MTO 20.2 Examples: Michael K. Trinastic, Dissonant Harmony

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

Figure 1. Interpenetrating harmonic series and the dissonant sonorities derived from them

a. Trivial interpenetrating harmonic series: those in which the lowest common tone is one of the fundamentals

\[
\begin{align*}
3\text{rd partial} &= \text{fundamental} \\
\text{fundamental} &= 7\text{th partial} \\
5\text{th partial} &= \text{fundamental}
\end{align*}
\]

\[
\begin{array}{ccc}
C & G & C \\
\text{ic-5} & & \text{ic-4} \\
\end{array}
\]

b. Non-trivial interpenetrating harmonic series: those in which the lowest common tone is not one of the fundamentals

\[
\begin{align*}
5\text{th partial} &= 3\text{rd partial} \\
7\text{th partial} &= 5\text{th partial} \\
11\text{th partial} &= 3\text{rd partial}
\end{align*}
\]

\[
\begin{align*}
C & A & C \\
\text{ic-3} & \text{ic-6} & \text{ic-1}
\end{align*}
\]

\[
\begin{align*}
\text{F-sharp} & & C \\
\end{align*}
\]

c. Dissonant harmonies created from the interpenetrating harmonic series in Fig. 1b.

\[
\begin{align*}
3\text{rd-5th-partial sonority} & & 5\text{th-7th-partial sonority} \\
\end{align*}
\]
Figure 2. Dane Rudhyar, “The Earth Pull,” measures 1–2

With the poignancy of autumns (♩= 120)

The 7/8 meter should be kept strictly
Change pedal at each bar

Figure 3. Dane Rudhyar, “The Earth Pull,” measures 29–41
Figure 4. Dane Rudhyar, “Sunburst,” measures 20–28

Figure 5. Analysis of Rudhyar’s “Stars”

a. Voice-leading graph.

```
1-4  5-9  10-11  12-17  18-21  22-26  27-28  29  30  34-39
```

interval-2: E/F-sharp

b. Harmonic background: stacked-fifth harmonies.

```
A-section  a-section  B-section  A’-section
1-4  5-9  10-11  12-21  22-26  27-28  29-39
```

C/F# Harmony  D/G Harmony  C/F# Harm.  Inner Harmony (French 6th)  Outer Harmony  C/F# Harm.  C/F# Harmony + D/G Harmony

```
c. Derivation of harmonies from the seed-tone.

Seed-tone in m. 2

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extension by interval-2
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C/F# Harmony

Seed-tone in m. 1

```
transposition up by interval-2
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D/G Harmony

Inner Harmony

Outer Harmony
Figure 6. Analysis of Rudhyat's *Granites*, first movement

a. Middleground

```
| 1 | 2 | 3 | 6 | 7 | 8a | 8b | 8c | 9a | 9b | 9c | 10 | 12b |
```

Harmony I ______ Harmony II ______ Harmony III ______ Harmony IV ______ Harmony I

lead motive

voice ex.

head motive

voice ex.

interrupted

lead motive

b. Background

```
Harmony I ______ Harmony II ______ voice ex. Harmony III ______ Harmony IV ______ Harmony I
```

026s: F/A/B Bb/D/E C#F/G and G/B/C# Eb/G/A F/A/B

c. Fundamental structure

Ascending harmonic series on A

Intersection on B (C-flat)

Descending harmonic series on F

Figure 7. Derivation of the triads in measure 2 of the first movement of *Granites* from the overtone series on A

triads in mm. 2-3

common tones: E Db/C♯ G A

overtones on A
Appendix I. Score to "Stars"

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