Analysis, Hearing, and Performance

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Within the past ten years, the practice of analysis has become pervasive within the broad spectrum of musical study. This pervasiveness has led scholars both to consider the viability of analysis as an autonomous discipline and to reconsider the functions of analysis within the traditional disciplines of composition, musicology, theory, and performance. We take as our main topic the bearing of analysis on performance.

Recent articles by Janet Schmalfeldt and Jonathan Dunsby and a book-length study by Wallace Berry have helped focus discussion in this area. The issues they raise include what role analysis plays in a convincing performance, what kinds of analytic observation are most helpful to the performer, and how particular interpretations are to be projected. In addition, they point to the more basic question of whether

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1An earlier version of this paper was delivered at the 1987 meeting of The Society for Music Theory in Rochester, New York. That presentation included live performance of excerpts and of the entire work. Lochhead is the clarinetist, Fisher the pianist. We dedicate this work to our teacher, David Lewin.


or not analysis has any bearing on performance at all. We address these issues through a discussion of the first two pieces of Berg’s *Vier Stücke für Klarinette und Klavier*, Opus 5. By doing so, we hope to contribute further to that “far-reaching endeavor” that Schmalfeldt describes as “a comprehensive critique of the values and limitations of analysis for performance.”

Our presentation relies heavily on the notion of “hearing” as the meeting ground for performance and analysis. For the performer, hearing involves a pre-performance sense in the aural imagination of how a piece should sound. For the analyst, it requires a responsibility to musical relations grounded in perception. While perceptually based relations may not be the only ones of interest to the analyst, they will be the ones of most value to the performer.

By attending to aural experience, we invoke an approach that is appropriate not only for studies in analysis and performance but for analytic studies in general. We are in sympathy with Michael Musgrave’s recent call for increased attention to hearing “in the inner ear.” In a review of three books on analysis, he identifies a strong bias the authors share towards analysis as a preliminary to aural experience; to counter that trend, he suggests further exploration of the ways that aural experience might be preliminary to analysis. Our essay is a partial response to that call.

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4In his book Berry considers the third of Berg’s pieces for clarinet and piano.


The article has three parts. The first introduces the general topic by formulating the performer’s primary task and correlating the analyst’s offerings with it. The second and third parts present analyses respectively of the first and second pieces of Berg’s Opus 5, both of which are interspersed with suggestions for performance.

General Introduction

_The primary task of the performer is to create and project his or her inner hearing of a composition._

8 This formulation differs from another that might be expressed as “the realization of a score.” In the latter formulation, the notational signs of the score serve as directions to do things, and the performer’s work consists in carrying out the directions. In the former, notation serves primarily as a cue for sounds and groupings of sounds, and the performer’s work consists in generating a hearing of the music symbolized by the score and presenting it to others. A performance conceived in terms of realizing the score, successfully accomplished, will be “correct.” A successful performance conceived in terms of inner hearing will be “convincing.” We find a convincing performance both more aesthetically valuable and more interesting to study.

“Inner hearing” is the sensory expectation about how a piece will proceed. It corresponds roughly to the terms “aural image” and “interpretation,” but differs significantly from both. Unlike aural image, which suggests something fixed and specified in every detail, inner hearing is a potential waiting to be achieved. It allows for and indeed encourages the flexibility and spontaneity that make each perfor-

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8Our use of “create” rather than “re-create” in this formulation recognizes that the score in itself does not provide unambiguous information about the composer’s inner hearing: notation does not represent but rather symbolizes that hearing. The performer’s responsibility to a composer’s inner hearing is fascinating but too complex to consider here.

Our formulation also suggests some of the limits of the inquiry. We address music that is “composed,” generally by a party other than the one that “performs.” We also restrict our attention to a composition that is defined by a notated score.
mance unique. Unlike interpretation, it is not essentially conceptual. An inner hearing may be intimately linked with an awareness of the physical gestures associated with sound production, the physical sensations of execution, and affective responses, as well as with a conceptual understanding of how the piece works.

In arriving at an inner hearing, some performers may proceed completely intuitively, internalizing the sounds and sound groupings by the various means associated with playing their instruments. Others may need or desire additional assistance in order to clarify, inform, or support their hearing. For those who seek it, assistance comes from two sources. One is performance practice, which refers to the interpretation of notational symbols based on criteria of past or present performing styles. The identification of these criteria would require the confrontation of some thorny historical problems that lie beyond the scope of this paper.

The other means of assistance is analysis. In our thinking about analysis, it has been helpful to distinguish between the process of analysis and the goal to which it leads. We define the process as the conscious, systematic investigation of musical materials. Performers engaged in the process of analysis will find it an efficient means for internalizing the sounds of a piece without the distraction of technical considerations associated with sound production. They will also be inclined to inquire deeply into a score and forge a hearing that transcends their initial predilections. We define the goal of analysis in general terms as the representation of musical structure. Performers who have achieved this goal will have an additional means for communicating their ideas about a piece to others. This can be helpful in teaching the piece, or in defending their own hearing against other conflicting hearings.

At this point, we pause to consider where our initial formulation of the primary task has brought us so far. Given our understanding of what constitutes a convincing performance, our respect for the variety of ways in which performers learn pieces, and our working definitions of analysis, it follows that a performance can be convincing without
being analytically based. With the same givens, however, it also follows that analysis can assist in creating a convincing performance. The position we define here is that while the link between analysis and performance is not necessary, it is possible. The basic question thus becomes not what bearing analysis should have on performance, but what bearing it can have.

We can proceed further by asking what kinds of investigation are most useful for performers, what conceptions of structure are associated with them, and how they are best represented. The opening sentence of Schmalfeldt's article provides a point of entry for this discussion:

Performance students at colleges and universities today depend especially upon the theorist-analyst for general knowledge about musical structure and compositional technique.

