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MTO 22.2 Examples: Reenan and Bass, Types and Applications of $P_{3,0}$ Seventh-Chord Transformations

(Note: audio, video, and other interactive examples are only available online)
http://www.mtosmt.org/issues/mto.16.22.2/mto.16.22.2.reenan_bass.php

Table 1. Types of Parallel $P_{3,0}$ Transformations

Antecedent Seventh Chord (example)	**Consequent Seventh Chord (example)**
Major Seventh (C^{M}7)	Half-Diminished Seventh at unison (C^{ø}7) Dominant Seventh at m2 above (C#7)
Dominant Seventh (C7)	Diminished Seventh at unison (C°7) Major Seventh at m2 below (B^{M}7) Minor Seventh at M2 below (B♭^{m}7) and m2 above (C#^{m}7) Augmented Dominant Seventh at m2 below (B7♯5) French Sixth at P5 below (G7$^{♭}$5) and m2 above (C#7$^{♭}$5)
Minor Seventh (C^{m}7)	Half-Diminished Seventh at M2 below (B♭^{ø}7) and m2 above (C#^{ø}7) Dominant Seventh at m2 below (B7) and M2 above (D7)
Half-Diminished Seventh (C^{ø}7)	Diminished Seventh at m2 above (C#°7) Major Seventh at unison (C^{M}7) Minor Seventh at m2 below (B^{m}7) and M2 above (D^{m}7) Augmented Dominant Seventh at m3 above (E♭7♯5) French Sixth at P5 (F7$^{♭}$5) and m2 below (B7$^{♭}$5)
Diminished Seventh (C°7)	Dominant Seventh at unison (C7), m3 (E♭7), tritone (F#7), and M6 above (A7) Half-Diminished Seventh at m2 (B^{ø}7), M3 (A♭^{ø}7), P5 (F^{ø}7), and m7 below (D^{ø}7)
Augmented Dominant Seventh (C7♯5)	Dominant Seventh at m2 above (C#7) Half-Diminished Seventh at m3 below (A^{ø}7)
French Augmented Sixth (C7$^{♭}$5)	Dominant seventh at m2 (B7) and P5 below (F7) Half-Diminished Seventh at m2 (C#^{ø}7) and P5 above (G^{ø}7)

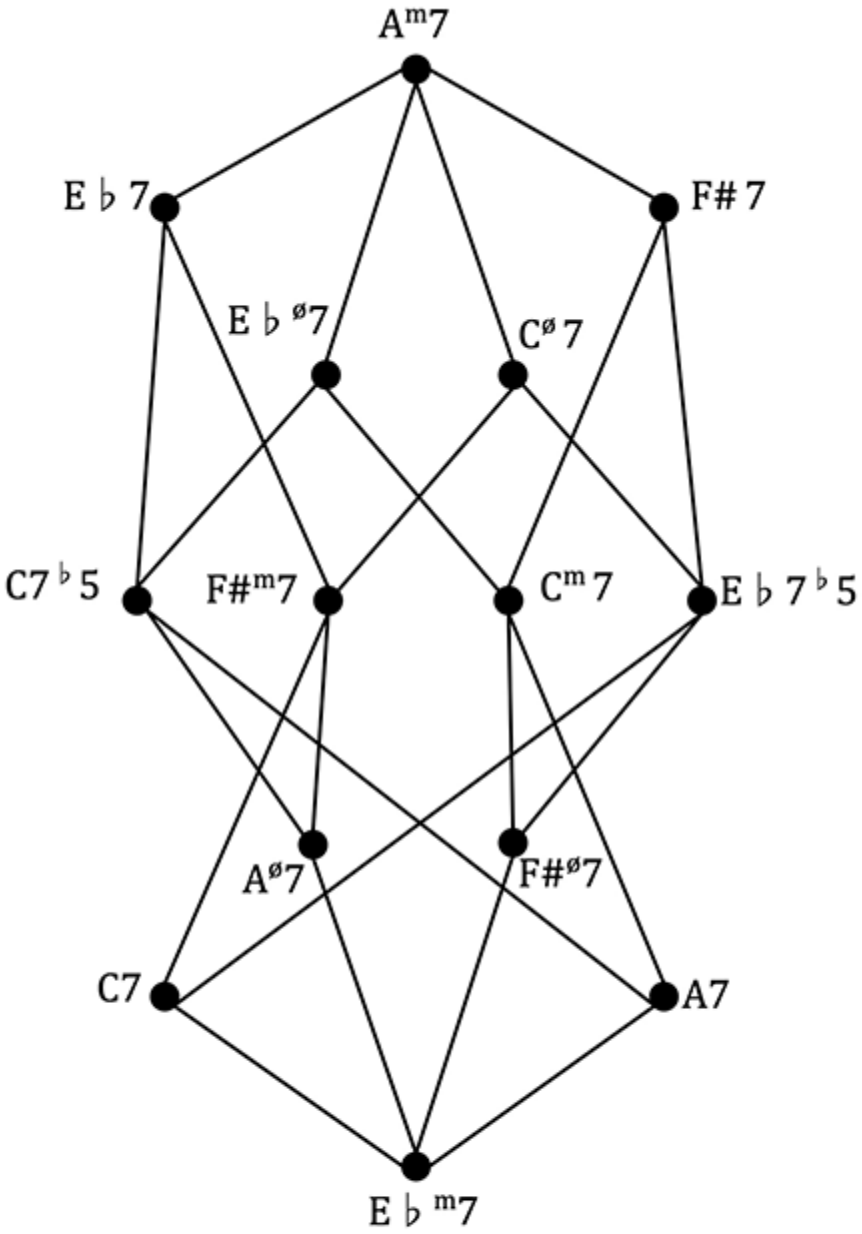
Table 2. Types of Contrary $P_{3,0}$ Transformations

Antecedent Seventh Chord (example)	**Consequent Seventh Chord (example)**
Major Seventh ($C^{M}7$)	Half-Diminished Seventh at M2 ($B\flat^{\emptyset}7$) and P4 below ($G^{\emptyset}7$) Dominant Seventh at m3 ($E\flat7$) and tritone above (F#7)
Dominant Seventh (C7)	Major Seventh at m3 ($A^{M}7$) and tritone below ($F\#^{M}7$) Minor Seventh at ($E\flat^{m}7$) and tritone above ($F\#^{m}7$) Augmented Dominant Seventh at m3 above ($E\flat7^{\#}5$) and below ($A7^{\#}5$) French Sixth at m3 above ($E\flat7^{\flat}5$) and below ($A7^{\flat}5$)
Minor Seventh ($C^{m}7$)	Half-Diminished Seventh at m3 ($E\flat^{\emptyset}7$) and tritone above ($F\#^{\emptyset}7$) Dominant Seventh at m3 (A7) and tritone below (F#7)
Half-Diminished Seventh ($C^{\emptyset}7$)	Minor Seventh at m3 ($A^{m}7$) and tritone below ($F\#^{m}7$) Major Seventh at M2 ($D^{M}7$) and P4 above ($G^{M}7$) Augmented Dominant Seventh at m2 ($B7^{\#}5$) and P5 below ($F7^{\#}5$) French Sixth at m3 above ($E\flat7^{\flat}5$) and below ($A7^{\flat}5$)
Diminished Seventh ($C^{\circ}7$)	None
Augmented Dominant Seventh ($C7^{\#}5$)	Dominant Seventh at m3 above ($E\flat7$) and below (A7) Half-Diminished Seventh at m2 ($C\#^{\emptyset}7$) and P5 above ($G^{\emptyset}7$)
French Augmented Sixth ($C7^{\flat}5$)	Dominant Seventh at m3 above ($E\flat7$) and below (A7) Half-Diminished Seventh at m3 above ($E\flat^{\emptyset}7$) and below ($A^{\emptyset}7$)

Table 3. $P_{3,0}$ Notation

$P_{3,0}$ Type	**Examples**
$P_{3,0}$ p↑(r)	Cø7-C^{M}7; C°7-C7
$P_{3,0}$ p↑(3)	C7-C#^{m}7; Cø7-E♭7$^{\#}$5; C°7-E♭7; C7$^{♭}$5-C$^{\#}$ø7
$P_{3,0}$ p↑(5)	C7-C#7$^{♭}$5; C^{m}7-C#ø7; C°7-F#7; C7$^{\#}$5-C#7
$P_{3,0}$ p↑(7)	C^{M}7-C#7; C7-B♭^{m}7; C^{m}7-B♭ø7; Cø7-C#°7; C°7-A7; C7$^{♭}$5-Gø7
$P_{3,0}$ p↓(r)	C^{M}7-Cø7; C7-C°7; C^{m}7-D7; Cø7- D^{m}7; C°7- Dø7; C7$^{\#}$5-Aø7; C7$^{♭}$5-F7
$P_{3,0}$ p↓(3)	C^{m}7-B7; Cø7-B7$^{♭}$5; C°7- Fø7
$P_{3,0}$ p↓(5)	C7-B7$^{\#}$5; Cø7-B^{m}7; C°7-A♭ø7; C7$^{♭}$5-B7
$P_{3,0}$ p↓(7)	C7-B^{M}7; C°7-Bø7
$P_{3,0}$ c↑[7] (r)	Cø7-A^{m}7
$P_{3,0}$ c↓[3] (r)	C^{m}7-F#ø7; Cø7-F^{M}7
$P_{3,0}$ c↓[5] (r)	C7$^{♭}$5-Aø7
$P_{3,0}$ c↑[7] (3)	C^{M}7-B♭ø7; C7-A^{M}7; Cø7-E♭7$^{♭}$5; C7$^{♭}$5-A7
$P_{3,0}$ c↑[5] (3)	C7$^{\#}$5-C$^{\#}$ø7
$P_{3,0}$ c↓[r] (3)	C^{M}7-F#7; C7-F#^{m}7; C^{m}7-E♭ø7; Cø7-F7$^{\#}$5; C7$^{\#}$5-A7
$P_{3,0}$ c↓[5] (3)	Cø7-B7$^{\#}$5
$P_{3,0}$ c↑[7] (5)	C^{M}7-Gø7; C7-A7$^{\#}$5; C^{m}7-A7; Cø7-F#^{m}7
$P_{3,0}$ c↑[3] (5)	C7-E♭7$^{\#}$5
$P_{3,0}$ c↓[r] (5)	C^{M}7-E♭7; C7-E♭7$^{♭}$5; Cø7-D^{M}7; C7$^{♭}$5-E♭ø7
$P_{3,0}$ c↑[5] (7)	C7-F#^{M}7; C^{m}7-F#7; C7$^{\#}$5-Gø7
$P_{3,0}$ c↑[3] (7)	C7$^{♭}$5-E♭7
$P_{3,0}$ c↓[r] (7)	C7-E♭^{m}7; C7$^{\#}$5-E♭7

