



MTO 16.1 Examples: Martin, Harmonic Progression in *Twine*

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

<http://www.mtosmt.org/issues/mto.10.16.1/mto.10.16.1.martin.php>

Example 1. *Twine*, measures 1–11

Chord 1

Scorevole

mf

p *mp* *p* *mp*

p *mp* *mf* *pp* *mp*

Chord 3

Chord 4

Chord 5

f *mf* *p* *pp*

Chord 6

Chord 7

Chord 8

mp *d* *mf* *mp*

poco f *f*

molto f

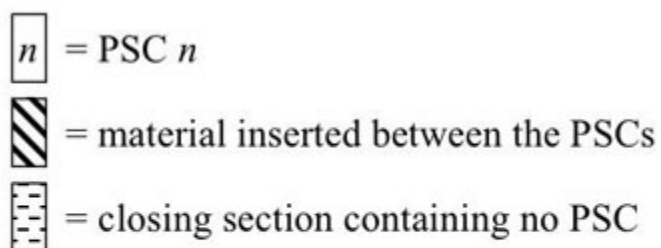
Example 2. The main progression of eight PSCs

PSC 1 PSC 2 PSC 3 PSC 4 PSC 5 PSC 6 PSC 7 PSC 8

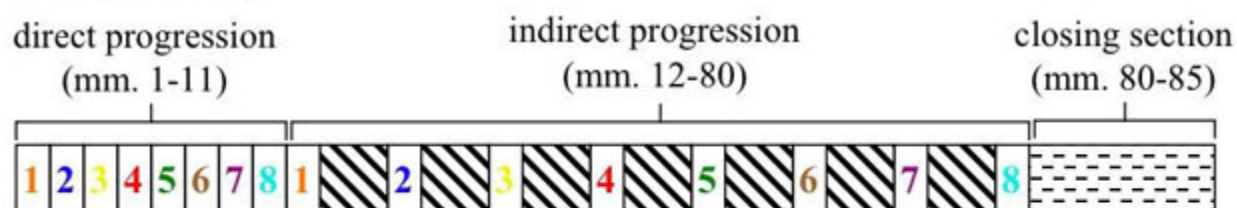
Figure 1. Pitch properties of *Twine*'s eight PSCs

PSC	low pitch	high pitch	axis	set class
PSC 1	D2	F6	C4/G4	(012346)
PSC 2	E1	D#5	B2/G#3	(012367)
PSC 3	C4	G6	D#5/E5	(013469)
PSC 4	A4	C8	E6/F6	(012578)
PSC 5	Eb2	Bb5	G#3/F4	(012578)
PSC 6	Eb2	D5	G#3/A3	(023468)
PSC 7	A0	Bb4	G2/C3	(012468)
PSC 8	C#2	E6	C4/F4	(012346)

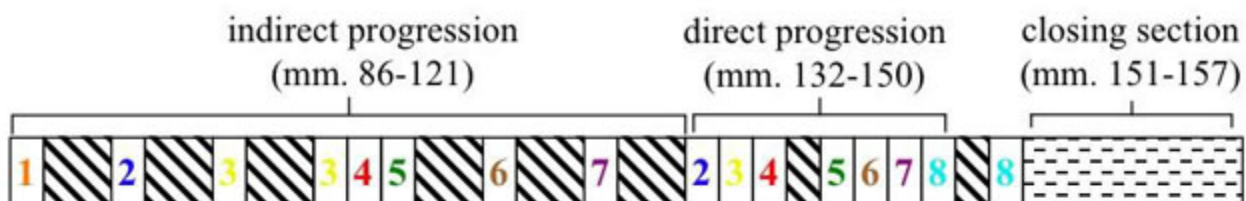
Figure 2. The overall harmonic framework of *Twine*



Part 1 (mm. 1-85)



Part 2 (mm. 86-157)



Codetta (mm. 158-160)



Figure 3. An illustration of Lindberg's expansion of chaconne using a sequence of chord properties

