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The Interaction of Conflicting Forces in Keith Humble's Career, Musical Identity and Compositional Process, as Reflected in *A Little Sonata in Two Parts*

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Keith Humble: Compositional Career Overview

Keith Humble's career, musical identity and output as a composer can be considered as a kind of 'performance', in which he juggled with very diverse forces and materials: materials which, to any casual observer, must surely seem to have been completely at odds with one another. In the course of this 'performance' he tried sometimes to make comprehensive sense of them all, but often simply allowed contradictory elements to exist side by side. Broadly speaking, we can say that there were five stages to this 'performance' and its output, discounting his early period as a student in Melbourne during the 1940s and the various bits of 'juvenilia' which have survived from that time:

(1) his period as a student of Réné Leibowitz in Paris, in the 1950s

(2) the period of his early visits to America, from the mid-1950s to the early 1960s

(3) his return to Melbourne as a staff member of Melbourne University, from the mid- 1960s to the early 1970s

(4) his period following appointment as Professor of Music at LaTrobe University in Melbourne, from the mid-1970s to the early 1980s

(5) his later years at LaTrobe and following retirement from University, from the mid-1980s to his death in 1995.

Discipline and Chaos

The basic parameters of this conflict were set up during the very first of these periods, when he was studying with Réné Leibowitz, a composer of strict 'post-Schoenbergian' discipline, while at the same time participating in the activities of some of the more free-wheeling, experimental artists – in visual, literary and theatrical fields as well as in music – on the Parisian scene, artists who were often of a distinctly dissenting or 'bohemian' character. Humble's later interview with the National Library's Hazel de Berg (see Humble 1969), although it passes over any of the concrete details of Humble's compositional technique (probably because de Berg was not a musician, and was unable to formulate questions which might have elicited such details), nevertheless gives quite a good impression of this general cultural environment which formed

his mature musical personality.

This period saw, for example, both compositions of a careful, tightly-disciplined, small-scale 'post-Webernian' nature, such as the *Three War Poems* and the *First Piano Sonata*, alongside those quintessentially French, free-for-all, chaos-embracing events known as 'Nuniques' which in some respects resembled – or perhaps even anticipated – the work of John Cage and other creators of 'happenings' and similar later events of the 1960s. The only (to date) substantial critical account and review of these 'Nuniques' and related improvisatory events is given by John Whiteoak in the final pages of his book about the history of improvisatory music in Australia (Whiteoak 1998: 296 – 312). However, Whiteoak considers the 'Nuniques' – and Humble's approach to improvisation more generally – without discussing his work as a composer *per se*. Although this is perhaps to be expected, given that improvisation is the subject of Whiteoak's book, what emerges from this portrait seems a somewhat one-sided picture of Humble's work as a whole, which encompassed significant achievements in *both* musical worlds.

As a result, Whiteoak's account of the 'Nuniques' carries a particular ideological subtext, viz that the former approach to musical activity is 'conservative' and the latter more 'radical'. To be sure, following the period in Paris when the concept of the 'Nuniques' was first realised, Humble spent longish periods working on campuses in the United States amongst colleagues (such as Salvatore Martirano and Raymond Ericson, for example) who espoused an aesthetic and an approach to composition which had more in common with latter approach than the former, and who were inclined to read the history of music after 1960 as a period of transition from the former type of compositional approach to the latter. This was, of course, a widespread attitude during the 1960s and the terms of Whiteoak's discussion ('process' versus 'product', 'reactionary' versus 'conservative', 'exploratory' versus 'repeating' approaches, 'democratic social dynamics' and so on) tend to suggest that he too reads the musical history of the period pretty much in that way.

Nevertheless, Humble retained a loyalty to both worlds throughout his career, and was quick to jump to the defence of – and to learn from – composers, not just his teacher Leibowitz, but American composers too (Babbitt, for example) whose musical character, formed in the 'post-Webern' era, seemed to some younger Americans to have been superseded by the more free-wheeling character of the 'new music' of the sixties. The evidence seems to indicate that he regarded the two different musical worlds as equally-important influences on his personal and musical identity, and the last 30 years of his life were taken up with attempts to find ways of drawing on both which would be fruitful rather than counter-productive. The following formulation, from John McCaughey's obituary article about Humble in the Melbourne *Age,* is speaking of the philosophy behind Humble's musical education projects, but it hits the nail on the head with regard to Humble's creative character more generally: 'He believed that musical learning thrived in the contradictions between new ideas' (McCaughey 1995: 16). This concurs with my own reading of the role of the conflicting elements in Humble's musical identity. In what follows, I will designate these contrasting elements in slightly different terms – as the

'constructivist' and the 'gestural' sides of his compositional character – but, nevertheless, essentially I refer to the aspects of his musical identity which grew out of his early studies with Leibowitz, on the one hand, and out of his participation in the 'Nuniques' and similar activities on the other. It seems to me that these conflicting sides of his character bore their richest fruit many years afterwards: through the co-existence and reconciliation of pre-meditated calculation and *ad hoc* gestural improvisation in the late works of the 1980s and 1990s.

