



MTO 17.2 Examples: Iverson, Creating Space

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

<http://www.mtosmt.org/issues/mto.11.17.2/mto.11.17.2.iverson.php>

Figure 1a. Summary of Bregman's factors influencing simultaneous integration

	Favor integration—single stream	Oppose integration—multiple streams
Frequency	Frequency close or similar enough to fuse partials	Frequencies quite distant or acoustically unrelated
Timbre	Similar timbre; similar spectral peaks in overtone series; likely originated from the same source	Different timbres; accidental mixture possible due to different spectral peaks in overtone series
Synchrony	Synchronous on-sets and off-sets	Asynchronous on-sets and off-sets

Example 1. *Fourth Symphony, IV*, measures 2-6, rehearsal no. 1. Simultaneous factors in scene analysis.

The musical score shows a complex rhythmic texture in the percussion section. The Snare Drum part features a series of eighth-note patterns with dynamics ranging from *pp* to *f*. The Cymbal and Bass Drum parts provide a steady accompaniment. The Gong part has a few prominent notes. The Cello and Bass parts are more melodic, with the Bass part including performance instructions such as "one pizz., one arco" and "Add by twos gradually". The score is in 6/8 time and features a key signature of one flat.

Figure 1b. Summary of Bregman’s factors influencing sequential integration

	Favor integration—single stream	Oppose integration—multiple streams
Frequency	Frequency quite close (perhaps < P4)	Frequency diverges widely and/or quickly
Speed of succession	Slow succession of pitches encourages a single integrated stream	Faster succession encourages formation of two or more independent streams
Timbre	Similar timbre; overtone series may have similar spectral peaks	Different timbre; overtone series may have unrelated spectral peaks
Spatial Clues	Acoustically similar sounds from similar spatial positions	Differently located sounds, especially if they are acoustically dissimilar

Example 2. *Fourth Symphony, II*, rehearsal no. 11. Sequential factors in scene analysis.

This musical score consists of three staves. The top staff is labeled 'Flute score' and contains a melodic line with eighth and sixteenth notes, some beamed together. The middle staff is labeled 'two streams' and shows a rhythmic pattern of eighth notes with stems pointing up and down. The bottom staff is labeled 'as heard' and contains a more complex melodic line with many beamed notes, similar to the flute score but with a different articulation.

Example 3. *Fourth Symphony, II*, rehearsal nos. 4-5. Violin melody vs. piano/low strings stream.

This musical score is divided into two sections, rehearsal 4 and rehearsal 5. Rehearsal 4 shows a Violin part with a melodic line and a Piano/Vc./Cb. part with a rhythmic stream of eighth notes. Rehearsal 5 shows a Violin part with a melodic line and a Piano/Vc./Cb. part with a rhythmic stream of eighth notes. The Piano/Vc./Cb. part in rehearsal 5 has a triplet of eighth notes.

Example 4. “Putnam’s Camp,” measures 27-29. Three separate but complementary streams.

Fl. "Massa"
Vln. "Putnam's Camp"
Tuba "Sepmer Fidelis"

Audio Example 4a

Audio Example 4b

Example 5. “Putnam’s Camp,” measures 34-36. “Yankee Doodle” normalized into one stream.

score
trumpet piccolo vlns.
B \flat : I C: I V B: I
reduction (as inferred by listener)
C: I V I

Example 6. *Fourth Symphony*, II, rehearsal no. 20-21. “Columbia, Gem of the Ocean” paraphrase.

"Columbia" paraphrase
Tpt. Pno. Trb.
"Columbia, Gem of the Ocean"

Example 7. *The Fourth of July*, measures 1-3. “Columbia” outside of the harmonic spectrum.

overtone series for F1

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

vln. (19) 13 14 19 17 15

vla. 5

vc. 3

cb. 2

Detailed description: This musical score shows the overtone series for the first fundamental (F1) in the upper staff, with notes numbered 1 through 20. Below it, the violin (vln.) part plays notes corresponding to overtones 19, 13, 14, 19, 17, and 15. The viola (vla.), violin (vc.), and cello (cb.) parts play notes corresponding to overtones 5, 3, and 2 respectively.

Example 8. *The Fourth of July*, measures 8-11. “Columbia” inside the harmonic spectrum.

