

MTO 21.4 Examples: Yust, Voice-Leading Transformation and Generative Theories of Tonal Structure

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

<http://www.mtosmt.org/issues/mto.15.21.4/mto.15.21.4.yust.php>

Example 1. Schenker's analysis of the second movement of Beethoven's op. 10 no. 3 (1979, Fig. 39/2), showing deep structural disjunctions between the bass and upper voice in mm. 1–7 and mm. 13–21

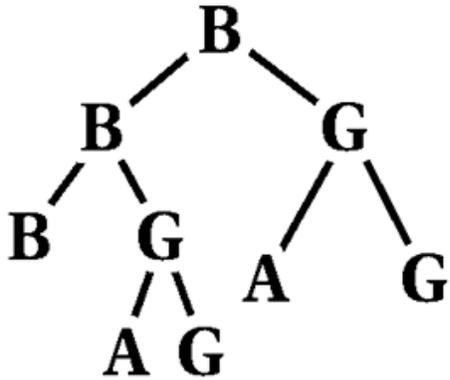
The image displays Schenker's analysis of the second movement of Beethoven's op. 10 no. 3. It consists of three staves. The top staff shows the original musical notation with structural groupings and annotations. The middle staff shows the analysis with various markings, including 'm.', '(ascent)', '(*)', '(mtn. inr. vc.)', and '(5 - 6, 5 - 6, 5)'. The bottom staff shows the harmonic structure with Roman numerals: (= I IV 5-6 #IV7 V- I) (=a: III V I). The analysis highlights deep structural disjunctions between the bass and upper voice in mm. 1–7 and mm. 13–21.

Example 2

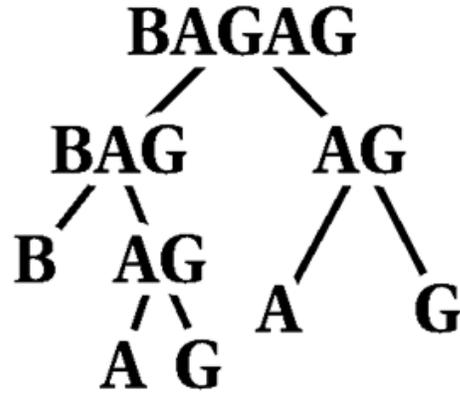
a. Embedded passing motions



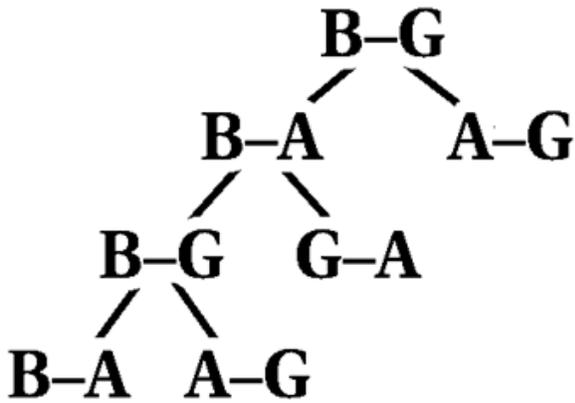
b. A representational hierarchy of events for 2a



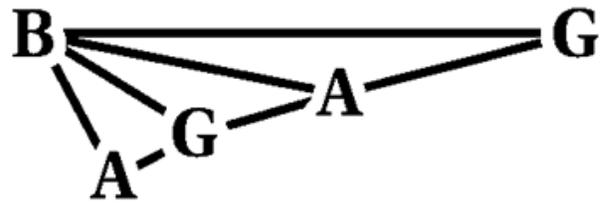
c. An inclusional hierarchy of events for 2a