The remainder of this paper is therefore concerned with a late work in which these 'constructivist' and 'gestural' elements co-exist and are reconciled: *A Little Sonata in Two Parts (Une petite sonate en deux parties),* for solo cello. It dates from the fifth and last of the periods of Humble's career outlined above. Indeed, it is one of his very last works, having been written in 1993 after his retirement from University life. What I have to say about it concerns a passage in the first movement, which is reproduced in its entirely as figure 1 (pages 136 – 138).

Pitch materials: from homogeneous to heterogenous

Humble's early works in the tightly-disciplined small-scale 'post-Webernian' vein were straightforwardly twelve-tone in some sense of that description, although right from the beginning (in the *Three War Poems,* for example) his tendency is to treat his series not so much as an ordered sequence of pitch-classes, but rather as two (multiply-ordered) collections of complementary hexachords, rather along the lines of the late Schoenberg (as in the *Ode to Napoleon,* for example). Hughes describes the basic material of the *Piano Bagatelles* as 'serial', but his additional qualification, that the series is always used 'harmonically' seems to imply simply that it is in fact used as a 'collection', *not* as a series.

However, there is a difference between the treatment of the collections in the *Piano Bagatelles* and other late works and their treatment in the early works such as the *Three War Poems*. In the *Three War Poems,* the collections are all hexachords, and they remain fixed to within transposition or inversion throughout, deriving as they do from the same hexachordal collection and its complement. It is therefore hard not to see the structure of the *Three War Poems* as deriving from a series, even if this series remains implicit rather than explicit. From this point of view, the *Three War Poems* actually seem to accord with Hughes characterisation of a 'series used harmonically' better than do the *Piano Bagatelles.*

By contradistinction, the approach to totally chromatic musical language which Humble developed during the last couple of decades of his life was based from the ground up on a more heterogeneous repertoire of pitch collections, constantly changing in cardinality and (therefore) intervallic content throughout a work. The *Three War Poems* are based throughout on the hexachord whose 'prime' is 0, 1, 2, 6, 7, 8 together with its transpositions/inversions, but in *A Little Sonata in Two Parts* a much more diverse repertoire of collection-types is deployed: collections containing as many as ten pitch-classes or as few as two.

The composer himself gave various informal accounts of his technique of handling these heterogenous materials. Some of these accounts have been reported and explicated by

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musicians who were students or colleagues during the 1980s and 1990s, at least in respect of particular works. Some aspects of this technique have been reported in recent theses, for example those by Stefanie Ryan (Ryan 1998) and Anthony Hughes (Hughes 2001). In broad terms, the pitchclass material of *A Little Sonata in Two Parts* is organised in 44 aggregates, and Stephanie Ryan has enumerated these (Ryan 1998: 105), although my own enumeration differs from hers in numerous details. Allan Walker (see this volume, pp 149 – 160) has captured the character of these aggregates as well as attesting their existence when he describes them as 'partially-ordered'. Anthony Hughes' thesis, begun under Walker's supervision, sets out the 128 'partially-ordered aggregates' as they appear in the *Piano Bagatelles*.

Heterogenous Complementary Collection-Pairs in Bagatelle No 8
The way I would characterise the particular form which these partially-ordered aggregates take is as a series of 'complementary collection-pairs', and perhaps the best way of understanding the composer's treatment of them is to summarise the way in which they are deployed in a particular piece.

For simplicity and brevity, let me summarise the deployment of complementary collection-pairs in the eighth of Humble's *Eight Bagatelles for Piano*, written in 1992, as discussed by Hughes (Hughes 2001). In *Bagatelle 8,* Humble begins with an arbitrary 4-note collection (which we will designate, using integer nomenclature, as 1, 0, 7 and 4) and its complement (11, 10, 9, 8, 6, 5, 3 and 2). In Allen Forte's terminology (Forte 1973) these are the complementary sets 4 – 18 and 8 – 18.

However, despite the general point made above about Humble's tendency to treat his pitch-class materials as *collections* rather than as *series,* the *ordering* as well as the *content* of these sets does have an element of significance at an abstract level, for reasons which will become apparent. I will call this ordering *scalar ordering*. Following Hughes (2001), and thinking of the twelve pitch-classes as a circular sequence (see Figure 1), 1– 0 – 7 – 4 represents an anti-clockwise ('descending') ordering of the 4-18 tetrachord, taking its first item ('1') as the *start-pitch*. The ordering of 8 – 18 is then also anticlockwise: beginning on '11' (the first available pitch-class after '1', counting anti-clockwise).