Example 1. An OctaCrystal network formed from contrary $P_{3,0}$ transformations acting on subsets of the $Oct_{0,1}$ set



$Oct_{0,1}$

Example 2. A partial Power Crystals graph, showing some of the contrary $P_{3,0}$ transformational "bridges" between the closed OctaCrystal networks

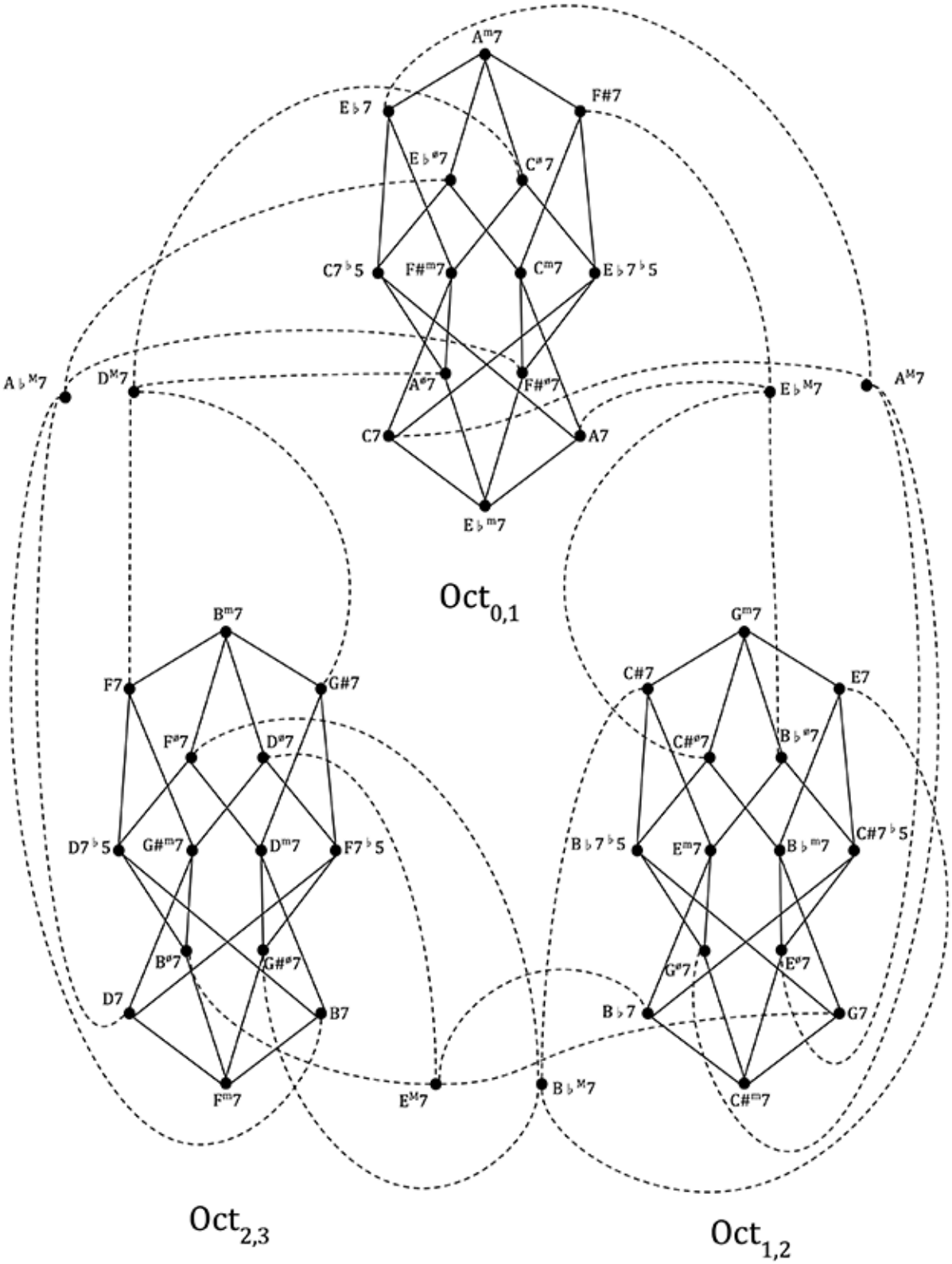


Table 4. Comparisons of $P_{3,0}$ between dominant and diminished seventh chords

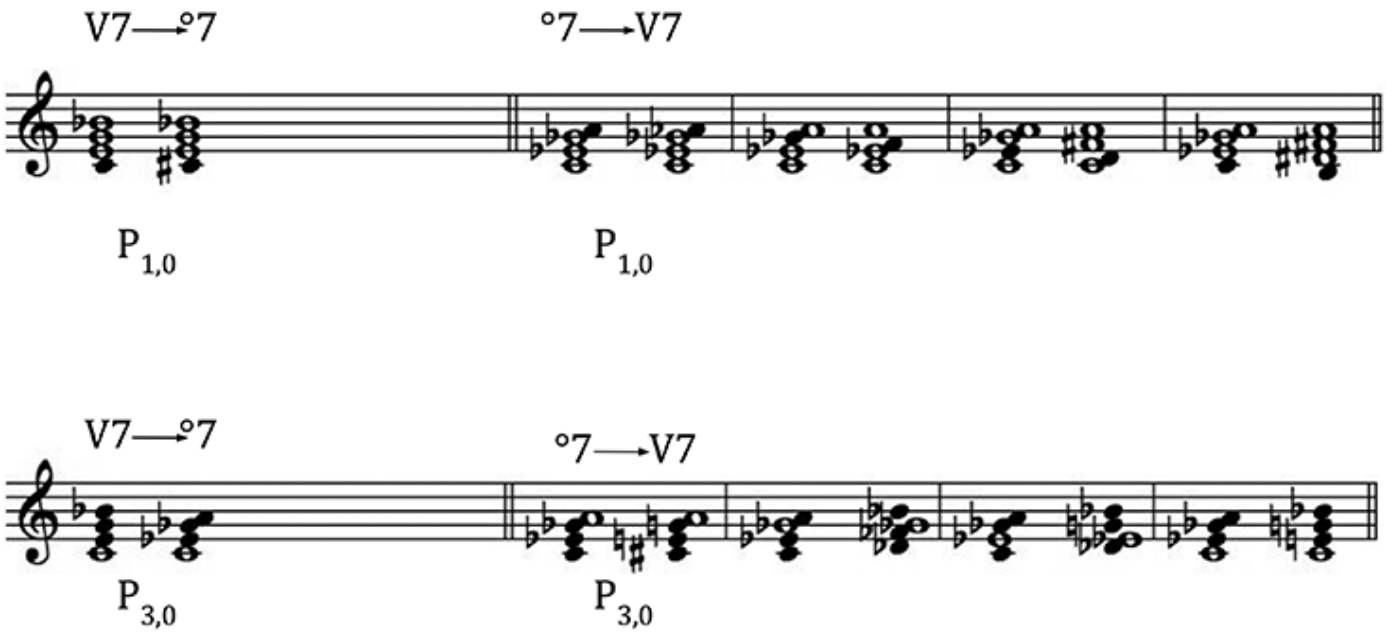


Figure 1a. $P_{3,0}$ in established harmonic paradigms: Strauss, *Das Geheimnis* op. 17, no. 3, mm. 1–3

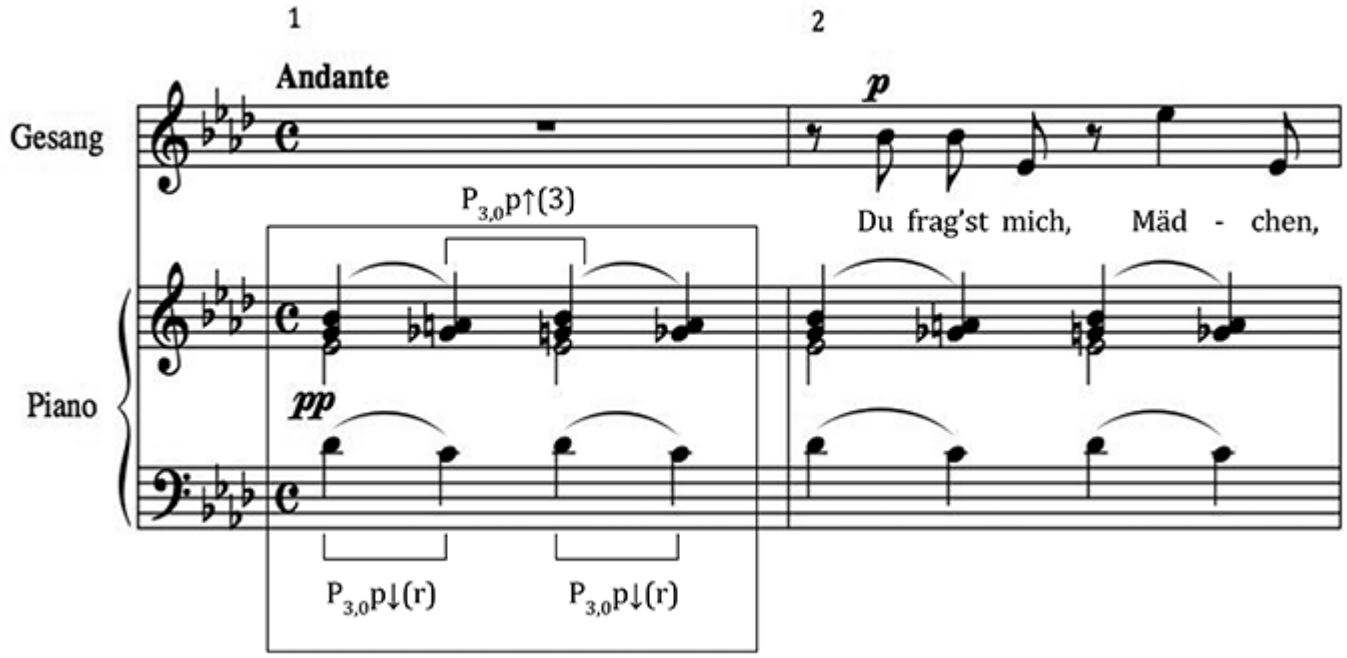


Figure 1b. $P_{3,0}$ in established harmonic paradigms: Franck, *Quatrième Trio* op. 2, mm. 71–82

