

Sir Harrison Birtwistle's *Précis*: An Analysis

Birtwistle's *Précis* was composed in 1960, and is dedicated to John Ogdon. *Précis* was written after the failure of *3 Sonatas for 9 Instruments* as a prototype for *Tragoedia*. *3 Sonatas for 9 Instruments*, (which was withdrawn by the composer after hearing the first rehearsal), according to Michael Hall on Birtwistle, (*Harrison Birtwistle*, M. Hall, 1984) was an exercise in symmetries, but these turned out to be "too obvious, [without] sufficient irregularities in them" (p. 21). Symmetry, however, was to become an important ingredient in Birtwistle's style.

In *Précis*, its very title indicating a desire for accuracy and discipline, Birtwistle tried to write a piece "which turned back on itself yet had a sense of forward movement" (*ibid.*, p.22). It is modelled on *Quantitäten*, a piece by the Swedish composer Bo Nilsson. Like *Tragoedia*, the overall structure appears symmetrical, in the form:

A-B-C-B-A

but it will be shown that the 'return journey' is substantially altered, generating energy and momentum towards the climax and the closure. The apparent formal symmetry is something which exists in the larger shaping of the music, and not so much in the manipulation of pitches. It appears, on first glance at the beginning and ending of the piece, that the music does literally enter a retrograde on reaching the middle, but it will be shown that the same pitches are arrived at through different means, and that the impression of vertical (structural) symmetry is confined only to the overall shaping.

The printed score (Universal Edition, 1965) is unfortunately highly inaccurate, with mistakes ranging from the misspelling of the dedicatee ("Ogden") to clefs changing in wrong places. It is always a difficult matter to decide which notes are incorrect and should be changed, and this analysis only makes corrections where it is unavoidable. Enquiries to Universal Edition revealed that there is no printed corrected score, and there is no copy of the original in the collection of John Ogdon kept at the Royal Northern College of Music. According to M. Hall (p. 155) Sir Peter Maxwell Davies owns a corrected copy.

Analysis

Note: In this analysis, the symbol Σ refers to a sum of symmetries; for example the dyad D/F# (2 6) would be referred to as $\Sigma 8$ symmetry ($2 + 6 = 8$). The number is expressed modulo 12 (for example, $7 + 6 = 1$ and not 13). For a detailed discussion of this technique, see, for example, *The Listening Composer*, G. Perle, 1990, Lecture V (p.123 in the 1996 edition).

Movement 1

The work opens with a short statement, shown in figure 1 below.

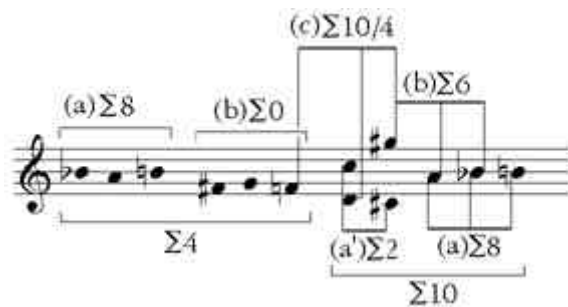


FIGURE 1

This opening statement can be split up and interpreted in two ways.

If this statement is interpreted as a group of five sets of three notes, then they may be labelled (in order, omitting a'), a-b-c-b-a. This, as has been stated above, is proposed as the overall form of the piece. Birtwistle often uses symmetries interchangeably; that is, $\Sigma 0$ treated as equivalent to $\Sigma 6$, $\Sigma 2$ equivalent to $\Sigma 8$, and so on. This is due to the tritone relationships between these pairs¹. With symmetries of $\Sigma 3$, $\Sigma 5$, $\Sigma 7$..., where the convergence is on two pitches a semitone apart rather than a single pitch², Birtwistle also finds equivalence: $\Sigma 5$, for example, is freely interchanged with $\Sigma 11$. This is because the convergent pitches in a given set of symmetries can be seen as two tritone dyads a semitone apart or two perfect fourth dyads a semitone apart; these can be swapped over in the equivalent set of symmetries³. This is why, in figure 1, the two sets $\Sigma 0$ and $\Sigma 6$ are both labelled b. The notes labelled a' are similarly related to the $\Sigma 8$ symmetries in a.

If the opening statement is interpreted in the second way shown in figure 1, with a $\Sigma 4$ set followed by a $\Sigma 10$ set, it becomes much more unified, as $\Sigma 4$ and $\Sigma 10$ have equivalence. These first few notes set the pace and style for the rest of the piece, and also neatly sum up the overall form of *Précis*.