Start pitch = 1

```
              0*                                          0
      11            1*                          11*           1
   10                  2                     10*                  2*
 9                        3               9*                          3*
   8                  4*                     8*                       4
      7*          5                             7           5*
              6                                          6*
Count anticlockwise from '1'              Count anti-clockwise from '11'
```
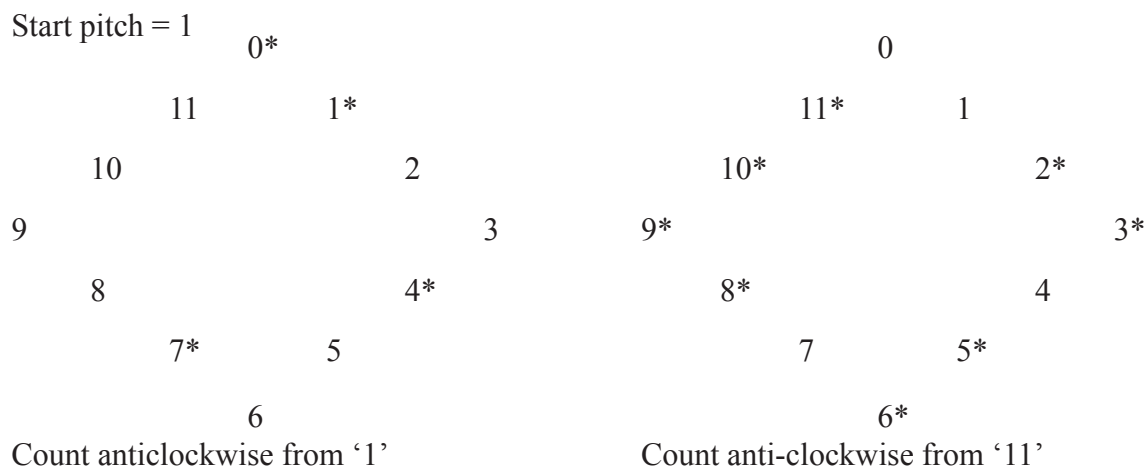
Figure 1: Scalar ordering of collection and complement

This gives us the following two ordered collections: 1 0 7 4 and 11 10 9 8 6 5 3 2.

This pair of collections is the first of 16 such pairs underlying *Bagatelle No 8*. Pairs 2 – 16 are all generated in a similar way. The process depends on the number of instances of the pitch-class interval '1' within each (scalarly-ordered) collection.
(1) The first step is to mark all the pitch-class pairs within 4-18 (1 0 7 4 ordering) and its complement 8-18 (11 10 9 8 6 5 3 2 ordering) which form the interval '1', viz

Within 4-18: (1, 0) .... and within 8-18: (11, 10), (10, 9), (9, 8), (6, 5) and (3, 2)

(2) The second step is to select the rightmost pitch-class in each pair ('the pitch-class on the anti-clockwise side'), viz 0, 10, 9, 8, 5 and 2, and to pair up the resulting sequence with its complement, viz 1, 11, 7, 6, 4 and 3.

(3) The third step is to order both the collections thus generated in anti-clockwise order, beginning with the start pitch '1' or the pitch-class immediately on the anti-clockwise side of '1', viz: 1, 11, 7, 6, 4, 3 and 0, 10, 9, 8, 5, 2.
In Allen Forte's terminology, these are the complementary hexachords 6-Z46 and 6-Z24.

This is the second of our 16 collection-pairs. The third is generated from the second in the same way, the fourth from the third, and so on. This results the following 16 collection-pairs:

Start pitch = 1

Bar #	Collection		Complement
1	1, 0, 7, 4	and	11 10 9 8 6 5 3 2
2	1, 11, 7, 6, 4, 3	and	0, 10, 9, 8, 5, 2
3	1, 0, 11, 10, 7, 5, 4, 2	and	9, 8, 6, 3
4	1, 9, 7, 6, 5, 3, 2	and	0, 11, 10, 8, 4
5	1, 0, 9, 8, 7, 4, 3	and	11, 10, 6, 5, 2
6	1, 11, 9, 6, 4, 2	and	0, 10, 8, 7, 6, 5, 3
7	1, 0, 11, 10, 9, 8, 6, 5, 4, 3, 2	and	7
8	1, 7, 6	and	0, 11, 10, 9, 8, 5, 4, 3, 2
9	1, 0, 7, 5	and	11, 10, 9, 8, 6, 4, 3, 2
10	1, 11, 7, 6, 5, 4	and	0, 10, 9, 8, 3, 2
11	1, 0, 11, 10, 7, 3	and	9, 8, 6, 5, 4, 2
12	1, 9, 7, 6, 3, 2	and	0, 11, 10, 8, 5, 4
13	1, 0, 9, 8, 7, 5, 3	and	11, 10, 6, 4, 2
14	1, 11, 9, 6, 5, 4, 3, 2	and	0, 10, 8, 7
15	1, 0, 11, 10, 9, 8, 6	and	7, 5, 4, 3, 2
16	1, 7, 6, 5	and	11, 10, 9, 8, 4, 3, 2

Figure 2: Complementary collection-pairs for Keith Humble: *Eight Bagatelles, No 8*

From the irregular pattern of the first few of these collection-pairs, one might anticipate that this list would proliferate indefinitely through lines 17, 18, 19 and so on, but in fact pair number 17 returns us to the same pair we started out with. The process is thus a finite one, at least if followed through rigorously, as in this particular case. Anthony Hughes describes the way in which each of Humble's *Eight Bagatelles* for Piano is built upon a similar pattern of 16 sequences. This gives rise to both interesting parallels and interesting divergences between the different bagatelles.