overtone series for C1

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

strings

strings

quartal whole-tone 0 quintal whole-tone 0

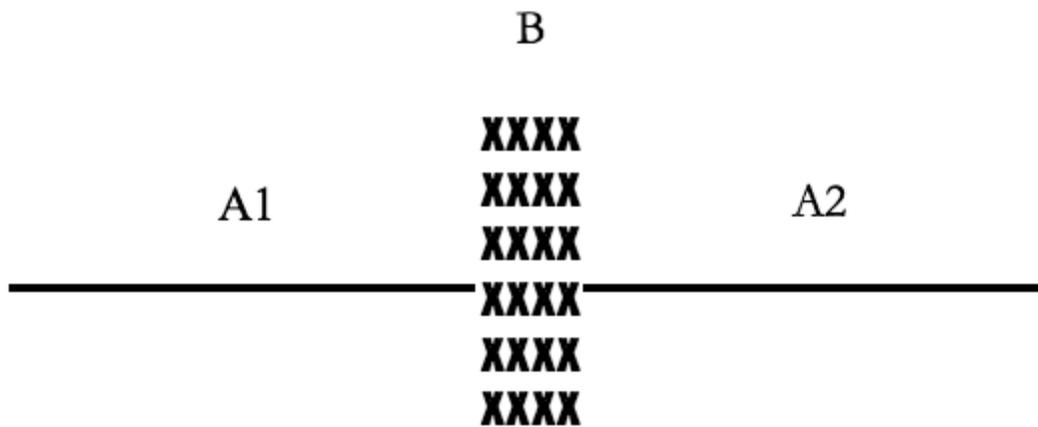
tuba 2 3 (5)

cb.

"Columbia" melody

Detailed description: This musical score shows the overtone series for the first fundamental (C1) in the upper staff, with notes numbered 1 through 20. Below it, the strings are divided into two parts. The upper strings play notes corresponding to overtones 17, 13, and 10, with additional notes 15, 20, (10), 5, 20, (10), 5. The lower strings play notes corresponding to overtones 7, 11, 9, 10, 12?, 13, 14, 6, 9, and 13, with additional notes (7). The tuba and cello (cb.) parts play notes corresponding to overtones 2, 3, and 5. The "Columbia" melody is shown in the bottom staff.

Figure 2. Continuity illusion as depicted in Bregman's Figure 3.22 (345).



Example 9. *The Fourth of July*, measures 74-79. "Old Home Day" continues behind masking blast.

The musical score consists of two staves. The top staff is labeled 'vlins.' and the bottom staff is labeled 'from "Old Home Day"'. The top staff has measures 74, 75, 76-77, 78, and 79. Measures 76-77 are obscured by a black rectangular box labeled "firecracker blast". The bottom staff has the lyrics: "A mi-nortunefrom Todd's ___operahouse comesto me as I crossthe square, there, ___".

Example 10. *Fourth Symphony, II*, rehearsal nos. 33-36. “Martyn” continues behind masking train noise.

The image shows a musical score for three parts: Vlns. (Violins), Vla. Pno. (Violoncello and Piano), and "Martyn". The Vlns. part has a treble clef and a key signature of one sharp (F#). The Vla. Pno. part has a bass clef and the same key signature. The "Martyn" part has a treble clef and a key signature of one flat (Bb). A shaded rectangular area labeled "train noise" covers measures 33-36 across all parts. In the Vlns. part, there is a "Beulah Land" quotation (R. 36) starting at measure 37. In the Vla. Pno. part, there is a "Martyn" quotation (R. 33) before the noise and a "Martyn" counterpoint (R. 36) starting at measure 37. The counterpoint includes Roman numerals I, vi, and V.

Figure 3. Ternary formal scheme for “Putnam’s Camp”, showing primary and secondary thematic materials in each section

A (measures 1-64)	B (measures 65-88)	A' (measures 89-163)
<p>“Putnam’s Camp”</p> <ul style="list-style-type: none"> • Putnam’s Camp melody (originally composed) • “British Grenadiers” • “Semper Fidelis” • “Massa’s in de Cold Ground” • “Battle Cry of Freedom” • “Yankee Doodle” • children’s tune (originally composed) 	<p>“Lady Liberty”</p> <ul style="list-style-type: none"> • Lady Liberty melody (originally composed) • “British Grenadiers” • marching drum cadence 	<p>“Putnam’s Camp”</p> <ul style="list-style-type: none"> • “British Grenadiers” • children’s tune • Putnam’s Camp melody

Figure 4. Ternary formal scheme for *The Fourth of July*, showing primary and secondary thematic materials in each section

A (measures 1-44)	B (measures 45-98)	A' (measures 99-123)
<p>“Columbia, Gem of the Ocean”</p> <ul style="list-style-type: none"> • “Columbia, Gem of the Ocean” • “Old Home Day” • cuckoo call • “Assembly” • “Marching Through Georgia” 	<p>“Old Home Day”</p> <ul style="list-style-type: none"> • “Old Home Day” • “Battle Hymn of the Republic” • “Battle Cry of Freedom” • “Reveille” • “Columbia, Gem of the Ocean” • “Tramp, Tramp, Tramp” 	<p>“Columbia, Gem of the Ocean”</p> <p>inaudible secondary material includes “Yankee Doodle,” “Assembly,” “Katy, Darling,” “Dixie,” “Garryowen,” “Irish Washerwomen,” “Marching Through Georgia,” and others (see Burkholder 1995, 378-79)</p>

Figure 5. Pablo Picasso, Violin, 1912. Pasted paper and charcoal.