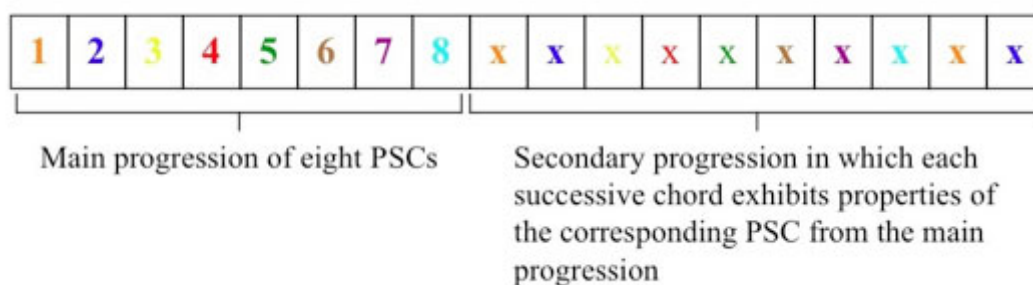


Figure 4. An illustration of Lindberg's expansion of chaconne using the interpolation technique

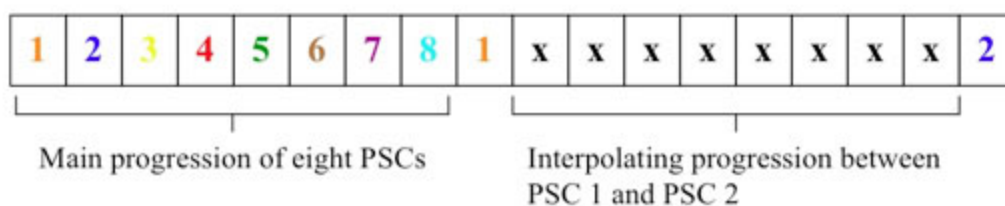


Figure 5. An illustration of Lindberg's expansion of chaconne using the "freeze" technique

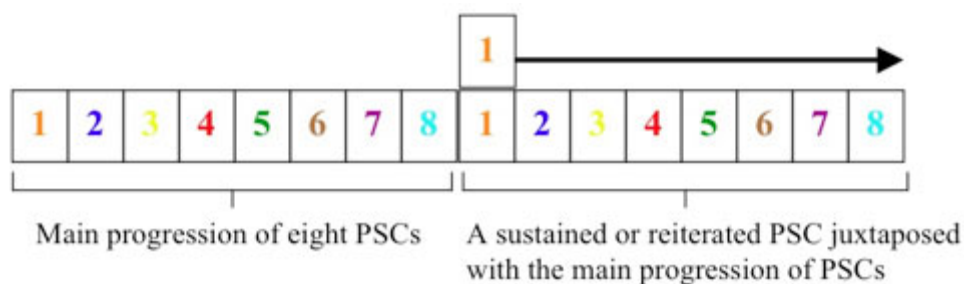


Figure 6. The harmonic structure of *Twine*, measures 1–80, showing the direct progression of eight PSCs and the eight secondary progressions that constitute the indirect progression

