MTO 16.3 Examples: Waters and Williams, Modeling Harmonies

(Note: audio, video, and other interactive examples are only available online)
http://www.mtosmt.org/issues/mto.10.16.3/mto.10.16.3.waters_williams.php

Example 1. Jazz harmonies from Diatonic, Acoustic, Octatonic, and Hexatonic Collections

Example 1a. Harmonies from C Diatonic Collection
(D0 = C, D, E, F, G, A, B, C)

Cmaj7, Cmaj7/9, C6/9 etc.
Fmaj7/9, Fmaj7/9/11
Dmin7/9, Dmin7/9/11
Gdom7/9, Gdom7/9/11
G7sus
Fmaj7/A

Example 1b. Harmonies from F Acoustic Collection
(A5 = F, G, A, B, C, D, Eb, F)
(Some harmonies include pcset [0148]: C, Eb, G, B or Eb, G, B, D)

F13(#11)
CminM7, CminM7/9, CminM7/9/11, CminM7/9/11/13,
Cmin6/9, etc.
Amin7/9[#5], Amin7/9/11[#5], Amin7/9/11/11[#5]
B7 altered (= G7b9, G7#11, G7º13)
Ebmaj7(#5), Ebmaj7/#11

Example 1c. Harmonies from D/Db Octatonic Collection
(Oct 2,3 = D, Eb, F, Gb, Ab, A, B, C, D)

D7b9, D13b9, D13b9/#11
F7b9, F13b9, F13b9/#11
Ab7b9, Ab13b9, Ab13b9/#11
B7(#5, B13b9, B13b9/#11
C0 maj7, C09(maj7), C011(maj7), C0º13(maj7)
Ebmaj7, Eb9(maj7), Eb11(maj7), Ebº13(maj7)
Gb0 maj7, Gb9(maj7), Gb11(maj7), Gbº13(maj7)
Ab0 maj7, Ab09(maj7), Ab11(maj7), Abº13(maj7)

Example 1d. [0148] Harmonies from B/C Hexatonic Collection
(H0 = B, C, Eb, E, G, Ab)

Bmaj7(#5), Ebmaj7(#5), Cmaj7(#5)
CminM7, EbminM7, AbminM7
Example 1e. Specific Hexatonic Harmonies in Post-1960s Compositions

- $A\text{maj7}\left(\frac{5}{9}\right)$: Wayne Shorter, “Vonetta”
- $A\text{maj7}\left(\frac{5}{9}\right)$: Chick Corea, “Song of the Wind”
- $E\text{minM7/A}$: Corea, “Song of the Wind”
- $A\text{maj7}\left(\frac{5}{9}\right)$: Shorter, “Iris”

Example 2. [0148] through the Hyper-Hexatonic System (Cohn, 1996)

Example 3. [0148] on the [7, 4, 3, E] Tonnetz
Example 4. Opening progression to “Vonetta”

Example 5a. $A_0$ and $A_1$ Acoustic Systems

Example 5b. $A_0$ Acoustic System ($= A_0, 2, 4, 6, 8, T$)
**Example 5c.** $A_1$ Acoustic System (= $A_1$, 3, 5, 7, 9, E)

![Diagram of A1 Acoustic System]

**Example 6.** $\text{Maj7}(\#5)$, $\text{minMaj 7th}$, and Chord 4 of “Vonetta” on $A_1$

![Diagram of Maj7(\#5), minMaj 7th, and Chord 4 of “Vonetta”]

**Example 7.** Hyper-Acoustic System and Chord 4 of “Vonetta”

![Diagram of Hyper-Acoustic System and Chord 4 of “Vonetta”]
Example 8. Three-dimensional tonal map (Diatonic and Acoustic Systems): Diatonic Harmonies

Example 9. Three-dimensional tonal map (Diatonic and Acoustic Systems): Acoustic Harmonies
Example 10. Three-dimensional tonal map: Diatonic and Acoustic Harmonies

Example 11a. Three-dimensional tonal map (Diatonic/Acoustic/Hexatonic/Octatonic Systems)
Example 11b. Opening Progression to “Vonetta” Plotted on Three-dimensional Tonal Map

Example 11c.