MTO 6.1 Examples: Mirka, Texture in Penderecki’s Sonoristic Style

(Note: audio, video, and other interactive examples are only available online)

http://www.mtosmt.org/issues/mto.00.6.1/mto.00.6.1.mirka.php

Table 1.

<table>
<thead>
<tr>
<th>perceptual parameters</th>
<th>perceptual categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>-</td>
</tr>
<tr>
<td>loudness</td>
<td>loud dynamics vs. soft dynamics</td>
</tr>
<tr>
<td>pitch</td>
<td>high register vs. low register</td>
</tr>
<tr>
<td></td>
<td>spatial continuity vs. spatial discontinuity</td>
</tr>
<tr>
<td></td>
<td>spatial mobility vs. spatial immobility</td>
</tr>
<tr>
<td>time</td>
<td>temporal continuity vs. temporal discontinuity</td>
</tr>
<tr>
<td></td>
<td>temporal mobility vs. temporal immobility</td>
</tr>
</tbody>
</table>
Figure 1. Mathematical model of contradiction

Figure 2. Mathematical model of contrariety

Figure 3. Contradiction in fuzzy logic

Figure 4. Contrariety in fuzzy logic
Table 2. Terms of the basic system categories

<table>
<thead>
<tr>
<th>OPPOSITE TERMS</th>
<th>CONTRADICTION</th>
<th>CONTRARIETY</th>
</tr>
</thead>
<tbody>
<tr>
<td>positive term (+)</td>
<td></td>
<td>positive term (+)</td>
</tr>
<tr>
<td>negative term (-)</td>
<td></td>
<td>negative term (-)</td>
</tr>
<tr>
<td>transition (-+)</td>
<td>transition (-+)</td>
<td>transition (-+)</td>
</tr>
<tr>
<td>border-zone term (*)</td>
<td>neutral term (0)</td>
<td></td>
</tr>
<tr>
<td>complex term (+/-)</td>
<td>complex term (+/-)</td>
<td></td>
</tr>
<tr>
<td>total term ([]</td>
<td>total term ([]</td>
<td></td>
</tr>
</tbody>
</table>

[ED: Some of the symbols above are ASCII approximations of the actual symbols that appear in the analytic diagrams.]

Figure 5. Example of a segment definition

<table>
<thead>
<tr>
<th>spatial continuity/discontinuity</th>
<th>+</th>
</tr>
</thead>
<tbody>
<tr>
<td>temporal continuity/discontinuity</td>
<td>+</td>
</tr>
<tr>
<td>spatial mobility/immobility</td>
<td>-</td>
</tr>
<tr>
<td>temporal mobility/immobility</td>
<td>-</td>
</tr>
<tr>
<td>high/low register</td>
<td>0</td>
</tr>
<tr>
<td>loud/soft dynamics</td>
<td>→</td>
</tr>
</tbody>
</table>
Example 1. Penderecki, *Threnody—To the Victims of Hiroshima* 70
Figure 6. Rosette of Penderecki's basic system
Figure 7a. Presentation of binary opposition

Figure 7b. Mediation of binary opposition

Figure 7c. Prohibited sequence of terms
Example 3. Penderecki, Polymorphia 38-45
Example 5. Penderecki, Polymorphia 32–37