¹ For example, $\Sigma 0$ converges on the pitch C (0) and the pitch F# (6; $6 + 6 = 0$ modulo 12). All other dyads within $\Sigma 0$ are pairs of different pitches (e.g., 5 7). If used as a dyad, the tritone C/F# (0 6) is $\Sigma 6$ symmetry. Likewise the convergent pitches of $\Sigma 6$ (E/A or 3 9) when taken together give $\Sigma 0$. This trait is used by composers as an axis for modulation in a similar fashion to the use of the relative minor (for example) in order to engineer a modulation in tonal music.

² For example, $\Sigma 3$ converges on C# (1) and D (2), giving $1 + 2 = \Sigma 3$. The even-numbered set of symmetries, i.e. $\Sigma 0$, $\Sigma 2$, $\Sigma 4$... converge on a single pitch; for example, $\Sigma 2$ converges on D.

³ In $\Sigma 5$, for example, there are two pairs of semitone dyads: D/D# (2 3) and G#/A (8 9). Combining the two dyads and re-separating gives two pairs of perfect fourth dyads: A/D (9 2) and D#/G# (3 8). These perfect fourths are $\Sigma 11$ symmetry. This mechanism allows the composer to modulate from $\Sigma 5$ to $\Sigma 11$.

The cellular construction of the music is further illustrated in figure 2 below.

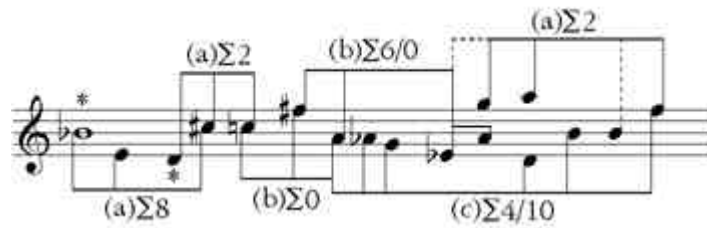


FIGURE 2

This extract is the ending of the first movement. It can be interpreted as a recapitulation of the opening, with once again the a-b-c-b-a structure broadly visible. This time, the symmetries of c are expanded and stretch from the centre of the structure to the ending. This shows how Birtwistle adapts the simple symmetry of A-B-C-B-A forms to make the return journey from the centre gather momentum and remain unpredictable.

The notes marked with asterisks in figure 2 are notes which, in the score, are given as G \flat and D, (in the treble clef), but are incorrect. The left hand begins in the bass clef, and changes to the treble clef (at the end of the first bar), but has an indication to change again to the treble clef in the eighth bar, without a change to bass clef in between. This can be explained two ways: either the second clef change should not be there, or there is a change to the bass clef missing. Analysis of the whole piece reveals that the pitches at the end of the fifth movement corresponded (in retrograde) with the pitches at the beginning of the first movement. Examining these pitches, it is clear that the pitches G \flat (in bar 7) and D (in bar 8) corresponded with the B \flat and D respectively in the fifth movement. Consequently, the G \flat has been altered in this analysis to B \flat by inserting a change to bass clef in bar 7, and the D preserved by bringing the change back to treble clef back by a semiquaver. This makes sense of both the clef changes and the pitches. Whilst it is of course dangerous to try to change notes to fit in with a pattern, in this case it would appear to be justified.

Movement 1 can be summarised as follows:

$$(a)(b)(a'/c)(b)(a) (c) (a..)(b...)(c/a)$$

or:

$$[\Sigma 8 - \Sigma 0 - \Sigma 10 / \Sigma 2 - \Sigma 6 - \Sigma 8] - (\Sigma 4) - [\Sigma 8 - \Sigma 6 - (\Sigma 4 / \Sigma 2)].$$

A much simpler interpretation of this structure would result in an A-B-A' form, an abbreviation of the main A-B-C-B-A form.

The gesture after the end of the first movement, which reappears almost identically before the fifth movement, appears to have two functions; to further establish the overall structure of the piece, and to define important symmetry centres.

Movement 2

The second movement, which functions in the overall structure as an episode between the beginning and the centre, follows the practice from the first movement of establishing symmetrical associations, then playing upon them by substituting an equivalent set of symmetries. This leads to a sense of ambiguity, rather similar in effect to the sense of 'keylessness' often found in the development sections of tonal sonatas. This is illustrated in figure 3 below.



FIGURE 3

The opening of the second movement is analytically straightforward, focusing on an outburst of $\Sigma 4$ symmetries. Figure 3 begins in the second half of the second bar, the anacrusis to the long held E. This is where the ambiguity of pitch focus arises: if the E is the centre of symmetry, then the surrounding notes should follow $\Sigma 8$ symmetry, but aside from the F/E \flat , they do not. Suggesting E \flat as the pitch focus also proves inconclusive. In fact, it is a combination of the two: a dual focus of E and E \flat , in $\Sigma 7$ symmetry, treated interchangeably with $\Sigma 1$.

