

Panayiotis Demopoulos - Composer / Performer

PROLOGUE

*“Mathematics possesses not only truth, but beauty;
a beauty cold and austere, like that of sculpture.”*
Bertrand Russell (1872-1970)

Anton Friedrich Wilhelm von Webern was born in Vienna on 3 December 1883 and was killed in error on 15 September 1945 near Salzburg. His very intense, musical life is well documented but it is the Symphony op. 21 which has become his best-known major serial work. The piece belongs to his mature period, that is the period from 1927 to his death. The work is a splendid blend of cohesion and a sense of equality between pitches, but also a fine example of economy and balance between sound and silence; rests in Webern’s music are more than mere pauses and reflect on high musical meaning; for the first time they appear to be used technically and essentially as equals to notes. The orchestration of the Symphony is also typically Webernian; a quartet texture written for 10 instruments, with the choice of instruments conveying a refined perception of sound timbres. This, however becomes more distinguishable after the music has started and the articulation of each and every note shapes the character of the piece. As the *New York Times* wrote the day after the Symphony’s world first performance: “The Symphony is one of these whispering, clucking, picking little pieces which Webern composes when he whittles away at small and futile ideas, until he has achieved the perfect fruition of futility and written precisely nothing. ‘The Ultimate Significance of Nothing’, this would be the proper title of this piece.”

ANALYSIS

“... the whole movement itself is a double canon by retrograde motion....what you see here.. is always the same..”

The formal ideal of variations on a theme is one that Webern pursued faithfully. But the primeval plant of Goethe where: “All shapes are similar and none is the same”, this holy riddle, is far from a game of basic arithmetic analogies. Symmetry is the means through which coherence is achieved.

The theme contains both a horizontal and a vertical mirror. I-8 is played throughout in the clarinet while I-2, its retrograde row, accompanies it symmetrically played by the harps and horns. The tritone importance for the whole movement is indicated in bar 6, when the two retrograde rows come to “agree” to the augmented fourth. Besides that, the tritone is the interval between the starting notes of any two retrograde rows.

Variation I follows the same principle. I-9 and I-3 form one such couple of reflections and P-1 and P-7 the other. The variation stays in the strings all the way through and each row is performed in

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one instrument. Then at the middle point of bar 17 the 10 bar long variation meets its reflection point. The instrumentation is also mirrored and exact rhythmical symmetry is succeeded.

From Variation II onwards more complex proceedings are adopted. The one-row -per - instrument principle of Variation I is never to appear again. The first overlapping of notes from different rows occurs here. Again the same exact form is followed in what is a true variation of the main theme. The one serious addition is the spiral technique in rows P-8 and I-7. This runs through the whole variation making the vertical side of things fail to achieve the purpose it served in Variation I. In this variation the exact middle point is the bar-line before bar 29. However the middle section for the spiral is half-way through bar 28. This seems as an asymmetry, still, a more careful examination of the variation suggests that the note rows have come to life in different beats of bar 23, thus they plunge into the mirror in their respective counterpart beats in 28. The orchestrational analogies are easy to verify both visually and aurally.

In Variation III, Webern employs only two retrograde rows at one time, in perfect symmetry and with a lot of traditional phrasing; two and three note groups. Indeed, this approach persists with the addition of two note borrowings from each row to the retrograde of its inversion. A basic characteristic of these borrowings is that they occur in instrumental symmetry. The shared e natural in the first harp in bar 39 is the central point of the variation, the rest of it being an exact mirror of the first half including the *fermate* and the *ritenuti*, as well as the dynamics and articulation.