Note that the choice of start pitch is sometimes crucial for the way in which materials unfold. For example, in generating pair 4 from pair 3, pitch-classes '1' and '2' are not adjacent in an anti-clockwise ordering of the octachord $1 - 0 - 11 - 10 - 7 - 5 - 4 - 2$ if '1' is the start-pitch. So, in $1 - 0 - 11 - 10 - 7 - 5 - 4 - 2$, the pitch-class pair (1, 2) is excluded from consideration, despite the fact that it forms the interval '1', and pitch-class '1' is not treated as the 'rightmost of a pair', with ongoing consequences for the generation of lines $5 - 16$ of Figure 2.

Complementary Collection-Pairs in A Little Sonata in Two Parts

Although *A Little Sonata in Two Parts* is, like the *Eight Bagatelles,* based on a sequence of collection-pairs (44 in this case), it seems that Humble generated his material for in something of an *ad hoc* manner, as he worked through it, rather than by pre-compositional calculation, and this 'ad hoc' aspect of his approach is sometimes a dominant factor. For example, before proceeding to each successive stage of the generation process, he sometimes decides to invert a collection-pair around some axis or other, change the start-pitch *in media res,* or take scalar ordering in a *clockwise* direction instead of anti-clockwise, with results which flow on into subsequent stages of the generation process, and mean that it is not a finite one, as in the *Eight Bagatelles.* However, the essential similarity of the generation-process in the two works seems

incontrovertible. Nevertheless the 'ad hoc' factor means that the details are somewhat tricky to tease out in places. Amongst other problems, is not always quite clear from the sketches exactly which pitch Humble considered to be the start-pitch, so there is a certain amount of guesswork involved in deducing what it is. Indeed, it appears that the start-pitch does not remain fixed throughout the course of the whole work (or even throughout each movement), so it may not be a useful concept at all in *A Little Sonata in Two Parts.*

The format I have adopted for the tables which follow, in which I describe the way in which Humble deploys his ' heterogenous collection-pairs' in *A Little Sonata in Two Parts* also differs somewhat from the format of the tables drawn up by Anthony Hughes to explicate the structure of the *Eight Bagatelles.* For example, rather than number the collection-pairs 1 – 16, I have referenced them by bar number, and I have opted for the (more immediately comprehensible) traditional letter-names for pitch-classes rather than integers. Because, rather more than in the case of the *Eight Bagatelles,* the pitchclass background for *A Little Sonata in Two Parts* is assembled in something of an 'ad hoc' manner, these tables have been compiled by means of a combination of hypothetical ('ad hoc' !) reconstruction, constant reference back to the composer's sketches and a 'close reading' of the published score of the final version. Despite the fact that the sketches are a chaotic mess, and that there are a few typographical mistakes in the published score (over and above those identified in the errata sheet published with it), my reconstruction of the generation process does seem to accord with them pretty well.

Start pitch = ?

Bar #	Collection		Complement
1	G A♯ C C♯ D E F	and	G♯ A B D♯ F♯
4	D D♯ F F♯ G A A♯ B	and	C C♯ E G♯
15	C♯ D♯ E G G♯ B	and	C D F F♯ A A♯
24	A B C C♯ D D♯ F G	and	A♯ E F♯ G♯
31	E F F♯ G G♯ A A♯ B	and	C C♯ D D♯
33	E C	and	F F♯ G G♯ A A♯ B C♯ D D♯
36	C C♯ E F	and	F♯ G G♯ A A♯ B D D♯
40	F G G♯ A A♯ B C♯	and	D D♯ E F♯ C
44	C C♯ D F F♯ G	and	D♯ E G♯ A A♯ B
52	D E G B	and	C C♯ D♯ F F♯ G♯ A A♯
52	C♯ D D♯ E F♯ G A♯ B	and	C F G♯ A
54	C C♯ F F♯ G♯ A♯	and	D D♯ E G A B
63	F G G♯ A A♯ B C D	and	F♯ C♯ D♯ E
69	C♯ D D♯ F F♯ G	and	G♯ A A♯ B C E
75	C♯ E F G♯	and	D D♯ F♯ G A A♯ B C
79	G♯ G F D♯ C♯ C	and	F♯ E D B A♯ A

Figure 3: Complementary collection-pairs for Keith Humble: *A Little Sonata in Two Parts (Une petite sonate en deux parties),* Movement 1

The basic procedure for generating each successive line of this table from the previous one seems can best be summarised by example, viz by explicating the process with respect to the

generation of the second collection-pair (@ bars 4 ff) from the first.

