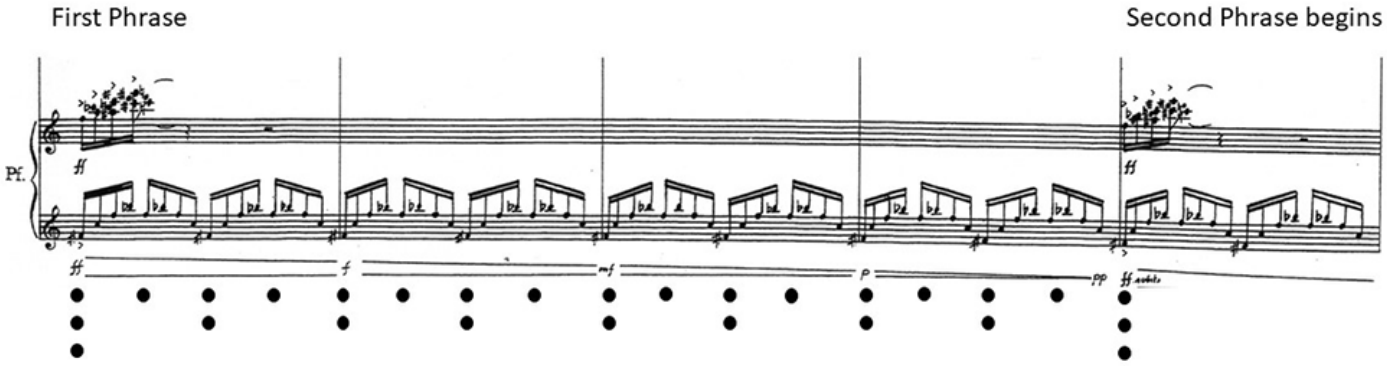
A JOURNAL OF THE SOCIETY FOR MUSIC THEORY

MTO 24.2 Examples: Jakubowski, Spectral Meter: Dramatizing Entrainment and Communicating Form in Gérard Grisey's *Vortex Temporum I* (1994–96)

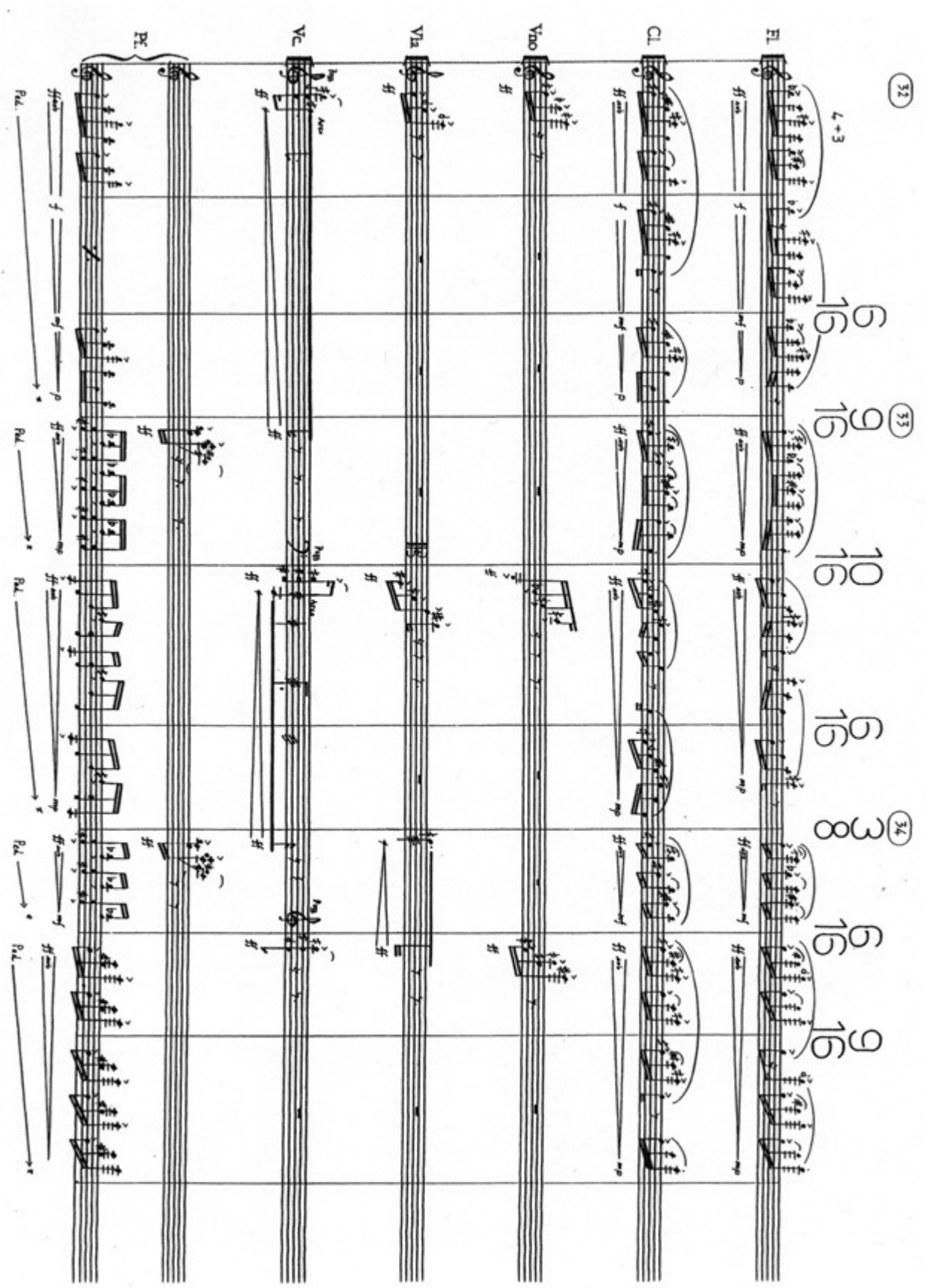
(Note: audio, video, and other interactive examples are only available online)
http://mtosmt.org/issues/mto.18.24.2/mto.18.24.2.jakubowski.html