Somewhat later in her introductory remarks she describes the relationship between performer and analyst as "elusive and problematic." It is our belief that part of the elusive and problematic

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9In his book, Berry understands interpretation and intuition differently. The performer is essentially an interpreter of notational symbols and of the musical structures that transcend them. He asserts that "even the most thoughtful interpreter commonly acts on purely intuitive inference and judgment rarely of articulate substance" (Musical Structure and Performance, 1). For Berry, intuition may lead to convincing interpretive decisions but it can be "a capricious guide, and ... is clearly inadequate in solving problems...." (Musical Structure and Performance, 8). In the earlier article, he states a stronger position: "The sense of what is happening, and to what formal, structural, expressive end—an awareness grounded firmly in the performer's learned conceptualization—becomes a basis for intelligent and intelligible interpretation, leading toward purposeful, clarifying interventions and tending to preclude inappropriate intrusions." ("Formal Process and Performance," 18).

We reserve the term interpretation for conscious, conceptually-based decisions, and assert that intuition can lead as easily as analysis to convincing performance. Performance decisions based solely in intuition differ from those based in analysis according to how they may be justified: the former in terms of their sound, the latter in terms of their sound and their role in a verbally articulated, structural context.

10Schmalfeldt, 1.

11Schmalfeldt, 2.
nature she perceives follows directly from the position she has staked out in the first sentence. In particular, it follows from her failure to distinguish between the roles of theorist and analyst and between their different approaches to musical structure.

We propose here that the primary activities of the theorist and the analyst are distinct.\textsuperscript{12} The analyst aims to understand musical structure through the elucidation and explanation of the contextual relations in a piece. An analysis driven by the concerns of a specific piece will necessarily depend on theory and may require the development of new constructs, but the focus remains on how the various parts of the piece work together. We’ll call such an investigation a “piece-driven analysis.” The theorist aims to understand musical structure through the postulation of models by which features of a piece or repertory of pieces can be explained. An analysis driven by some theoretical concern, a “theory-driven analysis,” will focus only on those features that are addressed by the model. Simply put, the analyst explains a work of art; the theorist provides the framework that makes explanation possible.

An example that bears directly on the current project may help to clarify the difference between these two kinds of investigation. In The Structure of Atonal Music, Allen Forte points out that the opening six notes of Berg’s Opus 5/1 and the opening seven notes of Opus 5/3 are both occurrences of pitch-class (henceforth pc) set 6Z-44. He then points out that the invariant pitches between these two sets form the subset labelled 4-19, and he asserts that this subset occurs in several

\textsuperscript{12}We enter the debate on the distinction between theory and analysis that was argued eloquently by David Lewin and Edward Cone in the 1960’s. The articles are Cone, “Beyond Analysis,” Perspectives of New Music 6/1 (1967), Lewin, “Behind the Beyond: A Response to Edward T. Cone,” Perspectives of New Music 7/2 (1969), and Cone, “Mr. Cone Replies,” Perspectives of New Music 7/2 (1969). Our discussion also recalls Leonard B. Meyer’s remarks about the difference between critical analysis and music theory in Explaining Music: Essays and Explorations (Chicago: University of Chicago Press, 1973), 6-9.
places as a "significant ... structural component of the composition." The notion of structure invoked here depends on the principle of equivalence postulated in Forte's theory of chords. It is correlated with the analytic task of demonstrating a theoretical concept rather than with the task of exploring a complex of relations within a piece.

A piece-driven analysis, whose task is the exploring of contextual relations in a single work, will invoke a variety of conceptions of structure. Such an analysis necessarily employs theoretical formulations but not in any restricted manner. Including linear, harmonic, motivic, and rhythmic concepts, a piece-driven analysis takes into account various musical dimensions and explores their interrelationships. Given the breadth of its structural concerns, a piece-driven analysis may represent relationships in a variety of ways: through verbal language, by graphs, in music itself.

With these distinctions in mind, let us answer the question about what kinds of investigation are most valuable to the performer. To begin with, we affirm that a piece-driven analysis will be more useful to the performer than a theory-driven analysis. Not all piece-driven analyses, however, will be of equal value. To bear most directly on a performer's inner hearing, a piece-driven analysis should also reflect musical relations grounded in perception. In keeping with this perceptual basis, it will also favor those strategies that take explicit account of music's temporal unfolding. These may include both drama and narrative, in which the events of a composition are conceived as progressing chronologically from beginning to end. They may also include accounts in which events are perceived, retained, or projected


14We take note of the inherent circularity of such theory-based observations: the theoretical concept of equivalence allows the observation of set recurrence, set recurrence grounds the assertion of structural significance, and structural significance justifies the observation of set recurrence.

15Although Schmalfeldt blurs the distinction between theory and analysis in her opening remarks, her analyses in the main body of the article are for the most part "piece-driven" and succeed well in informing her observations about performance.
in the listener's experience of the piece in more complex ways.\textsuperscript{16}

Before turning to the individual analyses, we offer some general observations about how a piece-driven analysis might be projected. Along with other writers on the topic, we affirm that one analysis can result in a number of different but equally valid performances.\textsuperscript{17} That is, an analysis does not define any one set of performance decisions that performers must discover. Instead, performers will engage in a process of making and matching. They will make choices from among various possibilities in the realms of timing, articulation, dynamics, color, and affect with an ear to supporting a given analytic observation. They will then match the resulting trial performances against a more internalized and less articulate sense of how the piece should proceed in sound. At its best, an analysis will provide the suggested limits as well as the proper stimulus for the creative imagination of the performer.

The analyses we present below attempt to exemplify both a piece-driven and perceptual approach to Berg's music and the kinds of performance decisions that may be used to project an analysis. Neither analysis proposes a comprehensive understanding but each offers some observations that exemplify our topic.\textsuperscript{18} The analysis of the first piece formulates motivic and pitch structure in terms of a plot. The analysis of the second explores harmonic and melodic construction and draws on the concept of phenomenological location. Both analyses demonstrate structural features relevant to our preparation of a performance, but our structural observations, which may differ in kind

\textsuperscript{16}Piece-driven analyses that do not bear as directly on the task of performers are not therefore irrelevant to it. Such analyses require translation of the structural observations into terms conducive to the creation of an inner hearing.

\textsuperscript{17}Dunsby employs a distinction between interpretation and performance to take specific account of this situation (Dunsby, "Guest Editorial," 7).