The example above ends just before the new tempo marking in bar 6/7, where there is another apparent printing error. The chord tied into bar 7 in the right hand part is written as G-B-C \flat , which would appear nonsensical given that the B and C \flat are the same note on the piano keyboard. However, if this is read in bass clef (by bringing forward the change to bass clef which follows the chord in this edition) the notes make more sense as B-D-E \flat . These pitches are also consistent with the $\Sigma 5/\Sigma 11$ symmetry which surrounds them.

After this $\Sigma 5/\Sigma 11$ symmetry, the movement ends in $\Sigma 0$ symmetry. The movement can be summarised as follows:

$$\Sigma 4 - \Sigma 1/\Sigma 7 - \Sigma 5/\Sigma 11 - \Sigma 0.$$

The manner in which Birtwistle chooses to play on a double focus in the two inner sections, and in which he uses only a single axis in the outer sections, implies a form of A-B-B'-A', which is a diminution of the main A-B-C-B-A structural motif.

Movement 3

This central movement again plays on symmetry substitution, this time incorporating an interesting structural twist. The movement opens once again with $\Sigma 4$ symmetry, although $\Sigma 2$ symmetry is at first implied. This opening is shown in figure 4:



FIGURE 4

G# emerges as the focal pitch after the initial flurry of pitches, which, bounded by the B/F tritone, implies $\Sigma 10$: the equivalent of $\Sigma 4$. There then follows a short 4-note motif (starting on the A at the end of figure 4, which is in bar 4), followed by a longer melody starting on the E at the end of bar 6. These notes are the longer held notes of the grace note chords, and are shown below in figure 5:



FIGURE 5

Whilst it seems unlikely that Birtwistle is quoting Alban Berg's *Lulu* in these first four notes, their properties (which Berg also exploited) of inversion are important. This is the centre of the whole piece, and Birtwistle, in his fondness for Greek form, has incorporated these notes as the *peripeteia* (literally, the turning point) of the work. Indeed, in the later *Tragoedia*, for which *Précis* served as prototype, Birtwistle takes Greek form one step further by naming the main movements *Parados – Episodion – Stasimon – Episodion – Exodos*. There, too, is the *peripeteia* at the centre of the work.

One tritone of the *peripeteia*, E/B \flat (4 10) is used to move to the $\Sigma 9$ phrase which follows⁴. The other tritone in $\Sigma 9$ symmetry, which complements the tritone E/B \flat , is the interval B/F (5 11). This, neatly, and in the spirit of *Précis*, is the tritone of the $\Sigma 4/\Sigma 10$ symmetry of the beginning of the movement. In addition, the second tritone of the *peripeteia*, E \flat /A (3 9), is matched in $\Sigma 9$ symmetry with the pitches C/F# (0 6), that is, recombining would give (0 9) and (3 6). These pitches (C/F#), when compared back to the initial $\Sigma 10$ symmetry, are matched with the notes B \flat /E⁵ (respectively), completing the circle.

⁴ q.v.: $\Sigma 9$ converges on (4 5) and (10 11). Recombining gives (4 10) and (5 11).

⁵ Recombining (0 6) and (4 10) to give (0 10) and (4 6), or $\Sigma 10$.

The whole movement, therefore, can effectively be summarised thus:

$$\Sigma 10 - \Sigma 7 - \Sigma 9$$

which, when the circular nature of the tritone links is revealed, again implies an A-B-A' structure.

Further analysis reveals something of the construction of the chords in this movement. By reducing the pitches of each chord to pitch-class notation, as in figure 6a below (from the beginning of the movement):



FIGURE 6A

and in figure 6b below (bars 8 – 9):



FIGURE 6B

it is clear that the chords are paired transpositions of each other. The remaining chords in the movement do not follow each other in pairs in this way, (at least if all the notes are correctly printed), although they do expand or contract by semitones. For example, the last two sounded chords of the movement reduce to (0 3 5) and then (0 3 4). The moving of one note of a chord by a semitone is typical of Birtwistle's later technique.

Movement 4

According to the initial hypothesis of an A-B-C-B-A form for the whole piece, this movement should in some way be the same as the second movement. However, it is not. In this movement Birtwistle's desire to move things on after the mid-point becomes very apparent, as does a surprising aspect of the piece as a whole.

