## Ensuen

[Musical Interludes from the Continuum of Life]
For small chamber ensemble and percussion
(11 musicians)

Dr Ian Percy<br>www.ianpercy.me.uk

## Compositional Method and Process

Ensuen: Middle English: to follow, to take place afterwards or as a result ...

The first sketches for this piece date back to $11^{\text {th }}$ November 2009. The revised score was completed (hopefully for the final time) in November 2019.

## All-Interval Tetrachords (AIT)

## All-Interval Tetrachords (AIT): 4-z15 (0146/0256) and 4-z29 (0137/0467) <111111>

i. The two All-Interval Tetrachords (AIT) get their name due to the fact they contain all twelve interval-types without replication:
a. 0146/0256 (4-z15/4-z15B) <111111> All-Interval Tetrachord 1
b. 0137/0467 (4-z29/4-z29B) <111111> All-Interval Tetrachord 2
ii. The interval is a micro palindrome and all interval-classes can produce equidistant pitch palindromes. The AIT are therefore the most succinct way to reference the theoretical concept of intervallic pitch palindromes within a single pitch-class set.
iii. The all-interval tetrachords (AIT) are self-contained palindromes:

0256 (4-z15b) is a retrograde inversion of 0146 (4-z15)
0467 (4-z29b) is a retrograde inversion of 0137 (4-z29)

All-Interval Tetrachords (AIT): Contain all twelve interval types (six interval-classes) without replication <111111>
4-z29: Mvt. 1 4-z15: Mvt. $24-z 15 b:[R I$ of 0146]: Mvt. 3 4-z29b: [RI of 0137]: Mvt. 4


## Form

$1^{\text {st }}$ movement: 0137
... After the Party: An Intimate Conversation ...
$2^{\text {nd }}$ movement: 0146
... The Day of the Big Game ...
$3^{\text {rd }}$ movement: 0256
.. Waiting on an Important Decision ...
$4^{\text {th }}$ movement: 0467
... The Morning After THAT Argument (or is it still the night before) ... ... Grotesque Shadows and Dancing Demons ...

The length of the first three movements bears a direct theoretical relationship to the AIT from which it was composed. The first movement ( 0137 material) is approximately $1^{\prime} 37^{\prime \prime}$ in length ( 97 seconds). The second movement ( 0146 material) is ca. $2^{\prime} 26^{\prime \prime}$ in length (146 seconds) and the third movement ( 0256 material) is ca. $2^{\prime} 56^{\prime \prime}$ in length ( 176 seconds). The golden ratio ( a , is to b , what b is to c ) was applied in retrograde and used to determine the length of the final movement resulting in ca. $3^{\prime} 11^{\prime \prime}$ ( 191 seconds):

> [a] I + 50.51\% = II [b] II + 20.55\% = III [c] III + 8.36\% = IV

$$
\text { [a] } 97+49=146[b] 146+30=176[c] 176+14.7=190.7(191)
$$

## Cycle of Fourths

(Interval Class Five)

The cycle of fourths can be described as a twelve-tone equidistant chromatic consonant scale. Like the six notes of the equidistant whole-tone scale, there is no inherent hierarchical reference to a home-tone unless one is established through the act of composition. The cycle contains each of the twelve interval-types without repetition and produces symmetrical interval-classes. The cycle of fourths is a Symmetrically Inverted AllInterval Twelve-Note (SI AITN) Chord.

Cycle of Fourths [within an octave]: Symmetrical interval classes


## Cycle of Fourths (Interval Class Five) Chromatic Transformations

1a. Descending semi-tones against ascending fourths (descending fifths):

| 0 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | B | $\mathrm{B}^{\mathrm{b}}$ | A | $\mathrm{G}^{\#}$ | G | $\mathrm{F}^{\#}$ | F | E | $\mathrm{E}^{\mathrm{b}}$ | D | $\mathrm{C}^{\#}$ | C |
| C | F | $\mathrm{B}^{\mathrm{b}}$ | $\mathrm{E}^{\mathrm{b}}$ | $\mathrm{A}^{\mathrm{b}}$ | $\mathrm{D}^{\mathrm{b}}$ | $\mathrm{F}^{\#}$ | B | E | A | D | G | C |
| 0 | 5 | 10 | 3 | 8 | 1 | 6 | 11 | 4 | 9 | 2 | 7 | 0 |

1b. Ascending semi-tones against descending fourths (ascending fifths):

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | $\mathrm{C}^{\#}$ | D | $\mathrm{E}^{\mathrm{b}}$ | E | F | $\mathrm{F}^{\#}$ | G | $\mathrm{G}^{\#}$ | A | $\mathrm{~B}^{\mathrm{b}}$ | B | C |
| C | G | D | A | E | B | $\mathrm{F}^{\#}$ | $\mathrm{C} \#$ | $\mathrm{G}^{\#}$ | $\mathrm{E}^{\mathrm{b}}$ | $\mathrm{B}^{\mathrm{b}}$ | F | C |
| 0 | 7 | 2 | 9 | 4 | 11 | 6 | 1 | 8 | 3 | 10 | 5 | 0 |

2a. Ascending semi-tones against ascending fourths (descending fifths):

