



A JOURNAL OF THE SOCIETY FOR MUSIC THEORY

MTO 31.1 Examples: Menke, Neuwirth, Hentschel, and Rohrmeier:

The Rule-of-the-Octave Hypothesis

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

https://www.mtosmt.org/issues/mto.26.32.3/mto.26.32.3.menke_et_al.html

Example 1. Comparison of the demonstration of the RoO by Campion (a and b) and Dandrieu (c and d). Campion illustrates the RoO in 24 keys, Dandrieu in 19 keys. Here, only the first two keys (major/minor) are shown.

a) Campion, RoO in major

TON MAJEUR

8 6 8 6 8 3 6 8 3 #6 8 2 8 6 8
5 4 6 5 5 6 5 5 6 4 5 6 6 4 5
3 3 3 3 3 3 3 3 3 3 3 4 3 3 3

b) Campion, RoO in minor

TON MINEUR

8 #6 8 6 8 3 6 8 3 6 8 2 8 #6 8
5 #5 6 5 5 6 5 5 6 4 5 6 8 #6 5
3 3 3 3 3 3 3 3 3 3 3 3 3 3 3

c) Dandrieu, RoO in major

Table de la Modulation Majeure en montant et en descendant par les sept Notes

8 6 6 5 3 3 3 8 3 3 3 4 6 6 8 4 3 8
5 4 3 3 8 6 6 5 6 #6 8 2 3 4 5 8 8 5
3 3 8 6 5 3 5 3 4 5 6 8 3 3 5 5 3

3 3 8 6 5 6 5 3 6 4 5 6 8 3 3 5 5 3
8 6 6 5 3 3 3 8 3 3 3 4 6 6 8 4 3 8
5 4 3 3 8 6 6 5 6 #6 8 2 3 4 5 8 8 5

d) Dandrieu, RoO in minor

1.re Répétition de la Table de la Modulation Mineure en montant et en descendant par les sept Notes

#6 6 5 # 6 # 5 6 6 # #4 6 #6 4 #

#6 6 5 # 6 5 6 6 # #4 6 #6 4 #

Example 2. Early demonstration of the RoO in the anonymous Italian source *Regole del contrapunto; per sonare il basso continuo, et accompagnare la parte che canta*, 39 (a few obvious mistakes have been corrected here)

8 5 3 #6 6 6 5 # 6 6 5 #6 6 5 #

1 2 3 4 5 6 7 1 2 3 4 5

3 4 4

1 3 1 5 3 4 2 1 5 1 5 1

Example 3. The RoO expressed according to the DCML annotation standard

Ascending (major): I V43 I6 ii65 V IV6 V65 I

Ascending (minor): i V43 i6 ii%65 V IV6 V65 i

Descending (major): I V6 V43/V V V2 I6 V43 I

Descending (minor): i v6 ii%43 V V2 i6 V43 i

Example 4. All distinct chords from the major and minor versions of the RoO

Major: I, V43, I6, ii65, V2, V, IV6, V43/V, V65, V6

Minor: i, V43, i6, ii%65, V2, V, IV6, ii%43, V65, v6

b) in our slightly modernized edition, completing the second ending (m. 16b) with the petite reprise in m. 14. The dotted quarter C5 has been corrected to a dotted eighth.

(a)

pour la petite reprise

This musical score is for a section titled "pour la petite reprise". It consists of two staves, a treble staff and a bass staff, both in 2/3 time. The treble staff begins with a key signature of one flat (B-flat) and contains a series of eighth and sixteenth notes, followed by a repeat sign and a final cadence. The bass staff begins with a key signature of one flat and contains a series of eighth and sixteenth notes, followed by a repeat sign and a final cadence. The text "pour la petite reprise" is written in a cursive script above the bass staff. The score is marked with various musical notations, including accidentals, repeat signs, and a final double bar line with a repeat sign.

