 1963, although she does not employ his set-theoretic methodology. As the author herself notes, she uses pitch as a point of departure for discussion of other aspects of the musical structure (rhythm, register, articulation). The present analysis takes precisely the opposite approach; rhythmic articulation, register placement, and dynamics all coalesce in the *determination* of pitch/interval structures. The main difference between Stein's analysis and that of the present essay is that the former is based upon an examination of hierarchies among pitch classes while the latter is based upon hierarchies established among interval classes (a structure of primary and secondary pitches vs. one of primary and secondary intervals). As such, Stein's diagrams look rather like Schenkerian graphs, which are quite different from those of the present essay. Moreover, following Travis, Stein sees in Opus 19, No. 2, an example of "tonality-within-atonality," which is again antithetical to the approach taken in the present essay. Stein does, however, mention the general transformation of minor to major 3rds over the course of the piece, although she does not trace them systematically. She also comments on the progression of B–D and C–E♭ into B♭–D and C–E via semitone expansion. Both of these ideas are very important in the present essay, although their significance here is quite different.

In 1989 Fred Lerdahl presented yet another view of Schoenberg's Opus 19, No. 2. This is in many ways the most puzzling of all the published discussions of the work. The author applies a reductive

method of analysis through which he identifies those events of the composition which he considers most important. However, this process is taken no further; he fails to discuss the significance of these events vis-à-vis the evolution of either the composition's form or musical language. Thus, it is not at all clear why the prolongations and linear connections which the author has identified are in any way meaningful. In this regard, Lerdahl's second interpretation of the piece is particularly unclear. His fusion of distinct, often opposing sonorities obscures the evolution of various intervals, most significantly that of minor 3rds into major 3rds, which is fundamental to the work's structure and to the present analysis.

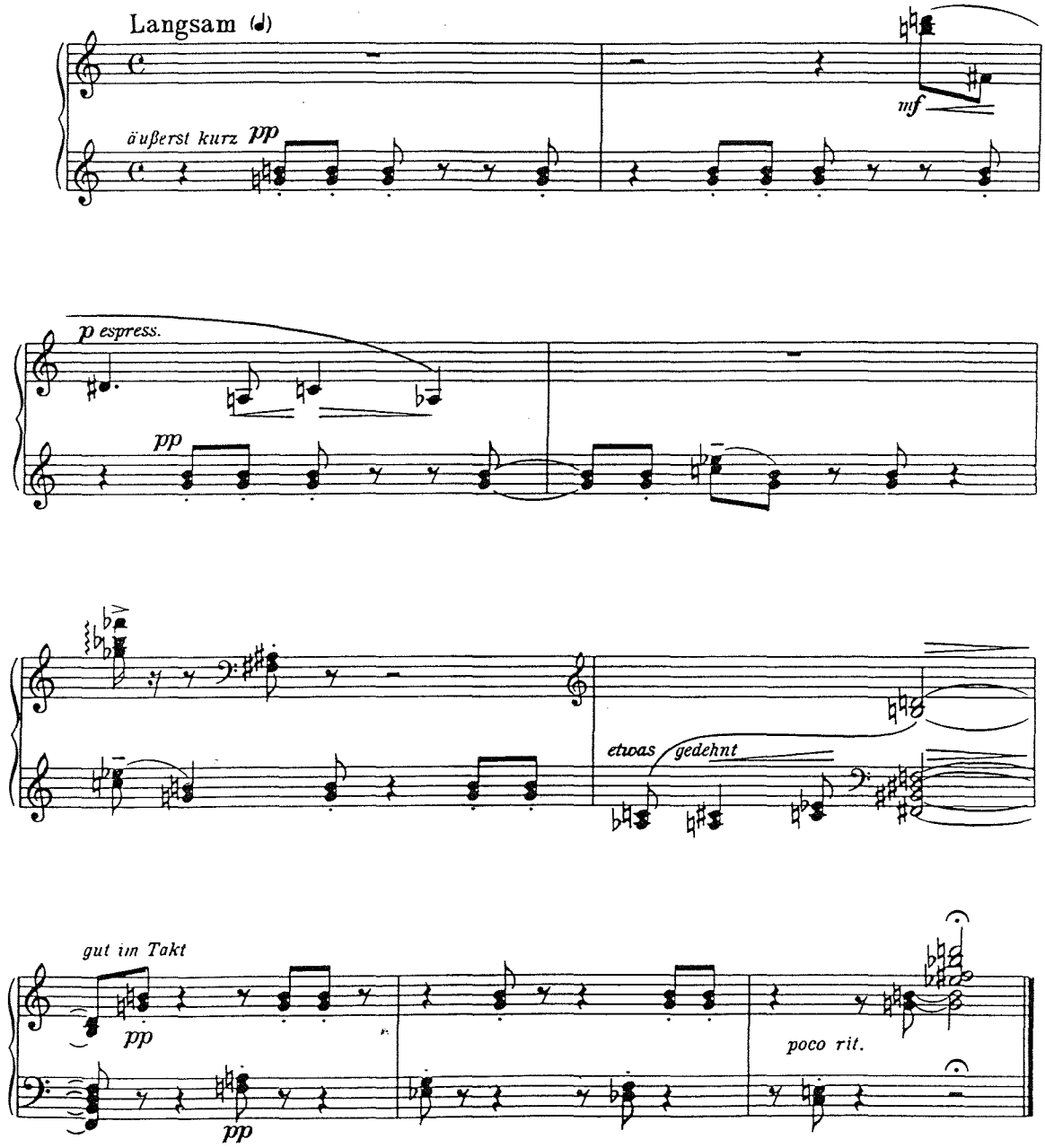
Finally, in 1994 Eric Lai presented another tonal view of the final bars of the piece and, while his analysis is quite different from that of Roy Travis and is carefully formulated, it too bears little resemblance to the discussion that follows.