PSC n = Primary structural chord n

P n = Position n containing a new 12-tone chord exhibiting properties of PSC n

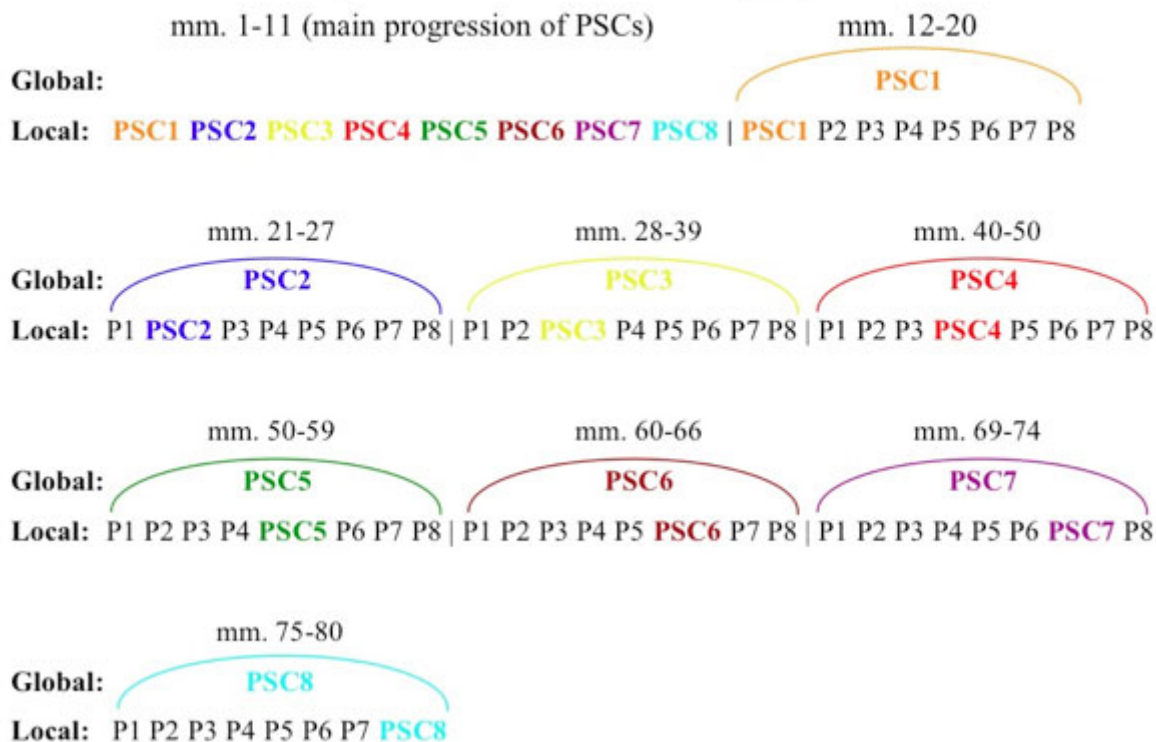


Figure 7. Register contour of the main progression of PSCs

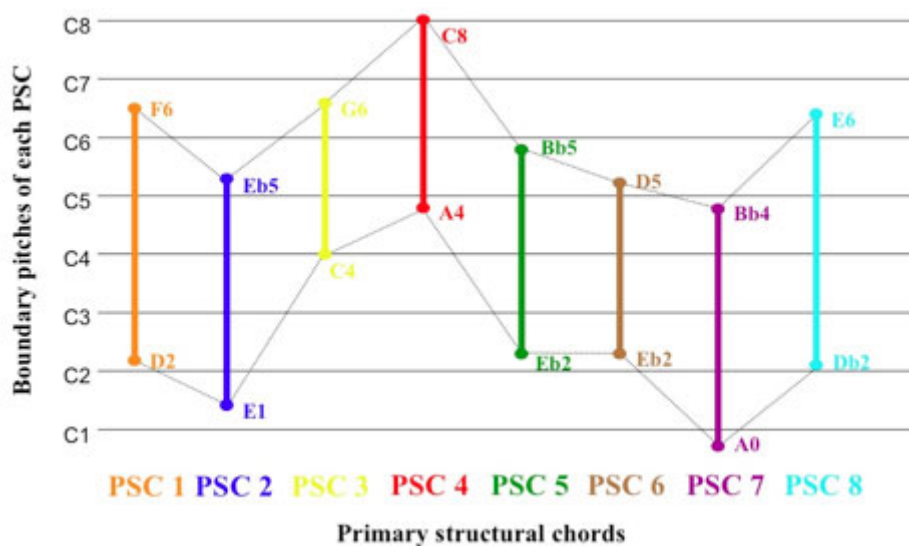
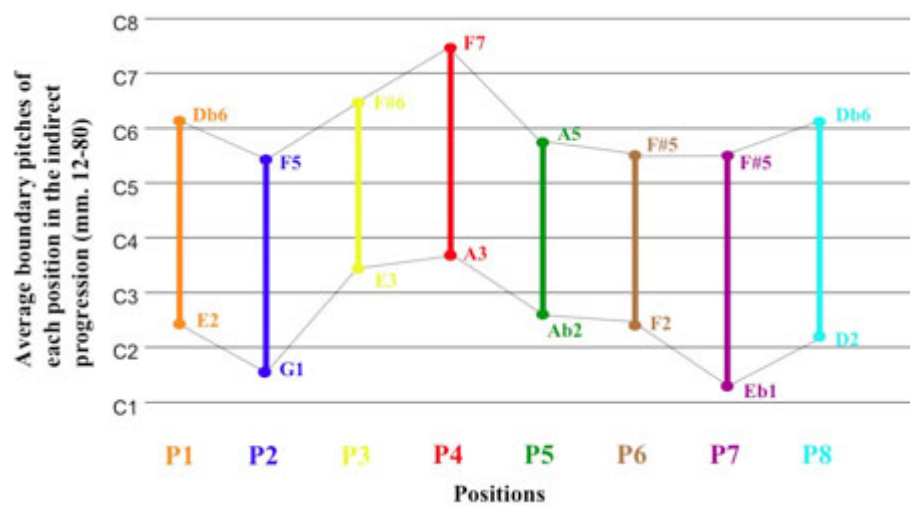


Figure 8. Register contour illustrating the average high and low pitches residing in each position of part 1's indirect progression



Example 3. *Twine*, measures 60–68

The musical score for measures 60–68 of *Twine* is presented in two systems. The first system (measures 60–64) is divided into four positions, and the second system (measures 65–68) is divided into four positions. Each position is indicated by a bracket and a label.