THEME I-2 I-8	CODA I-2 I-8
VARIATION I I-3 P-1 I-9 P-7 I-3 I-9 P-1 P-7	VARIATION VII I-3 P-1 P-7 I-9 P-7 I-3 I-9 P-1

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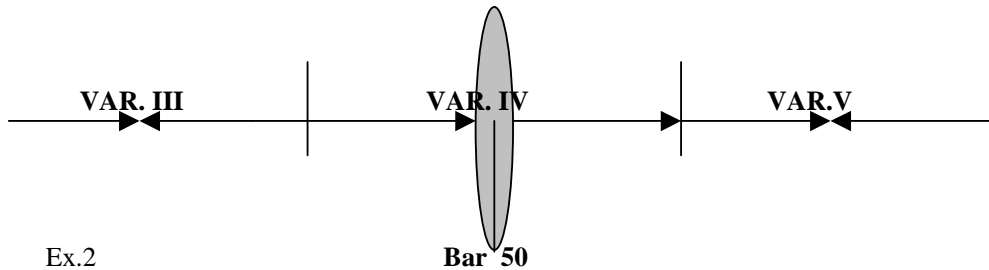
VARIATION II P-8 I-7 I-10 P-6 P-0 I-4	VARIATION VI I-10 P-6 I-1 P-2 I-4 P-0
VARIATION III P-11 P-5 I-2 I-8 P-11 P-5 I-2 I-8 P-11 P-5	VARIATION V P-11 I-8 P-5 I-2 P-11 I-8 P-5 I-2 P-11 P-5

Ex.1

Then the central variation arrives. Together with the Coda, the other mirror point, these are the only *solo* sections, the only confirmed points of existence – existence in Webern can only be time-related. Here, four rows without any apparent relationship initiate the music. However, an interrelationship does exist. The last two notes of every row are the first two of another, only not in retrograde (I-4, P-1, et.c) Within bar 50, the central point of the movement, four rows end and their *quasi* retrogrades begin. Similarly, these seemingly unrelated four rows of the second half share an identical bond. Thus, it is mathematically inevitable that an exact mirror is not feasible at this point, at least not pitch-wise. One cannot but wonder why. This incident cannot be the result of compositional incompetence, nor can it be an accident, for it is too well constructed to be one. It is perhaps the only way that Webern could devise to avoid the second half of the work being an exact sound mirror of the first. In that case he might very well have abandoned all effort and copied what he could see in front of the real mirror of this first half. But retrograde forms are not a game. In his words: “retrograde, canon etc. mustn’t be thought of as ‘stunts’ – that would be absurd!” The same thing happens again at the very end. One would expect the last two notes to be f and b; they are b and f. Many logical explanations come to mind. Perhaps Webern did not like the sound of the exact retrograde. Maybe it led him to a mechanical dead-end. But the most probable reason is that philosophically, a passing to a parallel musical world through a mirror cannot have an end (ex.2). If Webern were to use retrograde rows at these two points this would mean that there would be a beginning and an end to the

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composition, something highly fatalistic and unnatural, yet another egotistical statement suggesting that since human beings expire so must everything else.



With Variation V, the composer uses chordal textures for the first time in a brilliant display of how to use clusters in dodecaphony. Even these clusters, however, operate in a symmetrical mode, in that they echo the four first and four last notes of P-0. The harp resonates a silence twice around an isolated A natural in the middle register. The sound is that of *ostinato* strings accompanying the Harp. The association with Variation III is well hidden in terms other than numerical.