\textsuperscript{18}Certainly, our analyses do not have the breadth of Berry's account of Opus 5/3. He also has the luxury to show how particular structural features in the third piece refer to others in the Opus—something we felt would not be advisable in the present context. Of course, performers of the work would not consider the pieces in isolation, and many performance decisions would reflect observations about relations between them. But like Berry, we have restricted our focus to individual pieces for presentational purposes.
from those offered in other analytic venues, extend beyond the unique concerns of our performance. We hope to demonstrate how alternatively constructed analysis can apply generally to performance.\(^{19}\)

Analysis of Berg Opus 5/1

We turn now to an analytical hearing of the first piece. The analysis is cast as two interrelated stories in which musical actors enact two strands of a musical narrative, but the articulation of two narrative strands here does not preclude the possibility of other such strands. The analytic narrative replicates the unfolding of the musical plots and formulates the ordering of events according to a dramatic curve.\(^{20}\) The

\(^{19}\) While we both subscribe to the premises of this paper, we do not share analytic habits or strategies. Lochhead is primarily responsible for the first analysis, Fisher for the second.

\(^{20}\) I have chosen a narrative format because of its affinity with acts of both hearing and playing: narrative entails a succession of events in which temporal order is essential. In choosing this format I wish to engage only the idea of plot as useful for relaying not simply "what happens" but the motivations for "what happens," and further I wish to distinguish between the analytic practice of using a narrative format as a tool for analysis and the assertion that "music is" narrative.

Example 1. Vier Stücke für Klarinette und Klavier, I, Alban Berg

Aufführungsrecht vorbehalten
Droits d'exécution réservés

Mäßig (breve = 76) Langsam. (breve = 58)

p leicht poco rit. schwerer pp

immer hervortretend

poco cresc.

espress. mehr be-

(p) nff

(p)

Rit.

'glettend cresc.

\textsuperscript{1}) Da von der Herausgabe eines eigenen Klarinetten-Sätze aus Gründen des Zusammenspielens Abstand genommen werden müsse, sind für die Wiedergabe der Stücke zwei Exemplare erhältlich.

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Berg VIER STÜCKE FÜR KLARINETTE UND KLAVIER
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Example 1 continued
score is given in Example 1.

Story 1

The clarinet's opening figure presents a down-up-down contour; the boundaries of the contour take on significance due to their emphasis by duration, rhythm, dynamics, and articulation. Before this contour has completed itself, the piano enters with a compact figure, the A/B♭/A♯ succession, which contrasts sharply with the opening clarinet presentation. As the piano continues from this figure, the clarinet's reassertion an octave above stops abruptly. A continuation is withheld until the inversion in m. 3.

The compact figure emerges as a motive through these and later presentations. The motive, shown in Example 2 as Motive X in its

Example 2. Motive X

![Motive X](image)

Example 3. Comparisons with Motive X

![Comparisons with Motive X](image)

original version (+1 -2 semitones), occurs subsequently in the standard transformations. As the figure emerges as a salient motive during mm. 2-3, its defining intervallic features shed light on a hearing of the initial clarinet passage. The contour extremes emphasized in the opening passage form a four-note group which is shown in Example 3a. By
reducing compound to simple intervals, as shown in Example 3b, a relationship between the four-note group and Motive X may be observed: the first three pitch classes of the four-note group imply an inverted Motive X as shown in Example 3c. The clarinet, then, in its hesitancy to continue Motive X in m. 2 draws attention to this relation. Only in m. 3, when the clarinet gives the inverted form that is implicit in m. 1, can it present a continuation.

The continuations from Motive X, first by piano and then by clarinet, seem to veer away from initial premises but ultimately make manifest underlying structural features of the opening. The piano’s right-hand (henceforth RH) proceeds with a vacillation between E and Eb that expands to include F during mm. 3 and 4. The intervallic compactness here, similar to that of Motive X, reflects an implicit feature of the clarinet passage. Proceeding from the contour reduction (as shown in Example 3b), we may note in Example 3d a descending three-note chromatic group formed by order elements 1, 2, and 4.

The clarinet’s continuation similarly draws out structural features of the opening music. Moving within an even “tighter” configuration, it presents a two-note chromatic group in m. 3: C#/D. From the original registral extremes of the clarinet’s opening (Ex. 3a), we may note in Example 3e such two-note chromatic groups in both the upper and lower registers.

So far my story has focused on some details of the piece’s beginning because initiating events play an important role in setting up the conditions of the plot. Now, in a more synoptic view, I’ll consider moments that prominently develop the musical plot.

Measure 6 plays a climactic role for dynamics, texture, and sonority. For motives and pitch groups, it plays a complicating role. This complicating function arises from events which, while referring to prior occurrences, articulate changes or are set in different contexts. It is these complications of referential events that require redressing by subsequent music. The references and complications are schematized in Example 4. The clarinet’s opening trill refers both to the initial statement of Motive X and to the upper two-note group of m. 1. The conjunction of the trill with the flutter-tongued triplet refers to both the upper and lower two-note groups. This association is clouded, however,
Example 4. References and complications in m. 6

Motive X

2-note group

Gunsang

(C)

Rit.

(C)

3-note group
in two ways: by the B♭ grace note and by the continuation beyond F# to F and E. The LH participates in the complicating function of m. 6 as well. Its lowest voice refers to the three-note group of the opening, and on the third beat, its vertical sonority provides a "pc bed" for the clarinet's descent from F# to E.

The complications of this measure are sustained by events in m. 7 and the beginning of m. 8. Most notably the LH continues the clarinet's descent in m. 6, driving down to E♭2 and finally D1 (measures 7 and 8 respectively). The clarinet responds to this very low note with its own lowest, D3, attaining a gestural bottom for the piece. From this registral trough the clarinet begins to regain the tonal space that has been lost during the complicating music of mm. 6-8. Pushing up chromatically from D, the clarinet pauses briefly in m. 9 on E3, which recalls the clarinet's low point in m. 6, and continues to F3. The chromatic ascent is broken by the rising interval of four semitones to A, the pc which has been insistently asserting itself in the RH from the end of m. 7. The arrival at A3 recalls the significant functions of this pitch: the first note of Motive X in its initial statement and of the climax on the downbeat of m. 6.