Example 1. Meter in *Vortex Temporum I,* Reh. 1 (piano part only)

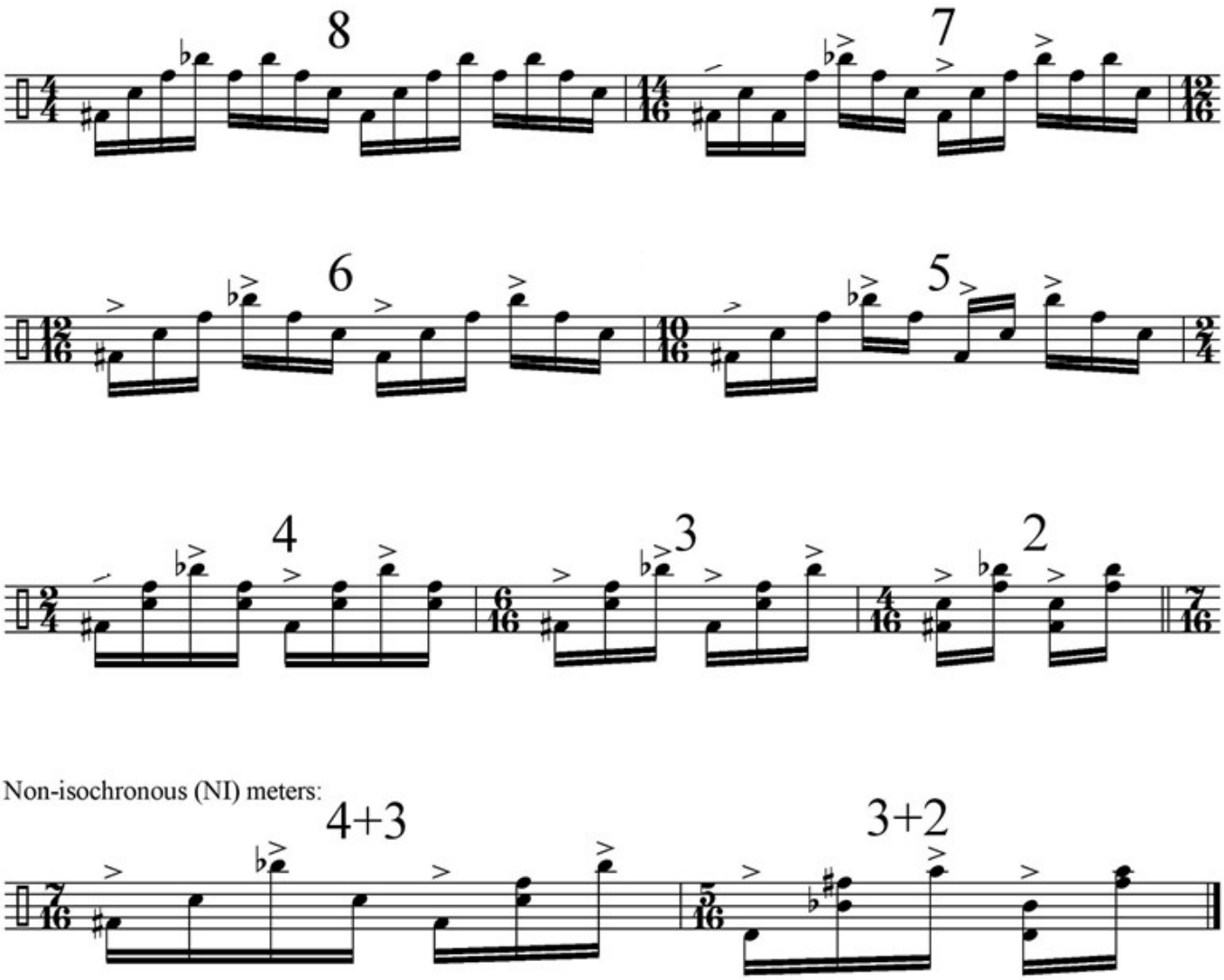


Pulse layer (score): isochronous sixteenth notes
Subdivision layer (one dot): four pulses, contour change and grouping (rising contour vs. jagged contour)
Tactus layer (two dots): eight pulses, marked by lowest pitches and pitch recurrence
Phrase layer (three dots): eight tactus beats, given by parallelism when second phrase begins