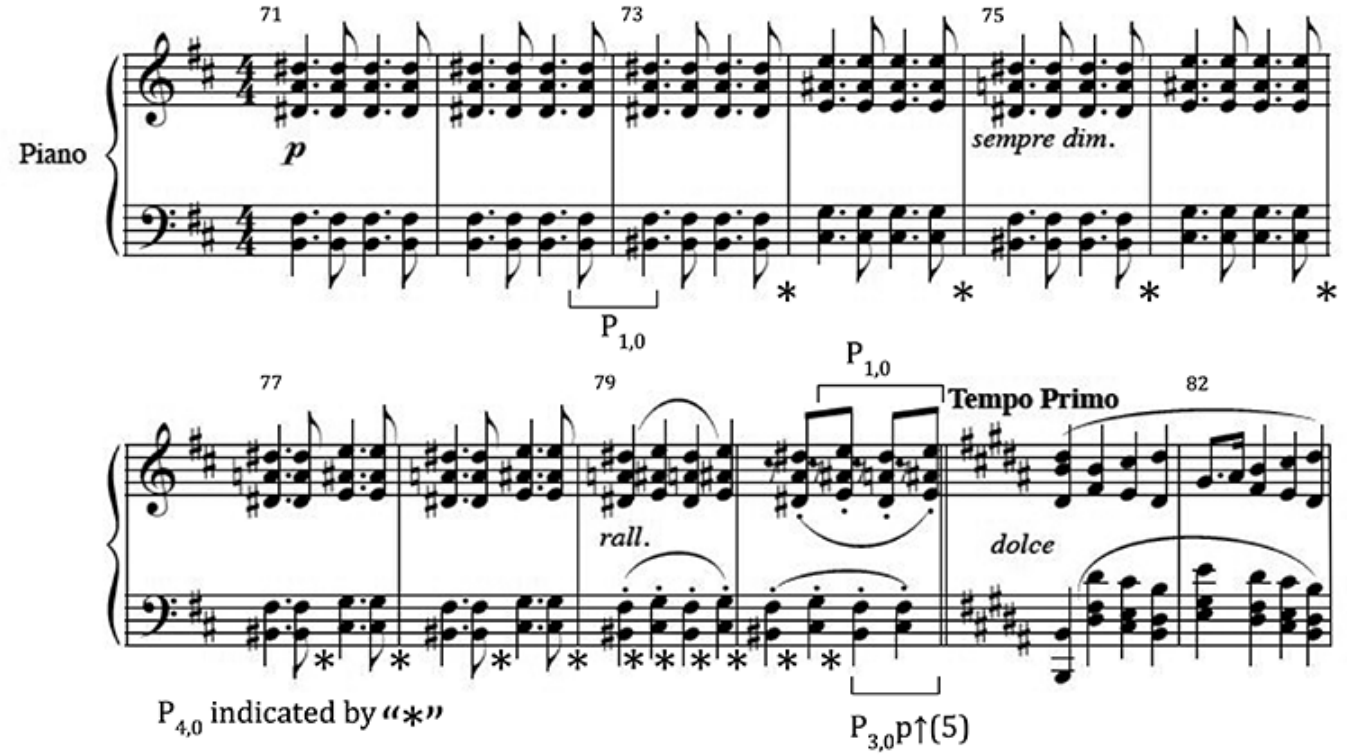


Figure 1c. $P_{3,0}$ in established harmonic paradigms: Scriabin, op. 11, no. 2, mm. 7–12

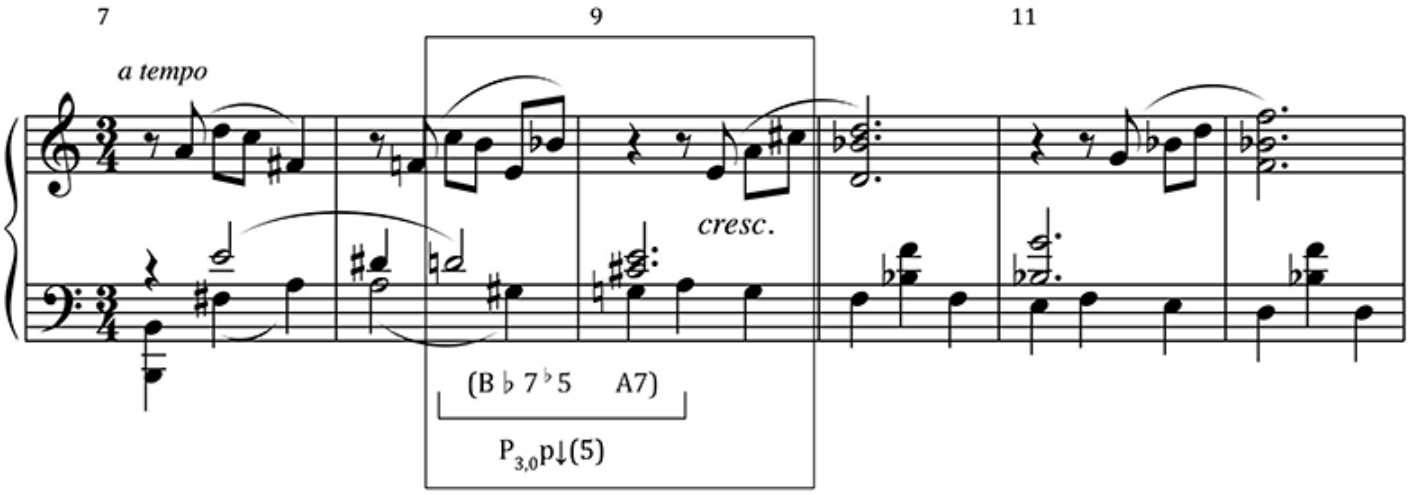


Figure 2a. $P_{3,0}$ usage in the combination of successive semitone shifts: Strauss, “Die Zeitlose” op. 10, no. 7, mm. 7–14

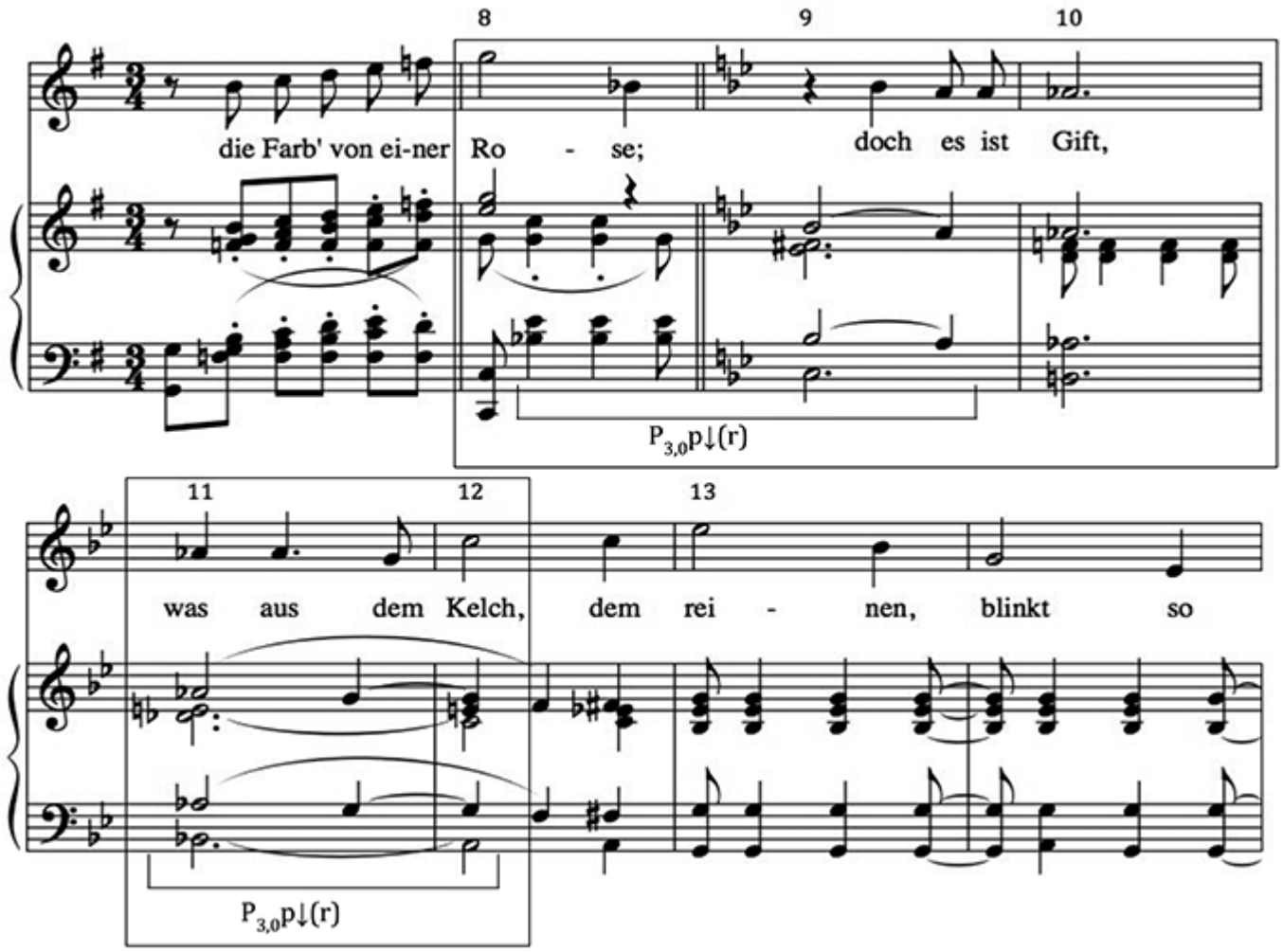


Figure 2b. $P_{3,0}$ usage in the combination of successive semitone shifts: Harmonic reduction of “Die Zeitlose,” mm. 8–13