Once this A is gained by the clarinet in m. 9 something "snaps" in the music. The clarinet plays ohne Ausdruck [without expression], and the piano winds down to a narrow focus. References to opening events following the fermatas of m. 9 sustain this sense of sudden shift. The RH plays a figure which, recalling clarinet music going into and at the beginning of m. 2, sets a motivic stage for the recurrence of the clarinet's A as specifically that initial A of Motive X. The clarinet's pcs at the end of m. 9 reorder those of the opening's four-note group as Example 5a shows. And further, as indicated in Example 5b, that reordering results in Motive X as the last three notes.

In its new placement at the end of the four-note group, Motive X dovetails into the "frozen" world of mm. 10-12. These concluding measures affirm the transformed recurrence of the four-note group not by repeating its various elements but by fixing this final presentation in a static eternity.

What may be done to project this analysis of one narrative strand from Opus 5/1 depends in part on each performer's unique reading of
Example 5. Comparisons with Motive X

a. 4-note group

\begin{align*}
\text{beginning mm} & \quad 1-2 \\
\text{end m. 9} & \quad \text{end m. 9}
\end{align*}

order numbers: 1 2 3 4

b. Motive X

\begin{align*}
\text{intervals} & \quad 1 + 2 \\
\text{by semitone} & \quad -2 + 1
\end{align*}
the notation. I offer here, then, a set of performance decisions based on my own reading of the score that can project the analytic story. Some decisions seemingly amount to no more than a faithful account of what is notated. In these cases, the analysis has provided an insight into why the markings are there and the kind of hearing they suggest.\textsuperscript{21} Others go beyond what is simply given in order to clarify a particular function or relationship. The contour of the clarinet's opening passage will emerge without special attention as will the registral formations of the two-note chromatic groups. The three-note group, however, requires some care. The clarinetist can bring out this group by articulating the passage into two sub-phrases: the first three and the last six notes. This articulation affords some prominence to G and F\# as the end of sub-phrases. In order to maintain both the momentum toward A5 and the continuity of the six-note unit, the clarinet may shorten the rest by playing the E into it, as the tie suggests, and apply the \textit{poco ritard} to the A, not the rest. Further, a slight accent on the F\#4, as the \textit{schwerer} [harder] indication suggests, will bring out its reference to G. Growing out of the analysis, my concern to project a continuous six-note unit lends a certain comprehensibility to the given notation at the end of m. 1 and beginning of m. 2. It lets me understand the purposes of the tie and the \textit{schwerer} indication, and permits a decision about where precisely to start the \textit{ritard}. In this instance, then, my analysis not only allows a more nuanced meaning of notational givens but further generates decisions going beyond those givens.

In order to bring out the climactic nature of m. 6, the clarinetist may play the entire measure without breathing between the trill and fluttertongue. This lack of separation prevents the fluttertongue from being heard as something new and thus sustains the complicating function initiated by the trill. The pianist may emphasize through dynamics and articulation the bass notes of the LH, the low A\textsubscript{b}/G/F\#, in order to make clear the recollection of the earlier three-note group

\textsuperscript{21}In his analysis of Opus 5/3, Berry often points out how analytic observation provides a context for understanding notational instructions: "To draw conclusions for performance is largely to verify the composer's abundant directions" (\textit{Musical Structure and Performance}, 110).
and its role in the complicating function of the measure.

The clarinet’s chromatic ascent in the low register during mm. 8-9 may be brought out by lengthening the D and E♭, as the *tenuto* marks suggest. The chromatic ascent will be sustained through the second beat of m. 9 if the pianist and clarinetist do not hold the *fermata* too long. By making the *decrescendo* from the clarinet’s F to A in m. 9 dramatic within its notated boundaries, the arrival at A may be a quiet achievement of that moment when something snaps in the music. And finally, the clarinetist may render the *ohne Ausdruck* with no vibrato and a distant and somewhat fuzzy sound. This new coloring affirms the change from dynamic motion in mm. 8-9 to stasis in mm. 10-12.

Story 2

The second story is not exclusive of the first but forms one of the strands necessary to a complete understanding of the musical narrative. Listening again to the opening of the piece, we may observe some relationships that are developed by later occurrences. During the opening, the pc D emerges as central due to emphasis by rhythmic and pitch constructs. The downbeat arrival and upbeat preparation into it provide rhythmic and metric stress on the D5 of m. 2. The registral strands indicated in Example 6a show some pitch constructs that add to this emphasis. The D acts as the last element in a statement of Motive X in one strand, and, as if to mirror the falling pitch interval (henceforth pi) 2 from E5 to D5, the C5 moves up to D by the same interval. The descending pi 7 from A to D supplies a cadential weight on the downbeat D due to the definition of a linear “dominant” by the acoustically strong “perfect fifth” in this context. And further, the succeeding F♯4 realizes a triadic structure that gives prominence to D as a momentary “root.”

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²²I invoke the concepts “dominant” and “triadic structure” here for the special nature of this event. The tonal associations emerge from these intervals at this moment because the context does not prevent them. The linear dominant and triad do not create a “moment of tonality” but rather, through the pitch hierarchies of such tonal constructs, they provide an emphasis of the D5.

The topic of “tonal” implications plays an important role in Berry’s and Christopher Lewis’s analyses of Opus 5/3 (Berry, *Musical Structure and Performance*...
Example 6. Emphasis of D

The emphasis of D in the opening emerges as central to the second story; however, the tale is complicated by associations of D with alternately F# and F. Before telling how this conflict of associations unfolds, I need to consider the two factors establishing D as central. First, simple reiteration gives prominence to the pc. Second, other pcs, through various relations to D, are contextually defined as "implicative"; that is, these other pcs, through functions set up by the piece, imply or refer to D.

The implicative function arises from two sorts of relations to D. First, pcs are connected either as upper or lower chromatic neighbors or as a neighbor to a neighbor. As contextually defined here, the implicative pcs are C#, E♭, E. Second, the pc A takes on a linear "dominant" function pointing toward D as its referential note; A♭ and B♭ are secondarily implicative acting as the neighbors of the pc A.23

and Lewis, "'Tonal Focus in Atonal Music: Berg's Opus 5/3,'" *Music Theory Spectrum* 3 [1981], 84-97). Their eloquent accounts of how such implications arise in a work that is not tonal, such as Berg's, provide a strong foundation for observations of tonal focus in not only the analysis of the first but also of the second piece of Opus 5.