Opus 19, No. 2

In Opus 19, No. 2 (see Example 1), Schoenberg evolves a language in which the major and minor 3rd function, respectively, as primary and subordinate sonorities. These are linked in different ways by the minor 2nd. However, this hierarchy is not clear at the outset of the piece. In fact, there is a great deal of ambiguity at the beginning of the composition as to which interval is primary and which is secondary. This ambiguity is clarified over the course of the work and is only fully resolved at its conclusion. Each step in this process of language formation becomes a formal unit in the work. The greatest moment of tension in the piece—its climax—arises from a momentary and rather startling preponderance of the secondary sonority, which briefly overshadows the primary sound of the composition and propels it forward toward its resolution. Given the subject of this article, the composition will be divided into formal units only as the analysis proceeds. However, it should be noted from the outset that the evolution of the work is quite continuous. For this reason, whenever formal divisions are encountered they will be labeled not with a

traditional term such as *phrase* (which seems particularly inappropriate

Example 1. Arnold Schoenberg, Opus 19, No. 2



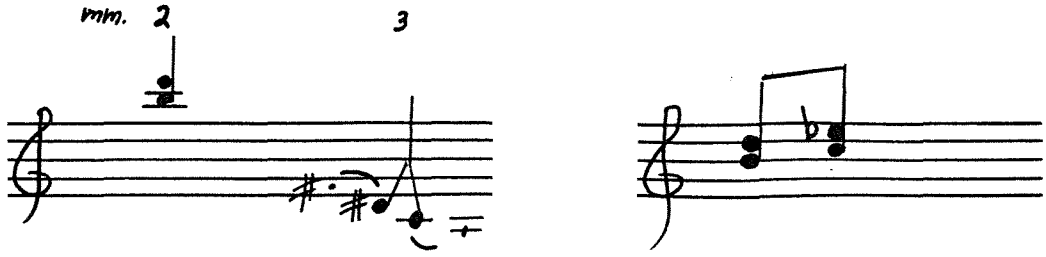
in describing formal units in this music, since it carries with it a specific sense of linguistic closure) but rather with the term *gesture*, which carries with it implications of evolution and process.

Analysis

Opus 19, No. 2 opens with a rhythmic ostinato repeated every measure, reiterating the major 3rd, G–B. This has an effect similar to that of a pedal tone in tonal composition (though without the implications of tonal function usually carried by such a device). Schoenberg then immediately places emphasis upon the major 3rd, and, in particular, G–B.

Against this a melody constructed primarily of minor 3rds unfolds (see Example 1, mm. 2-3). In it the composer presents: (1) B–D (m. 2, isolated by register and texture), (2) F♯–D♯ and A–C (mm. 2-3, both articulated by short/long rhythmic patterns), and (3) D♯ (E♭)–C (m. 3, articulated prominently by the two tones placed on the longer beats of the previously mentioned patterns). Of these four minor 3rds, two seem much stronger in context. The initial B–D is isolated from the rest of the line by register (two octaves above the succeeding tones) and texture. Moreover, it is sounded as a simultaneity, while all the other minor 3rds are linear. The D♯ (E♭)–C is given rhythmic emphasis by the short-long rhythmic pattern, the long stresses being placed on D♯ and C in turn. Indeed, the shorter tones which lead into each of these pitches (F♯ to D♯ and A to C) sound somewhat like embellishments to structurally more significant tones. Comparing the two emphasized minor 3rds, one notices that they are separated by a minor second, despite differences in register (see Example 2).

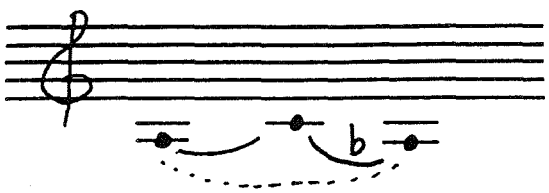
Example 2. Significant minor thirds in the melody, mm. 2-3



The melody comes to a temporary halt on a major 3rd, A♭–C (m. 3). Schoenberg emphasizes this sonority in two ways. He slows down the rhythmic motion to quarter notes and accentuates the interval with a crescendo/diminuendo. In this way he not only emphasizes the A♭–C, but also temporarily halts the forward motion of the piece at this point. Thus far in the course of the music, two major 3rds have been heard, G–B and A♭–C. As was the case with the two significant minor 3rds discussed above (B–D, C–E♭), these two major 3rds are separated by a half step.

Three intervals emerge here with remarkable clarity: major 3rd, minor 3rd, and minor 2nd. The minor 3rd and major 3rd appear to be the basic sonorities of the piece, while the minor 2nd is used to create movement through transpositions of each class of third. Of great significance, however, is the fact that at the end of this melody (m. 3), Schoenberg uses the half step to link the minor 3rd to the major 3rd for the first time (see Example 3).

