

Serial Procedures in Schoenberg's Opus 23

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The decade that began with 1915 was critical to the history and development of twelve-tone music. It should be clear to anyone who thinks about this subject that the twelve-tone method of composing could not have appeared, as it were, full-blown from Schoenberg's head. There must have been many experiments before Schoenberg reached the point where he felt that the technique was sufficient for him. It would appear that when all the sketches become available for study, some determination of the order of events leading to the twelve-tone row will be possible.¹ Until that time, one can at least examine and classify the kinds of techniques Schoenberg was using in his various works. Toward that end, one can note that the five pieces of Opus 23 provide a compendium of four of the procedures which led to the twelve-tone row.

This article is primarily an exposition of the technique used in the first piece of this opus.² However, in order to understand the piece in its larger context, we will briefly summarize the techniques used in the other pieces of Opus 23. The approach will be to proceed from the simpler to the more complex techniques.

The simplest procedure contained in these five pieces provides the basis for the third piece. Schoenberg introduces in m. 1 a five-pitch motive, which, in various inversions and transpositions, generates a large portion of the remainder of the piece.³

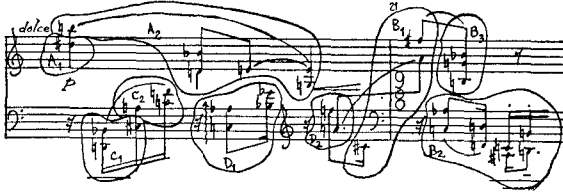
In the fourth piece Schoenberg extends this concept to include more than one basic cell.⁴ The various cells (see Ex. 1a⁵) are used both at their original pitch level and at transpositional levels to form new combinations throughout the piece. An example of a new grouping of the cells at P₀ level can be observed in mm. 20-21 (Ex. 1b). The divisions given in Example 1a are as they appear in Maegaard.

EXAMPLE 1

a.

The image displays five staves of musical notation, each representing a different transpositional form of a five-pitch motive. The staves are labeled A₁, A₂, B₁, B₂, B₃, C₁, C₂, D₁, and D₂. The notation includes various accidentals (sharps, flats, naturals) and stems, illustrating the specific pitch relationships and transpositions for each form. The staves are arranged in a roughly vertical sequence, with A₁ and A₂ at the top, followed by B₁, B₂, and B₃, then C₁ and C₂, and finally D₁ and D₂ at the bottom.

b.



The second piece utilizes two rows; because of their length and the way in which they are used, one can no longer refer to them as cells. In this movement Schoenberg experiments with the concept of repeating an extended series of pitches.⁶

Opus 23, No. 1, develops this last-mentioned concept more fully. Here Schoenberg introduces three different rows, which are, however, intervallically related.⁷ All three rows are presented simultaneously here, whereas, in the second piece, the two rows are used consecutively. Example 2 presents the three rows, labelled Rows A, B, and C, respectively.

EXAMPLE 2

A few brief comments regarding these rows are in order at this point. Row A is constructed from twenty-one pitches. However, only ten pitches of the chromatic scale are presented. The pitches *a* and *b* are missing. Row B contains twenty pitches. Once again, only ten discrete pitches are presented. The missing pitches are *f* and *f*. Row C is somewhat shorter; it is constructed from thirteen pitches. In this last row there are only eight discrete pitches, the missing ones being *f*, *f*, *g*, and *g*. It will be observed that in each row the missing pitches are chromatically consecutive, and that in both Rows B and C, *f* and *f* are among the missing pitches. Beyond that point, it can be observed that when the missing pitches from all three rows are combined, they comprise all the pitches of the chromatic scale from *f* through *b*. It would appear, then, that Schoenberg was aware of the peculiar construction of his rows and that the omission of these pitches was not accidental. At this time, however, without a thorough examination of the sketches, his purposes cannot be clearly understood.

As hypothesized in Maegaard,⁸ there seems to have been a lapse of time at one point during the composition of this piece. The break appears to occur at m. 22. This hypothesis seems to be well-founded if one examines the piece in detail.

EXAMPLE 3

The image shows two systems of musical notation. The first system consists of two staves, with measures 1 through 4. The second system also consists of two staves, with measures 5 through 7. The notation includes various rhythmic values, accidentals, and dynamic markings such as *p* and *mf*. There are also some performance instructions like *tr* (trill) and *acc.* (accents).

Following the presentation of the three rows (mm. 1–6), shown in Example 3, there is a free section (mm. 7–12) based on the opening material. Most prominent is the melodic cell which commences Row B; it can be observed in the middle voice (m. 7) and the upper voice (mm. 9 and 11). There is also some use of transposition and retrograde, though not with any apparent system. See, for example, pitches seven through sixteen of Row A, at P_3 transposition, in mm. 9–10, or the retrograde of Row C in m. 7, at P_{11} transposition.

A middle section follows (mm. 13–21), in which a simple accompaniment (possibly derived from the sixth through ninth pitches or the seventeenth through twenty-first pitches of Row A) first complements pitches one through seven of Row A, and then pitches one through nine of Row C. At the end of m. 21 there is a short pause, after which the opening material is tentatively reintroduced. It is at this point that Schoenberg is thought to have stopped.

