Structuring Processes in Electroacoustic Composition

Volume II:
Figures

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Figure 1.1 ‘Waterfall’, (Lithograph 1961, Escher 1989: plate 76)
Example of a visual paradox.
Figure 1.2 ‘Circle Limit IV’, (woodcut print 1960, Escher 1989: plate 25).
Example of a periodic drawing.
Figure 1.3. Relationships between sound and space in terms of perceptual realism.
**Colour Codes**

- Rocks
- Ice
- Breath synth.
- Busker
- Synthetic
- Dustcart crash and hooter
- Wood
- Crunch
- Water

Broken lines indicate source sound transformed into pitch material, i.e. semi-synthetic.

**Text codes**

- Dog snuffle: snuffle
- Door creaks: creaks
- Footsteps: footsteps
- Speech: text
- Aural focus: position of sound in listener's aural focus

**Macro-time unit demarcations**

- Small unit
- Large unit

Material edited in the September 1996 remix

4'00: -5" Time location and duration of edit

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**Pitch notation**

Identified pitch in order of prominence

- Most prominent
- Least prominent

Gr. Pitch material forming a short group

Pl. Pitch material forming a plane

Cross section reference between materials

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'Eart Haze' analysis KEY
Figure 1.5 Alternative Listening Strategies in the Perception of Form Including Pitch Consideration.
<table>
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<tr>
<th>Time</th>
<th>Sound Grouping Based on Micro-details without Considering Pitch</th>
<th>Sound Grouping Based on Macro-details without Considering Pitch</th>
<th>Macro-scale Time Demarcations</th>
</tr>
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<tr>
<td>0'00</td>
<td>'Rocks' transform into 'synthetic' material, with 'synth breath'. Implication of a large space. 'Door creaks' distanced by reverb. 'Synthetic' character maintained along high register plane.</td>
<td>0'00 'Rock' and dense 'synthetic' gestural material.</td>
<td>0'00</td>
</tr>
<tr>
<td>2'10</td>
<td>'Busk' material emerges to form a noise surge, which subsides into an active, iterative texture, culminating at 3'50 in 'footsteps'.</td>
<td>1'38 'Synthetic' material rise to high register plane.</td>
<td>1'38</td>
</tr>
<tr>
<td>3'55</td>
<td>Implication of a large space. Resonant 'water' with 'rock' gesture injections. 'Crash' and 'synth breath' material die into a quiet 'synthetic' plane.</td>
<td>2'30 Noisy 'busk' material emerges and then falls to a textural plane, ending in silence.</td>
<td>2'55</td>
</tr>
<tr>
<td>5'48</td>
<td>Very quiet speech. Rhythmic interaction of 'rock', 'crash' and 'synth'. Accumulates into a large attack material which subsides.</td>
<td>5'40 Thin material</td>
<td>5'40</td>
</tr>
<tr>
<td>7'11</td>
<td>Loud 'crash' and 'busk' material fragment into iterative texture and sweeping gestures, which fade to reveal material at 8'30</td>
<td>7'11 'Crunch' and 'busk' noise gestures fall into 'wood' and 'rock' repetitive texture. Fast fade towards 8'30.</td>
<td>7'11</td>
</tr>
<tr>
<td>8'30</td>
<td>Short overlap of 'synthetic' material and previous texture. Implications of large space. Vague 'rain' and 'bell' sounds accumulate into 9'40</td>
<td>8'30 Slow moving synthetic material.</td>
<td>8'30</td>
</tr>
<tr>
<td>9'35</td>
<td>Enclosed space with 'crunch' sounds.</td>
<td>9'35</td>
<td>9'35</td>
</tr>
<tr>
<td>10'14</td>
<td>Loud 'crash' and 'rock' injections transform into repeating gestures with rhythmic coincidence.</td>
<td>10'14 Surface rhythmic features fall away to end, losing spatial implications.</td>
<td>10'14</td>
</tr>
<tr>
<td>11'19</td>
<td>Subside into ambiguous spatial implications, iteration and sudden cut.</td>
<td></td>
<td></td>
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<tr>
<td>12'20</td>
<td>Sparse material with rear 'crash', 'busk', 'rock' and 'synth' sounds accumulate into loud 'busk' material.</td>
<td>12'20 Spectrally thin material accumulates towards 13'00.</td>
<td>12'20</td>
</tr>
<tr>
<td>13'12</td>
<td>Rhythmic accumulation and 'rock' gesture injections.</td>
<td>13'00 Dense layers of 'busk' and 'synthetic' material. Relaxation into gentle material.</td>
<td>13'00</td>
</tr>
<tr>
<td>14'00</td>
<td>Decreasing 'rock' and 'crash' material. Implications of an increasing space with mainly synthetic material, descending to close.</td>
<td>14'28 Quiet accumulation of synthetic gestures, subside to end.</td>
<td>14'28</td>
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<tr>
<td>15'30</td>
<td></td>
<td>15'30</td>
<td>15'30</td>
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Fig. 1.51 Alternative Listening Strategies in the Perception of Form
Figure 1.6 Possible Material relationships in 'Earth Haze'
Figure 3.1 ‘Little Animals’ graphic score
### Figure 3.3 The association of materials between the two movements in 'Racing Unseen'.

- **Section 1**
  - (0'00-3'30 real-time)
  - Continuous flow of material
  - Environmental sound material, repeating noise gestures, and noise-based layer

- **Section 2**
  - (3'30-7'34 in real-time)
  - Fragmented and changing segments of material
  - Quiet 'metal rolls' and vocal implication growing into crashing gestures
  - Thick deep texture
  - High 'metal' fragments and low church bells moving into granulated bell texture and focusing to the single bell chime

- **Section 3**
  - (7'34-10'10 in real-time)
  - Tiny chime sounds and pitched gestures
  - Growth through vocal qualities
  - Loud, distorted, thick, metal resonant texture

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### Key

- **Association with movement one forming a false end to movement two**
- **Main sections identified in figure 3.2**
- **Experienced association of material between the two movements**
- **Continuity of material**
Figure 3.4 Establishing a hierarchy of repetitive cycles: a hypothetical example based on an approximation of material in 'Racing Unseen'
Figure 4.1 Early stages of gesture and phrase expansion in 'Imago'
Figure 4.2 Association of materials in 'Surf'.

Score Extract

0-0:06

Synchronization via attack.

2:52 - 3:00

Synchronization through tempo and phrase.

3:12 - 3:23

Co-ordination through articulation and phrase.

3:38 - 3:44

Co-ordination through articulation, phrase and gesture.

4:27 - 4:31

Fusion through timbre and articulation.

Material Relationship

Acousmatic part

Guitar part

Texture and pitch and articulation

Key

Weak relationship between parts

Strong relationship between parts

Chronological links
A = common instrumental material
    acousmatic and live material in movement two reflected in live material in movement four

B = common instrumental material
    acousmatic and live combined articulations in movement two reflected in live material in movement four

C = movement two pitch, gesture and timbral density reflected in movement four
    considerable reduction in length

↔ linkage between the two movements

Figure 4.3 Buoyant Charm material association between movements two and four