d. A dynamic hierarchy for 2a

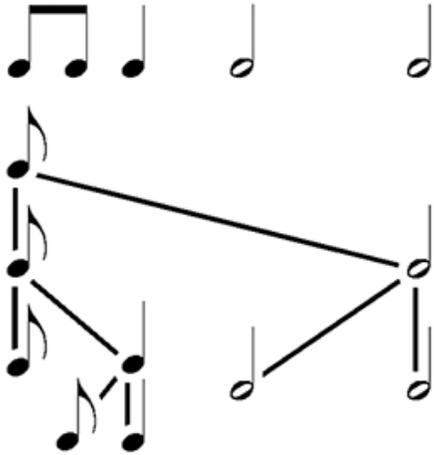


e. A different way of representing 2d

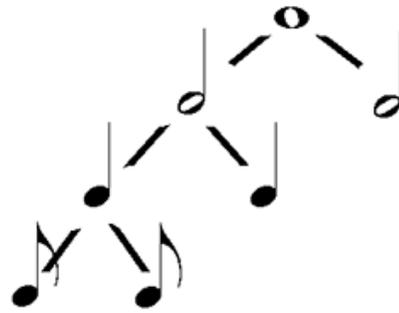


Example 3

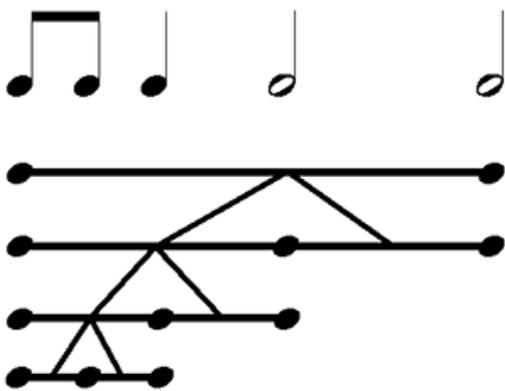
a. A representational hierarchy of timepoints, analogous to Example 2b



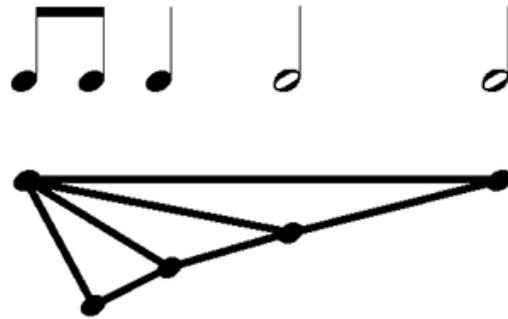
b. A containment hierarchy of timespans, analogous to Example 2d



c. A different way of representing 3b



d. A different way of representing 3b



Example 4

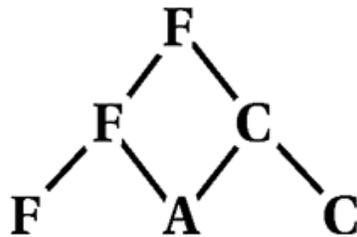
- a. The first two measures of a chorale setting of “Der Christus ist mein Leben” by J.S. Bach with Ler Dahl’s analysis (2001, 22–23)

The image shows a musical score for the first two measures of a chorale setting of "Der Christus ist mein Leben" by J.S. Bach. The score is in G minor, 4/4 time. The first measure is marked '1' and the second measure is marked '2'. Above the score, there is a diagram showing a large circle at the top right, with lines radiating downwards to smaller circles, representing a hierarchical structure of the music.

- b. A likely Schenkerian analysis of the first measure of the passage in 4b

The image shows a Schenkerian analysis of the first measure of the passage in 4b. The score shows the first measure of the passage in 4b, with a large circle above the staff indicating a Schenkerian analysis.

- c. A violation of hierarchy results from reading the analysis of the soprano line of 4b under the representational model



d. An ungrammatical Schenkerian analysis and the implied violation of dynamic hierarchy

The musical score shows a melodic line in the treble clef and a bass line in the bass clef. The treble line starts with a half note F, followed by quarter notes A, Bb, and C, all beamed together. The bass line starts with a half note A, followed by quarter notes G, A, and Bb, all beamed together. A bracket connects the first half note of the treble line (F) to the first half note of the bass line (A).

The Schenkerian analysis tree is as follows:

```

graph TD
    FC[F-C] --- FA[F-A]
    FC --- AC[A-C]
    AC --- AA[A-A]
    AC --- GB[G-Bb]
    AC --- BC[Bb-C]
    AA --- AG[A-G]
    AA --- GA[G-A]
    GB --- AB[A-Bb]
  
```

e. A hierarchy of motions describing the soprano of 4b and the MOP representation of this hierarchy

Initial Ascent: F-C

Arpeggiation: F-A, A-C

Passing: A-Bb, Bb-C

Repetition: A-A, A-Bb

Neighbor: A-G, G-A

The MOP (Motion of Part) representation is a graph with nodes F, A, G, A, Bb, and C. The nodes are arranged in a roughly triangular shape. The connections between nodes are labeled with motion types:

