THE VIOLIN FANTASY - SCHOENBERG'S SERIAL SCAFFOLDING

ABBCCD ABBCCD ABBC CD ABBC BA
DADADA CDDA BC DA

Does this collection of thirty-eight letters make any sense? There are four distinct elements - A, B, C and D - which rotate and oscillate in an alphabetical sequence. This sequence is broken only at the end when the expected BC or CD is replaced by BA (no musical laws are broken by the presentation of AB in retrograde at this point).

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A	B	C	D	A	bar
P-0 + I-5					1
	P-9 + I-2				21
		P-6 + I-11			25
			P-11+ I-4		26
			P-3 + I-8		27
			P-11+ I-4		29
P-0 + I-5					32
	P-5 + I-10				34
		P-2 + I-7			52
		P-10+ I-3			60
			P-7 + I-0		77
P-4 + I-9					85
	P-1 + I-6				102
	P-9 + I-2				110
		P-6 + I-11			117
			P-3 + I-8		135
P-0 + I-5					143
	P-5 + I-10				161
P-0 + I-5					162

When we expand the alphabetical sequence in terms of the pairs of sets used by Schoenberg in his Fantasy for violin with piano accompaniment op. 47 (1949) we can see that repetition of a letter does not mean repetition of an identical set-form. P-0, P-4, I-0, I-4 and I-8 are all described by the letter A. There are five sets described by the letter B, six by C and another six by D. The only reason that A and B do not have six each is that Schoenberg does not use P-8(A) or I-1(B) in the work.

When analysts discuss Schoenberg's combinatorial technique in his later serial works they inevitably give the greatest emphasis to the fixed association between P-0 and I-5, P-1 and I-6, and so on. It thus becomes self-evident that if the composer can be shown to be using P-0, I-5 will not be very far away (in op. 47 the two are combined from the very beginning). Nor is there any problem about why Schoenberg combined or juxtaposed these two particular set-forms. As far as the Violin Fantasy is concerned the reason can be expressed as follows:

P-0:	1	2	3	4	5	6	7	8	9	10	11	12
I-5:	10	7	8	12	9	11	2	3	5	1	6	4

This shows that the order-numbers of the first hexachord of P-0 recur reordered in the second hexachord of I-5, and vice-versa.

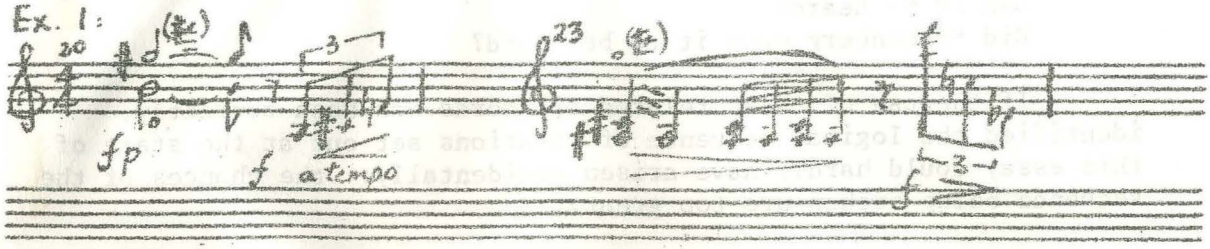
What is less often discussed is why in this case Schoenberg should have followed P-0 + I-5 (A [rea] -0, to adopt David Lewin's convenient shorthand) with A-9 (P-9 + I-2) rather than with some other pair of transpositions. The change actually takes place in the middle of bar 21, shortly before the change of tempo in bar 25 which is an important stage in the thirty-nine bar first section of the Fantasy. The change of set-pair thus anticipates changes in other aspects of the music.

From the analytical summary presented above we read that I-5 (from Area 0) and P-9 (from Area 9) are both sets of type B, which means that the third trichord of each has the same pitches (in different order):

I-5:	10	7	8	12	9	11	2	3	5	1	6	4
P-9:	6	11	1	9	12	7	3	2	5	8	10	4

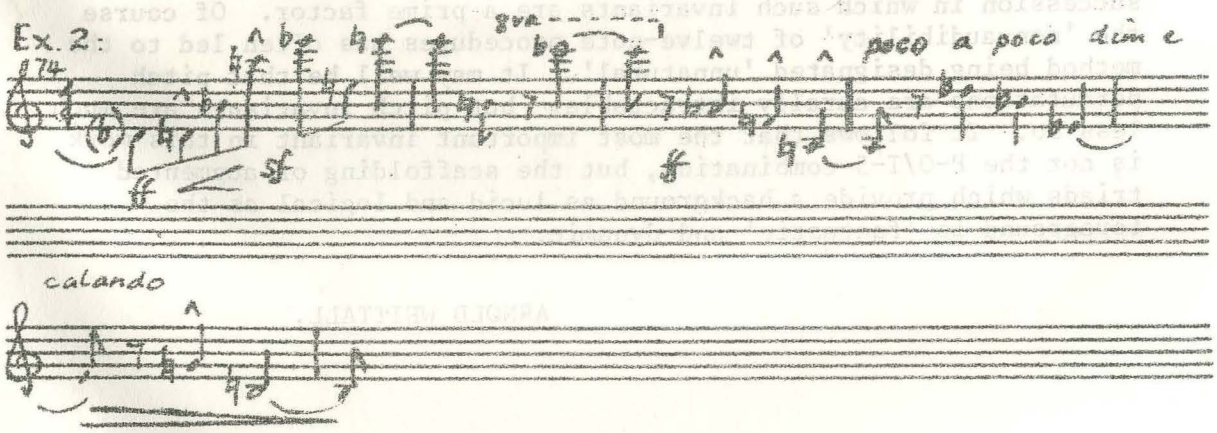
Schoenberg gives the adjacent statements of these two trichords to the violin (bars 20 and 23 respectively) and lays them out as follows, with significant differences and similarities:

Ex. 1:



An example of a similar process from later in the work may be seen in bars 74 - 78 of the violin part where the (type D) sets involved are I-3 and R-7:

Ex. 2:



The pitches of the invariant trichords (in whatever order) are as follows:

Type A: A flat, C, E
Type B: F, A, C sharp
Type C: F sharp, A sharp, D
Type D: G, B, E flat

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Is this structural feature likely to have arisen accidentally?
Can it be heard?
Did Schoenberg want it to be heard?

If the use of these related trichords has been correctly identified the logical sequence of rotations set out at the start of this essay could hardly have arisen accidentally: the chances of the sequence being broken are too great.

Once we are aware of it, and can identify its occurrences, then it can be heard with significant frequency and clarity, though there are naturally degrees of disguise which must be penetrated, especially when a vital aspect of Schoenberg's technique at this time was that the order of pitches within hexachords was variable. He could therefore, if he chose, separate the three pitches in question from each other.

It seems probable, however, that whether Schoenberg wanted the invariant trichords to be heard or not, he used a scheme of set-succession in which such invariants are a prime factor. Of course the 'non-audibility' of twelve-note procedures has often led to the method being designated 'unnatural'. It may well be that pitch permutations are aurally intractable: but pitch invariants are much less so. It follows that the most important invariant in this work is not the P-O/I-5 combination, but the scaffolding of augmented triads which provide a background as lucid and logical as the foreground is 'fantastic' and dynamic.

ARNOLD WHITTALL.