Bar reference: 1
Collection pair = Start-Set [G A♯ C C♯ D E F] and its complement [G♯ A B D♯ F♯]

Take all the semitone-pairs within the collection and its complement, viz
[(C C♯) (C♯ D) (EF)] and [(G♯ A)]

Select one item from each semitone-pair, viz
C C♯ E and G♯

Select the residue within [G A♯ C C♯ D E F] after C C♯ E has been extracted, and the residue within [G♯ A B D♯ F♯] after G♯ has been extracted, viz [D F G A♯] and [A B D♯ F♯]

The new Start-Set = the sum of these residues [B A♯ A G F♯ F D♯ D]

Bar reference: 4
Collection pair = New Start-Set [B A♯ A G F♯ F D♯ D] and its complement [G♯ E C♯ C]
Proceed in the same way to generate the third collection-pair (@ bars 15 ff) from the second (@ bars 4 ff)

All subsequent lines of the table are generated by the same procedure, except in four places where it is varied slightly:

(1) In moving from collection pair 7 (@ bars 36 ff) to collection-pair 8 (@ bars 40 ff) [see Fig 3, below], where one might expect collection pair 7, namely

36	C C♯ E F	and	F♯ G G♯ A A♯ B D D♯

to be followed by either

40	C D E F♯	and	C♯ F G G♯ A A♯ B D♯

or

40	C♯ D♯ F B	and	C E F♯ G G♯ A A♯ D

whereas, although the passage @ bars 40 ff comes close to the first of these, the pitch D# has been transferred from right to left (or at least that's one way – not necessarily the composer's, of course – of explaining what's happening here):

40	F G G♯ A A♯ B C♯	and	C D (D♯) E F♯

This variation from the 'standard' generation-procedure can be compared with three others (conjectural explanations of which are omitted here):

(2) In moving from collection pair 23 (@ bars 122 ff) to collection-pair 24 (@ bars 135 ff) [cf Figs 4/5]

(3) In moving from collection pair 35 (@ bars 175 ff) to collection-pair 36 (@ bars 178 ff) [cf Fig 5/6]

(4) In moving from collection pair 43 (@ bars 200 ff) to collection-pair 44 (@ bars 202 ff) [cf Fig 6]

Start pitch = ?

Bar #	Collection		Complement
(79)	G♯ G F D♯ C♯ C	and	F♯ E D B A♯ A
90	A C D D♯ E F F♯ G	and	A♯ B C♯ G♯
93	G G♯ A B C C♯	and	D D♯ E F F♯ A♯
99	G A♯ B D	and	G♯ A C C♯ D♯ E F F♯
104	D C♯ B A G F♯	and	C A♯ G♯ F E D♯
106	F D C B A♯ A G♯ G	and	C♯ F♯ E D♯
122	F♯ F E D C♯ C	and	D♯ B A♯ A G♯ G
135	(G♯) F♯ D♯ D B	and	G F E C♯ C A♯ A

Figure 4: Complementary collection-pairs for Keith Humble: *A Little Sonata in Two Parts (Une petite sonate en deux parties), Movement 2*

Start pitch = ?

Bar #	Collection		Complement
(135)	(G♯) F♯ D♯ D B	and	G F E C♯ C A♯ A
143	B A♯ G♯ G F♯ F D♯ C♯	and	A E D C
147	A A♯ C C♯ D D♯ E F	and	F♯ G G♯ B
150	F♯ A B C	and	G G♯ A♯ C♯ D D♯ E F
153	F♯ G A A♯ B C♯	and	D D♯ E F G♯ C
156	C C♯ D F♯ G♯ A	and	D♯ E F G A♯ B
159	D♯ F♯ G G♯ A♯ C	and	E F A B C♯ D
160	F G♯ A A♯ B C D D♯	and	F♯ G C♯ E
164	G F E D♯ C♯ C	and	F♯ D B A♯ A G♯
168	C D D♯ F♯ G G♯	and	C♯ E F A A♯ B
169	G♯ F D♯ C♯ C B	and	G F♯ E D A♯ A
174	B D D♯ E F F♯ G♯ A	and	C C♯ G A♯
175	C♯ B A♯ A G F♯	and	C G♯ F E D♯ D
178	F F♯ G B C	and	E G♯ A A♯ C♯ D D♯

Figure 5: Complementary collection-pairs for Keith Humble: *A Little Sonata in Two Parts (Une petite sonate en deux parties)*, Movement 3

Start-pitch = ?