23The implicative function of A derives from the acoustic strength of a pi 7. The concept of a linear dominant implies not tonality as such but diatonic functions that may
Example 7. Selective Hearing of Piece I, Second Story

be observed in pre-tonal as well as tonal music.
Example 7 continued
Example 7 shows occurrences of D, its implicative pcs, and the associative pcs F# and F. The beams indicate the participation of these pcs in phrase groups. Occasionally a non-beamed note will be slurred to a beamed note; these slurrings indicate a somewhat less important supporting role for the pc or group of pcs. The example is not a reduction in the usual sense but rather a selective hearing of the piece that isolates pitches playing a role in the emphasis of D and the conflict of associations. The second story below refers extensively to Example 7.

The pc D is initially associated with F#4 during the first beat of the clarinet in m. 2. This association is contradicted by the F4s of the RH in measure 3. At the end of the measure the clarinet’s move up to D through C# and the LH’s arrival on D4 underscore the assertion of F and make the new D-F association explicit.

This new association receives further emphasis by the rhythmic and pitch arrival at beat 3 of m. 4 which is prepared by registral expansion and exchange. As the LH’s lowest voice moves down from A³ to E♭3, the clarinet’s ascent and the RH’s stasis concludes with a voice exchange. The clarinet reaches down below the piano for the first time, reasserting the D-F association explicitly in a middle register. The piano chord here emphasizes D by both statement and implicative notes. The extremities of the chord, C# and E♭, are chromatic neighbors, and the A♭ is secondarily implicative through its chromatic connection to A. Further, the LH pcs form an (0,1,6) chord which becomes a prominent harmonic and linear construct later in the piece and which is an implicit feature of the opening clarinet figure, as Example 6b shows.

The climactic m. 6 emphasizes both D and A, the latter having the function of a longer range implicative pc. Further, it both makes explicit and complicates the F#/F conflict. Like the first story, then, m. 6 has functions other than climax: it implies and complicates.

The climactic features of m. 6 are prepared in the preceding music. The RH’s soprano voice and the LH’s tenor voice in m. 5 move up toward D creating an expectation for arrival on the downbeat, an expectation thwarted not only by the clarinet’s A/G# trill on the first two beats of m. 6 but also by its chromatic descent. The descent makes
the F#/F conflict explicit by juxtaposition and provides complication by its continuation to E.

The piano further averts attention from D by the chromatic descent from A♭ in the LH, moving away from the implicative A, and later by the secondary emphasis of A in the RH. The local effect of diversion occurs during this measure, but as we will see shortly, these events play a role in a longer-range move back to D.

Concurrent with the emphasis of A in measure 7, D begins again to assert itself as a central pitch. The clarinet’s long upward sweep to D6 in that measure is dramatically juxtaposed with the low Ds by clarinet and piano that follow. The piano’s D1 completes a four measure presentation of the LH (0,1,6) chord heard in m. 4. The completion of this construct, framed linearly by Ds, reasserts that pc as central and signals a change in the progress of the musical story.

The clarinet line turns upward regaining the pitches of the m. 6 descent excepting F#, an absence addressed by the F#/Gb/F frame of the LH chord in mm. 8-9. The relative calm attained by the reassertion of D and the coexistence of F#/F by the end of the second beat of m. 9 is ephemeral, however.

At the end of m. 9 the slightly “wrong” references to opening events—the reordering of the four-note group, the occurrence of Motive X at the end of the group, the piano’s transformation of the clarinet’s figure going into m. 2—create not a calming sense of formal balance but rather a tense effect that seems a passionless retreat after the outpouring of measures 6-8. The RH’s molto espressivo of m. 9 weakly attempts to regain that earlier intensity. Failing this the RH responds with a mildly skewing gesture that provides a certain unbalance at the piece’s conclusion. While the RH’s Eb/D/E present an inverted Motive X in tandem with the clarinet’s Motive, the continuation to F# in m. 10 presents a whole-tone succession which, while not unprecedented in the piece, is not common. Further, the F# reasserts the D/F# association throwing off the tense calm of mid-measure.

The ending of the piece freezes this skewing move. The unchanging sonority of mm. 10-11 does not review previous parts of the piece’s musical story but is reminiscent of certain aspects of it. The treble-clef chord consists of two (0,1,6) chords separated by pi 5. The
arrival on F# in m. 10 forms an (0,1,6) chord with the clarinet’s G and both the LH’s C# and C, thus saturating this frozen sonority with the chord-type that plays a significant role in the strong articulative moments of the story. The final complicating gesture of the piece is the low B of m. 12. Heard with the clarinet’s repeating G, this pc presents a pi 8 reminiscent of the descending D-F# of m. 2. This new transposition of ic 4 prepares the upcoming concentration on this interval in the second piece.

Let’s turn now to some performance decisions I have found useful. In order to emphasize the D and F# of m. 2, the clarinetist may play the crescendo into the D with the dynamic intensity held until the entrance of the LH on the second triplet of beat 2. The pianist may further emphasize the pc D through voicing of the LH chords in mm. 2 and 3.

In m. 4 the registral exchange between clarinet and RH may extend to dynamics. The exchange needs to be set up by the emphasis of the RH voice from the middle of m. 2 until beat 3 of m. 4, an emphasis called for by the verbal instruction immer hervortretend [always standing out]. The clarinetist can contribute to this emphasis by not letting the crescendo of m. 4 go above the dynamic of the RH. When the voices cross (on beat 3) the clarinet takes up the dynamic level pursued by the RH and the RH that by the clarinet. This dynamic exchange allows the registral connections to emerge more clearly.

In order to bring out the climactic nature of m. 6, the clarinetist may strongly articulate the downbeat A3; a breath before the A may provide accentuation by the slight pause and assure enough air to get through the entire measure. In contrast to this, the pianist, during the last two beats of m. 5, may play as if both parts went continuously to the expected downbeat. The effect of surprise may be heightened if the pianist slightly delays the entrance on the second eighth. And further, if the pianist plays the over-reaching Eb5 very close temporally to the D, this expected pitch may be obscured, making the sounding top of the delayed chord ambiguous. Finally, during m. 6 a slight lingering over the F# and F and a noticeable increase in the crescendo at the articulation of the F# will project the conflict between these two pcs.