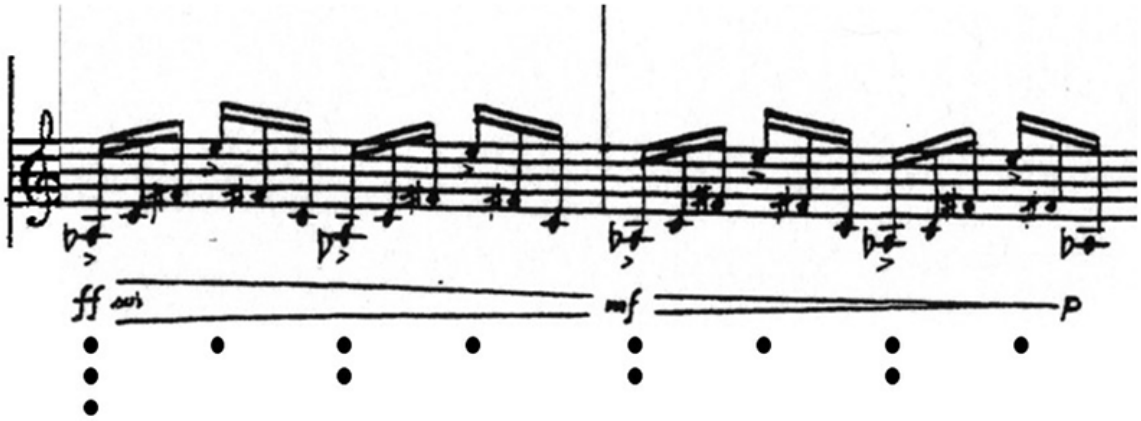
Example 2. Heightened metric complexity near the end of the first section (Reh. 32–34)



Example 3. The nine meters in *Vortex Temporum I,* Reh. 1–37

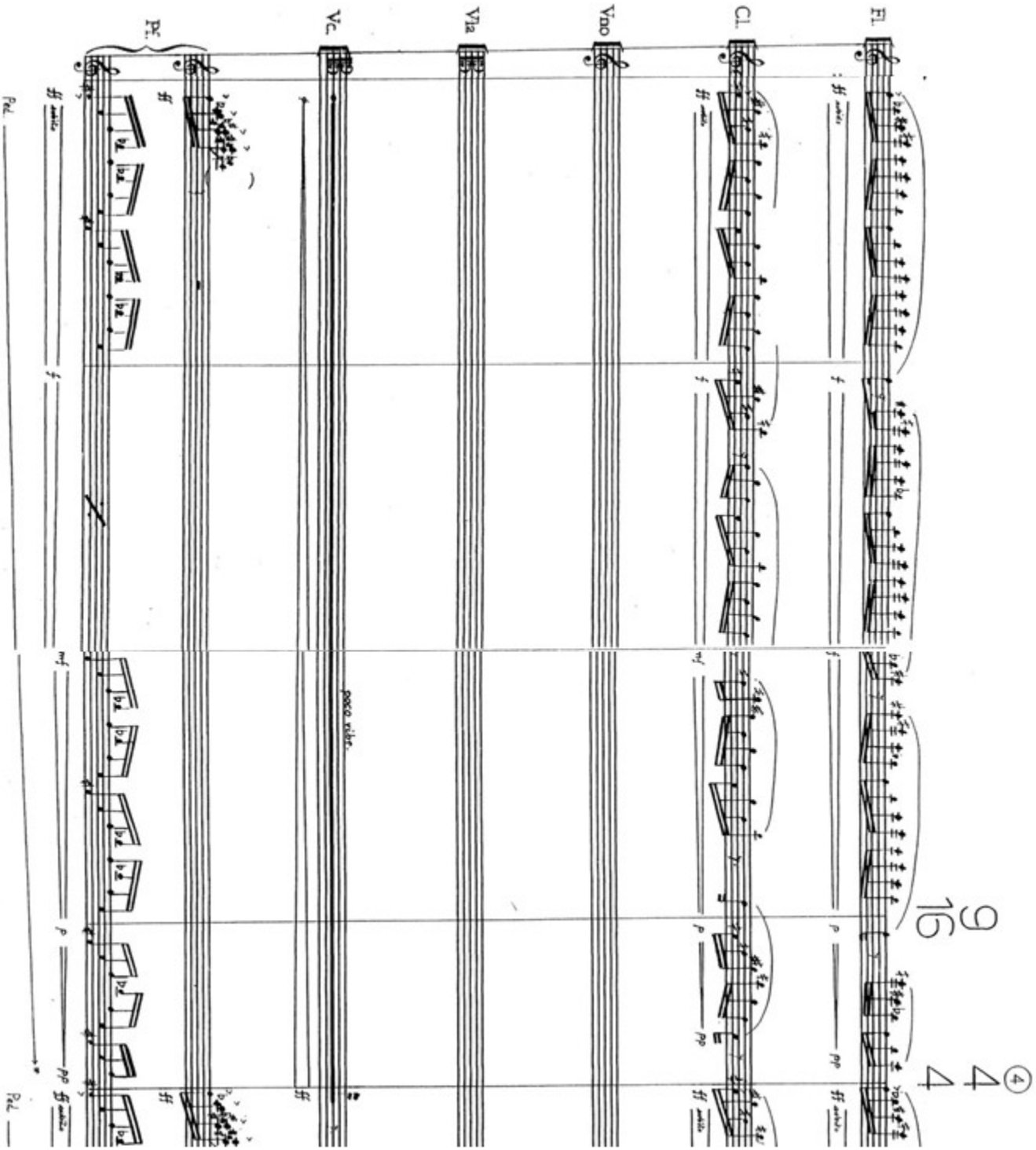


Example 4. A six-pulse tactus meter in a later phrase, exhibiting similar grouping evidence



Pulse layer (score): isochronous sixteenth notes
Subdivision layer (one dot): three pulses, marked by contour changes and notated accents
Tactus layer (two dots): six pulses, marked by lowest pitches and pitch recurrence
Phrase layer (three dots): eight tactus beats (attenuated by shortened phrase here)