- Initial Ascent:** F to C (top edge)
- Arpeggiation:** F to A (left edge), A to C (right edge)
- Passing:** A to Bb (middle edge)
- Repetition:** A to A (self-loop)
- Neighbor:** A to G (bottom-left edge), G to A (bottom-right edge)

Example 5. Leonard Meyer's (1973, 103) analysis of the Menuetto from Mozart's Flute Quartet, K. 298 (a), and a network representation of the hierarchy (b)

Dashed lines are additional connections that complete the structure but are not explicitly indicated in Meyer's analysis

(a)

Menuetto

f antecedent consequent

(b)

Gap-fill

Linear

Gap-fill

Linear

Gap-fill

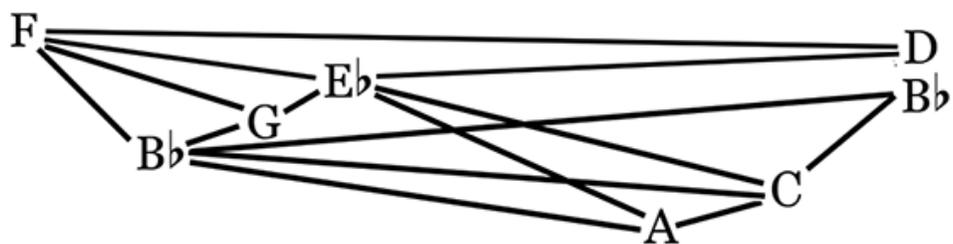
Linear

Example 6

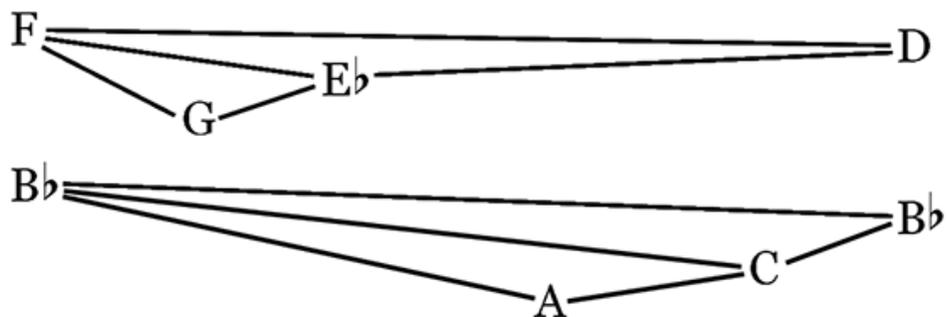
a. Mozart's Piano Sonata K. 333, first mvt., mm. 1-4

b. Skeletal analysis of the melody in 6b

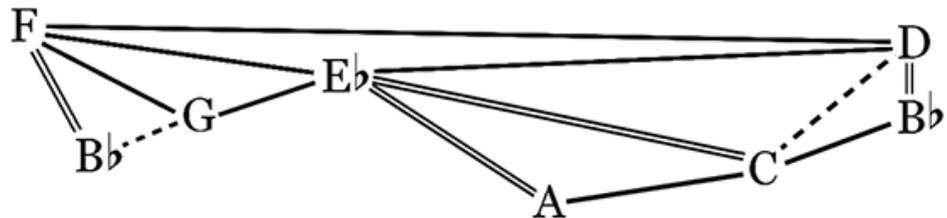
c. The melodic connections shown in **6b** taken as a whole are not hierarchical



d. When split into voices, the connections in **6b** make well-formed hierarchies



e. A single-voice hierarchy for **6b** includes intervals of unfolding, but excludes most of the inner-voice connections



Example 7

a. Menuett I from J.S. Bach's *Partita* for keyboard in B flat major, mm. 1–8

A musical score for the first eight measures of Menuett I from J.S. Bach's Partita for keyboard in B flat major. The score is written for two staves, treble and bass clef, in B-flat major. The melody in the treble clef consists of eighth and sixteenth notes, while the bass clef provides a simple harmonic accompaniment.

b. A reduction of 7a

A musical score showing a reduction of the first eight measures of Menuett I. The melody from the treble clef of 7a is reduced to a series of half notes, and the bass clef accompaniment is also reduced to a series of half notes. The reduction is written in a single system with two staves.

c. A counterpoint created by the intervals horizontalized in 7b

A musical score showing a counterpoint created by the intervals horizontalized in 7b. The score is written in a single system with one staff, showing a series of notes connected by a long horizontal line, representing the horizontalization of the intervals from the reduction in 7b.