In m. 9 the clarinetist may hold the dynamic through the fermata
on E, letting the *decrescendo* begin after the articulation of F; this will emphasize the reference to the E3 of m. 6 and allow the continuation of the chromatic ascent to be heard as such. In order to project the required expressionlessness, the clarinetist may play the rhythms mechanically on beats 3 and 4 of m. 9. The RH emphasis of the *crescendo* on the fourth beat, with a slight pause before the articulation of the downbeat F#4, will help to project the skewing move to F#.

During mm. 10-12, the pianist and clarinetist can project the sense of an eternal ending by sustaining the preceding mechanical rhythms and taking the *poco ritard* quite literally. And finally, in order to bring out the new transposition of i/c 4 that prepares the second piece in m. 12, the pianist and clarinetist may dynamically emphasize G and B within the whole chord, a voicing that must begin in m. 10.

Analysis of Berg Opus 5/2

From one point of view, this piece is about the "major third" (pi 4) and its companions and travels. Beginning on D3/F#3 in the solo piano, it relocates over the course of the piece to F3/A3 (m. 4 beat 2) and then to D♭3/F3 (m. 5 beat 4) before returning to D3/F#3 at the end. The score is reproduced in Example 8. The following discussion will explore the extent to which these "thirds" help define the primary harmonic areas of the piece. It will also consider the relationship between harmonic and melodic structure in arriving at a unified conception of the piece. In the course of the discussion, I shall suggest ways in which the analysis can be projected through performance.

The first leg of the journey, up to the arrival of F3 in the bass (m. 4), is characterized by a lack of harmonic focus. The clarinet enters with a well-defined melodic idea whose pcs—E♭, D♭, C, A♭, G, and E—are totally distinct from those of the LH. The RH, upon its entrance in m. 2, associates more strongly with the clarinet than with the LH. Harmonically, its pcs are common to those of the clarinet, and rhythmically it continues the steady eighth-note motion with which the clarinet set out. In the broad picture, then, the two chords of the RH combine with the melody of the clarinet to form one harmonic area
Example 8. *Vier Stücke*, Mvt. II

Klarinette

Sehr langsam. ($\frac{4}{4}$, c. 32)

Klavier

Beide Pedal

Gered

Etwas langsamer.

(Zeit lassen)

Rit.

A tempo (nicht ellin)

Viel Ped.

Noch langsamer.

*) relatives Forte.


U. E. 7485

Berg VIER STUECKE FUER KLARINETTE UND KLAVIER

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while the D and F# of the LH form another.

The second slur-group of the clarinet introduces a new pitch, A4, on the downbeat of m. 4; shortly after this, the LH moves. I understand this relation between the clarinet A and and LH motion as causal or motivating. From a harmonic point of view, A4/C6 of the clarinet combine with E♭4/G4/C5 of the RH to create a new harmony that is completed by the arrival of F3/A3 in the LH. Put somewhat differently, beats 1 and 2 constitute a gradual coming into focus an ‘‘F-chord’’ (described either by its pc content, F/A/C/E♭/G, or with its traditional label as F dominant ninth). 24 The second beat of m. 4 thus marks the first time in the piece that all three parts have united to form a single, simultaneous harmony.

How can this analytic interpretation, in which the initially ill-defined harmonies of the opening come into focus at the move to F3/A3, be carried out in performance? To begin with, the clarinetist—sensitive to the energizing effect of her or his event on the downbeat of 4—can play A4 as a point of emphasis as well as the focus of the dynamic swell. Beyond this, the pianist can make use of some of the resources suggested by the pedal indication at the beginning of the piece. (The words Beide Pedal [both pedals] refer to the una corda or soft pedal and the damper pedal.) Taken simplistically as a direction to do something, it means to put both feet down, probably until the next pedal indication in m. 5, or at least until the call for no pedal in m. 7. Taken as a cue for a quality of sound, it allows for more imaginative treatment. In order to project the sense of one harmonic area during the opening three measures, the pianist can include both RH chords in the same pedal. The pedal can be cleared, perhaps

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24 I acknowledge and embrace the problematic associations of this terminology. While I do not claim that traditional triadic tonality functions in an a priori way in this piece, I do believe that tonal elements are evident in the prominence given to the bass and in the way that chords are constructed in thirds in their lowest voices. They are also evident in the way some chords are related to others. While the phrase ‘‘F dominant ninth’’ refers primarily to the structure of the chord independent of tonal context, it suggests also that the ‘‘F-chord’’ stands in dominant relation to a tonic B♭ at the end of the piece. I shall return to this point below.

Also, see note 22 above.
gradually, as the "F-chord" comes into focus in the second beat of m. 4.

The objection might be raised at this point, as well as at others during the course of this paper, that these performance directions are too willful. By proceeding too far beyond the written performance indications, they somehow distort the piece and lead to a hearing that is unfaithful to the score. My defense is a simple one: if an analysis helps the performer make better sense of the music and if its projection is not specifically precluded by the notation, it should at least be given a sympathetic hearing in rehearsal. If the trial performance is deemed to be unsatisfactory, the performance directions can always be rejected, or the analytic observation on which they are based can be revised.

The second leg of the journey, extending from the second beat of m. 4 to the arrival of D♭3/F3 in m. 5 beat 4, is the most unrestrained of the piece. The piano begins by recapitulating the motion between the first two thirds in the LH, attacking simultaneously with the RH for the first time. With the arrival of the highpoint E♭6 in the clarinet on the downbeat of m. 5, the tempo is restored, the melody begins a cascade to G4, and the piano breaks into a succession of chords converging on what I shall call a "D♭ chord" (D♭3/F3/G♯3/B3/E4). The qualifying words for the tempo in this measure (nicht eilen [don’t hurry]) and the low dynamic level of the piano suggest a gesture of release rather than of force—a suitable response to the harmonic clarification and movement during the course of the previous measure.