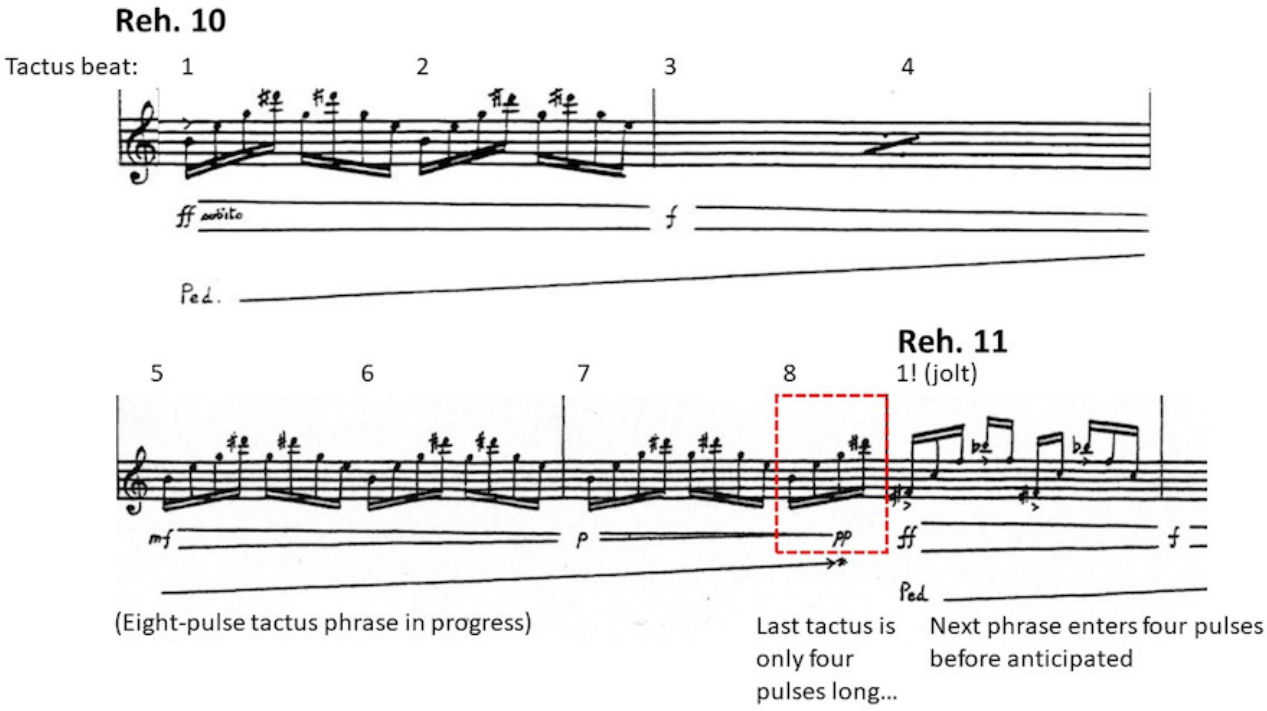
Example 5. Metric ambiguity creating a dynamic "crossfade" between the crescendoing strings and fading piano



Example 6. Phrases, meters, and displacements in *Vortex Temporum I*

Stage	Phrase	Score location	Tactus (final bar meter shift)	Jolts (-) and deferrals (+)	Displacement by whole unit?
1	1	Reh. 1	8	0	
	2	Reh. 2	8	-3	
	3	Reh. 3	8 (6)	-7	
	4	Reh. 4	8	-13	
	5	Reh. 5	6	+3	
2	6	Reh. 6	8	+1	
	7	Reh. 7	7	-6	subdivision
	8	Reh. 8	6	-3	
	9	Reh. 9	5	+2	subdivision
3	10	Reh. 10	8	-4	
	11	Reh. 11	5 (3)	-1	
	12	Reh. 12	5 (4)	-4	1 shifted tactus
	13	Reh. 13	6	+7	
	14	Reh. 14	4	+1	
	15	Reh. 15	7 (6)	-6	1 shifted tactus
	16	Reh. 16	6	-3	
	17	Reh. 17	4	-2	
	18	Reh. 18	5	0	
	19	Reh. 19	4+3	-1	
4	20	Reh. 20	8	-24	3 tacti
	21	Reh. 21	4+3	-4	
	22	Reh. 22	5	*-5*	1 tactus
	23	Reh. 23	3	*-3*	1 tactus
	24	Reh. 24	4	-2	subdivision
	25	Reh. 25	3	-6	2 tacti
	26	Reh. 26	7	-32	
	27	Reh. 27	3+2	-8	
	28	Reh. 28	6	-24	4 tacti
	29	Reh. 29	3+2	-5	2 (unequal) tacti
	30	Reh. 30	4	-7	
5	31	Reh. 31	8	-25	
	32	Reh. 32	4+3	-8	
	33	Reh. 33	2	-7	
	34	Reh. 33^{+1}	5	-24	
	35	Reh. 34	2	-10	5 tacti
	36	Reh. 34^{+1}	3	*-9*	3 tacti
	37	Reh. 35	7	-30	
	38	Reh. 36	3+2	-10	4 tacti
	39	Reh. 36^{+1}	3	*-9*	3 tacti
	40	Reh. 37	3+2	-15	6 tacti
	41	Reh. 37^{+2}	3?	-21?	