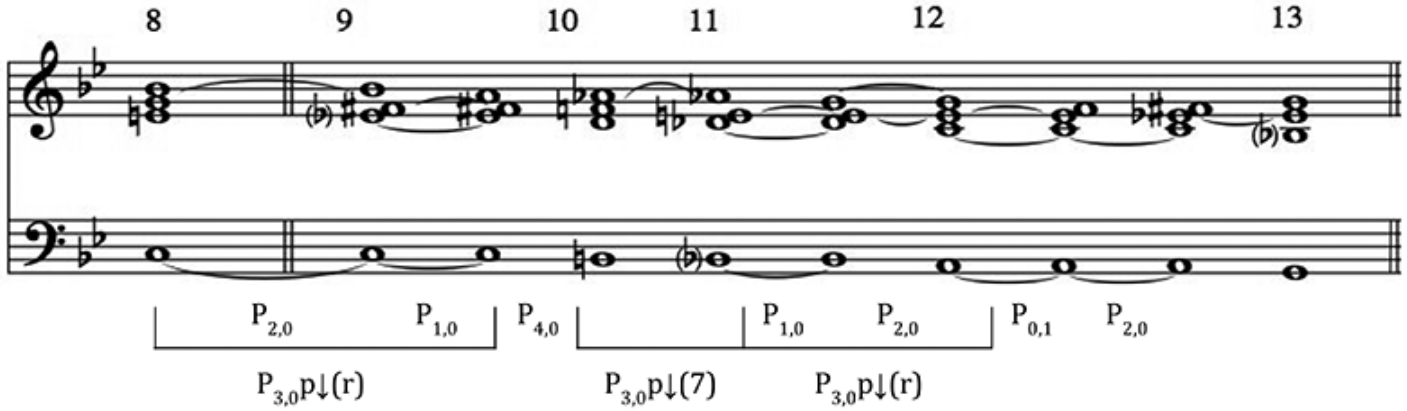


Figure 2c. $P_{3,0}$ usage in the combination of successive semitone shifts: Balakirev, 10 Songs (1895-96) no. 4, mm. 27–28

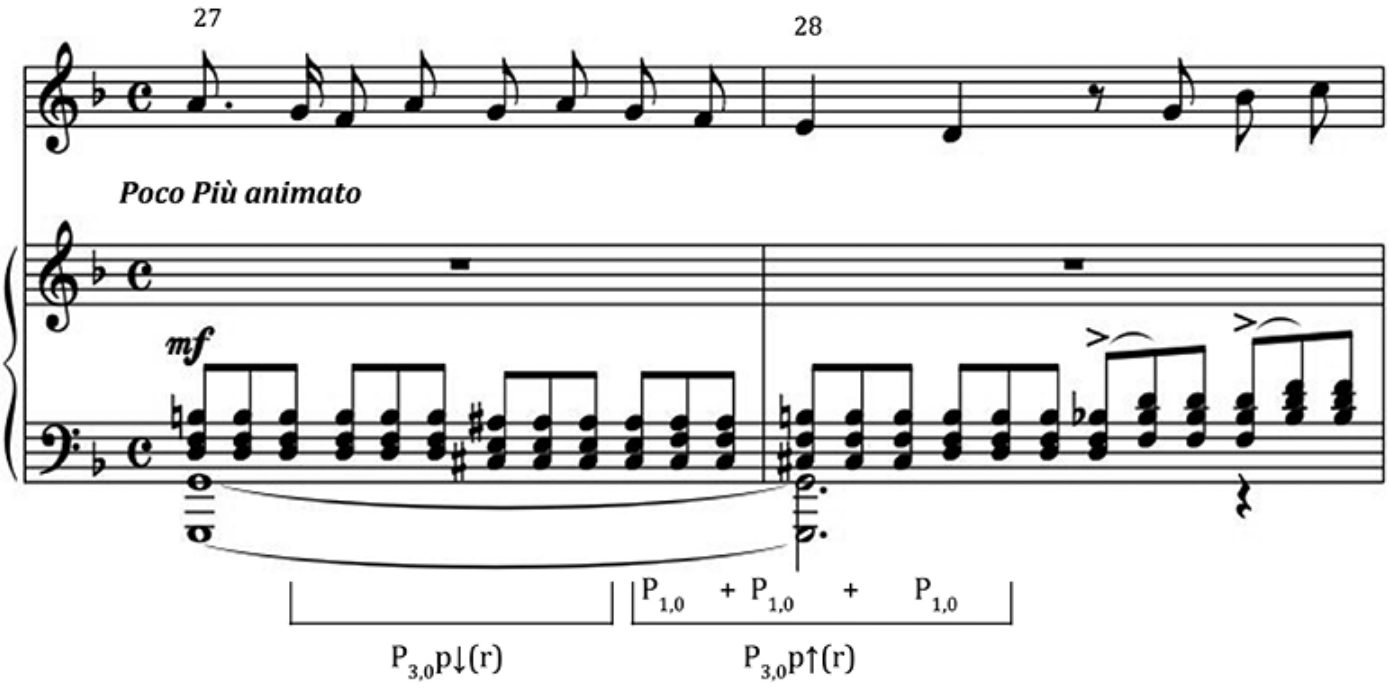


Figure 3a. Parallel $P_{3,0}$ transformations in non-functional progressions between dominant and minor seventh chords: Strauss, “Die Verschweigenen” op. 10, no. 6, mm. 5–15

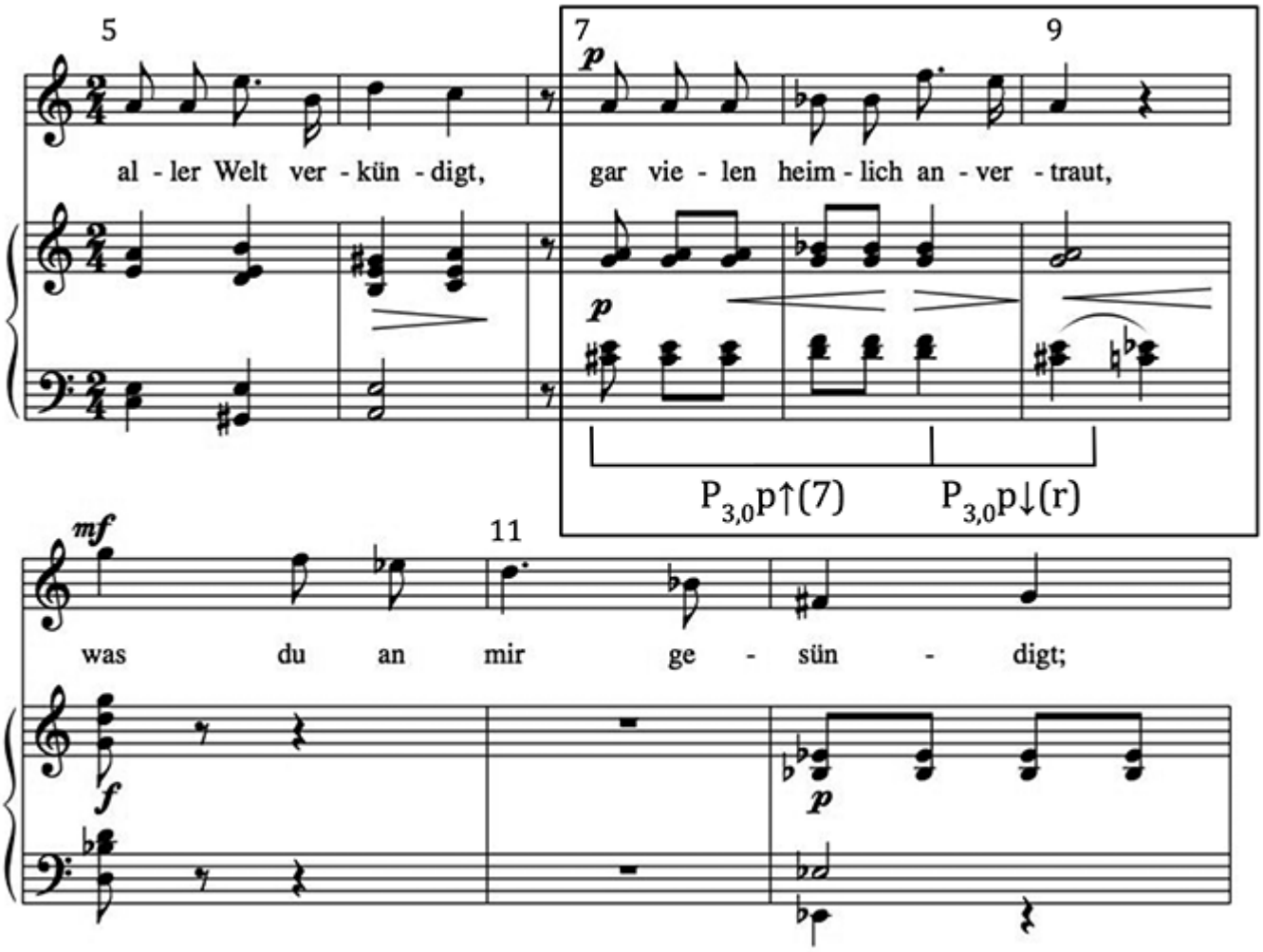


Figure 3b. Parallel $P_{3,0}$ transformations in non-functional progressions between dominant and minor seventh chords: A harmonic reduction of Rachmaninoff, “Duma” op. 8, no. 3, mm. 21–25