The clarinet participates in the "D♭ chord" defined by the piano in a complex way. In the fourth beat of m. 5, above the first appearance of the chord, the clarinet plays the pitches A4/A♭4/G4. A♭ appears as the least stable of the three pitches because of its metric placement on a weak sixteenth and the prominence of the pitches on either side. A decision about the relative stability of A and G is more

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25 I would also say it is the least consonant of the three, although this description is more problematic. Despite its octave doubling of G♯3 in the piano, it does not sound like a member of the chord. In considering relative consonance and dissonance in this music, the principle of octave equivalence does not automatically apply. See also the discussion of F♯3 and F♯4 in m. 7, below.
difficult. On one hand, the A is heard as stable because of its placement at the beginning of the beat and by the recollection of A as a harmonically defining pitch in the clarinet from m. 4. It also acquires some stability by virtue of the symmetrical construction it forms with the top two notes of the piano (Example 9a). On the other hand, G is more stable because of its length and its role as the bottom of a cascade and a chromatic descent. Like A, it also enters into a symmetrical construction with pitches in the piano, although here the symmetry involves the top three pitches of the piano instead of the top two (Example 9b). Its stability is reinforced by the recollection of G4 in the piano from the previous beat, a pitch that has not been linearly displaced by the intervening chord.

Given an equivocal reading for the two pitches, my own preference at this point in the piece is to consider G4 as the more stable pitch and to hear A4 as a decorated appoggiatura to it, largely on the strength of G as the melodic goal for the line. This reading will be reconsidered shortly in light of the overall melodic structure and of later events in the piece.

Example 9. Mvt. II, m. 5 beat 4, Symmetrical Arrangements

Because of the limited harmonic means of the first four measures, the richness of the chordal succession in m. 5 invites explication. I understand this passage primarily in a horizontal way, as the means of proceeding from the “F chord” to the “Db chord.” From this horizontal point of view, the two voices of the LH are especially interesting: the bass proceeds up the chromatic scale to D♭3; the tenor fills in the lower third of the “F chord” before returning to the original F3, which now functions as an inner part of the “Db chord.”
The performers can do at least three things to help project this sense of linear connection from the "F chord" to the "Db chord." First, the pianist can bring out slightly the tenor in m. 5, that is, the inner voice that makes most explicit the connection between the beginning and ending chords. Second, the clarinetist can exaggerate the ritard on the last eighth of m. 4, intensifying the expectation before the arrival of the following downbeat. Third, the dynamics of the two instruments should remain independent: in no way should the piano participate in the clarinet's crescendo as the line descends, or in its agitation when it reaches its lowest notes.

Consideration of the harmonic business of m. 5 should not divert our attention from the crucial melodic issue raised by the last three notes of the clarinet in that measure. I turn again to the question of the relative stability of the A4 and G4 in the clarinet with reference to the melodic structure of the entire piece. As William de Fotis has noted in his article on the Vier Stücke,26 the clarinet part is made up of a series of melodic fragments linked by the repetition of pitches from the end of one slur group to the beginning of another. If the melodic fragments are reduced to their pitch content and the linking pitches are superimposed, a synthesized melody results that spans the entire piece (Example 10). The most significant structural event of this synthesized melody occurs when G4 from the third slur group is replaced by F#4 in the fourth. This occurs in the piece at the downbeat of m. 7, and is preceded by a passage of considerable tension and contortion. I identify this event as the climax of the piece, and point to the way in which the heightened dynamic level helps orchestrate the drama inherent in the substitution of pitches.

In reference to melodic structure, F#4 is the pitch that allows the clarinet to continue and conclude. It is thus melodically "correct" within the context of the whole piece in a way that G4 was not. This melodic replacement of G4 with F#4 invites a reinterpretation of the harmonic roles of G4 and F#4 as well. The appearance of the succession A4/G#4/F#4/E at the climax of the piece above the

Example 10. The Synthesized Melody

reiterated "Db chord" indicates that the earlier reading of the clarinet
G4 as the most suitable partner for the piano harmony has been
rejected; instead, A4 becomes the more harmonically stable tone. In the
latter passage, both G#4 and F#4 function as passing tones between the
relatively stable A4 and the E4 sounding in the top voice of the piano.

Thus, although F#4 is the correct continuation for the entire
melody of the piece, it is harmonically incongruous at its point of
arrival. It is only with the arrival of D3 in m. 7 beat 3 that a harmonic
and motivic context is created in which the pc F# (here presented in the
lower octave, F#3) can be fully stable.

It is the task of the performers to revel in the melodic
"correctness" of the F# when it arrives. At the same time, however,
they must also highlight its harmonic incongruity and contentiousness.
The clarinetist sensitive to this harmonic vindication of F#4 by the
arrival of D3 will take special care to extend the ritard through the
triplet on the second beat as indicated in the score, resisting the
temptation to accelerate to the bottom of the range, and will also
articulate the D clearly as the beginning of a new idea.

The linear presentation of the initial major third, D/F#,
in the
third beat of m. 7 marks the beginning of the end of the piece. The
events of the last two beats of this measure and the downbeat of the
next can be heard in at least two different contexts, each one creating
a different expectation about how and when the piece will end. In the
more immediate context, extending back to the first beat of m. 7, or
even to the beginning of m. 6, an expectation is created that the end
will come with the final attack of the clarinet. With its final attack the
melody comes to rest and the F#4 becomes transformed into a constituent element of the harmonic dyad, D3/F#3. The LH, which passes from D♭3 through C3 to B2, lends further support to F#3 by harmonizing it with a perfect consonance, the “fifth.” In addition, the attack of B2/F#3 is metrically weighted by its arrival on a downbeat.