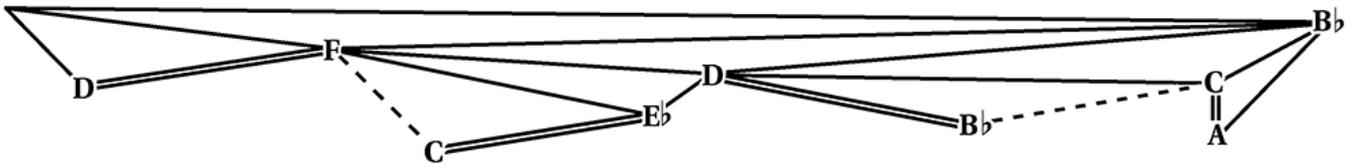
d. The hierarchies of the separate voices in 7c

A diagram showing the hierarchies of the separate voices in 7c. The diagram consists of two rows of notes connected by lines, forming a series of triangles. The top row notes are F, D, C, Bb. The bottom row notes are Eb, Bb, A. Lines connect F to Eb, D to Bb, and C to A. A long line connects F to Bb, and another long line connects Eb to A.

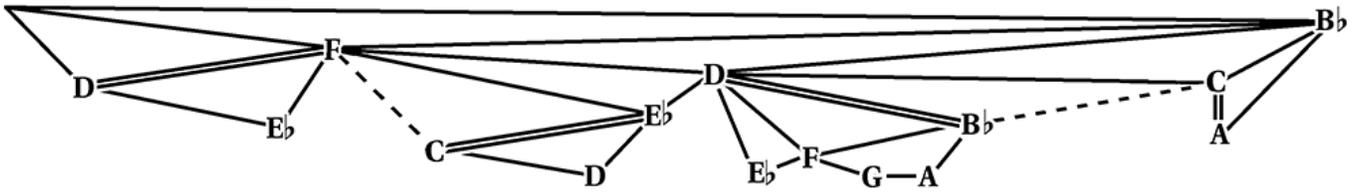
e. The first step in an unfolding transformation applied to 7d

A diagram showing the first step in an unfolding transformation applied to 7d. The diagram consists of two rows of notes connected by lines, forming a series of triangles. The top row notes are F, D, C, Bb. The bottom row notes are D, C, Bb, A. Lines connect F to D, D to C, C to Bb, and Bb to A. A long line connects F to Bb, and another long line connects D to A.

