

MTO 12.4 Examples: Childs, Structural and Transformational Properties of All-Interval Tetrachords

(Note: audio, video, and other interactive examples are only available online)
<http://www.mtosmt.org/issues/mto.06.12.4/mto.06.12.4.childs.php>

Figure 1. Capuzzo's analysis of Carter: *Scrivo in Vento* (mm. 37–42)

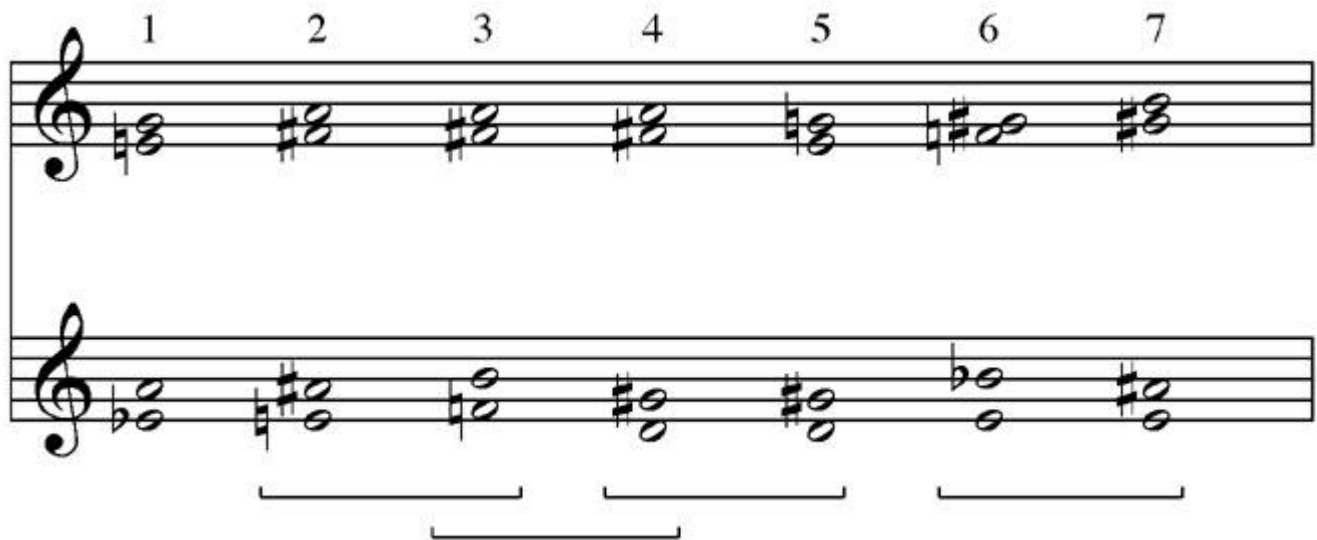


Figure 2. Modified reduction of Carter: *Scrivo in Vento* (mm. 37–42)



Figure 3. AITs as partitions on the set of interval classes

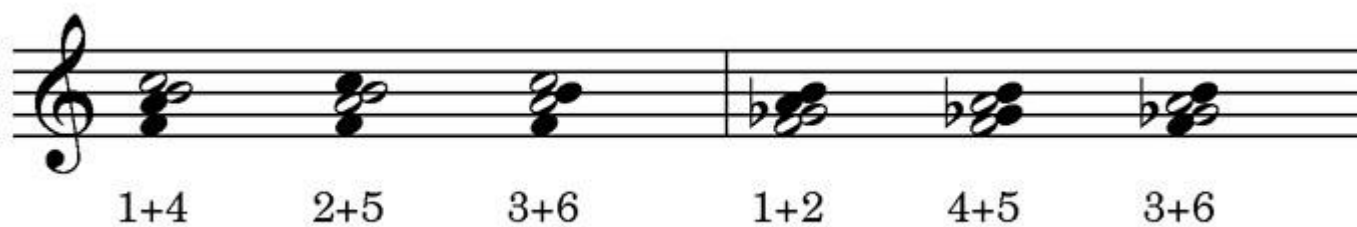


Figure 4. The four qualities of AIT



Figure 5. Transformational labels for multiple-common-tone relationships among AITs

The figure displays four musical staves, each representing a different AIT. Each staff shows a sequence of chords and their transformational labels. The transformations are categorized as 3T (3-note transformations), 1T (1-note transformations), 2T (2-note transformations), 4T (4-note transformations), 5T (5-note transformations), 3T3+/- (3-note triad transformations), 6T (6-note transformations), and 1X5, 2X4, 4X2, 5X1 (interval transformations).