In the broader context of the whole piece, the process set in motion on the third beat of m. 7 remains incomplete at the downbeat of m. 8. With the opening of the piece in mind, the initial material has returned in the right register but in the wrong instrument and in the wrong way: only after D and F# are taken over by the piano and verticalized is the sense of closure achieved. In addition, B is unacceptable as the final note of the bass: the bass must continue through B to B♭. The sense of B♭ as the preferred bass note in the context of the whole piece depends on the following two observations. First, in the pitch language of this piece, the interval that is harmonically defining is neither the “perfect fifth” (B/F#), nor the minor third, (B/D), but the major third, (B♭/D). Second, if one accepts the suggestion of a long range dominant function for the “F chord” of m. 4, B♭ fulfills expectation of tonic resolution.27

These two observations raise the possibility that the primary major third in the last two measures is not the upper third, D/F#, but the lower one, B♭/D. This interpretation is supported by recalling that the major thirds on which harmonic units have been built previously occur between the two lower voices rather than in the upper parts. It is also supported by recognizing that the bass D♭ of the previous harmonic area does not move up to D but down—Berg is careful to point out that the piano D♭ should still be sounding when the clarinet D enters. A bass movement down a minor third from D♭3 to B♭3 provides a balanced response to the bass movement up a minor third

27The argument is to some extent circular. I assigned a dominant function to the “F chord” in m. 4 because I heard the B♭ at the end as a tonic for the piece. Nonetheless, the circularity does not prevent the analysts or performer from reenacting the uncertainty associated with how the piece should end.
from D3 to F3 between the first two harmonic areas.\textsuperscript{28}

What then is the challenge to the performers in this passage from the third beat of m. 7 to the end? According to the above interpretation, the challenge is to acknowledge, and distinguish between, the provisional end of the piece at the close of the clarinet line and the ultimate end of the piece at the entrance and subsequent “playing out” of the final piano material. In playing from the middle of m. 7 to the end, they must relinquish the relative familiarity of the opening motive in the clarinet for the absolute familiarity of the opening motive in the piano, and they must pass through the relative stability of the sonority above B to the absolute stability of the sonority above B\textsuperscript{b}. All three performance indications in m. 8, \textit{Noch langsamer} [still slower], \textit{espressivo}, and \textit{Zeit lassen} [allow time], help to suggest an environment in which these entertainments can take place.

The above discussion depends heavily on the concept of “phenomenological location,” a concept that Lewin addresses directly in the article cited earlier.\textsuperscript{29} According to his discussion, what appears as a single event on the page, such as the B/F\# on the downbeat of m. 8, is actually associated in our perception of the piece with a variety of mental acts. These acts depend among other things on the context in which the event is heard, the relations which are explored, and the theoretical language used. Thus, it can make sense to say that the event on the downbeat of m. 8 is both an end and a transition to the final close because one hears it differently in different contexts and at different times.

In a related discussion, Lewin draws attention to certain kinds of analytical statements that he calls “political/legal” statements, since they require either a yes or no vote or a guilty or innocent plea. He claims that the analyst is often tricked by such statements since she or

\textsuperscript{28}The decision in favor of B\textsuperscript{b}/D as the primary third at the end of the piece contradicts the reading given in the first paragraph of this analysis. In that reading, the initial third D/F\# returned home at the end. While the earlier model provided a convenient point of departure, it fails to accommodate some of the observations brought to light in the course of this analysis.

\textsuperscript{29}Lewin, “Music Theory, Phenomenology, and Modes of Perception.”
he fails to recognize that different statements correspond to different perceptions, and are thus not necessarily in conflict with one another. While keeping an eye out for the dangers of political/legal discourse, I offer some concluding remarks about the overall harmonic profile for Piece II.

Example 11. Graphs of Harmonic Structure

Example 11 provides six graphs of harmonic structure—three depicting successions of major thirds, and three dealing with groupings of thirds within a succession. In considering graphs A and B as representations of the harmonically defining intervals of the piece as a whole, I would argue that we do have to vote for one of them. Although graph A models the satisfaction we sense at the return to the opening third in the clarinet, it does not record the greater satisfaction of hearing B♭ as the final bass note. Graph C provides a better model than either A or B since it acknowledges the primacy of the lower third while reflecting the prominence of the upper as well.

In considering graphs D and E as representations of the groupings of thirds, I would argue that we are not confronted with an either/or situation. Both graphs represent relations that are meaningful in the piece. Graph D, with its indication of minor-third couplings between bass notes, emphasizes the way in which the move up between the first two thirds is mirrored by the move down between the last two. Graph E, which highlights the major-third couplings between bass notes, emphasizes the sense of progression between the “F chord” and the
"Db chord" in the middle of the piece. It also demonstrates a nonadjacent link between the first and last thirds, a link that is supported by the actual piling up of those two thirds in the final measure of the piece.

Graph F represents the most complex scheme of the piece—one which attempts to retain all the groupings of graphs C, D, and E as well as to formalize the dominant-to-tonic relation mentioned above. More than any other single graph, it suggests a piece that is tightly woven with various strands. As a harmonic scheme, it provides a suitable counterpart to the melodic sketch given in Example 10. Both conceptions, the harmonic and melodic, work together to suggest that the piece is to be heard as one, long, extended "superphrase."

It is at this point, when the analyst says to the performer, "just play it like a single phrase," that we again raise the question about how the hearing suggested by the analyst can be projected in performance. We have left the area of specific instructions behind, for better or worse. Instead, we have entered the realm in which the performer's analytical understanding, incorporated into the more general inner hearing, must find its own, suitable, means of conveyance. Decisions about tempo and pacing are relevant here, as are many other decisions or spontaneous responses in the playing of the work.

Final Remarks

In the two analytic essays above, we have offered piece-driven, perceptually based analyses as well as specific decisions about performance. Because of their practical purpose, the performance decisions might seem to be the more valuable part of these essays. They prove to be less useful, however, since decisions about projection are unique to each performer. Given the limited utility of the performance decisions, a question arises about the utility of the analysis on which they are based. Specifically, one may ask for whom a piece-driven, perceptually based analysis is relevant and to what purpose it can be put.

While decisions about how to project the inner hearing supported
by an analysis are particular to each performer, the analysis itself has a more general function. For the analyst who is also the performer, it may bear directly on performance decisions. For the performer encountering an analysis by someone else, it may provide the basis for an inner hearing as the performer comes to own the analysis. Performance decisions will then derive from the performer's "found" inner hearing. Additionally, a performer responding to the analysis of another may be motivated to develop her or his own. In this case, the inner hearing of the original analyst acts as a catalyst for the analytic activities of the performer.

In closing, we return to the original question of what bearing analysis has on performance. Here we have been concerned not with whether analysis should be relevant to performance but rather with the kinds of analysis that can be conducive to the activities of performers. This view of the relation between analysis and performance requires careful consideration of the various activities known as analysis and the means by which diverse analytic goals are achieved. An analytic approach that takes into account the primary task of the performer—the creation and projection of an inner hearing—can make a significant contribution to convincing performance.