f. The completed unfolding transformation applied to 7d



g. Linear progressions added to 7f to complete the single-voice hierarchy for 7b

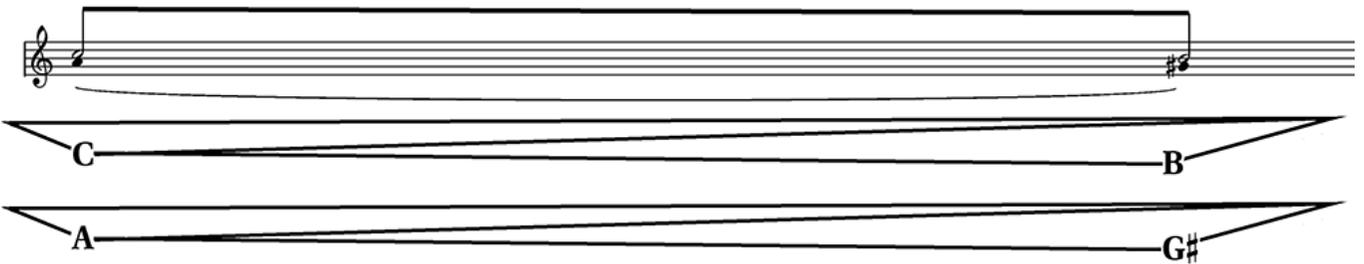


Example 8

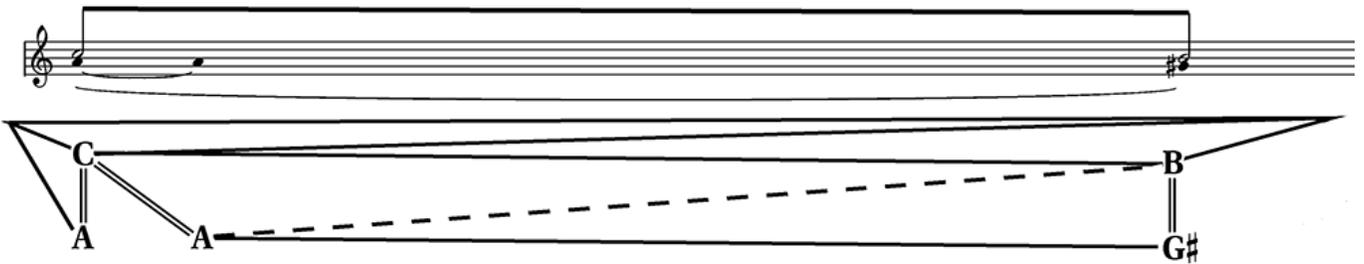
a. Burlesca, mm. 1–8, from J.S. Bach's Partita no. 3



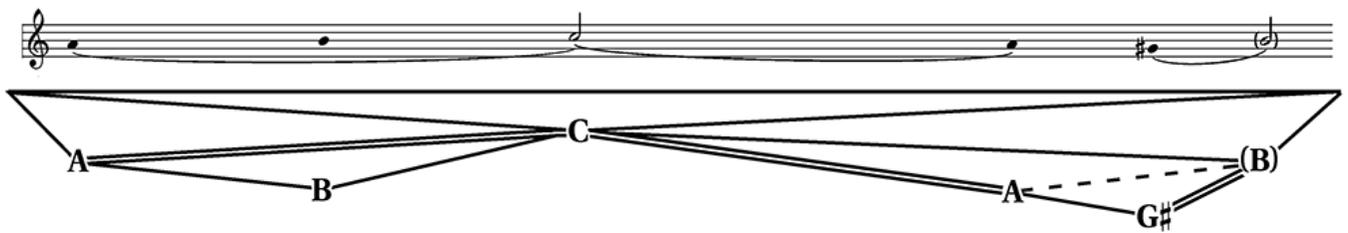
b. Generation of the upper voice of 8a begins with a simple counterpoint in parallel thirds



c. An unfolding transformation applied to the counterpoint in 8b, with one repeated note



