The Bagatelles of 1908 stand at a crucial point in the compositional evolution of Bela Bartok. In the introduction to a 1945 edition of his early piano music, Bartok recognizes that "the Bagatelles inaugurate a new trend of piano writing in my career." He describes this "new style" as "stripped of all unessential decorative elements, deliberately using only the most restricted technical means."\(^1\) The motivation for this stylistic change is traditionally credited to Bartok's discovery in 1907 of the music of Debussy and recognition of the similarity of its resources to those of Hungarian folk music. While the existing literature often refers to the Bagatelles, the cursory references deal almost exclusively with those pieces in which folksong influence is evident. The other pieces are generally listed as "innovative" or "experimental" and dismissed after mention of the often-quoted bitonality of no. 1 and quartal harmony of no. 11.\(^2\)

In fact, mention of no. 9 is rarely found. Examination of this monophonic piece reveals the difficulty in application of traditional tonal theory (even though Bartok himself named the tonality as E\(^\flat\) Major). However, this author has found that substantial insight is gained into the internal structure of the piece when it is considered as a representative of that category of early twentieth-century music.

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\(^1\)Quoted in Benjamin Suchoff, Essays on Bela Bartok (London: Faber and Faber, 1976), pp. 432-3.

\(^2\)An important analysis of one of these "other" pieces (8) is to be found in Allen Forte, Contemporary Tone-Structures (New York: Columbia University Press, 1955), pp. 74-90.
called atonal. Much of the difficulty in understanding this complicated music has been overcome with the recent development of the unordered pitch-class set concept by Allen Forte. While usually applied to compositions from Schoenberg's "school," the concept will be seen here to offer valuable assistance in understanding the music of Bartok.

PRINCIPAL MOTIVE

Initial examination of this piece necessarily focuses on the four-pc motive, which so obviously articulates the three large formal divisions. This motive, dynamically and agogically contrasted to surrounding material at each appearance, is found in basic form in the last measure. The appearances of the principal motive (mm. 13-14, 37-38, and 70) serve as closing cadential patterns for each of the three sections of the form.

However, the importance of this motive can be shown to extend far beyond this obvious surface feature. Comparison with measures 1 and 2 shows that the principal motive may be considered a contour and rhythmic distillation of the opening phrase of the piece. This two-measure phrase, with only minor modifications, initiates each principal section of the form (mm. 1-4, 15-18, 39-43). Thus, formal coherence is strengthened by "rounding" each of the three sections

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3 Its 1908 compositional date is the same as that of the George Lieder Op. 15 of Schoenberg, which is generally regarded as his earliest atonal work.

Example 2. Distillation of Opening Phrase into Principal Motive, mm. 1-2.

with basic motivic materials.

An even more pervasive significance of the principal motive is discovered when unordered pc set analysis is applied. The final two versions of the motive both analyze as pc set 4-16, (0,1,5,7). In addition, each of these two motivic occurrences is preceded by the pc that forms 4-16 (in inversion) with the first three motivic pc's. The first motive presentation does not, however, reveal 4-16 directly, although, as in the other occurrences, it is preceded by the pc which forms an inverted 4-16. (The 4-23 formed by the motive in mm. 13-14 is not structural in this work.) Numerous additional occurrences of 4-16 pc sets in this piece will be discussed later in this paper.
Example 3. Motivic 4-16 Presentations.

(a.)

Largo

Molto sostenuto (d = d)

(b.)

(c.)

Molto sostenuto (d = d)

pesante

X

4-23 (3,5,8,10)

I 4-16 (8,10,2,3)
Examine the beginning of the piece, we find in the opening two-measure phrase and its modified repetition all of the pc sets that are to be significant structural elements. Tetrachords formed by contiguous pc's are shown in Example 4.

Example 4. Tetrachords Formed by Contiguous Pc's, mm. 1-4.

The first two measures present significant pc sets 4-26 and 4-19 as surface, contiguous units. In the repetition presented in mm. 3-4, Bartok retains the initial tetrachord but modifies the final one by expanding the last interval from a minor sixth to a minor seventh. While this modification maintains the identity of the phrase by rhythm and contour, this subtle change also results in the appearance of the 4-16 tetrachord, whose importance has already been established. Of more significance is the observation that the 4-16 in measure 4 is at the same pitch level as that of the final measure of the piece (see Example 1). This intervallic change also transforms the entire melodic phrase (mm. 3-4) into pc set 8-16, the complement of the 4-16 just mentioned.

Another level of pc set analysis involves the extraction of those pc's significant due to position, length, accent, recurrence, or similar criteria. A set analysis of mm. 1-4 reveals initial occurrences of significant pc set 4-20. One example of 4-19 serves to connect the two phrases by involving pc's in all four measures. The 4-24 occurrence is a
hint toward the whole-tone rich sections which occur later in the piece.