Position 1 (measures 60–61): Indicated by an orange bracket. Measure 60 contains a fingering (012346) and a measure rest. Measure 61 contains a fingering (012346).

Position 2 (measures 62–63): Indicated by a blue bracket. Measure 62 contains a fingering (012367) and a measure rest. Measure 63 contains a fingering (012367) and a measure rest.

Position 3 (measures 64–65): Indicated by a yellow bracket. Measure 64 contains a fingering (013469) and a measure rest. Measure 65 contains a fingering (013469) and a measure rest.

Position 4 (measures 66–67): Indicated by a red bracket. Measure 66 contains a fingering (013469) and a measure rest. Measure 67 contains a fingering (013469) and a measure rest.

Position 5 (measures 68–69): Indicated by a green bracket. Measure 68 contains a fingering (012578) and a measure rest. Measure 69 contains a fingering (012578) and a measure rest.

Position 6 (measures 70–71): Indicated by a brown bracket. Measure 70 contains a fingering (012578) and a measure rest. Measure 71 contains a fingering (012578) and a measure rest.

Position 7 (measures 72–73): Indicated by a purple bracket. Measure 72 contains a fingering (023468) and a measure rest. Measure 73 contains a fingering (023468) and a measure rest.

Position 8 (measures 74–75): Indicated by a cyan bracket. Measure 74 contains a fingering (012468) and a measure rest. Measure 75 contains a fingering (012468) and a measure rest.

The score includes various musical notations such as notes, rests, and dynamic markings. The first system includes markings like *p*, *molto f*, and *mp*. The second system includes markings like *p*, *molto f*, and *mp*. The score is written in 3/8 time and features a key signature of one sharp (F#).

Example 4. An illustration showing the common tones shared between each secondary chord and its corresponding PSC in measures 50–59 (indicated by numbers above the note heads)