d. The unfolded line of 8c with a linear progression added



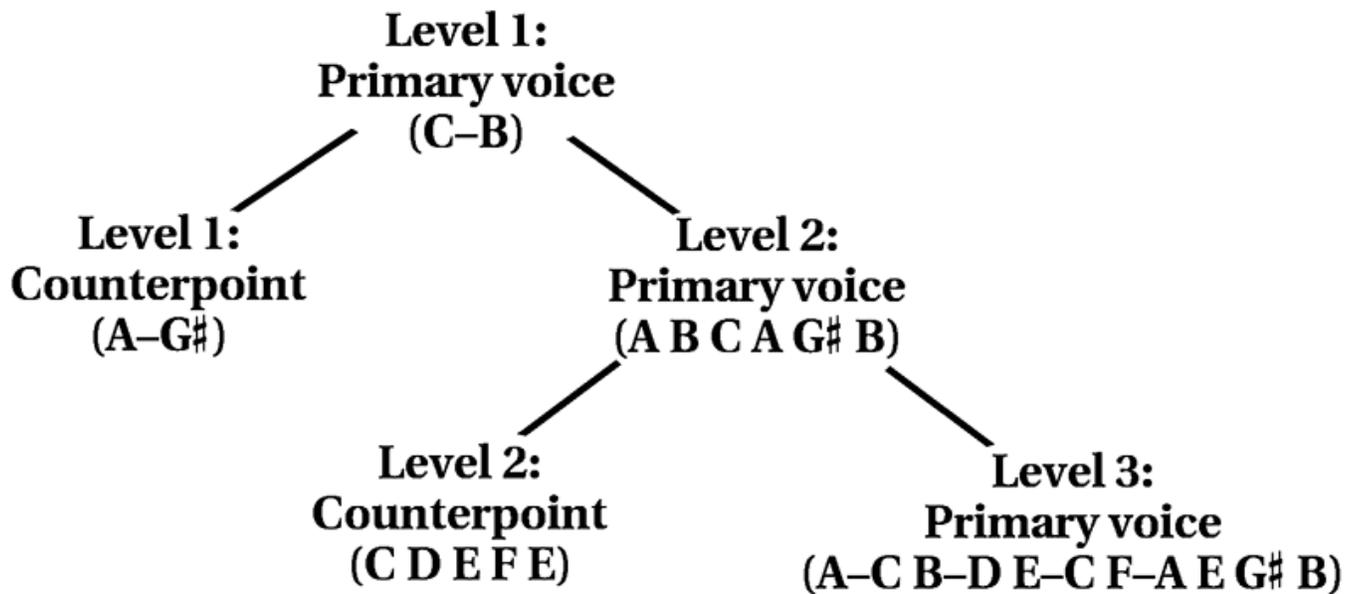
e. A voice added in counterpoint to 8d

Musical notation for example e shows a single voice with notes A, B, C, A, G#, B. Below it, a voice diagram shows two voices: the top voice (C-B) and the bottom voice (A-G#).

f. An unfolding transformation of 8e with passing tones added

Musical notation for example f shows a single voice with notes A, B, C, D, E, F, A, G#, B. Below it, a voice diagram shows two voices: the top voice (C-B) and the bottom voice (A-G#).

Example 9. The hierarchy of voices created by the transformations in Example 8



Example 10. mm. 1–8 of the Menuetto from Beethoven's Piano Sonata op. 22, third movement

The image shows a musical score for the first eight measures of the Menuetto from Beethoven's Piano Sonata op. 22, third movement. The score is written for piano in 3/4 time, with a key signature of one flat (B-flat major). The first system (measures 1-4) features a treble clef with a piano (*p*) dynamic and a bass clef with a steady eighth-note accompaniment. The second system (measures 5-8) features a treble clef with a crescendo (*cresc. - -*) dynamic and a bass clef with a steady eighth-note accompaniment. The piece concludes with a piano (*p*) dynamic in the final measure.

Example 11. Schenker's analysis of mm. 1–8 (*Free Composition*, fig. 82/2)

The image shows Schenker's analysis of the first eight measures of the Menuetto. The analysis is presented on a single staff with a treble clef and a key signature of one flat. A circled number (3) is placed above the first measure. The analysis uses thick black lines to represent the primary structure (Kern) and thinner lines for secondary structure. A dashed line indicates the underlying harmonic structure, showing the progression from the tonic to the dominant and back to the tonic.

Example 13

a. Mm. 9–16 of the Menuetto

Musical score for Example 13, part a, showing measures 9–16 of the Menuetto. The score is in 3/4 time, B-flat major, and consists of two systems of piano and bass staves. The first system shows measures 9–12 with dynamics *p* and *ff*. The second system shows measures 13–16 with dynamics *sf*, *decresc.*, and *p*.

b. A durational reduction and analysis

Musical score for Example 13, part b, showing a durational reduction and analysis of measures 9–16. The score is in 3/4 time, B-flat major, and consists of two staves. The top staff shows a durational reduction with notes and rests, and the bottom staff shows the original piano accompaniment.

Example 14. G–F resolutions in the coda, mm. 24–30

The musical score is written for piano in 3/4 time, key of B-flat major. It consists of two systems of music, each with a treble and bass clef staff. The first system (mm. 24-26) begins with a piano (*p*) dynamic. The right hand features a melodic line with a G4-F4 resolution in measure 25, indicated by a bracket labeled "Reg. trans.". The left hand provides a steady accompaniment. The second system (mm. 27-30) continues the melodic and accompanimental lines. A crescendo (*cresc.*) is marked with a dashed line starting in measure 27. A second "Reg. trans." label is placed above the right hand staff in measure 27, pointing to a G4-F4 resolution. The piece concludes with a final chord in measure 30.

Example 15.

- a. The derivation begins with the “chord of nature,” numbered as level 0. A voice-leading transformation in the upper voice leads to level 1, the *Ursatz*. After adding a secondary upper voice, a voice-leading transformation leads to level 2

Level 0: Level 1: Level 2:

The diagram illustrates the derivation of a musical structure through three levels.
Level 0: Shows a simple triad in the upper voice (D-C-B \flat) and a bass line (B \flat -F-B \flat).
Level 1: Shows the addition of a secondary upper voice, creating a more complex structure with notes D, C, B \flat , F, G, and B \flat .
Level 2: Shows further voice-leading transformations, including the addition of a new inner voice and the unfolding of the upper voice into a new structure with notes D, B \flat , F, G, C, and B \flat .