Example 5. Extraction of Significant Pc's, mm. 1-4.

At this point it should be observed that the comparison between the principal motive and opening phrase (shown in Example 2) goes beyond the contour similarities discussed. Tetrachord 4-16 is expressed by both the principal motive and the pc's extracted in Example 2. (The substitution of Eb for E as indicated by the dotted line reveals pc set 4-20, another significant set.) This type of background equivalence is found throughout the piece, insuring a coherent and unified structure.

At an even more concealed background level, the pc set 8-22 in mm. 1-2 contains three 4-19's, two 4-20's, and four 4-16's. The pc set 8-16 in mm. 3-4 contains six 4-16's, three 4-19's, and two 4-20's. Although some of these do not appear obvious on the surface, Bartok's choice of sets that contain these particular tetrachords in such great numbers is significant. A few of the concealed sets are shown in Example 6.

Section 2 of the piece begins in mm. 15-16 with the same phrase that was found in mm. 3-4. This phrase, itself a modification of mm. 1-2, is varied slightly in the following two measures (mm. 17-18). The lowering of the fourth pc from C♯ to C results in the changing of set 4-26, (8,11,1,4), to 4-19, (4,8,11,0). The lowering of all four final pc's by a minor second obviously retains the
Example 6. Concealed Tetrachords, mm. 1-4.

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Example 7. Significant Tetrachords, mm. 15-18.

tetrachord 4-16, but it also creates 4-19, (0,1,4,8), from the second through the fifth pc's. The significant tetrachords are detailed in Example 7.

Example 7. Significant Tetrachords, mm. 15-18.
The third and final major division of the piece begins in mm. 39-40 with yet another modification of the original phrase, differing from mm. 17-18 by only two pc's. By lowering the second and eighth pc's from G♯ to G, the first tetrachord (which had been 4-19) becomes I 4-20, (4,7,11,0), and the significant pc's B, D, F♯, and G form 4-20, (6,7,11,2). A modified sequence of the final three pc's of the phrase may be explained by its lengthening of the 4-20 tetrachord into the following measure (m. 41). In addition, consistency is maintained in comparison with mm. 15-18 by the presence of a 4-19 tetrachord displayed by agogically significant pc's, beginning with the motive heard in measure 38. Thus, 4-19, (10,11,2,6), solidifies a five-measure segment (mm. 37-41) and bridges two major sections (II and III).

Example 8. Significant Tetrachords, mm. 37-41.

The following measures contain the opening phrase for the first time at a transposition level other than the original. While the choice of transposition level can be most obviously explained by the traditional "down a perfect fifth" operation, it is significant that this transposition level
expresses a 4-16 tetrachord and hints at the 4-16 tetrachords which permeate the materials which follow. The new pc E, when taken with the preceding three pc's F#, B, and C, forms 4-16, (11,0,4,6).

The transposition in mm. 42-43 is exact for two measures (until the final three pc's are sequenced). Here (mm. 44-45) two different modifications express 4-16 sets. This type of set usage is characteristic of the next several measures, as indicated in Example 9.

Example 9. Significant Tetrachords, mm. 43-50.

Over a 12-measure span (mm. 39-50), the final trichord of the phrase is found numerous times at various transposition levels and is modified as to pitch and rhythm. While the choice of individual transposition levels and modifications may seem to be insignificant, set analysis reveals an overall feature which strengthens the stability and consistency of this lengthy section. The initial pc's of each of these trichords form the set 4-19, (6,7,10,2). Amazingly, the
pattern may be seen to extend back into Section II by two measures (mm. 37-38), unfolding this tetrachord over a span of fourteen measures.

In addition to local set occurrences, further set unity is found in this area of the piece when sixteenth-note dyads following each of the just-discussed trichords are examined. Taking the first pitches of each dyad in measure 46 (D♯, G) and the corresponding pitches in mm. 47-48 (G, C) with those of measure 49 (D, F♯) reveals I 4-16, (0, 2, 6, 7). Measure 49 (D, F♯) and mm. 50-53 (A, C♯) produce 4-20, (1, 2, 6, 0), and the dyad of mm. 50-53 (A, C♯) and E, G♯ of measure 54 form another set of similar type, I 4-20, (1, 4, 8, 9). A detail of the extraordinary set complexity of this area of the piece is given in Example 10.
Example 10. Tetrachordal Sets (mm. 37-54).