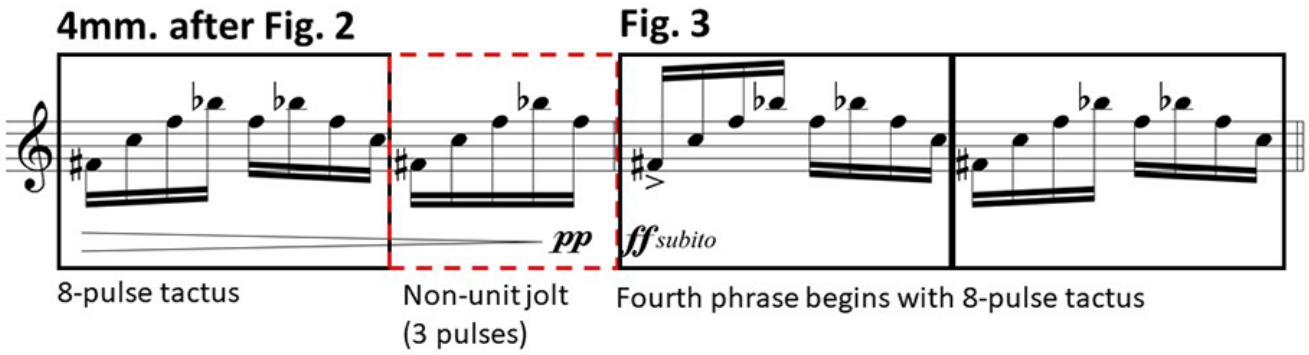
Example 7. Jolt (phrase begins too early), Reh. 10–11



Example 8. Deferral (phrase entrance delayed), Reh. 5–6

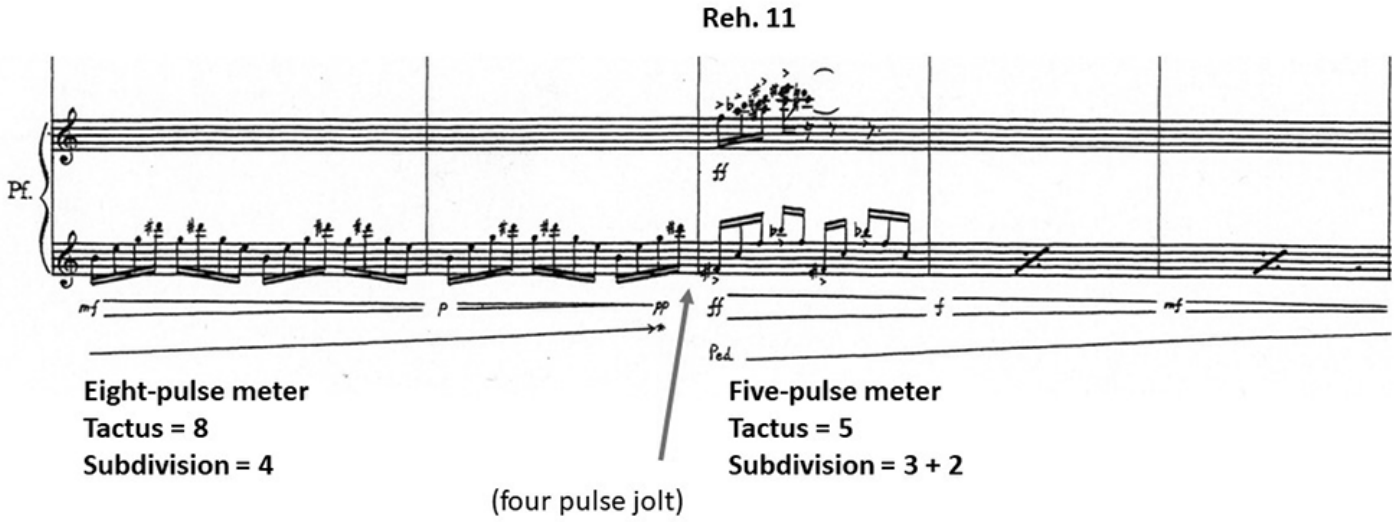
Fifth phrase extended by three extra beats (a metric subdivision unit), relative to phrase length expectation (8 repetitions of six-pulse tactus = 48 pulses)

