Nursery Tunes for Demented Children

for three retuned pianos

by Kyle Gann
2012/15
Nursery Tunes for Demented Children (2012/15)

1. Down to the End of the Town
2. Up the Hill and Up Again
3. Tiger, Tiger, Turning Right
4. The Cracked Bells at St. Swithun’s
5. Jack Ate a Blackbird

Nursery Tunes for Demented Children is a group of tuning studies I wrote on the scale I was thinking about using for a much larger work, which eventually became Hyperchromatica (2015-17). The tuning employs 33 harmonics of Eb. It comprises eight harmonics series', each up to the 15th harmonic, based respectively on the 1st, 3rd, 5th, 7th, 9th, 11th, 13th, and 15th harmonics. The 33-pitch tuning of the three pianos (the same in every octave) is as follows, given first in the number of cents above E-flat, and then as ratios to the E-flat 1/1:

<table>
<thead>
<tr>
<th>Piano Key</th>
<th>Cents</th>
<th>Ratio</th>
<th>Cents</th>
<th>Ratio</th>
<th>Cents</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>1088</td>
<td>15/8</td>
<td>977</td>
<td>225/128</td>
<td>1044</td>
<td>117/64</td>
</tr>
<tr>
<td>Db</td>
<td>969</td>
<td>7/4</td>
<td>938</td>
<td>55/32</td>
<td>906</td>
<td>27/16</td>
</tr>
<tr>
<td>C</td>
<td>857</td>
<td>105/64</td>
<td>773</td>
<td>25/16</td>
<td>840</td>
<td>13/8</td>
</tr>
<tr>
<td>B</td>
<td>738</td>
<td>49/32</td>
<td>755</td>
<td>99/64</td>
<td>729</td>
<td>195/128</td>
</tr>
<tr>
<td>Bb</td>
<td>702</td>
<td>3/2</td>
<td>590</td>
<td>45/32</td>
<td>609</td>
<td>91/64</td>
</tr>
<tr>
<td>A</td>
<td>551</td>
<td>11/8</td>
<td>551</td>
<td>11/8</td>
<td>481</td>
<td>169/128</td>
</tr>
<tr>
<td>Ab</td>
<td>471</td>
<td>21/16</td>
<td>440</td>
<td>165/128</td>
<td>408</td>
<td>81/64</td>
</tr>
<tr>
<td>G</td>
<td>386</td>
<td>5/4</td>
<td>320</td>
<td>77/64</td>
<td>342</td>
<td>39/32</td>
</tr>
<tr>
<td>Gb</td>
<td>204</td>
<td>9/8</td>
<td>275</td>
<td>75/64</td>
<td>275</td>
<td>75/64</td>
</tr>
<tr>
<td>F</td>
<td>155</td>
<td>35/32</td>
<td>192</td>
<td>143/128</td>
<td>192</td>
<td>143/128</td>
</tr>
<tr>
<td>E</td>
<td>92</td>
<td>135/128</td>
<td>53</td>
<td>33/32</td>
<td>27</td>
<td>65/64</td>
</tr>
<tr>
<td>Eb</td>
<td>0</td>
<td>1/1</td>
<td>1103</td>
<td>121/64</td>
<td>1173</td>
<td>63/32</td>
</tr>
</tbody>
</table>

“Down to the End of the Town” takes its title from one of the favorite A.A. Milne poems of my childhood. It is a polytonal study in which melodies on the 11th and 13th harmonics cavort over an ostinato on the 5th harmonic; the techniques here ended up in Hyperchromatica’s Reverse Gravity. “Up the Hill and Up Again” is a voice-leading exercise among hyperchromatically related chords – “tonality flux” was Harry Partch’s term for it. These kinds of chord links ended up in many movements of Hyperchromatica, notably The Rings of Saturn. “Tiger, Tiger, Turning Right” has its harmonies determined by a hyperchromatic line in mid-register, a
device later used in *Dark Forces Signify.* "The Cracked Bells of St. Swithun's" uses upper harmonics (chords with ratios like 7:9:11 and 8:10:13) to achieve bell-like sonorities; having explored them here, I later used them in *Liquid Mechanisms.* And "Jack Ate a Blackbird" is a neoclassic romp among almost-normal harmonies that are actually distantly related, with voice-leading like those later used in *Pavane for a Dead Planet.*

- Kyle Gann

Duration: 10 minutes
Down to the End of the Town

Kyle Gann
2012
Down to the End of the Town
Down to the End of the Town
Down to the End of the Town
Down to the End of the Town
Up the Hill and Up Again

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Up the Hill and Up Again
Up the Hill and Up Again
Tiger, Tiger, Turning Right

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2012
Tiger, Tiger, Turning Right
Tiger, Tiger, Turning Right
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Pno.1

Pno.2

Pno.3

Tiger, Tiger, Turning Right
Tiger, Tiger, Turning Right
Tiger, Tiger, Turning Right
Tiger, Tiger, Turning Right
Tiger, Tiger, Turning Right
The Cracked Bells of St. Swithun's

Kyle Gann
2015
Jack Ate a Blackbird
Jack Ate a Blackbird