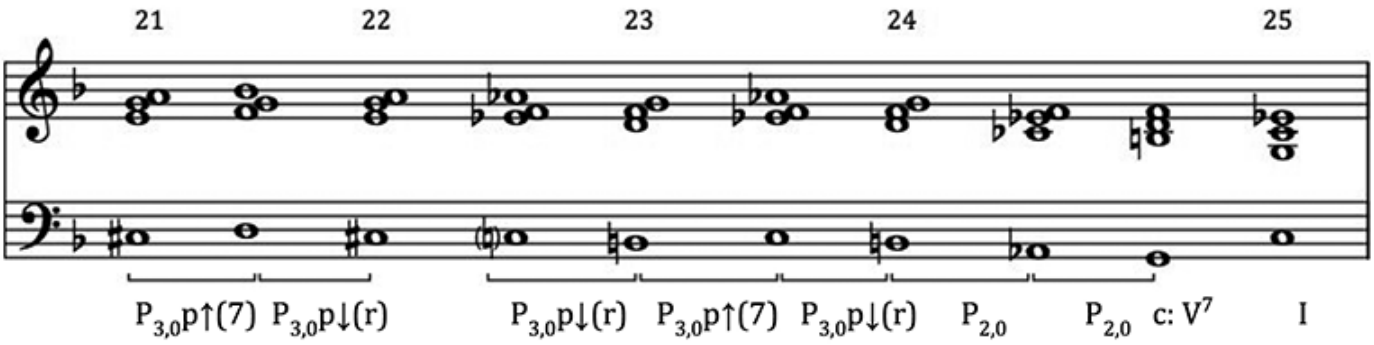


Figure 3c. Parallel $P_{3,0}$ transformations in non-functional progressions between dominant and minor seventh chords: Liszt, *Ce qu'on entend sur la montagne* S. 95, rehearsals W–X

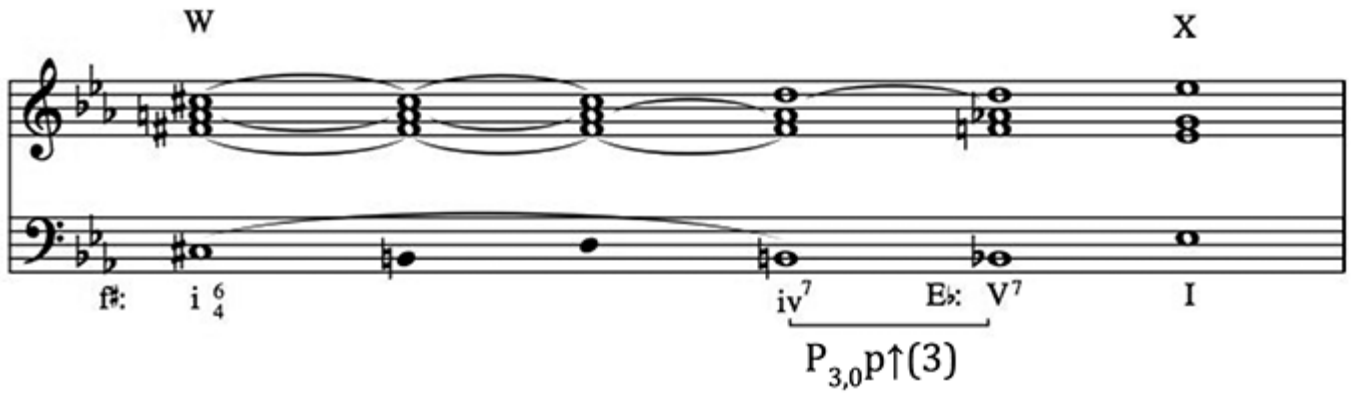


Figure 4a. Instances of parallel $P_{3,0}$ in pairings other than dominant and minor sevenths: A harmonic reduction of Wolf, *Genialisch Treiben*, mm. 39–47

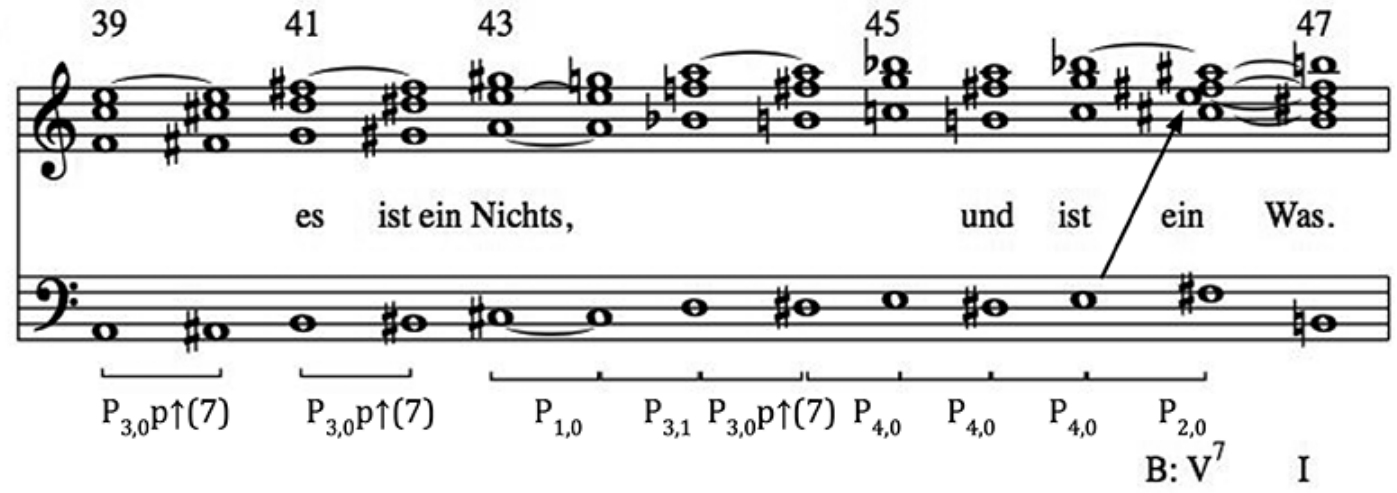


Figure 4b. Instances of parallel $P_{3,0}$ in pairings other than dominant and minor sevenths: Liszt, “Ich Liebe Dich” S. 315, mm. 22–29

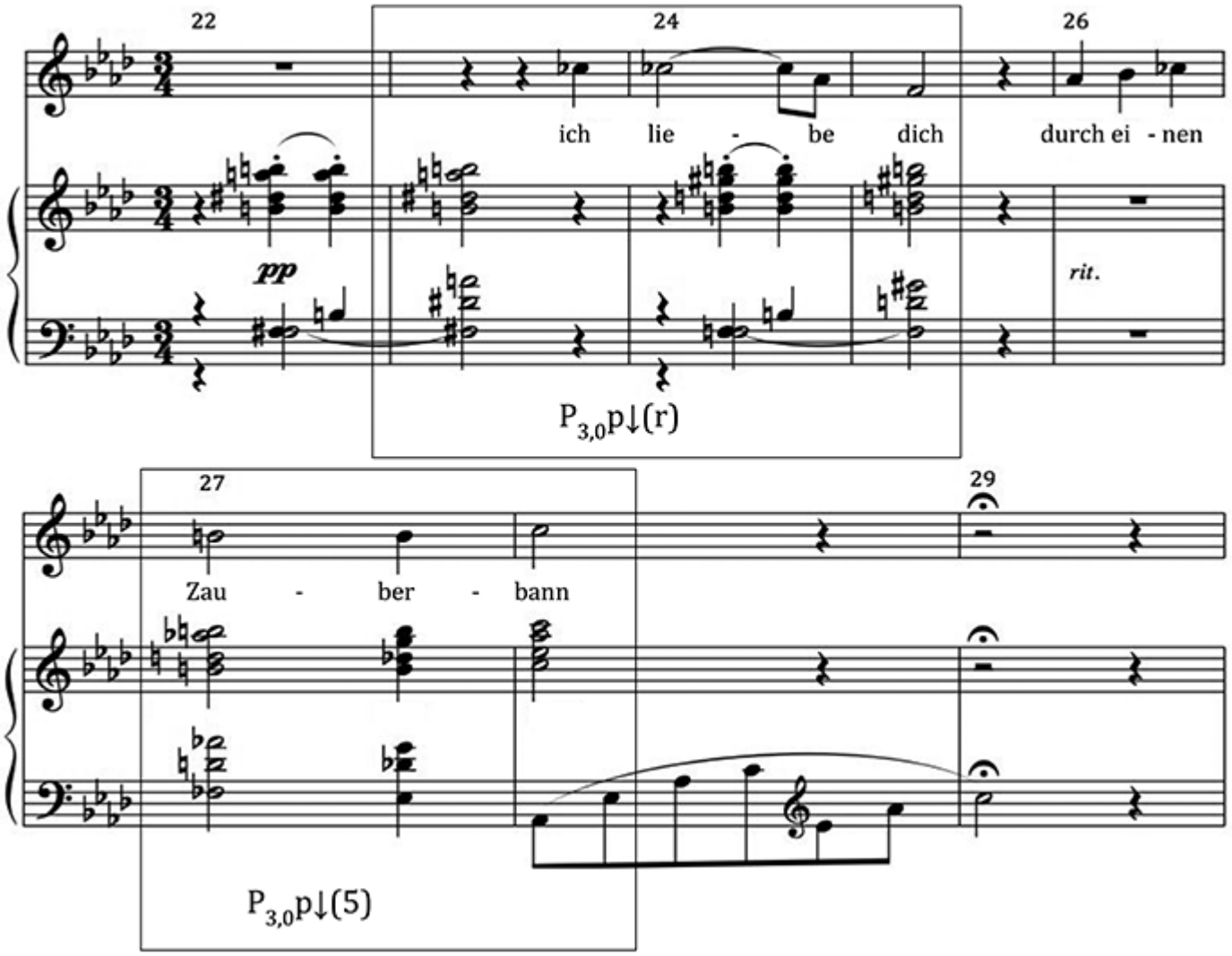


Figure 5a. Contrary $P_{3,0}$ transformations in non-functional progressions between dominant and minor seventh chords: Balakirev, 10 Songs (1895–96) no. 4, mm. 1–2