- b. At level 2 in the derivation there is a new arpeggiation in the upper voice (G-E \flat -C) before a new inner voice is added in counterpoint and combined with the upper voice through unfolding to create a new upper voice at level 3

Level 2: Level 3:

The diagram illustrates the derivation of a musical structure through three levels.
Level 2: Shows a new arpeggiation in the upper voice (G-E \flat -C) and the addition of a new inner voice.
Level 3: Shows the unfolding of the upper voice into a new structure with notes D, B \flat , F, G, C, and B \flat , and the addition of a new inner voice.

d. At level 4 the bass combines via unfolding with an inner voice

Level 4:

A musical score for Level 4, consisting of two staves. The top staff is in treble clef and the bottom staff is in bass clef. Both staves are in a key signature of two flats (B-flat and E-flat). The music features a complex melodic line in the treble staff and a more rhythmic, bass-oriented line in the bass staff. The bass staff includes some notes with a flat sign (B-flat and E-flat) and a double bar line.

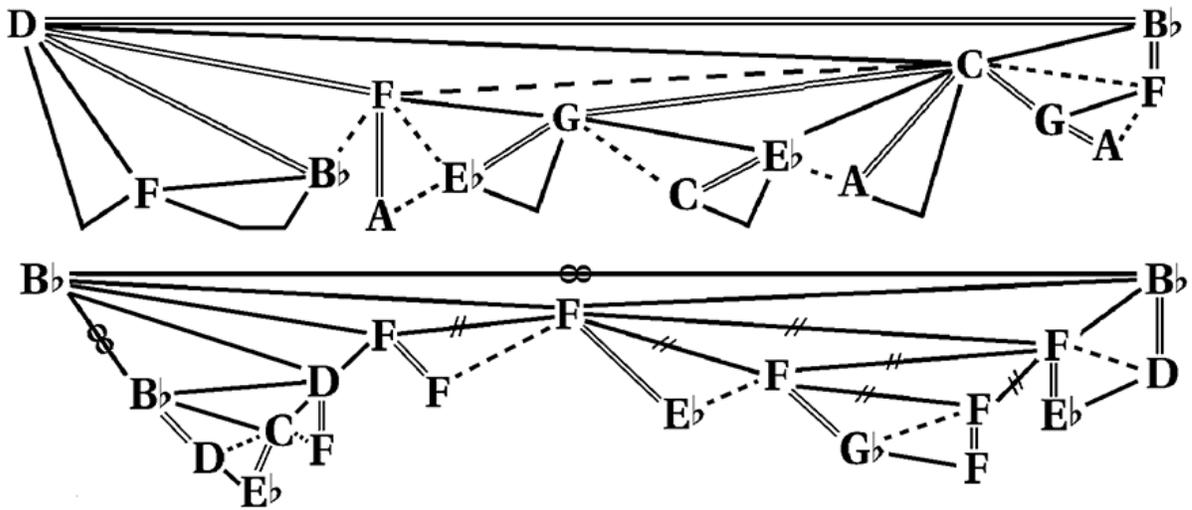
A harmonic diagram for the first staff of the musical score. It shows a series of chords and intervals connected by lines. The top line is labeled 'D' on the left and 'B \flat ' on the right. Below this, a series of chords and intervals are shown: F, B \flat , F, G, C, E \flat , A, G, A, F. Dashed lines connect some of these notes, indicating relationships between them. The diagram illustrates the unfolding of the bass line into an inner voice.

A harmonic diagram for the second staff of the musical score. It shows a series of chords and intervals connected by lines. The top line is labeled 'B \flat ' on the left and 'B \flat ' on the right. Below this, a series of chords and intervals are shown: B \flat , D, C, E \flat , F, F, F, E \flat , F, G \flat , F, F, E \flat , D. Dashed lines connect some of these notes, indicating relationships between them. The diagram illustrates the unfolding of the bass line into an inner voice.

e. The addition of diminutions brings level 4 to the musical surface, making this the foreground level. This example shows just the most significant of these diminutions.

(Note: this is the same level as 15(d) because they are related by diminution, not transformation)

Level 4:



Example 16. The hierarchy of voices involved in the transformations from 15b to 15f