Example 9. Non-unit jolt, Reh. 2–3



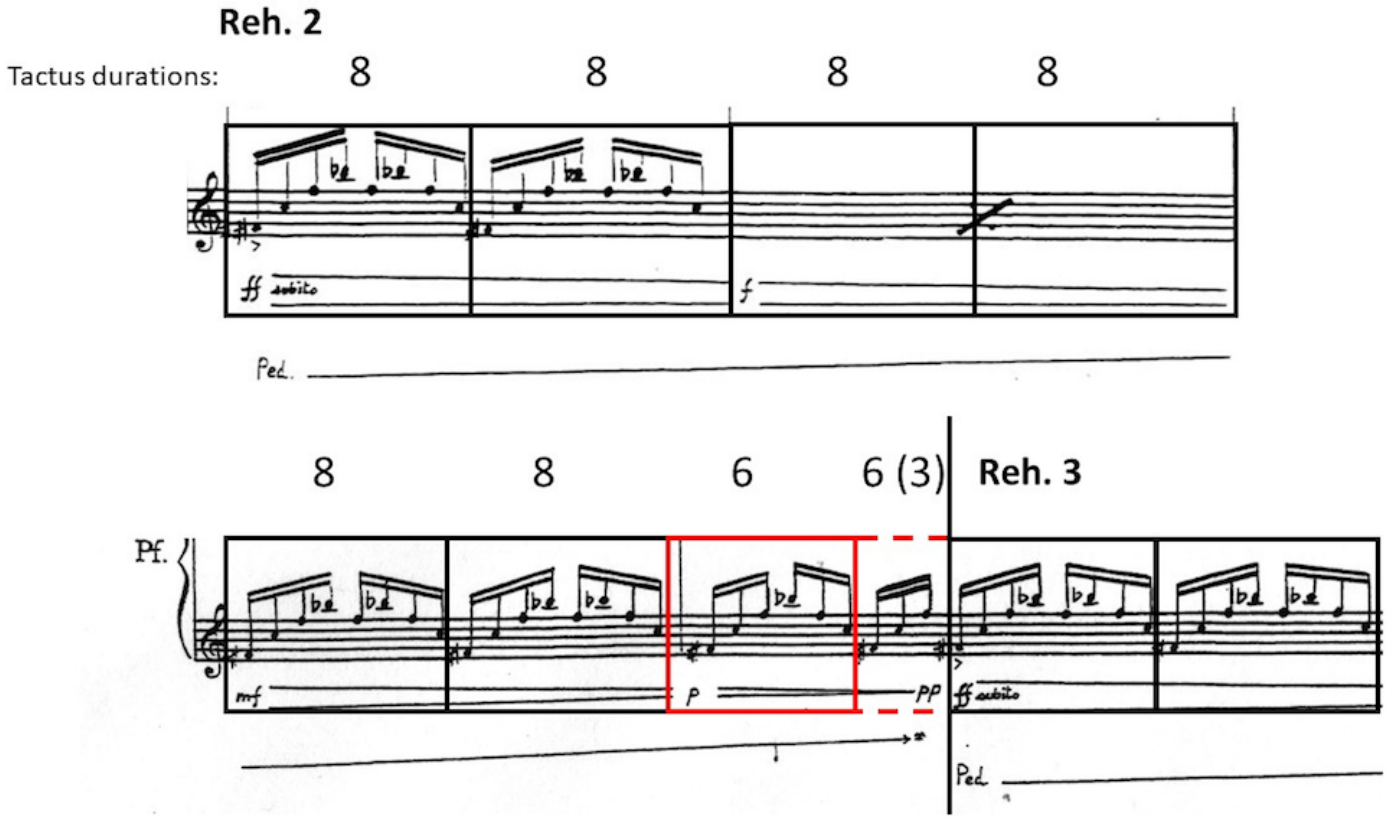
N.B. the audio sample begins at Fig. 2. The printed example begins with the seventh and eighth tacti of the second phrase.

Example 10. Complex meter change, maintaining no periodic layers except the trivial pulse layer (Reh. 10–11)

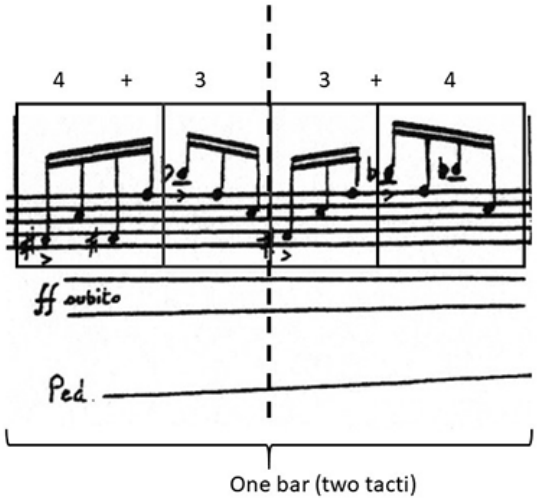


N.B. the audio sample begins slightly before this score excerpt, at Reh. 10

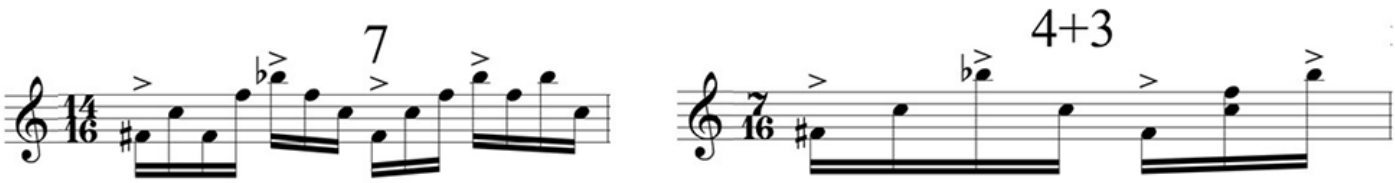
Example 11. Final bar meter shift from an eight- to a six-pulse tactus, Reh. 3–4



Example 12. Aperiodic subdivision of a 7-pulse tactus and aperiodic bar grouping (successive tacti subdivided differently)