Position 1, mm. 50-51



Position 2, mm. 51-d.b. 52



Position 3, mm. 52-53 b.1



Position 4, mm. 53 b. 2-54



Position 5, mm. 54-55: PSC 5



Position 6, mm. 56-57



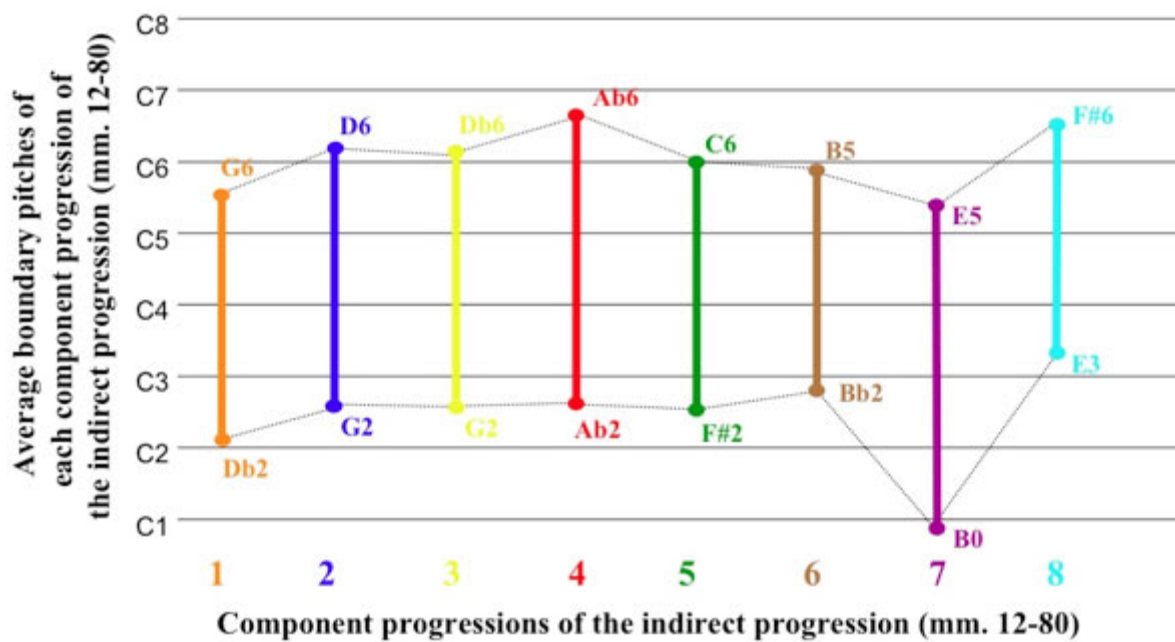
Position 7, mm. 57-58



Position 8, mm. 59



Figure 9. A register contour derived by averaging the high and low boundary pitches from all chords in each of the eight positions in part 1's indirect progression, measures 12–80



Example 5. An illustration showing the common tones shared between each secondary chord and its corresponding PSC (indicated by boxed note head and the numbers above the note heads) and all of the secondary chords and PSC 6 (indicated by the numbers below the note heads) in measures 60–68

Position 1, m. 60

Position 2, mm. 61-62

Position 3, mm. 62-63

Position 4, m. 64

Position 5, m. 65

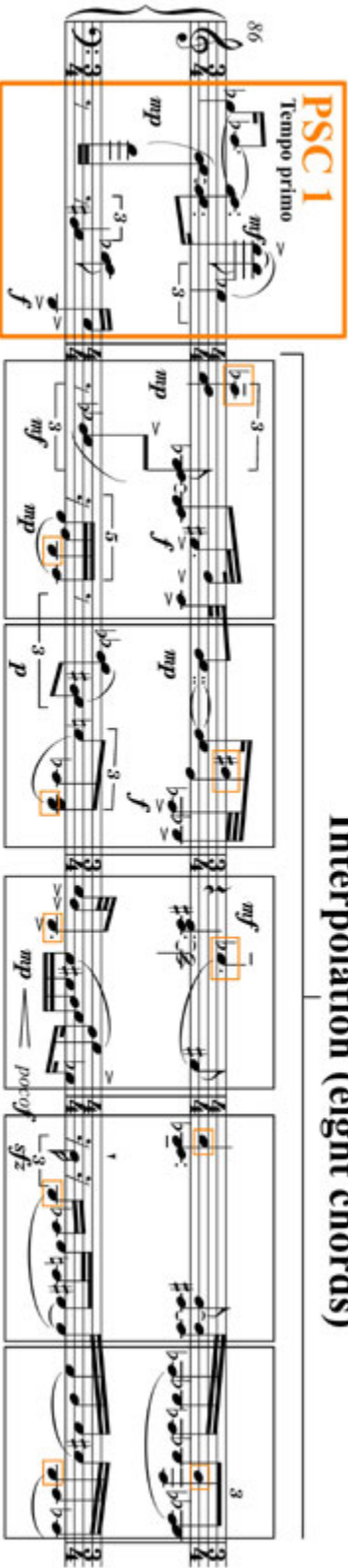
Position 6, m. 66: PSC 6

Position 7, m. 67

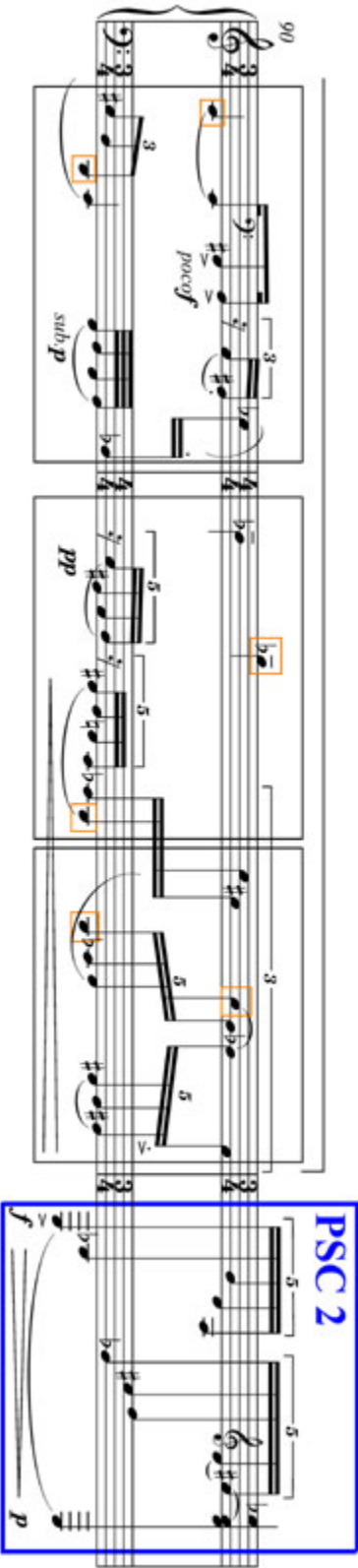
Position 8, m. 68

Example 6. *Twine*, measures 86–92

PSC 1
Tempo primo



Interpolation (eight chords)