Example 3. Melody, m. 3

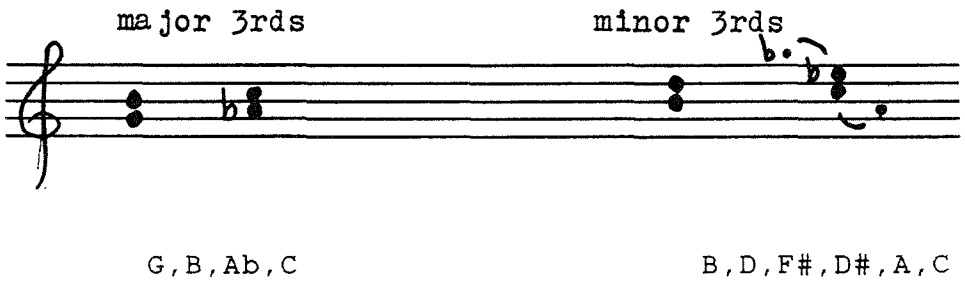


In fact, one can now argue that a complete structural unit is formed at the end of m. 3. This is the juncture at which the first coherent linguistic units of the piece are formed: two minor 3rds separated by a minor 2nd, two major 3rds separated by a minor 2nd, and one minor 3rd expanding to a major 3rd by a minor 2nd. This final move creates the composition's first sense of closure, and, therefore, its first formal unit. The expansion from a minor 3rd to major 3rd (leaving one common tone) will function as a cadential formula in this piece. Thus mm. 1-3 constitute the *first gesture* of the composition (*gesture 1*). The formation of the first linguistic unit of the piece coincides with the creation of its first formal unit. Since there is no *a priori* pitch/interval

hierarchy such as the one provided by tonal language, the evolution of sonorities into a language of hierarchies and relationships occurs contextually, as the piece unfolds. In turn, the forging of a language becomes the form of the piece—a graphic example of the unity of content and form.

One should carefully note the factors which distinguish Schoenberg's treatment of the minor 3rd from the major 3rd. Only two major 3rds are heard in this gesture, while four minor 3rds are sounded. Four tones of the twelve-tone collection are heard as major 3rds, while six are heard as minor 3rds (two tones are repeated in different minor 3rds—see Example 4).

Example 4. Major and minor 3rds, gesture 1



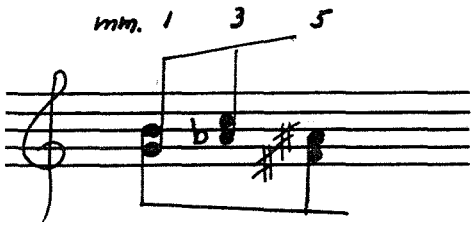
However, one major 3rd, the ever-present G—B, is sounded twelve times. No other sonority is repeated in this gesture. Thus, each interval is emphasized in a different way. The repetition of G—B is a powerful device emphasizing the major 3rd. On the other hand, the expansion of minor 3rds deeper into the chromatic collection is also quite compelling. Which of these elements will in fact evolve to its fullest potential by encompassing the entire chromatic collection? Which will then become the primary interval of the composition's language? Such questions identify the dramatic/expressive dialogue of the piece.

The music continues with the first deviation from the rhythmic ostinato which has been heard in every measure thus far. (The tied eighth notes at the end of m. 3 mark the change.) This departure would

seem to confirm that the initial gesture has ended and that a second one is beginning. The next sonority heard is C–E♭ (m. 4), which is itself repeated and seems briefly to become part of the ostinato. The twofold presentation of this minor 3rd confirms its importance (as first observed in gesture 1). Schoenberg extracts this minor 3rd from gesture 1, isolates it, and gives it emphasis through repetition. Moreover, the C–E♭ which was sounded linearly on successive beats in m. 3 is here sounded vertically, clearly identifying it with the original sounding of the other important minor 3rd of the first unit (B–D). From this point on the only minor 3rds which will be used melodically are B–D and C–E♭ –further confirmation of their preeminence in this composition.

The fifth and sixth measures of the piece contain a succession of major 3rds expanding by half step from the ever-present G–B. In m. 5, F♯–A♯ is sounded twice in widely separated registers (a clear correspondence to the displacements of gesture 1). F♯–A♯ is, of course, a half step below the central major 3rd G–B and begins movement downward from the latter. Thus far, major 3rds have begun to move in both directions from the G–B pedal by half steps (see Example 5).

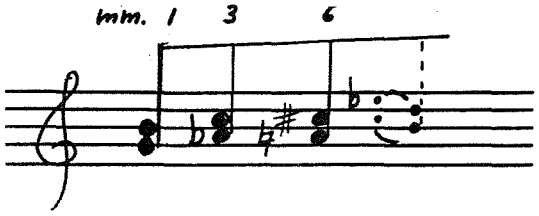
Example 5. Ascending and descending chromatic expansion of major 3rds from G–B



In m. 6 the process continues as the melody picks up where it left off at the end of m. 3; A♭–C sounds in precisely the same register in which it was heard earlier. This sonority ascends further by half step to A–C♯. At this point the listener naturally expects the melodic line to continue moving up by half steps to the next major 3rd. This

expectation, however, is quite dramatically thwarted by the substitution of the minor 3rd, B–D, for the expected B♭–D. B–D and B♭–D are of course closely related. They share one note in common and their remaining tones are separated by a half step (a similarity which immediately reminds the listener of the closing moments of gesture 1, where A–C expanded to A♭–C). Significantly, B–D is itself embellished by the other important minor 3rd of gesture 1, C–E♭, which lies a half step above it (see Example 6).

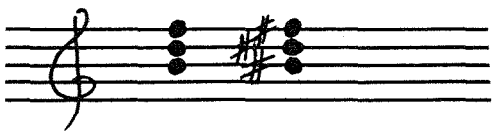
Example 6. Ascending chromatic expansion of major 3rds, mm. 1-6



Thus, both important minor 3rds from gesture 1 recur at this prominent moment. In a sense, their purpose is revealed as they thwart the expected melodic unfolding of major 3rds.