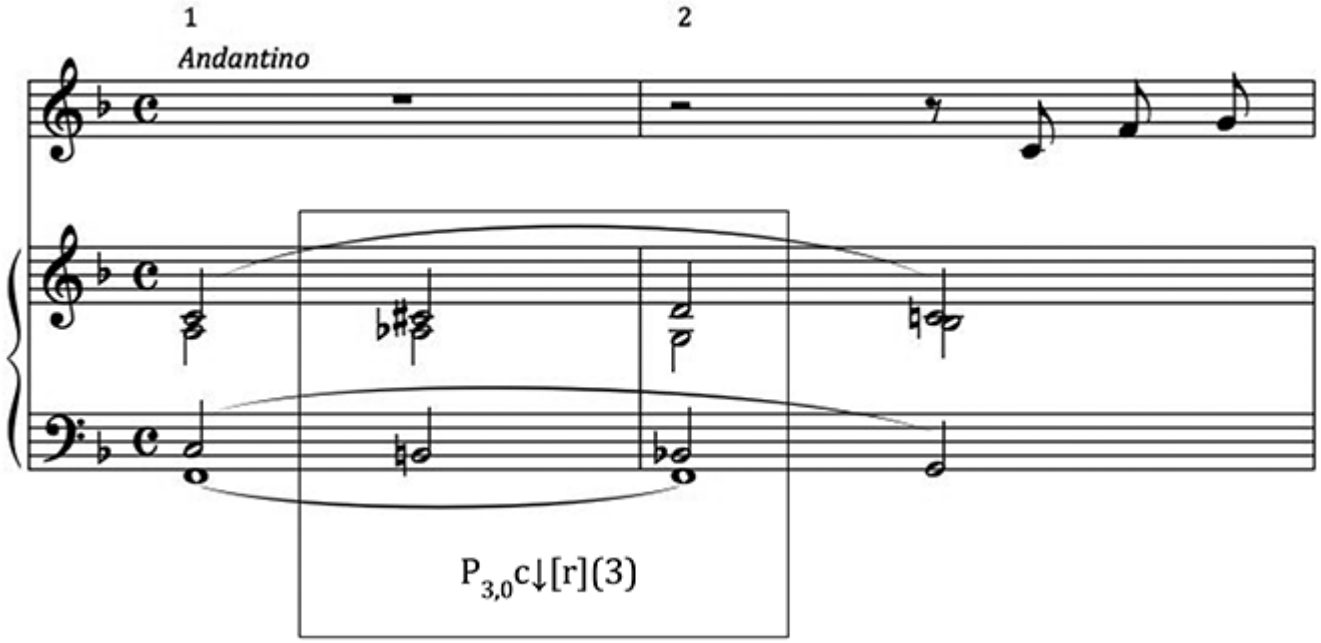


Figure 5b. Contrary $P_{3,0}$ transformations in non-functional progressions between dominant and minor seventh chords: Rachmaninoff, “Duma” op. 8, no. 3, mm. 28–29

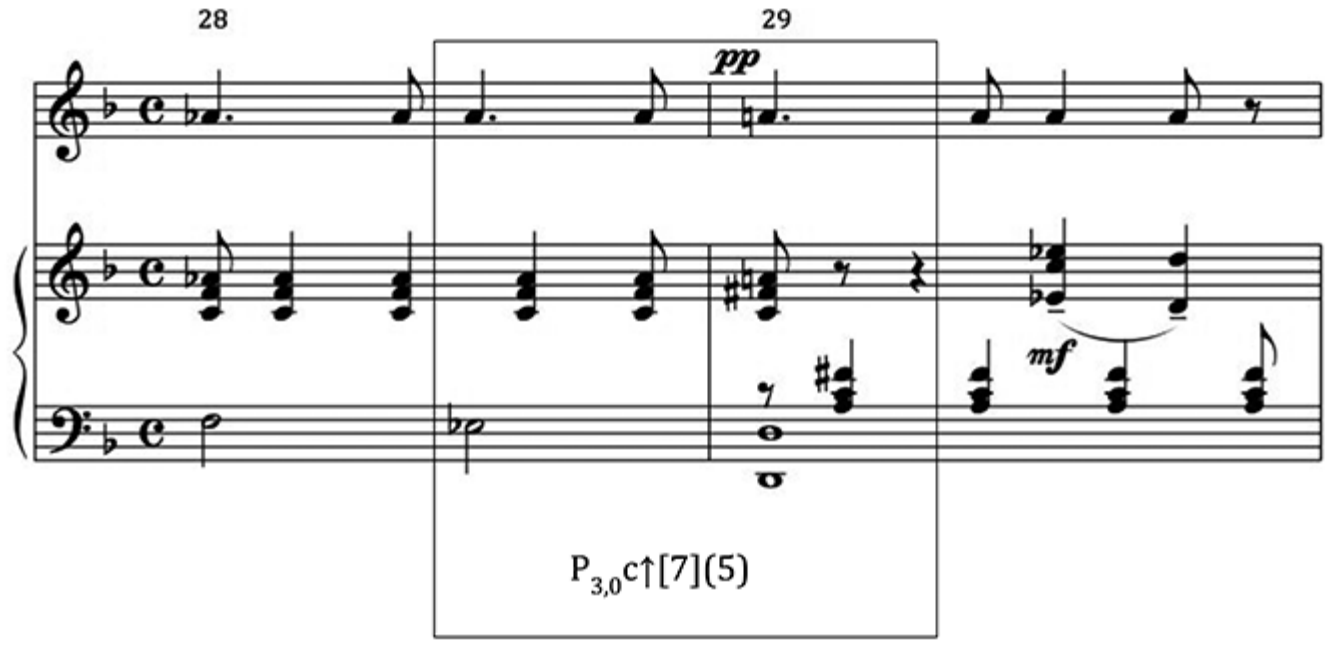


Figure 6a. Other instances of Contrary $P_{3,0}$: Strauss, *Elektra* op. 58, mm. 16–19

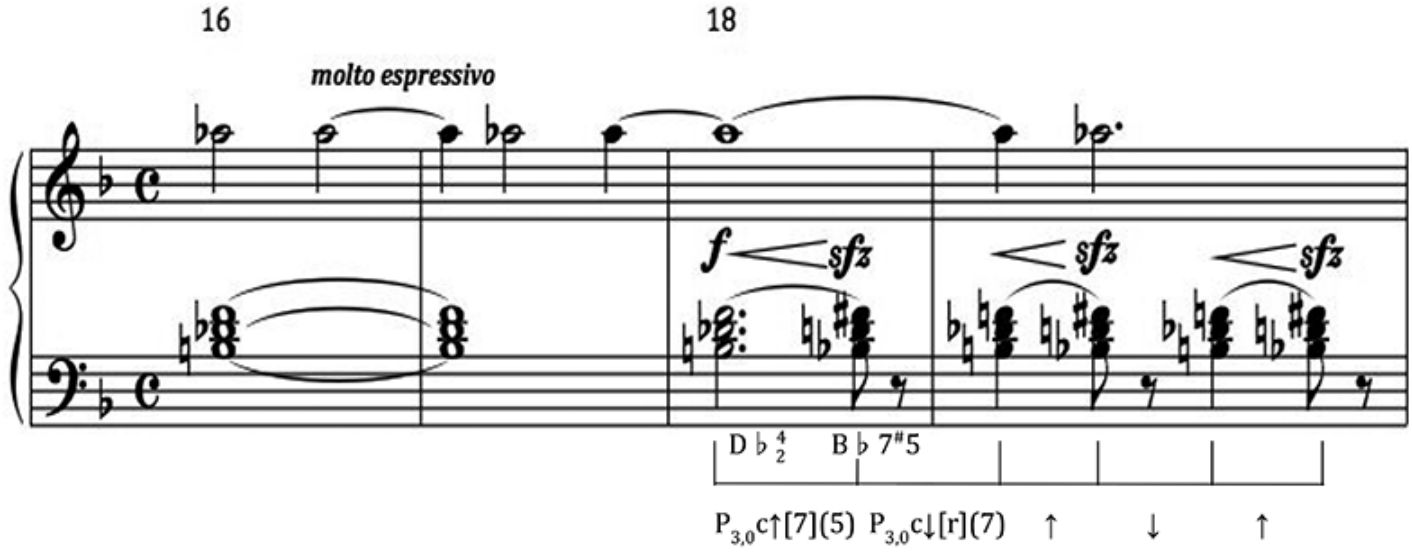


Figure 6b. Other instances of Contrary $P_{3,0}$: Liszt, “Der du von dem Himmel bist” S. 279, mm. 5–9