(b)

III+M7⁽⁹⁾ i⁶ VI ii⁵ V V⁷ i|PAC} | 1. i|PAC} { 2. iv⁷ ii⁵%⁵ III+M7⁽⁹⁾ i⁶ VI ii⁵ V V⁷ i|PAC}

pour la petite reprise

7 6 6 7
b₅ 3 2 5 b₃ b₃

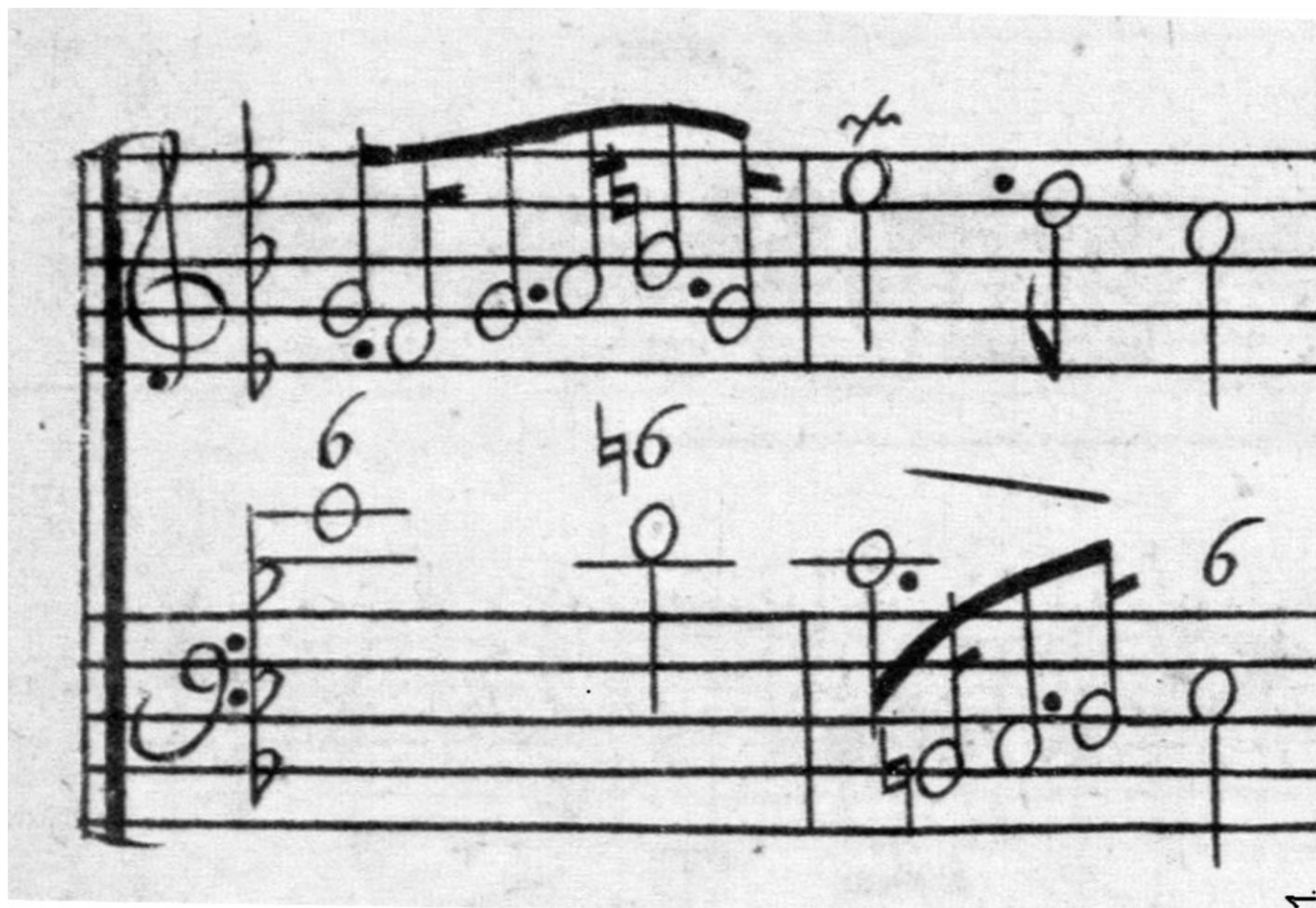
7 6 7
b₃ b₃ 2

7 6 7
b₅ 3 2 6 b₃ b₃

Example 6. Overview of the dataset in terms of number of printed measures, total length (in quarter notes), number of noteheads (including grace notes), and number of annotation labels. The last four columns give the same information normalized (i.e., averaged) for each concert by the number of movements.