The movement opens amid a cloud of ambiguity: symmetries $\Sigma 2$, $\Sigma 10$ and even $\Sigma 4$ can be seen (albeit fleetingly) in the opening chords. In fact the first three bars follow $\Sigma 9$ symmetry, focusing on the pitches E (4) and F (5). There follows after the long held F a short sequence, the F (held over from the long note) implying a move to $\Sigma 10$ symmetry, but in fact the first phrase of the sequence has $\Sigma 3$ symmetry (bars 4 to 6). The second phrase of the sequence is almost an inversion of the first, but still retains $\Sigma 3$ symmetry on D/C# despite the implied $\Sigma 5$ and $\Sigma 2$ symmetries. The quick flurry of notes after the pause in bar 8 are still in $\Sigma 3$ symmetry. However, there is a modulation (q.v.) taking place here as one of the outer tritone pairs of $\Sigma 3$ symmetry (C/G#) leads to $\Sigma 2$ symmetry (end of bar 10). The following procedure is illustrated in figure 7:



FIGURE 7

This swift sequence of symmetry changes resembles a modulation through a cycle of intervals: in this case, the common cycle of fifths, slightly altered. If the central pitches of each set of symmetries are considered, the following “cycle of fifths” can be extracted, starting from the beginning of figure 7:

$$C\# - [F\# (G) - C\# (C)] - [F\# (F) - B(C)] - [E(E\flat) - A(B\flat)] - E$$

The final E is the long note E, with the pause, in bar 12. This is the first note in figure 8, below:

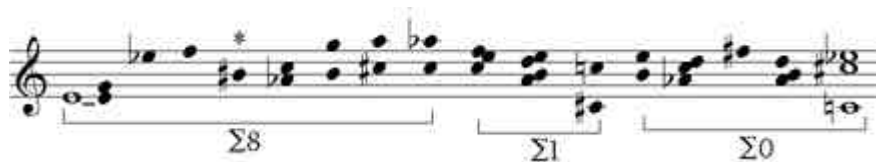


FIGURE 8

The asterisked note B# appears awkward in the score as it is followed immediately afterwards by the note C, suggesting another printing error. However, there does not seem to be a good case for altering the note as no alternatives are obviously available, and the pitch B# (or C) happens to fit in with the other notes in the $\Sigma 8$ symmetry surrounding it.

Following the cycle of fifths extract which appeared before it, this final phrase seems cadential. Indeed, it does follow (arguably) a cadential formula, thus:

$$\begin{array}{cccc} \Sigma 8 (E) & - & \Sigma 1 (G-F\#) & - & \Sigma 0 (C) \\ I_b & - & V & - & I \end{array}$$

for a cadence on C. This raises the possibility that the whole of *Précis* has a neo-tonal subplot. This is explored further after the analysis of movement 5.

The fourth movement can be summarised as follows:

$$\Sigma 9 - \Sigma 3 (\text{sequence}) - (\text{cycle of fifths}) [\Sigma 2 - \Sigma 1 - \Sigma 11 - \Sigma 7] - (\text{cadence}) \Sigma 8 - \Sigma 1 - \Sigma 0.$$

Although this appears to break the A-B-A' mould, it actually fits in rather well with it. If the associations of “cycle of fifths” and “cadence” are correct, then this movement's structure would not be out of place in, for example, a Corelli trio sonata. The form there would be key-oriented, rather than pitch-focus oriented, but would be similar in nature to the summary above and would be considered to be in the form A-B-A.

This fifth movement, of all the movements, bears the least relation to the motivic A-B-C-B-A structure: the deconstruction of this form which began in the fourth movement is concluded here. In the summary of the movement:

$$\Sigma 10 - \Sigma 8 - [\Sigma 0 / \Sigma 6 - \Sigma 8 - \Sigma 4] - (\Sigma 8 + \Sigma 6) - \Sigma 8$$

the aforementioned motivic structure is barely recognisable; the structure is so twisted that the some components happen simultaneously, some are augmented, and some are diminished to the point of invisibility. However, taken as a whole, the pitches retained from the first movement together with the changes Birtwistle has made to a straight retrograde, the structure can be read as:

(pitches from **1**) – (modulation) – (new pitches) – (modulation) – (pitches from **1**)

which is a clear A-B-C-B-A structure.

Conclusion

Although it at first seems unlikely, the apparent cycle of fifths and cadence in the fourth movement and perfect cadence in the fifth movement prompt an investigation of the possibility of a quasi-tonal scheme to *Précis*. Given the origin of the pitches in this composition, this would not be a tonal plan in the traditional sense (i.e. based on key relationships), but could be a plan based on the tension of the interval of the fifth, and the exploitation of the listener's expectations of this interval.

Figure 11 summarises the 'tonal' elements of *Précis*:



FIGURE 11

Figure 11 shows that there may well be a tonal plan behind the piece, but that this plan exists only at a lower level. The music itself certainly does not appear superficially tonal; there are no keys or key relationships. However, the almost Baroque treatment of the fifth as a guiding force does lend the piece a satisfying sense of completion when heard.

Upon analysis, it is clear that *Précis* succeeds in Birtwistle's aim of a piece high in discipline and punctiliousness: this is apparent despite the printing errors. In fact, it is the very rigour of the piece which enables one to identify and correct some of the errors in the printed edition. *Précis* is a work of great detail, with every aspect and angle of form and structure considered and brought to bear, on a level akin to that of the Greek drama it is modelled upon.