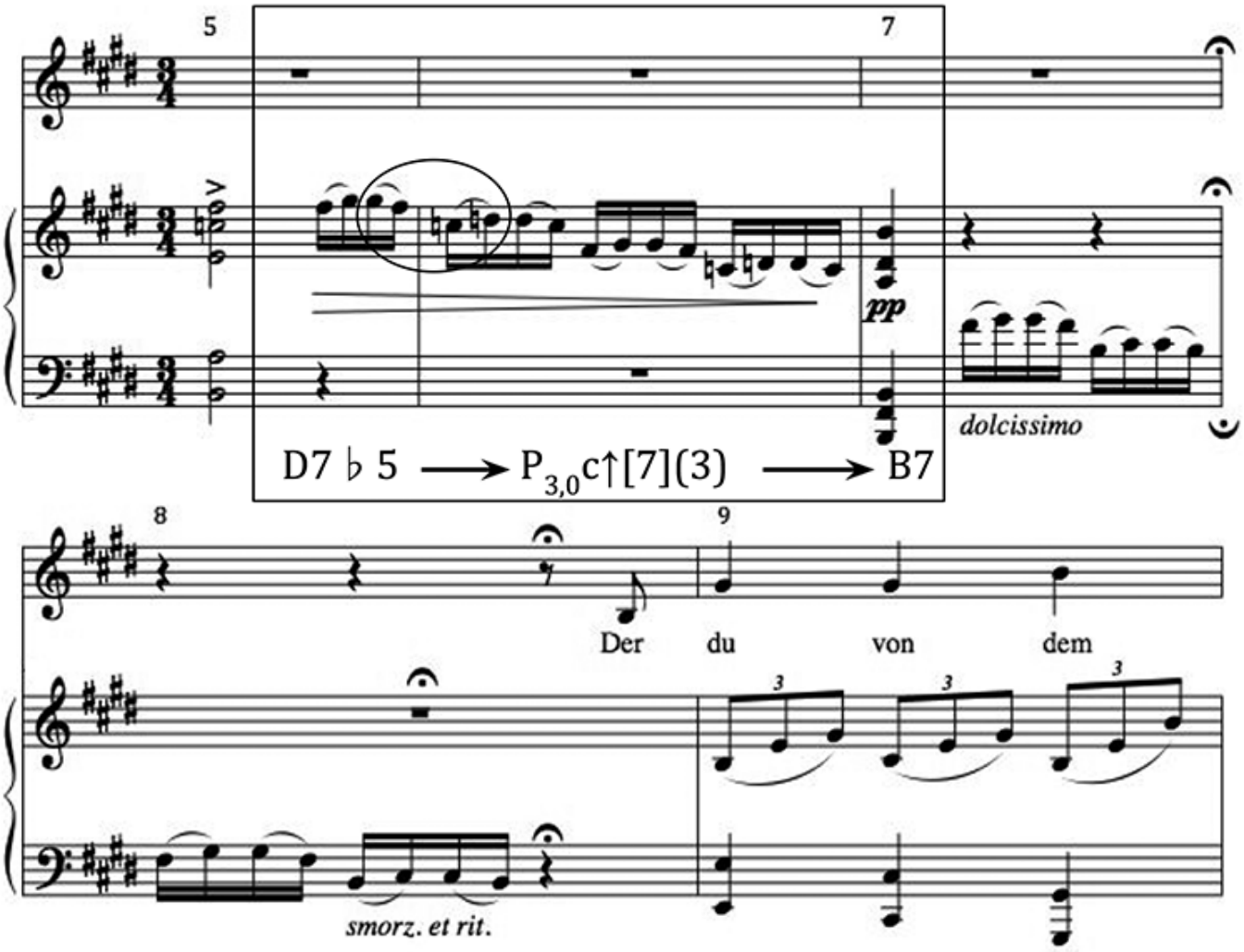
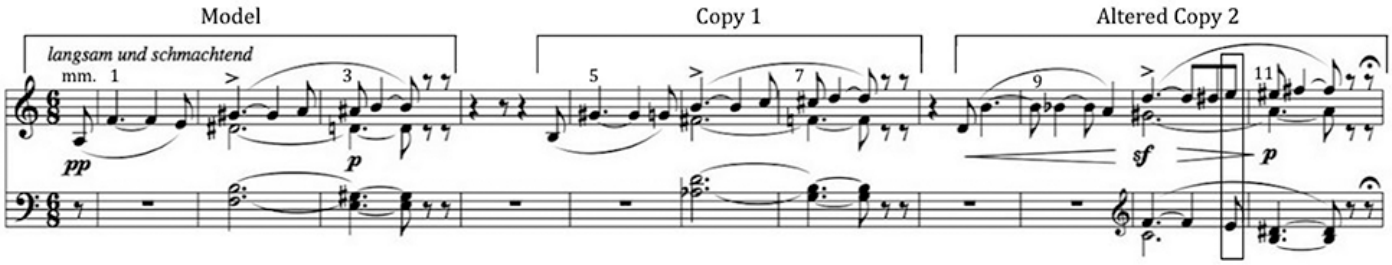


Figure 7. $P_{3,0}$ analysis of the opening sequence of the Tristan Prelude, mm. 1–11

a. Piano reduction



b. Annotated harmonic reduction

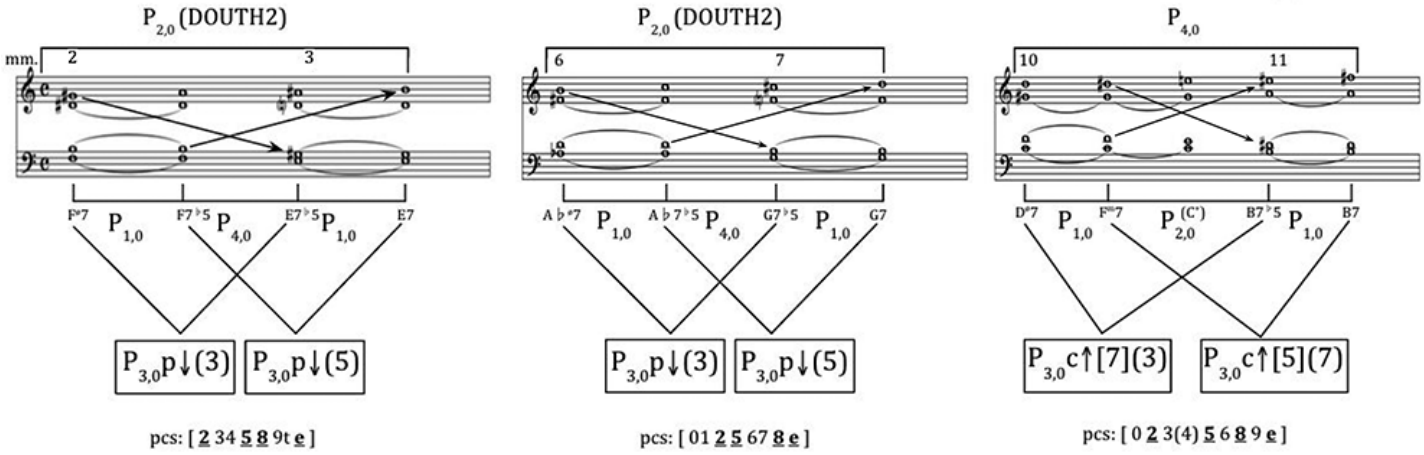
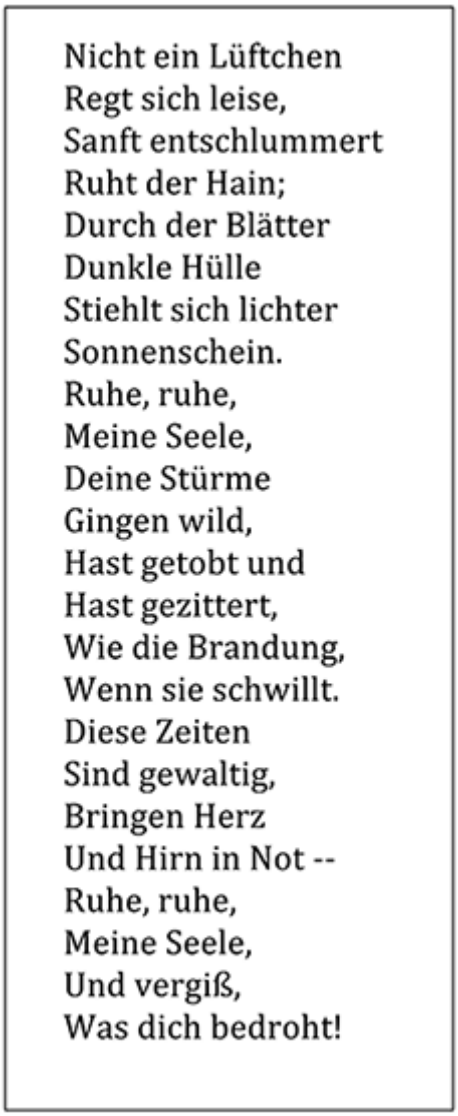


Figure 8. Karl Henckell, “Ruhe, meine Seele!”



Nicht ein Lüftchen
Regt sich leise,
Sanft entschlummert
Ruht der Hain;
Durch der Blätter
Dunkle Hülle
Stiehlt sich lichter
Sonnenschein.
Ruhe, ruhe,
Meine Seele,
Deine Stürme
Gingen wild,
Hast getobt und
Hast gezittert,
Wie die Brandung,
Wenn sie schwillt.
Diese Zeiten
Sind gewaltig,
Bringen Herz
Und Hirn in Not --
Ruhe, ruhe,
Meine Seele,
Und vergiß,
Was dich bedroht!