	movements	measures	length	notes	labels
Concert Royal no. 1	6	137	492	1859	480
Concert Royal no. 2	5	248	711	2500	597
Concert Royal no. 3	8	300	866	3565	805
Concert Royal no. 4	7	242	780	2743	652
Les Goûts-Réunis no. 5	5	205	617	2014	529
Les Goûts-Réunis no. 6	5	164	566	2133	590
Les Goûts-Réunis no. 7	6	171	637	2364	602
Les Goûts-Réunis no. 8	11	420	1620	3542	939
Les Goûts-Réunis no. 9	8	252	800	3211	919
Les Goûts-Réunis no. 10	4	124	431	1596	364
Les Goûts-Réunis no. 11	8	254	964	2890	855

Example 7. F. Couperin, *Concerts Les Goûts-réunis, Onzième Concert*, first movement, mm. 5, 13, and 30, here m. 13



Example 8. The fifty most frequent chords in the major (left-hand side) and minor (right-hand side) modes in the Couperin corpus. Chords in red appear in both the ascending and the descending variants of the RoO; chords in green appear only in the ascending variant, while chords in blue appear only in the descending version.

[See HTML Version for Example 8]

Example 9. The fifty most frequent chords in the major (left-hand side) and the minor (right-hand side) modes in the Corelli corpus. Chords in red appear in both the ascending and the descending variants of the RoO; chords in green appear only in the ascending variant, while chords in blue appear only in the descending version.

[See HTML Version for Example 9]

Example 10. Top five chord types covering bass degrees of all major segments and movement types following each chord. B = Bass degree; P = Proportion; E = Entropy; SR = Sonority Rank

[See HTML Version for Example 10]

Example 11. Top five chord types covering bass degrees of all minor segments and movement types following each chord

[See HTML Version for Example 11]

Example 12. Frequency-based ranking of harmonic bigrams (top 20, in major and minor) in Corelli's works

Major			Minor		
Bigram	Count	Proportion	Bigram	Count	Proportion
('V', 'I')	227	5.52 %	('V', 'i')	190	4.5 %
('I', '')	191	4.64 %	('i', 'V')	152	3.6 %
('V7', 'I')	186	4.52 %	('i', '')	146	3.45 %
('I', 'V')	166	4.04 %	('V65', 'i')	123	2.91 %
('V65', 'I')	148	3.6 %	('V7', 'i')	122	2.89 %
('V', 'I6')	118	2.87 %	('ii%65', 'V')	120	2.84 %
('I6', 'I')	83	2.02 %	('V43', 'i')	85	2.01 %
('V43', 'I')	82	1.99 %	('V2', 'i6')	81	1.92 %
('V', 'V7')	78	1.9 %	('i6', 'V43')	81	1.92 %
('ii65', 'V')	78	1.9 %	('V', 'i6')	81	1.92 %
('I', 'I6')	74	1.8 %	('V', 'V7')	66	1.56 %
('I6', 'ii65')	64	1.56 %	('i6', 'ii%65')	63	1.49 %
('V(4)', 'V')	63	1.53 %	('i', 'V65')	59	1.4 %
('V2', 'I6')	63	1.53 %	('V65', 'V7')	57	1.35 %
('I6', 'V43')	62	1.51 %	('i6', 'i')	55	1.3 %
('V65', 'V7')	54	1.31 %	('i', 'i6')	53	1.25 %
('I', 'IV')	49	1.19 %	('I', '')	46	1.09 %
('I', 'V65')	47	1.14 %	('V43', 'i6')	45	1.06 %
('I', 'V6')	46	1.12 %	('ii%43', 'ii%65')	44	1.04 %
('I', 'vi')	41	1.0 %	('i6', 'V65')	42	0.99 %

Example 13. Distribution of intervals between adjacent bass notes in the same key. P: perfect; M: major; m: minor; a: augmented; d: diminished

[\[See HTML Version for Example 13\]](#)

Example 14. Distribution of movement types between adjacent bass notes in the same key

[\[See HTML Version for Example 14\]](#)

Example 15. Sankey diagram summarizing all bass movements to and from all chords in the Couperin corpus

[\[See HTML Version for Example 15\]](#)

Example 16. Sankey diagram summarizing all bass movements to and from all bass degrees in the Couperin corpus, and which type of chord follows in each case

[\[See HTML Version for Example 16\]](#)

Example 17. Comparison of the RoO with different top-k vocabularies.

[\[See HTML Version for Example 17\]](#)