Staff	3T6	1T3	2T3	4T3	5T3	3T3+	3T3-	6T3	1X5	2X4	4X2	5X1	
1	F+	B+	D-	F-	B-	G#-	F7	B7	D7	F±7	D±7	G#±7	B±7
2	F-	B-	Ab+	F+	B+	D+	Ab±7	D±7	F±7	D7	F7	B7	Ab7
3	F7	B7	F±7	Ab±7	D±7	B±7	B+	F+	Ab+	D-	B-	F-	G#-
4	F±7	B±7	F7	D7	Ab7	B7	G#-	D-	F-	B+	D+	Ab+	F+

Transformational labels for 3T1, 3T5, 6T1, 3T2, 3T4, 6T2 are also provided for each staff.

Figure 6. Examples of transformations performed on F7

(a) Possible transpositions by 3 half-steps: $1T3$ turns F7 into F \pm 7

(b) Possible ic4 dyads for exchange with ic2: $2X4$ turns F7 into B-

Figure 7. Reduction of Carter: *Scrivo in Vento* (mm. 37–42)

1 2 3 4 5 6 7

A7 F $\sharp\pm$ 7 B7 D+ G \sharp 7 F \pm 7 D+ E \pm 7 B \flat 7 G \pm 7 E+ C \sharp 7

A7 $\xrightarrow{4T3}$ F $\sharp\pm$ 7 $\xrightarrow{6T1}$ B7 $\xrightarrow{6T3}$ D+ $\xrightarrow{3T3-}$ G \sharp 7 $\xrightarrow{4T3}$ F \pm 7 $\xrightarrow{2X4}$ D+ $\xrightarrow{3T2}$ E \pm 7 $\xrightarrow{5T3}$ B \flat 7 $\xrightarrow{4T3}$ G \pm 7 $\xrightarrow{2X4}$ E+ $\xrightarrow{6T3}$ C \sharp 7

Figure 8. Excerpt from Carter: *Shard* (mm. 56–57)

G+ D \sharp - F7 A \flat 7

D $\sharp\pm$ 7 C \pm 7 B+ D7

G+ $\xrightarrow{3T4}$ D $\sharp\pm$ 7 $\xrightarrow{6T3}$ D \sharp - $\xrightarrow{3T3-}$ C \pm 7 $\xrightarrow{6T1}$ F7 $\xrightarrow{3T3+}$ B+ $\xrightarrow{6T3}$ A \flat 7 $\xrightarrow{3T6}$ D7

Figure 9. Excerpt from Carter: *Shard* (mm. 48–50)

$C^+ \xrightarrow{4T3} F\#^- \xrightarrow{3T2} C\#7$
 $F7 \xrightarrow{6T1} C\pm 7 \xrightarrow{5T3} F\#7 \xrightarrow{4X2} F\#^- \xrightarrow{5T3} D\#+$
 $E7$

Figure 10. Reduction of Carter: *Scrivo in Vento* (mm. 1–17, 21–36)

$D\pm 7 \xrightarrow{3T3-} B^- \xrightarrow{3T2} F\#7$
 $A\pm 7 \xrightarrow{5X1} A^+ \xrightarrow{3T5} G\#^- \xrightarrow{3T3-} F\pm 7 \xrightarrow{3T3-} D^- \xrightarrow{3T2} A7$

Figure 11. Excerpt from Carter: *Scrivo in Vento* (mm. 63–66)

The musical score consists of two staves. The first staff contains five measures with chords C#7, C±7, C±7, Eb7, and C7. The second staff contains six measures with chords E+, F±7, F±7, G#±7, Bb+, and D-. Fingerings (3, 6, 3) are indicated above notes in the first staff.

$$\begin{aligned}
 & C\sharp 7 \xrightarrow{3T4} C^- \xrightarrow{6T3} C\pm 7 \xrightarrow{3T1} E7 \xrightarrow{3T1} C\pm 7 \xrightarrow{1T3} C7 \\
 & E\flat 7 \xrightarrow{1X5} C^- \xrightarrow{2X4} C7 \xrightarrow{3T1} G\sharp\pm 7 \xrightarrow{6T2} E^+ \xrightarrow{3T6} B\flat^+ \\
 & F\pm 7 \xrightarrow{3T3^-} D^- \xrightarrow{3T3^+} F\pm 7
 \end{aligned}$$