PSC 2

Example 7. An illustration showing the interpolating progression in measures 86–91

The image displays a musical score for measures 86 through 91, illustrating an interpolating progression. The score is written on nine staves, each with a bass clef and a key signature of one flat (B-flat). The measures are labeled on the left: PSC 1, m. 86; m. 87 b. 1-2; m. 87 b. 3-4; m. 88; m. 89 b. 1-2; m. 89 b. 3-4; m. 90; m. 91 b. 1-2; and m. 91 b. 3-4. The notation includes various musical symbols such as notes, rests, and accidentals. Vertical orange lines connect specific notes across the staves, highlighting the interpolating progression. The progression starts in measure 86 and continues through measure 91, showing a series of chromatic and diatonic shifts in the bass line.

Example 8. *Twine*, measures 104–111

The musical score is divided into two systems, each containing piano and PSC (Piano-Specific Chord) parts. The piano part is written in treble and bass staves, while the PSC part is written in a single staff.

System 1 (Measures 104–106):

- Piano Part:** Measures 104–106. Measure 104 starts with a forte (*f*) dynamic and a *sost. ped.* (sostenuto pedal) marking. Measure 105 includes the instruction *più mosso e leggero* (faster and lighter). Measure 106 ends with a *mp* (mezzo-piano) dynamic.
- PSC Part:** Measures 104–106. Measure 104 is labeled **PSC 3**. Measure 105 is labeled **PSC 3 + 1**. Measure 106 is labeled **PSC 3 + 2**.

System 2 (Measures 107–111):

- Piano Part:** Measures 107–111. Measure 107 starts with a *pp* (pianissimo) dynamic. Measure 108 includes a *p* (piano) dynamic. Measure 109 includes a *mp* (mezzo-piano) dynamic. Measure 110 includes a *poco f* (poco forte) dynamic. Measure 111 ends with a *pp* (pianissimo) dynamic.
- PSC Part:** Measures 107–111. Measure 107 is labeled **PSC 3 + 5**. Measure 108 is labeled **PSC 3 + 6**. Measure 109 is labeled **PSC 3 + 7**. Measure 110 is labeled **PSC 3 + 8**. Measure 111 is labeled **PSC 3**.

Additional annotations include *5* (quintuplet), *3* (triplet), and *8^{va}* (octave) markings throughout the score.

Example 9. An illustration showing Lindberg’s use of the freeze technique in measures 104–110

Six pitches from PSC 3 that are struck in m. 104 and sustained through m. 110.

A musical staff in treble clef showing six notes: B4, C#4, D4, E4, F#4, and G4. These notes are grouped together in a yellow box, indicating they are sustained throughout the measures shown.

Position: 1 2 3 4 5 6 7 8
PSCs: 3 + 1 3 + 2 3 3 + 4 3 + 5 3 + 6 3 + 7 3 + 8

Chord progression from mm. 105 - 110.

A musical staff in treble clef showing a chord progression from measures 105 to 110. The staff is divided into eight measures, each with a different chord. The chords are: 1. B4, C#4, D4, E4, F#4, G4 (yellow box); 2. B4, C#4, D4, E4, F#4, G4 (yellow box); 3. B4, C#4, D4, E4, F#4, G4 (yellow box); 4. B4, C#4, D4, E4, F#4, G4 (yellow box); 5. B4, C#4, D4, E4, F#4, G4 (yellow box); 6. B4, C#4, D4, E4, F#4, G4 (yellow box); 7. B4, C#4, D4, E4, F#4, G4 (yellow box); 8. B4, C#4, D4, E4, F#4, G4 (yellow box). The notes are grouped together in a yellow box, indicating they are sustained throughout the measures shown.

Figure 10. The formal structure of part 2, measures 86–160

\boxed{n} = primary structural chord n

Pn = position n