It is significant that B–D is itself accompanied by a chord which is derived from two sets of stacked minor 3rds (diminished triads) a half-step apart (see Example 7).

Example 7. Source material for chord in m. 6



Moreover, this chord contains almost all of the minor 3rds heard in the first phrase (all but A–C), synthesizing the opening melody into a single harmonic entity. Also of great interest is the fact that this chord *introduces only one new minor 3rd into the piece (D–F)*. Indeed, in contrast to the first gesture, major 3rds drive deeper into the chromatic collection here while minor 3rds expand no further. By this point in the piece (m. 6), eight tones (G, B, A♭, C, A, C♯, F♯, A♯) have been sounded within major 3rds (and, in fact, all of these have sounded since the end of gesture 1). In contrast, only six tones have been heard as minor 3rds (those listed earlier), and of these only four have been reiterated since the end of the first gesture. Moreover, the pedal G–B continues to be emphasized. Thus the major 3rd grows substantially in prominence. The major 3rd emerges here as the primary interval of the composition while the minor 3rd is clearly subordinate.

The chord which concludes m. 6 constitutes the climactic moment of the composition. It is the first time that the minor 3rds and major 3rds intertwine so deeply and influence one another's evolution; in this case the minor 3rd interrupts the evolution of the major 3rds. It is a moment filled with tension. The expectation of yet another major 3rd (B♭–D) is thwarted by the substitution of the minor 3rd (B–D). This tension is heightened by the presence of a chord derived almost entirely from minor 3rds which accompanies the B–D. The significance of this chord is also suggested by a number of surface details:

(1) It is the lowest point in a composition which generally unfolds in the middle and low registers of the keyboard.

(2) It is one of the two longest sustained sounds of the piece.

(3) It is a loud point approached by a crescendo.

(4) It is sounded in the only measure of the piece which does not include the pedal tones G–B, a fact which surely intensifies the feeling of instability which accompanies this climax.

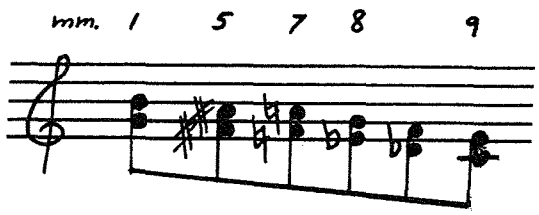
All of this occurs against the backdrop of the gradual crystallization of

the composition's linguistic hierarchy in which major 3rds predominate.

Thus ends the *second gesture* (*gesture 2*) of the composition (mm. 3-6). At its conclusion, emphasis is placed on the secondary interval, momentarily suspending any sense of closure which might have been expected. As may be recalled, the first gesture ended with the expansion of a minor 3rd, A–C, by half step into a major 3rd, A♭–C. The second gesture ends with the substitution of a minor 3rd, B–D, for a major 3rd, B♭–D, which, of course, has a relationship to B–D that is similar to the one that A♭–C had to A–C. Thus, the cadential formula defined in gesture 1 is also at work in gesture 2, but here it is arrested before its completion (a quasi half-cadence?), which the listener awaits.

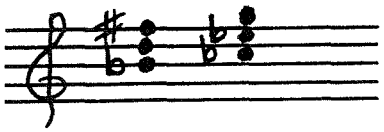
The remaining three bars of the piece (which will be shown to constitute the third and last gesture of the composition) confirm many of the observations made regarding the first two gestures. The minor 3rd virtually disappears (two minor 3rds are present in the final chord but these, as will become clear, are of little consequence), confirming its stature as the subordinate sonority. In contrast, the entire phrase consists almost entirely of major 3rds, which continue to move through and ultimately engage fully the entire twelve-note collection. Continuing the descending line of major 3rds begun in the previous gesture with F♯–A♯, Schoenberg descends through F–A, E♭–G, D♭–F to C–E (see Example 8).

Example 8. Descending chromatic expansion of major 3rds, mm. 1-9



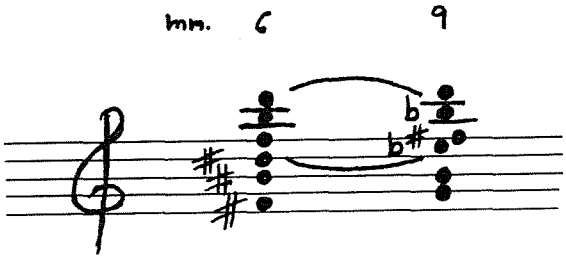
The *third gesture* (*gesture 3*) ends with a chord which parallels remarkably the climactic chord. It consists of a pair of stacked major 3rds (augmented triads) separated by half steps (see Example 9).

Example 9. Source material for the chord in m. 9



Comparison of the climactic chord to the final one is revealing. (In keeping with earlier displacements heard in the piece, both appear in very different registers; but a simple shift of two octaves reveals their obvious interconnections—see Example 10.)