Molto sostenuto (d: d) Tempo I.

\[ 4\cdot19 (10, 11, 2, 6) \]
The final few measures bring the piece to a close with a return of the principal motive as has been mentioned earlier. Example 3 shows the 4-16 set occurrences within this motive. However, the sense of return and finality is greatly strengthened by the untransposed return in mm. 68-70 of materials found twice earlier (mm. 3-4 and mm. 15-16) in the opening phrase. Here, mm. 68-70, the materials take a markedly different shape, involving a rhythmic motive found earlier and the principal motive. It will be remembered that the motive was determined to be a distillation of the opening phrase. The materials of mm. 3-4 (and 15-16) include an overall 8-16, (7,8,11,1,2,3,4), and contiguous statements of its complement 4-16, (2,3,7,9) and 4-26, (8,11,1,4). The acknowledgement of unordered sets allows us to discover in mm. 68-69 the same 4-26, (8,11,1,4), just mentioned. The final measure reveals a contiguous 4-16, (2,3,7,9), although in a different shape and order from its initial appearances. The overall material of these final measures is determined to be the 8-16 found earlier. Example 11 illustrates the return of these materials.
The preceding discussion has centered upon the existence in this piece of one basic melodic idea, expressed in two shapes (principal motive and opening phrase), and occurring only at crucial points in the tripartite form. In addition, the set structure of these points has been characterized by the existence of only four basic tetrachords (4-16, 4-26, 4-19, and 4-20). Completing the study of this piece by examining the interior of each section, we uncover a few sets not previously found and are able to refine our view of the others through their respective placement.

Sets 4-16 and 4-26 are found to contain strong formal im-
plications since they appear at the beginning and end of the three major sections.

Example 12. Placement of Pc Sets 4-16 and 4-26.

<table>
<thead>
<tr>
<th></th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
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<tbody>
<tr>
<td>Mm.</td>
<td>1</td>
<td>15</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>4-16</td>
<td>15-18</td>
<td>37-38</td>
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<td></td>
<td>4-26 1,3</td>
<td>15</td>
<td>50-54</td>
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<tr>
<td></td>
<td>1-4 8 12-13</td>
<td>40-49 58-60 64-70</td>
<td>67-69</td>
</tr>
</tbody>
</table>

Sets 4-19 and 4-20 support the consistency and continuity of the work, as revealed by their presence throughout. They are found in fifty of the seventy measures. The last few measures of each section, however, are characterized by the absence of these two significant sets.

Example 13. Placement of Pc Sets 4-19 and 4-20.

<table>
<thead>
<tr>
<th></th>
<th>I</th>
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<tbody>
<tr>
<td>Mm.</td>
<td>1</td>
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<td>39</td>
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<td></td>
<td>4-19</td>
<td>15-18</td>
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The interior of each section is characterized also by the presence of whole-tone rich passages, i.e. sets 3-6, 4-21, 5-33, and 6-35. Example 14 illustrates the manner in which a whole-tone set exists in conjunction with other structural sets of this piece.

The placement of these whole-tone rich passages is diagramed in Example 15.

In order to complete the set analysis of the piece, two additional (although scarcely used) sets must be mentioned. The octatonic sets 4-3, 4-28, and 8-28 are found, as well as set 4-11. Their placement is shown in Example 16.

Example 17 offers an overview of motivic surface features of the work. In addition to basic motivic material already discussed, three small motivic units are found to be significant. It will be noticed that set placement supports the ever-expanding three-section form shown in Example 17, as well as adding to the continuity factor necessary to any musical composition. Example 18 summarizes the overall set placement of significant sets in the work.

Finally, one fundamental difficulty in set analysis of this piece has been suggested earlier, that is, explaining the F which occurs as the fourth motivic pc in measure 14.
An overview of the work, however, helps present one possible answer to this question. The importance of the initial and final pc's of each section is obvious. Any formal section can be viewed simply as movement of the first pitch, through others, to the last. Here, analysis of the three such situations reveals that the initial pitch of each section is
Example 17. Motivic Placement.

Principal Motive (P)

Opening Phrase (O)

Motive a

Motive b

Motive c
Example 18. Overall Set Placement.

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B and that the final pitches follow in a down-in-fifths progression.

Example 19. Initial and Final Pitches of Sections.

\[
\begin{array}{c}
I \quad \text{II} \quad \text{III} \\
\text{4-6 (10, 11, 3, 5)}
\end{array}
\]

This logical and predictable movement toward $E_b$ (which Bartok named as "tonic" of this piece) establishes the place of F. It is certainly more than coincidental, however, that the four pc's of Example 18 form the set 4-16, (10, 11, 3, 5), whose primary significance in this work has already been established.

In conclusion, unordered pc set analysis has demonstrated structural significance in this piece on several differing levels and seems to cast doubts toward the "experimental" or "immature" nature of this Bagatelle. Rather, it is a tightly constructed atonal work whose basic principles of construction are carefully conceived.

AUTHOR'S NOTE

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BIBLIOGRAPHY