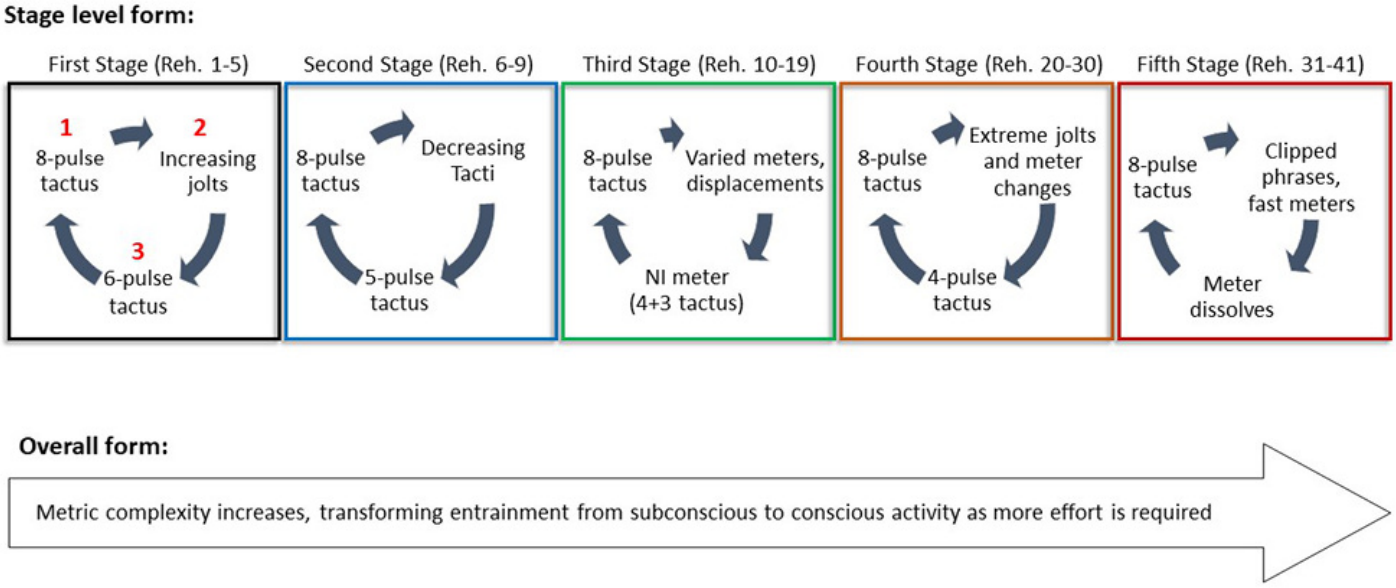
Example 13. Comparison of prime (7) and NI (4+3) meters



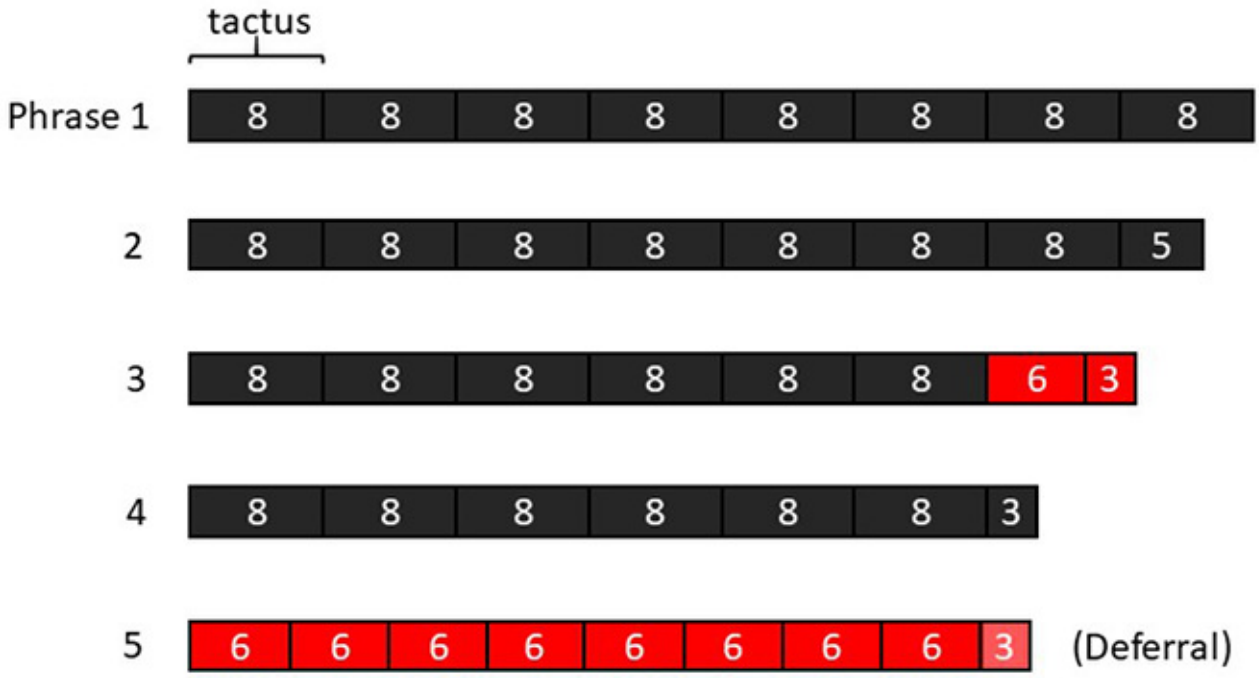
Seven-pulse meter
Tactus = 7
Subdivision = 4+3, 3+4

NI (4+3) meter
Tactus = 4+3
Subdivision = 2+2, 3 (2+1)