Example 10. Comparison of chords in mm. 6 and 9

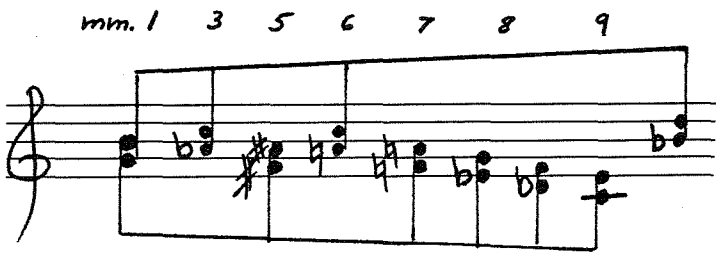


All tones but two move by half step. The two that do not move are simply held over from the first chord into the second. As a result of this motion, the minor 3rds of the climactic chord are replaced by major 3rds in the final chord. Specifically, two important major 3rds are produced. The first, the B♭—D on top of the chord, is the very major 3rd expected at the climax in m. 6! Thus the B—D heard in its

place in that measure finally expands to the expected major 3rd, B♭–D. The cadence implied but left unresolved in m. 6 is thus completed in m. 9. The other major 3rd, at the bottom of the chord and sounded an eighth note early to isolate and emphasize it, is the familiar pedal G–B, which is reiterated one last time. One might be tempted to think of the movement of tones from the chord in m. 6 to that of m. 9 as a resolution of tritones inward to 3rds, and then to conclude that the piece contained vestiges of tonal practice. However, there is no clear and consistent evidence that any tonal context has been established over the course of the piece. Nor indeed is there any need for such thinking. As should be clear from the foregoing discussion, the piece establishes its own unique procedures which lead the listener to the resolution of minor 3rds to major 3rds rather than the resolution of tritones to 3rds, whether major or minor. The pattern linking minor 3rds to major 3rds via the half step has been established as a cadential motion in the piece, while the motion of tritones resolving to 3rds has not been so established. Moreover, the upper tritone closes upon the major 3rd F♯–B♭, which, as has been shown within the context of this piece, is far less significant than the B♭–D above it.

First and foremost, the piece ends at this point because, with the concluding major 3rds of each line, Schoenberg fully engages the entire twelve-note collection as major 3rds for the first time. By the penultimate bar, all notes but two–D and E–have been sounded in the context of major 3rds. In the final bar D is finally sounded in a major 3rd (the B♭–D which concludes the upper line) while E is also for the first time heard in a major 3rd (the C–E which concludes the lower line–see Example 11).

Example 11. Ascending and descending chromatic expansion of major 3rds (mm. 1-9)



At this point, then, all twelve tones have been sounded as major 3rds and the piece concludes. Thus, *closure is achieved through the complete saturation of the twelve-tone collection via the systematic transposition of the composition's primary interval(s).* Closure is achieved at the same time that language is defined. (For another clear example of this principle see Schoenberg's Opus 19, No. 6, where the primary interval is the perfect fourth.)

More significantly, however, is the fact that the two major 3rds which end each line also displace the two important minor 3rds of the composition, B–D and C–E♭. By this point the minor 3rd has been reduced to serving more or less as a foil to the major 3rd, subordinated to the relentless expansion of the major 3rd through the entire twelve-note collection. However, two particular minor 3rds (B–D and C–E♭) have recurred throughout the piece and have played a particularly prominent role in the linguistic evolution of the composition. The major 3rd which ends the chromatic ascent from G–B transforms one of these two important minor 3rds, B–D, into the major 3rd, B♭–D, by half-step expansion. In turn, the major 3rd which ends the descent from G–B transforms the other important minor 3rd, C–E♭, into a major 3rd, C–E, also by half-step expansion. Thus the piece closes in m. 9 because the two most important subordinate intervals of the piece, B–D and C–E♭, are finally transformed into primary intervals, the major 3rds B♭–D and C–E, respectively. The process by which these minor 3rds expand into major 3rds is, of course, carefully prepared. The major 3rd which concludes the opening gesture (m. 3) evolved from a minor 3rd in precisely the same way (one note in common, the other moving by half step). This was the very first instance of the minor and major 3rds being linked by the minor 2nd (see Figure 1).

Of great interest is the succession of major 2nds which appear in the final gesture within the descending succession of major 3rds. These appear not because the major 2nds themselves are significant but because Schoenberg *carefully chose to skip certain major 3rds* in the course of his expansion through the twelve-tone collection (see Example 12). Earlier it was noted that, by the final measure, all but two notes of the collection–D and E–were yet to be sounded within major 3rds. Both of these tones are present within the major 3rds which Schoenberg

skips (D−F♯ and E−G♯)! He has chosen to avoid these particular major 3rds, preferring to introduce the tones D and E within a different