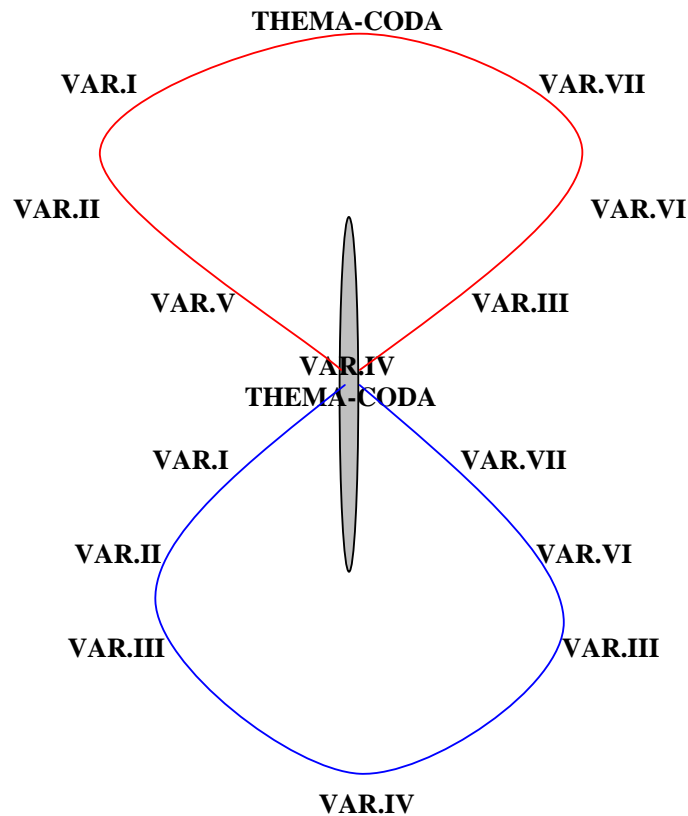
In VI, the counterpart of II, the exact same technique is used. The repetition of some notes is only part of the character of the variation. The barren, neurotic even rhythms contrast the regularity that the spiral rows gave Variation II. Hence the repeated figures can be thought of as chords. Theoretically and if we were to abandon the rhythmical symmetry for the sake of pitch analogies, P-0 and I-4 could begin in bar 71 thus reducing the repetition problem to two incidents. Still, the obvious dichotomy of Variation VI is the middle of bar 72.

The seventh variation would be expected to connect to the first by now. The contradictions are apparent, but not as overwhelming as it may seem at first. The E natural of bar 83 divides the variation in two equal parts. The texture looks very altered from its idol. Nevertheless, one needs to keep reminding oneself that textural mirrors also exist and that this may very well be one of them, so that the sober motion that the lines had in Variation I is answered by its retrograde, only in an exaggerated way; the kind of distortion a magic mirror would produce. But the Coda is not distorted. The circle has been fulfilled and a new one may emerge – it certainly subsists – returning to the theme atmosphere is achieved through the sparseness and spasmodic temper of the last music. All the lyricism that carries on, is strained on the tritone f sharp-c in the violins. Emotionalism is avoided at the very end, the last tritone is abrupt, mechanical, unrefined as is any unspoken, intrinsic essence *in utero*.

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EPILOGUE

The time when Webern composed was a philosophically active time. It was Gottlob Frege (1848-1925) who turned philosophy to what it became in the early 20th century. Philosophy, or rather the theory of knowledge, was a synonym of epistemology to that point. People's minds were the epicentre of knowledge. From Frege on logic is the centre of philosophy, and mathematics one of logic's instruments. In Frege's words: "There is nothing more objective than the laws of arithmetic." The mirror relations are by default infinite. It could very well be that the coda could be followed by the restatement of the thema thus creating an endless circle, whose diameter would only be defined by the composer's will, that is by how many variations he would like to employ:



But regardless of how fascinating this process may be for the composer, the analyst or a studious audience, the mathematical complexity of the work is limited if not very little. Webern's approach is to be admired first and foremost for its direction and for the original music it results in. Webern struggles for unity, for coherence or *Zusammenhang* as he called it, he strives to prove what is to him

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instinctive; that paralogism is a logic yet to be discovered. In the musical world of post-romanticism this structural perfection is para-logical. In many respects, Webern is the *alter ego* of Debussy, the Second Viennese school a parallel of the impressionists. Both were occultists and both wanted to express the admiration they had for natural beauty in sound. Debussy followed his instincts. Webern explored unknown musical instincts that he instinctively knew he had. These opposite directions are the only significant theoretical *differentiae* in the two composers' work. On the practical side of things, of course, the result is as different as the depiction of the motion of waves is from the molecular morphology inside every drop of water in these waves. In short, Webern is the esoteric, Debussy the poetic. Both create intense musical worlds one in endless canvases the other under the microscope. And the origin for this introversion is a desire to explore. Webern's philosophy is epitomised in Hildegard Jone's words, which Webern himself quoted in a letter to her, just after he had finished the Second Symphony: "We must come to believe that the only road onwards is inwards."