Bar #	Collection		Complement
(178)	F F♯ G B C	and	E G♯ A A♯ C♯ D D♯
180	E C A♯ G	and	D♯ D C♯ B A G♯ F♯ F
183	C B A♯ A G F♯ E D♯	and	G♯ F D C♯
187	C G♯ G F E D	and	B A♯ A F♯ D♯ C♯
190	G♯ F♯ F D♯ D C♯ C B	and	G E A♯ A
194	A♯ G♯ G F♯ E D♯	and	A F D C♯ C B
197	B A♯ A F♯ F D♯	and	D C♯ C G♯ G E
200	B G♯ F♯ E D♯ D	and	C♯ C A♯ A G F
202	C C♯ D F♯ G A A♯	and	D♯ E F G♯ B

Figure 6: Complementary collection-pairs for Keith Humble: *A Little Sonata in Two Parts (Une petite sonate en deux parties),* Movement 4

In the sketches for *A Little Sonata in Two Parts,* the collection-pairs appear written out in scalar order, ascending or descending, amongst a plethora of alternative possibilities, memoranda, short snippets of trial versions of the actual score, and various other *aides-mémoires.* While each collection can hardly be thought of as a mode in any general sense, stepwise movement up or down the 'mode' appears fairly frequently in the piece itself, and the attention given to changing the adjacent semitones within successive 'modal pairs' does suggest a vestige of 'modal' thinking, if only to provide a sense of constant 'modal flux'.

However, the roots of Humble's preoccupation with the semitonal content of his collection-pairs probably lies in more recent history, viz late Webern. Consider, for example, the opening of Webern's *Concerto for Nine Instruments,* which begins with a passage based on the following set-forms:

t-0S	B	B♭	D	E♭	G	F♯	G♯	E	F	C	C♯	A
t5-5IR	D	B♭	B	F♯	G	E♭	F	E	G♯	A	C♯	C
t4-IR	C♯	A	B♭	F	F♯	D	E	E♭	G	A♭	C	B
t-1S	C	B	E♭	E	G♯	G	A	F	F♯	C♯	D	B♭

The passage is especially celebrated as the *locus classicus* of the 'derived set' (four related versions of the same trichord), but its hexachordal context is also significant for the work's formal structure, and in terms of hexachordal content, we could summarise these four set-forms in terms of their hexachordal content as follows:

t-0S	W	X
t5-5IR	W	X
t4-IR	Y	Z
t-1S	Z	Y

The hexachord involved here is (to use Allen Forte's 'prime form' terminology) the 014589 hexachord (= the 'augmented scale' in jazz terminology), well-known from Schoenberg's *Ode to Napoleon,* or the playing of Ornette Coleman and other 'free jazz' artists (Weiskopf & Ricker 2002). The jazz terminology implies another way of thinking of it, of course: viz, as the union of two augmented triads. Thus (in phrases/aggregates one and two) the B augmented triad is first heard in conjunction with the B♭ augmented triad, but afterwards (from the third aggregate) in a new conjunction with the C augmented triad. This hexachordal shift in the third aggregate is often perceivable in a much simpler terms, however, even from individual pitch-associations. For example, the B♮ is heard firstly in association with B♭ and D (in the opening version of the celebrated three-note motif), but then in association with C and A♭ (in the third-aggregate version of the motif).

At any rate, the scalar form of the mode provides a repository of material from which other local structures can be drawn, and in order to follow this compositional process into the detail of the piece, we need to define more precisely the internal characteristics of each collection-pair. I begin by listing and cataloguing the start-set of each collection-pair, using Allen Forte's nomenclature, as well as Humble's own.

Forte's labelling is added to these tables here simply because Forte's catalogue is now a widely-known *vade mecum.* Humble, however, appears to derive his labelling elsewhere, possibly from the catalogue of another 'post-Schoenbergian' composer, Roberto Gerhard. He had almost certainly known Gerhard's articles on twelve-tone theory (see Gerhard 2001) and possibly Gerhard's catalogue of 'the number of possible chords' since the 1950s (long before *The Structure of Atonal Music* was published, and indeed before the journal articles out of which Forte's eventual theoretical *magnum opus* arose), since he had conducted a number of Gerhard's works, and respected Gerhard greatly as a composer. So he probably saw no reason not to continue to use Gerhard's catalogue for the rest of his life, despite the eventual ubiquitous adoption of Forte's catalogue as a reference. The American composer Elliott Carter, independently, also produced a third such catalogue for personal use, but information about this was published only much later, and it is doubtful whether Humble could have known of it.

Overviewed in such a blunt tabular way, this raw 'pre-compositional' material could appear to be either mechanically formulaic or chaotically heterogenous, until one begins to trawl this raw data for possible musical meanings and for a more detailed account of the compositional treatments which enable significant musical meaning to emerge. Such a trawl leads me to see *both* the formulaic *and* the chaotic as possibilities of the raw material, and the compositional treatment as an attempt to impose musical sense on it by reconciling – or at least balancing – them.

The nature of this detail resists a tidy, comprehensive account, but I will endeavour to characterise a few features of it in terms of such a reconciliation, by means of a blow-by-blow account of one of the simpler passages: the middle section of the first movement.

Start-pitch = ?