Figure 1. Expansion of minor 3rds into major 3rds

Gesture One

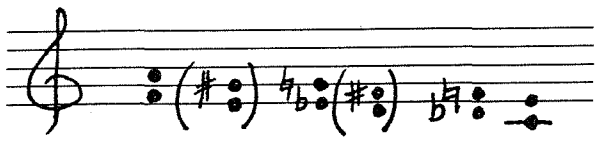
C----------C
| |
3 4
| |
A------1----A♭

Gestures Two and Three

D----------D
| |
3 4
| |
B------1-----B♭

E♭-----1-----E
| |
3 4
| |
C----------C

Example 12. Major 2nds, mm. 7-9

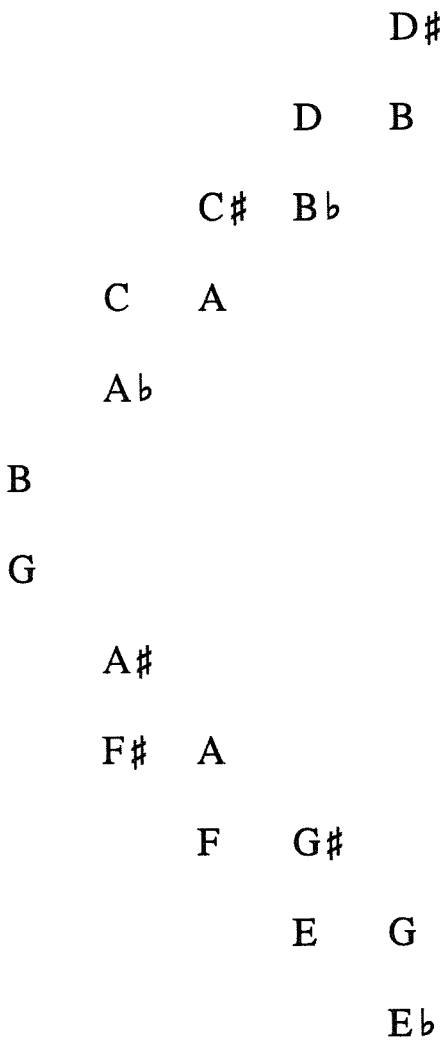


set of major 3rds, B♭–D and C–E. The latter are far more meaningful with regard to the dialogue of primary and subordinate intervals in this piece, since these are the major 3rds into which the two important minor 3rds, B–D and C–E♭, are transformed. Had Schoenberg sounded D–F♯ and E–G♯ prior to B♭–D and C–E, he would have brought these final tones (D and E) into the world of major 3rds prematurely. Not only then are D and E first sounded as components of major 3rds in the final bar of the piece, but, they are sounded as components of major 3rds which are particularly meaningful within the context of intervals established by the piece. Thus, completion of the twelve-tone collection within the linguistic context of this piece *coincides* with the resolution of the two most unstable elements of the composition.

It is interesting to note once again that in the final measure the climactic chord also moves to another prominent major 3rd, G–B. Thus, at the same time that the collection is completed and the two subordinate minor 3rds are transformed into major 3rds, Schoenberg also returns to the pedal G–B from which all major 3rds evolved.

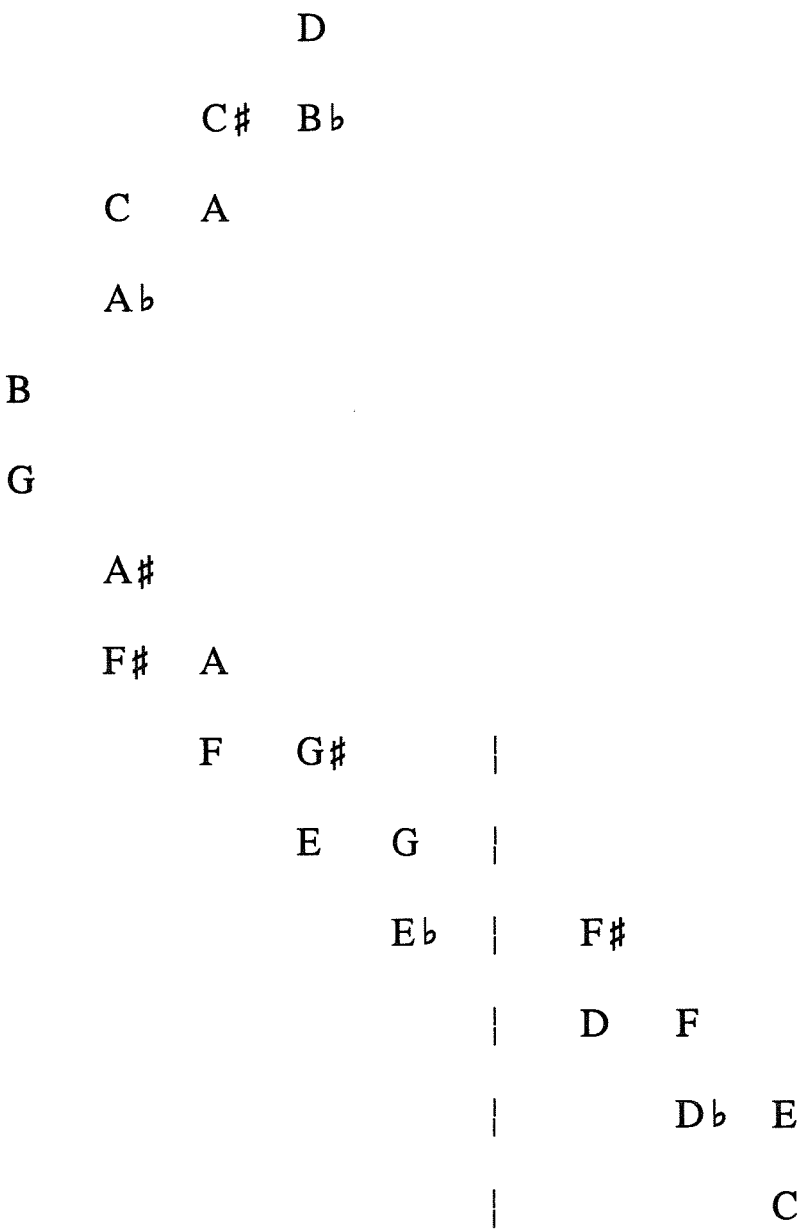
The following diagrams may help to synthesize the foregoing discussion of the composition's linguistic evolution. The most straightforward symmetrical expansion of major 3rds from G–B through the entire twelve-tone collection via the minor 2nd is represented in Figure 2. Here the entire twelve-tone collection is covered in only eight major 3rds. (Only one of the final 3rds, B–D♯ or E♭–G, is needed to complete the collection.) This is the minimum number of major 3rds needed to complete the collection while symmetrically expanding from G–B by half steps. In the actual composition, however, this scheme is skewed by the insertion of two subordinate elements, the two minor 3rds C–E♭ and B–D. These 3rds disrupt the scheme at one point (when the upper line approaches B♭–D)–the point at which B–D, embellished by C–E♭, steps in. From this point on, the piece no longer can simply expand by major 3rds toward completion. It must also, in some meaningful way, deal with these subordinate minor 3rds which have interrupted the process of expansion.

