

The Explicit and Implicit in Berg's op. 5, no. 2

Sometimes, what *is not* said is just as important as what *is* said. For example, one could cite how the use of a specific hexachord in twentieth-century music may imply a complementary hexachord made up of the notes *not* included in the original. But are there ever cases where what *is not* said essentially duplicates what *is* said? Such situations, apparent paradoxes, do in fact arise in post-tonal theory, since the interval-class content of certain hexachords is the same as the interval-class content of their complementary hexachords. The use of complementary hexachords with similar interval structures can thus impart a sense of balance and symmetry to a musical composition, much in the same way that pitch cycles can help bring symmetry to a work through their even divisions of the octave. In his op. 5 no. 2 piece for clarinet and piano, Berg employs pitch cycles as well as a small group of closely-related set-classes to tightly control the pitch content of the music, thereby endowing the piece with strongly symmetrical properties.

If we look at the first four bars or so of the clarinet's melodic line, roughly approximating two musical phrases, we can clearly see two main complementary sets that are fundamental to the structure of the piece. As bracketed in Figure 1, the first clarinet phrase contains the pitches $\langle C, D\flat, E\flat, E, G, A\flat \rangle$, notes which create a hexachord of set-class [013478]. In the next six unique clarinet pitches, shown in the second bracket of Figure 1, Berg uses almost the exact same pitch-classes, except instead of the $D\flat$, he substitutes an $A\sharp$. One may be inclined to label this $A\sharp$ as some sort of dissonant non-member to the prevailing set-class, but after further consideration, it would seem wisest to group these pitches into a new hexachord of set-class [012569]. This second hexachord is actually the abstract complement of the original [013478] hexachord. What may not be obvious in the set-class notation's dull string of integers (but what Berg clearly uses to his advantage) is that these two hexachords are able to differ by only one note. Furthermore, these two complementary sets also contain the same interval-class content and are thus z-related, further increasing the unity and balance of musical materials in the piece.

Evidence of these two germinal complementary hexachords does not solely appear in the clarinet line, however. Examining the pitch content of the right-hand chords in the piano part for bars 2-4, it should easily be seen that the notes are limited to $\langle C, D\flat, E\flat, G, A\flat \rangle$, all pitches directly drawn from the original [013478] set-class without even needing to be transposed. Looking further into the piece, we also find a recurring prominent piano chord of $\langle D\flat, E, F, G\sharp, B \rangle$ in bars 5-7; these notes fall into a subset of [012569], and with the appearance of the $C\sharp$ in bar 7, complete the set-class at T_{11} .

Besides the extremely close similarity between set-classes [013478] and [012569], they both share a special quality that helps give further symmetry to the work. This special quality is the strong cyclical implication of their interval-classes. In Figure 2, I have shown how both set-classes contain a complete 4-cycle (notated with a straight-lined bracket) as well as most of a 3-cycle

(notated with a rounded-line bracket). These cycles begin to become more apparent in the later measures of the work, as Berg moves away from a simple introduction of his musical materials towards their development and recombination. In bars 5-6, for example, the piano part has its contour determined by an obvious 3-cycle in the top line, as shown in Figure 3. Perhaps in an echo, the clarinet mimics this motion with a 3-cycle of its own in bar 7 (see Figure 1). But both 3-cycles ultimately lead to the end of the piece, where a 4-cycle of $\{B\flat, D, F\sharp\}$ emerges in a final moment of cyclic clarity and purity

In perhaps what will lead to a tenuous assertion, I would like to point out that both complementary hexachords only include a single tritone. This tritone is necessary to allow for the existence of the 3-cycles. But the uniqueness of this tritone, an interval traditionally prominent in post-tonal works, must have been something of which Berg was aware as a particular quality of these hexachords. As possibly proof, I would like to show how bar 5, a sort of bridge or transition measure, outlines the tritone $\langle E\flat, A \rangle$, which includes the exact pitch-classes of the tritone in the [012569] set-class as it appears originally in the clarinet line. It seems to me that a sum-6 wedge, centering on $\langle E\flat, A \rangle$, drives the left-hand piano part of measure 5 and is spun out into measure 6. Figure 4 shows this wedge, with some allowances for missing members. Thus Berg may be pulling out a salient defining interval from one of his central hexachords to create pseudo-modulatory devices.

Finally, just as the 4-cycle seems to "win out" against the previously existing 3-cycles by the end of the piece, Berg's two [013478] and [012569] hexachords seem to "average out" over the course of the work. To help make this averaging effect more evident, the pervasive interval-class 4 dyads in the left-hand part of piano are shown in Figure 5. We may notice how the first half of the work sees an overall upward motion of an ic4 dyad by a minor third, whereas the second half of the piece sees an eventual downward motion of the ic4 dyad by a minor third, the second motion being the inverse of the first and thus creating a sort of inverse $A-A^{-1}$ form. Is it by coincidence, then, that the set-class that contains these pitches is [014589]? Perhaps it is a bit of numerology to say so, but this set-class, responsible for the underlying motion of the piece, seems to stand half-way between [013478] and [012569]. As Figure 2 shows, these three set-classes can (and often do in the piece) contain five notes in common, with set-class [014589] containing an extra member that lies halfway between the sixth members of the other two set-classes. Since set-class [014589] is its own complement, it would also seem to be a more rudimentary set-class out of which the two [013478] and [012569] hexachords have branched. I admit, however, that the central role of [014589] is harder to assert than the strong roles played by [013478] and [012569]. In any case, though, one must admit that Berg has built strong patterns of symmetry into this piece, compliments of complementary hexachords as well as interval cycles. Berg achieves the unity in his composition, moreover, by controlling both the explicit (what *is* said) and implicit (what *is not* said) musical materials of this short piece.

Cycles and Set Classes in Berg op. 5/2

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Figure 1: Sets and cycles in Clarinet line

Figure 2: Opening set, abstract complement, left-hand set

$$\begin{aligned} \langle CE^b EGA^b \rangle + \langle C^\sharp \rangle &= [013478] \\ \langle CE^b EGA^b \rangle + \langle A \rangle &= [012569] \\ \langle CE^b EGA^b \rangle + \langle B \rangle &= [014589] \end{aligned}$$

Figure 3: Right-hand 3-cycle, mm. 5-6

Figure 4: Bridge wedge, mm. 5-6

Figure 5: Form and large-scale ic4-dyad progression

Section A: Section A¹:
mm. 1-4 mm. 5-9