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | $\mathrm{C}^{\#}$ | D | $\mathrm{E}^{\mathrm{b}}$ | E | F | $\mathrm{F}^{\#}$ | G | $\mathrm{G}^{\#}$ | A | $\mathrm{~B}^{\mathrm{b}}$ | B | C |
| C | F | $\mathrm{B}^{\mathrm{b}}$ | $\mathrm{E}^{\mathrm{b}}$ | $\mathrm{A}^{\mathrm{b}}$ | $\mathrm{D}^{\mathrm{b}}$ | $\mathrm{F}^{\#}$ | B | E | A | D | G | C |
| 0 | 5 | 10 | 3 | 8 | 1 | 6 | 11 | 4 | 9 | 2 | 7 | 0 |

2b. Descending semi-tones against descending fourths (ascending fifths):

| 0 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | B | $\mathrm{B}^{\mathrm{b}}$ | A | $\mathrm{G}^{\#}$ | G | $\mathrm{F}^{\#}$ | F | E | $\mathrm{E}^{\mathrm{b}}$ | D | $\mathrm{C}^{\#}$ | C |
| C | G | D | A | E | B | $\mathrm{F}^{\#}$ | $\mathrm{C}^{\#}$ | $\mathrm{G}^{\#}$ | $\mathrm{E}^{\mathrm{b}}$ | $\mathrm{B}^{\mathrm{b}}$ | F | C |
| 0 | 7 | 2 | 9 | 4 | 11 | 6 | 1 | 8 | 3 | 10 | 5 | 0 |

## Ensuen Pitch Matrices:

4-z15: $(0146 / 0256)<111111>$ All-Interval Tetrachord 1 (Inverts to 4-z15)

| 0 | 1 | 4 | 6 |
| :---: | :---: | :---: | :---: |
| 11 | 0 | 3 | 5 |
| 8 | 9 | 0 | 2 |
| 6 | 7 | 10 | 0 |


| C | $\mathrm{C}^{\#}$ | E | $\mathrm{F}^{\#}$ |
| :---: | :---: | :---: | :---: |
| B | C | $\mathrm{E}^{\mathrm{b}}$ | F |
| $\mathrm{G}^{\#}$ | A | C | D |
| $\mathrm{F}^{\#}$ | G | $\mathrm{B}^{\mathrm{b}}$ | C |

4-z29: (0137/0467) < 111111> All-Interval Tetrachord 2 (Inverts to 4-z29)

| 0 | 1 | 3 | 7 |
| :---: | :---: | :---: | :---: |
| 11 | 0 | 2 | 6 |
| 9 | 10 | 0 | 4 |
| 5 | 6 | 8 | 0 |


| C | $\mathrm{D}^{\mathrm{b}}$ | $\mathrm{E}^{\mathrm{b}}$ | G |
| :---: | :---: | :---: | :---: |
| B | C | D | $\mathrm{F}^{\mathrm{Z}}$ |
| A | $\mathrm{B}^{\mathrm{b}}$ | C | E |
| F | $\mathrm{G}^{\mathrm{b}}$ | $\mathrm{A}^{\mathrm{b}}$ | C |

6-z37: $(012348)$ <432321> (Inverts to 6-z37) - Complement: 6-z4 (012456) <432321>

|  | I0 | I1 | I2 | I3 | I4 | I8 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P0 | 0 | 1 | 2 | 3 | 4 | 8 | R0 |
| P11 | 11 | 0 | 1 | 2 | 3 | 7 | R11 |
| P10 | 10 | 11 | 0 | 1 | 2 | 6 | R10 |
| P9 | 9 | 10 | 11 | 0 | 1 | 5 | R9 |
| P8 | 8 | 9 | 10 | 11 | 0 | 4 | R8 |
| P4 | 4 | 5 | 6 | 7 | 8 | 0 | R4 |
|  | RI0 | RI1 | RI2 | RI3 | RI4 | RI8 |  |

6-z48: (012579) <232341> (Inverts to 6-z48) - Complement: 6-z26 (013578) <232341>

|  | I0 | I1 | I2 | I5 | I7 | I9 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P0 | 0 | 1 | 2 | 5 | 7 | 9 | R0 |
| P11 | 11 | 0 | 1 | 4 | 6 | 8 | R11 |
| P10 | 10 | 11 | 0 | 3 | 5 | 7 | R10 |
| P7 | 7 | 8 | 9 | 0 | 2 | 4 | R7 |
| P5 | 5 | 6 | 7 | 10 | 0 | 2 | R5 |
| P3 | 3 | 4 | 5 | 8 | 10 | 0 | R3 |
|  | RI0 | RI1 | RI2 | RI5 | RI7 | RI9 |  |

7-33: (012468T) <262623> (Inverts to 7-33) - Complement: 5-33 (02468) < 040402>

|  | I0 | I1 | I2 | I4 | I6 | I8 | I10 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P0 | 0 | 1 | 2 | 4 | 6 | 8 | 10 | R0 |
| P11 | 11 | 0 | 1 | 3 | 5 | 7 | 9 | R11 |
| P10 | 10 | 11 | 0 | 2 | 4 | 6 | 8 | R10 |
| P8 | 8 | 9 | 10 | 0 | 2 | 4 | 6 | R8 |
| P6 | 6 | 7 | 8 | 10 | 0 | 2 | 4 | R6 |
| P4 | 4 | 5 | 6 | 8 | 10 | 0 | 2 | R4 |
| P2 | 2 | 3 | 4 | 6 | 8 | 10 | 0 | R2 |
|  | RI0 | RI1 | RI2 | RI4 | RI6 | RI8 | RI10 |  |

Dr Ian Percy