Figure 2. Symmetrical expansion of major 3rds



Specifically, the basic scheme outlined above is skewed in two ways. First, the composer ends the upper line with B♭–D, which transforms B–D into a major 3rd, while the lower line ends with C–E, which replaces C–E♭. However, following this scheme the composition no longer concludes with the sounding of the final notes of the twelve-tone collection. The collection is actually completed earlier, with E♭–G, leaving three unnecessary redundancies to follow: D–F♯, D♭–F, and C–E (see Figure 3). In order to rectify this matter, Schoenberg further alters his scheme by skipping E–G♯ and

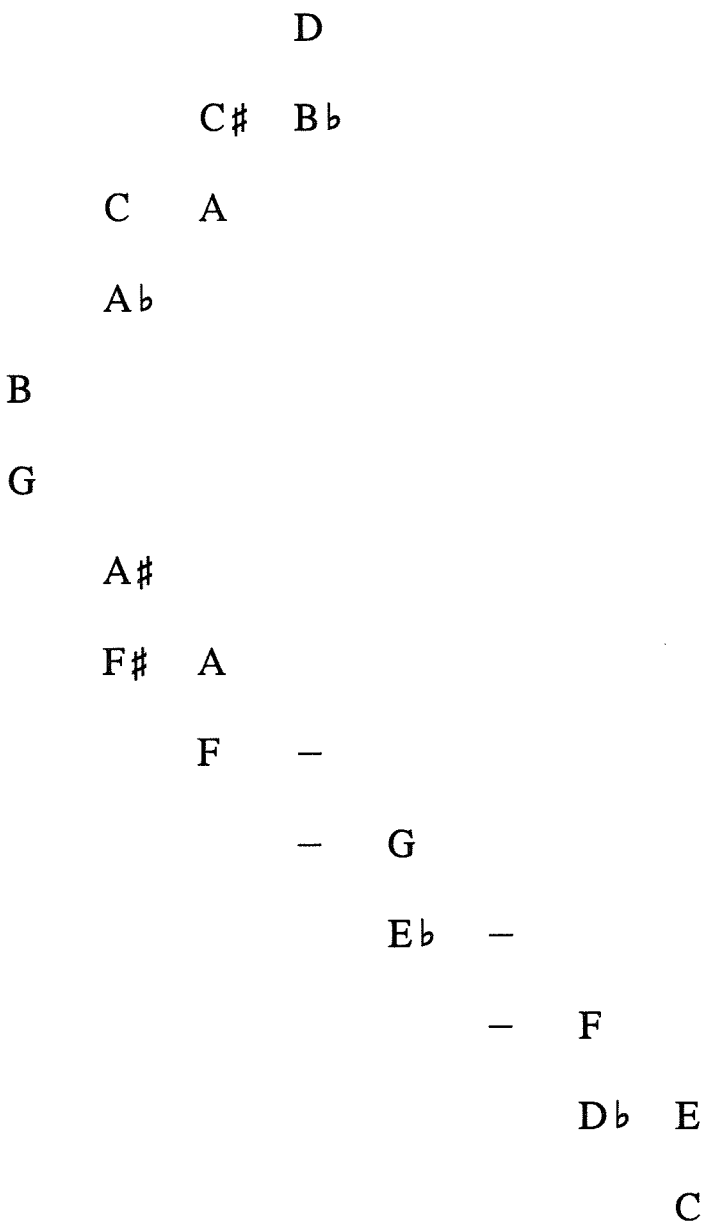
Figure 3. Asymmetrical expansion of major 3rds



D−F♯, thereby ensuring that the last tones of the collection to sound as components of major 3rds (E and D) are introduced at precisely the same moment that the minor 3rds B−D and C−E♭ expand respectively

to B♭–D and C–E (m. 9–see Figure 4).