Bar #	Collection	Humble	Forte
1	G A♯ C C♯ D E F	7 : 29	7 – 25
4	D D♯ F F♯ G A A♯ B	8 : 28	8 – 19
15	C♯ D♯ E G G♯ B	6 : 19	6 – 31
24	A B C C♯ D D♯ F G	8 : 13	8 – 21
31	E F F♯ G G♯ A A♯ B	8 : 1	8 – 1
33	E C	2 : 8	2 – 4
36	C C♯ E F	4 : 10	4 – 7
40	F G G♯ A A♯ B C♯	7 : 3	7 – 8
44	C C♯ D F F♯ G	6 : 7	6 – Z6
52	D E G B	4 : 9	4 – 26
52	C♯ D D♯ E F♯ G A♯ B	8 : 11	8 – 17
54	C C♯ F F♯ G♯ A♯	6 : 11	6 – Z26
63	F G G♯ A A♯ B C D	8 : 4	7 – 2
69	C♯ D D♯ F F♯ G	6 : 10	6 – Z4
75	C♯ E F G♯	4 : 11	4 – 17
79	G♯ G F D♯ C♯ C	6 : 11	6 – Z26

Figure 7: Complementary collection-pairs for Keith Humble: *A Little Sonata in Two Parts (Une petite sonate en deux parties),* Movement 1

Start pitch = ?

Bar #	Collection	Humble	Forte
(79)	G♯ G F D♯ C♯ C	(6 : 11)	(6 – Z26)
90	A C D D♯ E F F♯ G	8 : 4	8 – 10
93	G G♯ A B C C♯	6 : 10	6 – Z4
99	G A♯ B D	4 : 11	4 – 17
104	D C♯ B A G F♯	6 : 11	6 – Z26
106	F D C B A♯ A G♯ G	8 : 4	8 – 10
122	F♯ F E D C♯ C	6 : 10	6 – Z4
135	(G♯) F♯ D♯ D B	5 : 31	5 – 32

Figure 8: Complementary collection-pairs for Keith Humble: *A Little Sonata in Two Parts (Une petite sonate en deux parties),* Movement 2

Start pitch = ?

Bar #	Collection	Humble	Forte
(135)	(G♯) F♯ D♯ D B	(5 : 31)	(5 – 32)
143	B A♯ G♯ G F♯ F D♯ C♯	8 : 26	8 – 22
147	A A♯ C C♯ D D♯ E F	8 : 18	8 – 4
150	F♯ A B C	4 : 16	4 – 13
153	F♯ G A A♯ B C♯	6 : 30	6 – Z10
156	C C♯ D F♯ G♯ A	6 : 35	6 – Z43
159	D♯ F♯ G G♯ A♯ C	6 : 32	6 – Z46
160	F G♯ A A♯ B C D D♯	8 : 16	8 – 13
164	G F E D♯ C♯ C	6 : 30	6 – Z10
168	C D D♯ F♯ G G♯	6 : 35	6 – Z43
169	G♯ F D♯ C♯ C B	6 : 32	6 – Z46
174	B D D♯ E F F♯ G♯ A	8 : 16	8 – 13
175	C♯ B A♯ A G F♯	6 : 30	6 – Z10
178	F F♯ G B C	5 : 32	5 – 7

Figure 9: Complementary collection-pairs for Keith Humble: *A Little Sonata in Two Parts (Une petite sonate en deux parties),* Movement 3

Start-pitch = ?

Bar #	Collection	Humble	Forte
(178)	F F♯ G B C	(5 : 32)	(5 – 7)
180	E C A♯ G	4 : 27	4 – 27
180	C B A♯ A G F♯ E D♯	8 : 23	8 – 18
187	C G♯ G F E D	6 : 32	6 – Z24
190	G♯ F♯ F D♯ D C♯ C B	8 : 16	8 – 13
194	A♯ G♯ G F♯ E D♯	6 : 30	6 – 30
197	B A♯ A F♯ F D♯	6 : 35	6 – Z43
200	B G♯ F♯ E D♯ D	6 : 32	6 – Z46
202	C C♯ D F♯ G A A♯	7 : ??	7 – Z38

Figure 10: Complementary collection-pairs for Keith Humble: *A Little Sonata in Two Parts (Une petite sonate en deux parties),* Movement 4

The collection-pair at this point (bar 44, see Figure 7) consist of two heterogenous hexachord collections (heterogenous in the sense of 'unrelated by either transposition or inversion' (in Allen Forte's list: hexachords 6–Z6 and 6–Z38). But the way Humble relates them is through one of the most 'Webernian' and classically symmetrical serial constructs: the 'derived set'. As figure 11 shows, each is partitioned temporally and registrally as two forms of the '026' trichord (not that the specific trichord '026' ever shows up as a 'derived' set generator in Webern himself, of course). The important point as regards function, however, is that these trichords are not thematic in any substantial way (ie not widely referential); they appear but fleetingly elsewhere in the piece. They're merely part of a local 'impromptu' connective strategy for moving between diverse complementary collections.

Figure 11: Trichord '026' in bars 44 – 51

We might notice in passing some 'gestural' characteristics of this 8-bar phrase: for instance, that the 3-note motifs are phrased in 1+2 groupings in its first half (44 – 47) and as detached isolated notes in its second (48 – 51). I'll return to this 'gestural' aspect in just a moment.