Figure 9a. Strauss, “Ruhe meine Seele!” op. 27, no. 1, mm. 1–4: $P_{3,0}$ transformations and octatonic organization

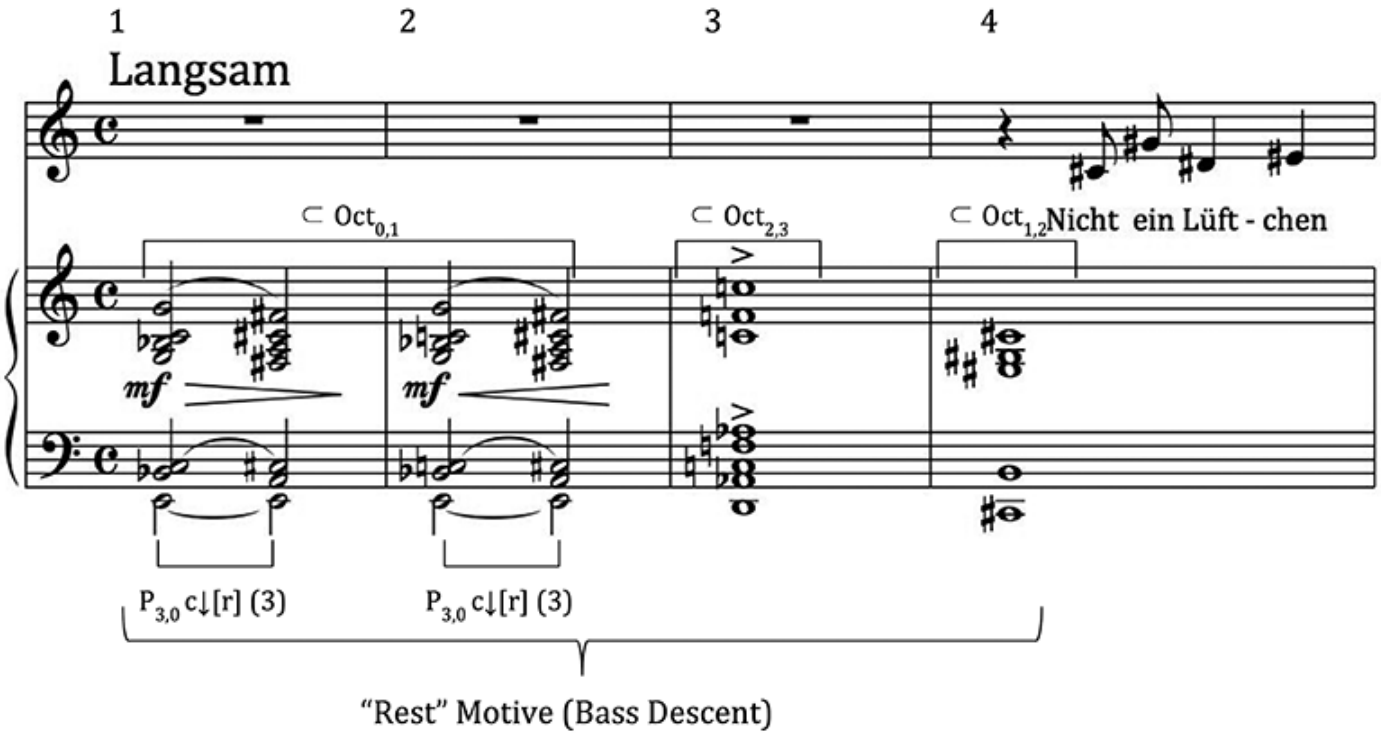


Figure 9b. Strauss, “Ruhe, Meine Seele!”: harmonic reduction and analysis

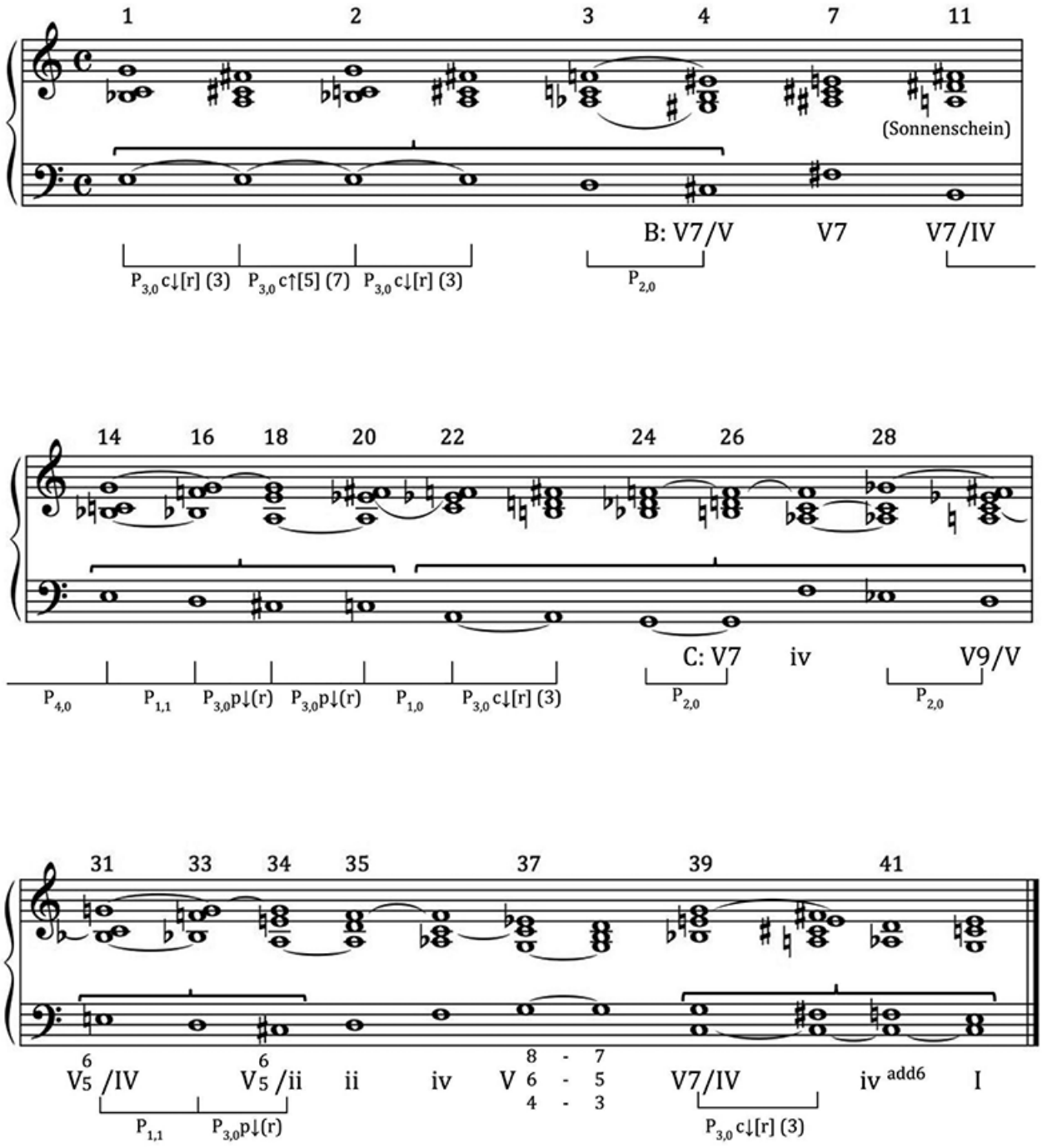
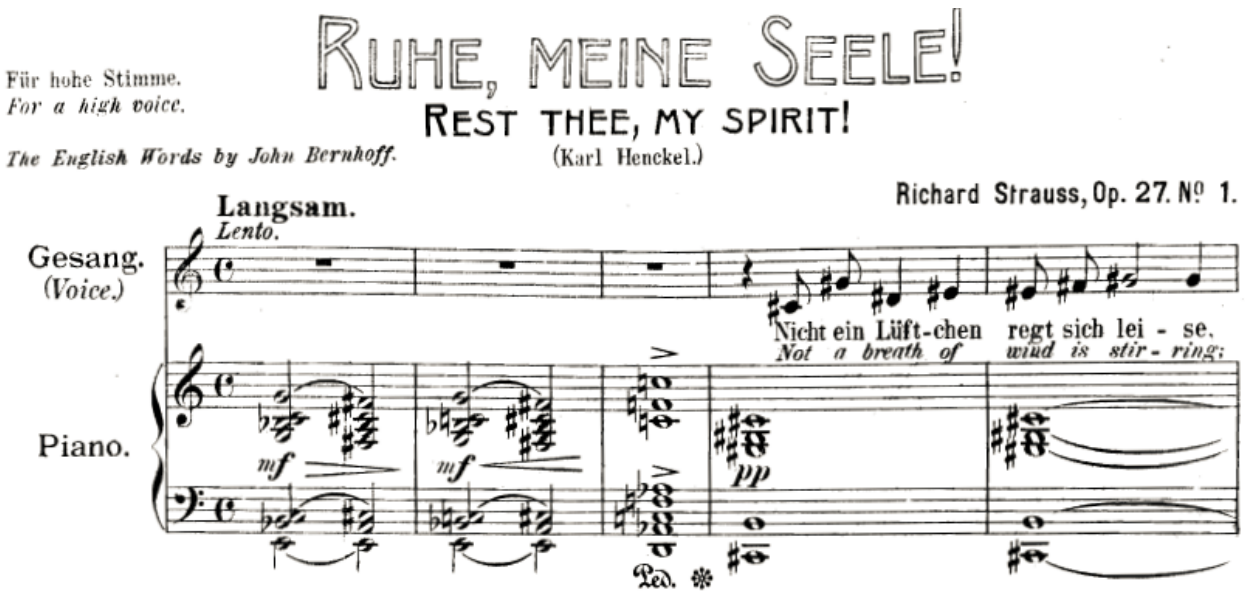


Figure 10. Strauss, “Ruhe, Meine Seele!”



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