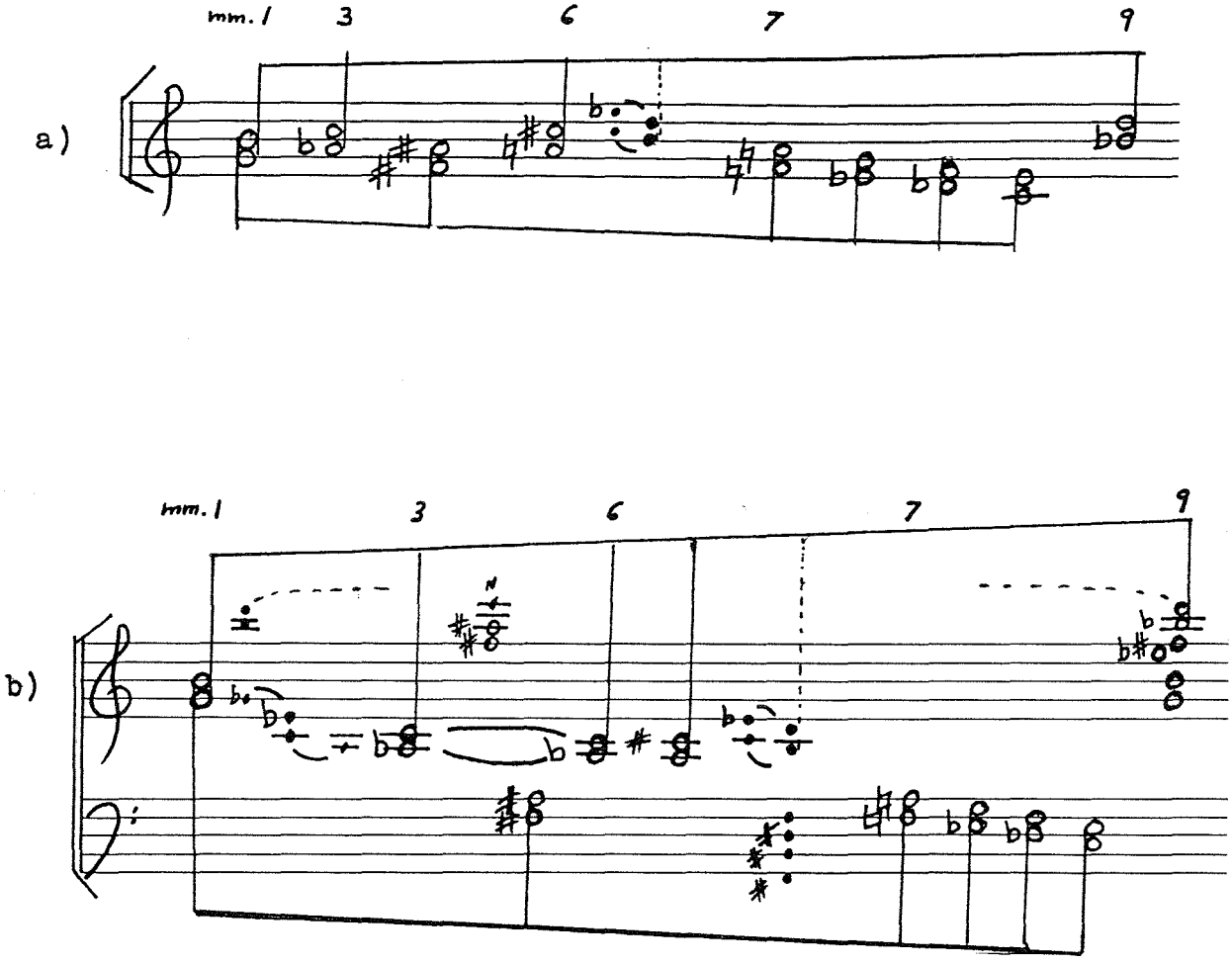
Figure 4. Asymmetrical expansion of major 3rds without E–G♯ and D–F♯



This plan, which is actually used in the piece, generates the entire twelve-tone collection using only nine major 3rds.

In all foregoing diagrams the piece has been reduced to its simplest linear disposition. As such, many abrupt and disjunct shifts of register have been disregarded. In Example 13a the piece is shown in reduced form; in Example 13b all tones are placed in the registers in which they actually sound. In both, major 3rds and minor 3rds are represented with open and closed noteheads, respectively.

Example 13. Spatial design of Schoenberg's Opus 19, No. 2



It is clear that relationships documented earlier in this paper are actually clarified by Schoenberg's spatial displacements. The main elements of the work are carefully stratified in different registers: both strata of major 3rds sound one octave below the pedal (the only exceptions being the first statement of F♯–A♯ in m. 5 and the final B♭–D in m. 9).[4] Indeed, most of the piece sounds in the pitch space below the G–B, and the climax is, as stated earlier, the lowest point. This leaves the space above G–B available for a few special events, the most important of which is certainly the placement of the first B–D (m. 2) and the final B♭–D (m. 9) in the highest register of the piece, and connected by the high E (notated as F♭) in m. 5, which functions somewhat as an upper neighbor.

Summary: Language and Form

In Opus 19, No. 2, Schoenberg establishes a complex hierarchy of sonorities in a very short period of time (nine measures). In the first gesture of the piece he focuses upon three intervals. Two of these, the minor and major 3rds, carry the argument of the piece forward. The major 3rd is emphasized through constant repetition, while the minor 3rd is emphasized through multiple transpositions. A third interval, the minor 2nd, creates movement and connection. The interaction of major and minor 3rds with the half step creates a mechanism for closure which is expanded in the second and third gestures and which ultimately defines closure for the entire piece.

In the second gesture, the major 3rd takes priority over the minor 3rd, and the two come into conflict with one another. The major 3rd continues to expand through the collection while the minor 3rd no longer moves. The half-step link between the minor and major 3rds which concluded gesture 1 does so as well in gesture 2, although *in*

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[4]One might also note that the two strata of major 3rds are distinguished through articulation as well. The ascending major 3rds are always played legato, while the descending ones are always sounded staccato. The G–B which links the two is sounded both ways at different times.

absentia. The second gesture remains open-ended, finishing on a minor 3rd where a major 3rd was clearly expected.

In the final gesture the major 3rd expands fully through the twelve-tone collection, and tension within the interval hierarchy is resolved. Minor 3rds from gesture 2 are transformed into major 3rds at the conclusion of this gesture. Both significant subordinate intervals are transformed at the same time into primary sonorities.

As the language of the piece is gradually transformed, so too is its formal/expressive design. As a hierarchy is established and the functions of the various elements of that hierarchy are defined, closure becomes possible (gesture 1). Gestures 2 and 3 take these interactions and multiply, intensify, and expand them to define the form of the rest of the piece. Gestures 2 and 3 complement one another. Those elements left unresolved in gesture 2 are brought to their proper conclusion in gesture 3. The final cadence not only ends the work but also signals the final crystallization of the hierarchy governing all the sonorities employed. In this composition form and content are indeed one and inseparable. As its language evolves its formal design emerges. The contextual formulation of a musical language and the creation of a musical form embody one and the same process. Thus, the advent of atonality not only opened up rich new sonic worlds for exploration but also, and perhaps more importantly, led to an identification of the process of language formation with the shaping of a composition's formal/expressive design.