Meaånwhile, the next two collection pairs (52 – 53) are collapsed into one unit, through the same sort of process viz partitioning of the two complementary collections to make a local connective common factor:

Tetrachord G, E, D, B ('A1') + Octachord B♭, A, A♭, G♭, F, E♭, D♭, C
.... with the octachord grouped as B♭, G♭, E♭, D♭ ('A2') and A, A♭, F, C ('B')

Tetrachord F, C, A, Aflat ('B') + Octachord G, F♯, E, Eflat, D, D♭, B, B♭
.... with the octachord grouped as G, E, D, B ('A1') and G♭, E♭, D♭, B♭ ('A2')

Again in passing, we may notice some 'gestural' characteristics of this 2-bar phrase (52 – 53): the quadruple-stop marcato, whose obvious relationship is not so much with the immediate context as with the 'fanfare' motif with which the piece opens. The immediate context I'll return to in a moment.

Before that, let me move on to two collection-pairs (Forte 6–Z4 and 4-17). From the viewpoint of general design, 6–Z4 and complement seem a bit like a rehash of the phrase @ 44 – 51: viz two otherwise unrelated hexachords connected through their disposition as a pair of registrally and temporally articulated trichords. The sketches indeed show that that's how the composer thought of them, though only one of the trichords is a version of that '026' trichord we heard ubiquitously in 44 – 51. There are gestural connections, however, which reinforce the reference: the disposition as 1+2 versus 3 isolated notes, the paired crotchets, and the minim/ crotchet figure. Nevertheless, the four trichords in 54 – 62 are versions of 013, 013, 025 and 026, so only the last of these directly reflects (in intervallic content) those of 44 – 51.

The 013 trichords effect continuity rather with the following phrase (63 – 69), which (to be sure) is based on a tetrachord + octachord collection-pair. But notice that the tetrachord in 63/ 64 is articulated as a 1+3 group, and of course the 3 group refers back to those 013 trichords.

The tetrachord which results from this 1+3 juxtaposition (viz 0235) is then used as a connective motif in the complementary octachord, the other half of this collection-pair, which is articulated

as two 0235 tetrachords (D, A, C, B and G B♭, A♭, F). Again the composer's sketches confirm that this is how he thought of this passage, even though (to be sure) the 'gestural' articulation seems to be suggesting something else, viz a 3+3+2 grouping. There are obvious reasons for this grouping across the tetrachords, of course: the reference back to 44 – 51 inherent in the 1+2 disposition of the 3s and the minim/crotchet motif.

Finally, this interplay between 6+6 collection-pairs and 8+4 ones might lead us to reflect on the tetrachordal aspects of 54 – 62, which thus far we have considered only from its trichordal aspects. In a sentence: the upper-register tetrachord (A♭, C, D♭, B♭) connects with (= is a transposition of) the F♯, D♯, E, C♯ tetrachord which is to follow in the **next** collection pair, whereas the upper-register tetrachord of its second half (E, G, B, D) refers back to the tetrachord which we have heard in the **previous** collection-pair. In this way, local 'improvised' connections between collections of different cardinalities as well as different intervallic character are drawn out.

This idea of *forcing* various degrees of unity on material of such a heterogenous nature is confirmed by the sketches, even those which Humble abandoned. Figure 12, for instance, shows – as well as a few enigmatic jottings and marginalia – the collection pairs for bars 52 – 88, and the way in which he drew up memoranda on the common tetrachordal features. As far as I can see, almost none of these tetrachordal commonalities featured much in the final piece. My interpretation of this is that the composer got a bit tangled up in his pre-compositional charts and decided that writing the collections out in musical notation in scalar form would allow him to hear connections in his inner ear much better. The trichordal features, against which there is just a question mark in the chart, actually became, in the event, the most prominent features (see Example 12, opposite).

Indeed, the sketches also show that this phenomenon of composing part of a piece and then stumbling across something which he had not until then noticed, and which made him think of a better way to proceed, was a rather frequent occurence. The *Little Sonata* is by no means the only piece for which the National Library of Australia Humble archive contains several unfinished versions. More than once, he started a piece, reached some kind of impasse, and then went back and rewrote it from the beginning, like an improviser who thinks about what he just played and decides he will play it differently next time around. Thus, although the late Humble pieces can seem from a certain point of view to be constructivist to the core, Humble the improviser constantly lurks beneath the surface, from where he emerges with 'improvisatory' strategies for the creation of repertoires of locally conective 'gestures'.

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			[0235]		[4:1] 15		[0347]	
6:11A	**6:11B**	**8:4**	**4:4**	**610A**	**10B**	**4:11**	**8:11**
0158							
0135							
0137							
0157							
0237							
0247		0247					
	0146	0146					
		0127					
		0235					
		0347					
		0246					
		0124					
							0134
							0156
							0358
							0248
							0148
			0235				
				0145			
				0124			
				0125			
				0126	0126		
027							
013	?						
015				015			
037					?		
				012			
				014			
				025			

Figure 12: *A Little Sonata in Two Parts (Une petite sonate en deux parties),* sketches: Checking for local connections in bars 52 – 88

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