The closing bars of this piece (mm. 23–35) are composed quite differently from those which precede them. The three rows again move simultaneously, and pitches not connected with any of the rows are added only when Schoenberg finds it absolutely necessary for his purposes. In mm. 23–25, the three rows are presented in their entirety. As may be observed in Example 4, there

EXAMPLE 4

The image shows a musical score with four staves. The first staff is labeled 'Row A' and contains measures 23 through 25. The second staff is labeled 'Row B' and contains measures 23 through 25. The third staff is labeled 'Row C' and contains measures 23 through 25. The fourth staff is labeled 'Free notes' and contains measures 23 through 25. The notation includes various rhythmic values, accidentals, and dynamic markings such as *p* and *mf*. There are also some performance instructions like *tr* (trill) and *acc.* (accents).

are only three pitches (on line 4) which are not attached to one of the three rows. It is interesting to note that these added pitches (m. 24) continue the series of alternating sevenths and thirds that develop from Row B, which, in turn, links this final section with the middle section through its accompaniment figuration. By his reintroduction of the accompaniment figuration from the middle section in this final section, Schoenberg has provided a link which unifies the entire piece. In m. 25 Schoenberg also reorders pitches 15 and 16 of Row A, to maintain the figuration.

EXAMPLE 5

Measures 26–28 (Ex. 5) present the three rows once more. The added pitches again complement the rows to provide the accompaniment figuration mentioned above. In mm. 26 and 27 these free pitches are combined first with Row C and then with Row A. (The completed figuration is given on line 5 of Ex. 5.) In the second eighth-note beat of m. 28, the added pitches are combined with Row B to complete the figuration; however, those added in the last half of the measure do not serve a similar function. Schoenberg's treatment of the rows themselves in m. 28 also deserves some discussion. Since the three rows are not constructed to be complementary with regard to the ordering of the pitches, there is some overlapping in this measure. In other words, at this point some pitches are functional in two rows at the same time. For example, pitch 10 of Row C (shown in parentheses in Ex. 5) is not directly stated as part of that row but rather as pitch 13 of Row A. Other similarly functioning pitches are also shown in parentheses. In this same measure Schoenberg uses one pitch (the sixteenth) to function also as the first pitch of that row. Thus, this pitch provides the link to the remainder of the piece, since it starts Row A once again, even as that row is being completed.

The final sections (mm. 29–31 and mm. 31–35) use incomplete versions of the rows. In the first of these sections (Ex. 6), Schoenberg uses the first thirteen pitches of Row A (while at the same time presenting a retrograde of the first seven), the first fifteen pitches of Row B, and the first six pitches of Row C. In terms of intervals, the added pitches complement Row A to produce

EXAMPLE 6

the middle section figuration. Two pitches in this section function in dual capacities. Both occur in m. 30. The first pitch is a *d* \sharp shared by Rows A and B. The second is an *e* \flat (the thirty-second note in Row A at the end of the measure), which starts the retrograde (shown in brackets) and at the same time continues the row as its tenth pitch.

EXAMPLE 7

In the section which follows (Ex. 7), Schoenberg uses the first ten pitches of Row A, the first three pitches of Row B, and the first ten pitches of Row C. The free pitches are again complementary (see line five of Ex. 7). At the last eighth-note beat of m. 33, Schoenberg skips from the tenth pitch of Row A to its last three pitches. However, pitch 21 is again used to function as pitch 3 (see mm. 28–29). By this substitution, Schoenberg can return to the beginning of Row A once again (m. 34). Pitches 19–21, as a unit, also provide the basis of the free pitches used in m. 34. The final measure starts the three rows once again.

In the final piece of this opus, Schoenberg uses a twelve-note row as the basis of the entire movement. While this is not the first piece completed in the dodecaphonic technique,⁹ its inclusion in this set of pieces brings Schoenberg's circle of experimentation to a close.

NOTES

¹ In the article "A Study in the Chronology of Op. 23–26 by Arnold Schoenberg" by Jan Maegaard in *Dansk Aarvog for Musik Forskning* (1962), pp. 93–115, there is a preliminary attempt to date chronologically all the movements of these works. While Maegaard's attempts clarify certain relationships among the various pieces, a detailed examination of Opus 23 seems to contradict a number of his conclusions.

² The earliest analysis of this piece is contained in *Musikblätter des Anbruch*, 13 September 1924, in the article "Neue Formprinzipien" by Erwin Stein. On p. 295 he states that the piece is really a three-voice invention. There follows a brief summary of the larger formal divisions of the piece.

³ A detailed exposition of this piece appears in Josef Rufer's *Composition with 12 Notes* (London, 1954), pp. 71–75.

⁴ Maegaard, *op. cit.*, p. 96.

⁵ Musical examples in this article are by the author.

⁶ A discussion of this piece appears in George Perle's *Serial Composition and Atonality* (Berkeley, 1968), pp. 49–51.

⁷ For a discussion of the intervallic relationship between the rows in the opening measures of this piece, see Perle, *op. cit.*, p. 10.

⁸ Maegaard, *op. cit.*, p. 96.

⁹ N. Slonimsky, *Music Since 1900* (New York, 1949), pp. 580–81. Maegaard quotes portions of the letter referred to by Slonimsky.