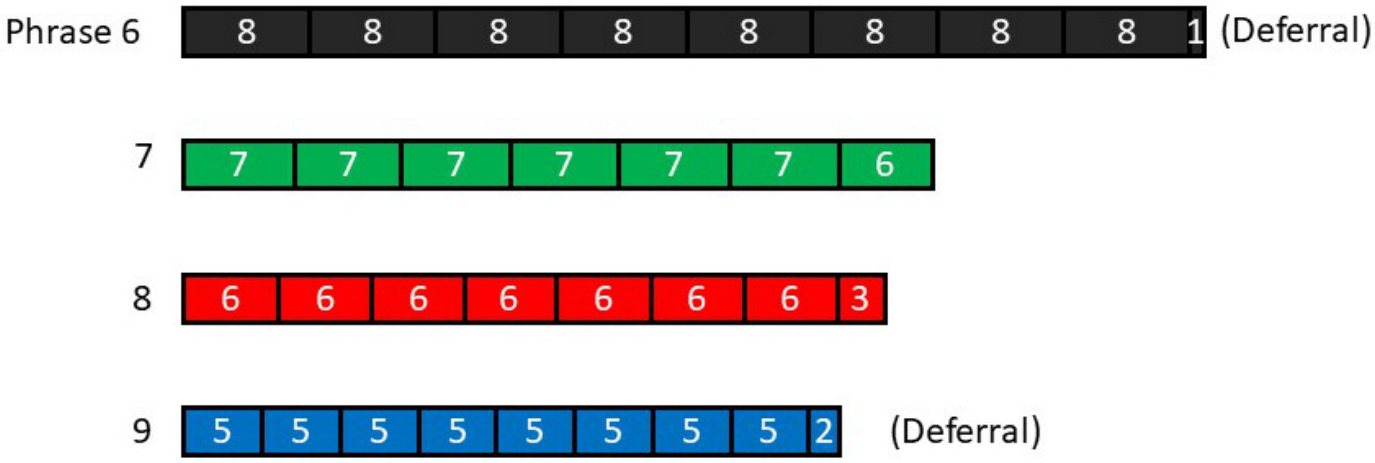
Example 14. Two higher-level forms in *Vortex Temporum I,* Reh. 1–37



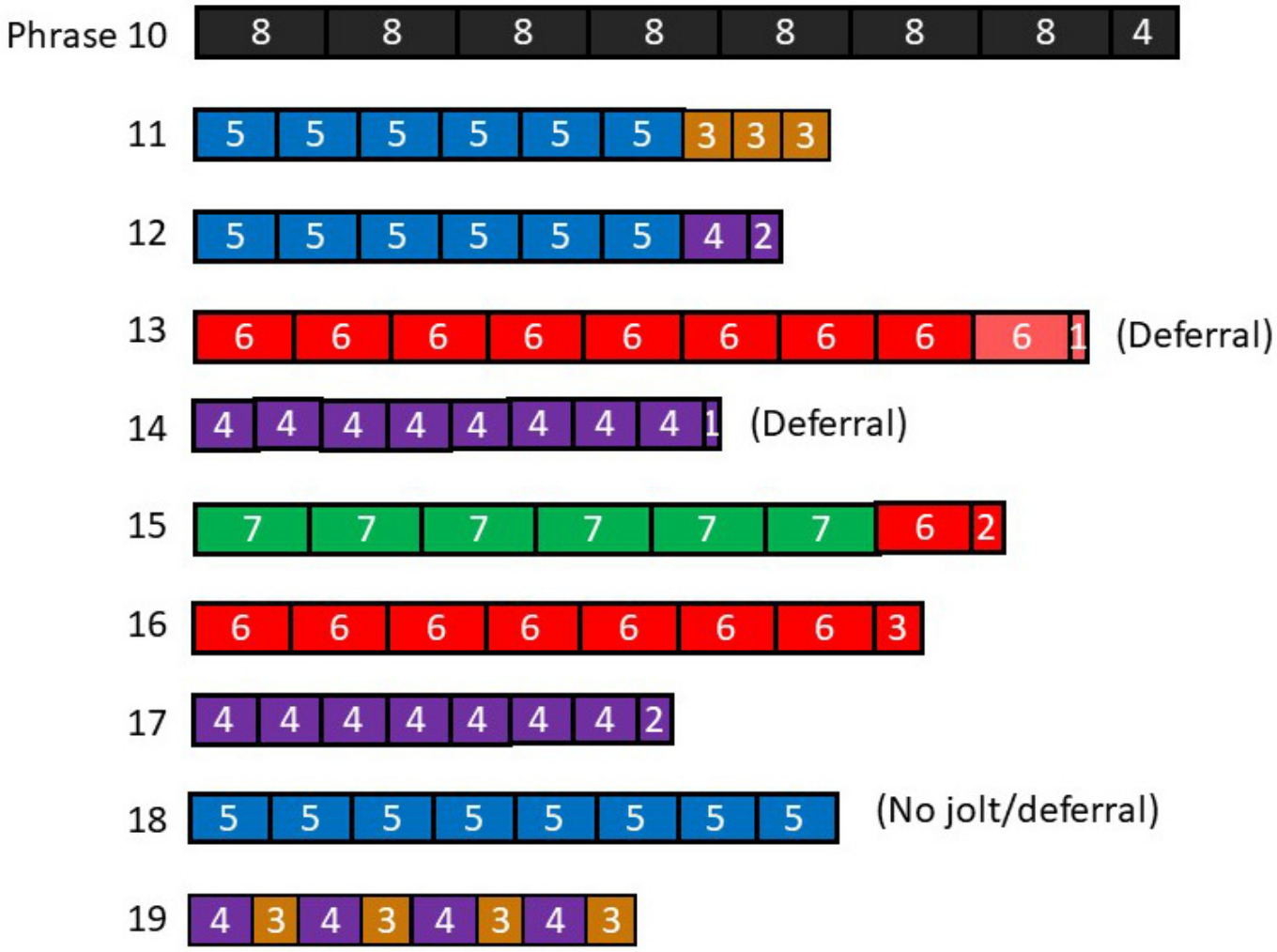
Example 15. First Stage



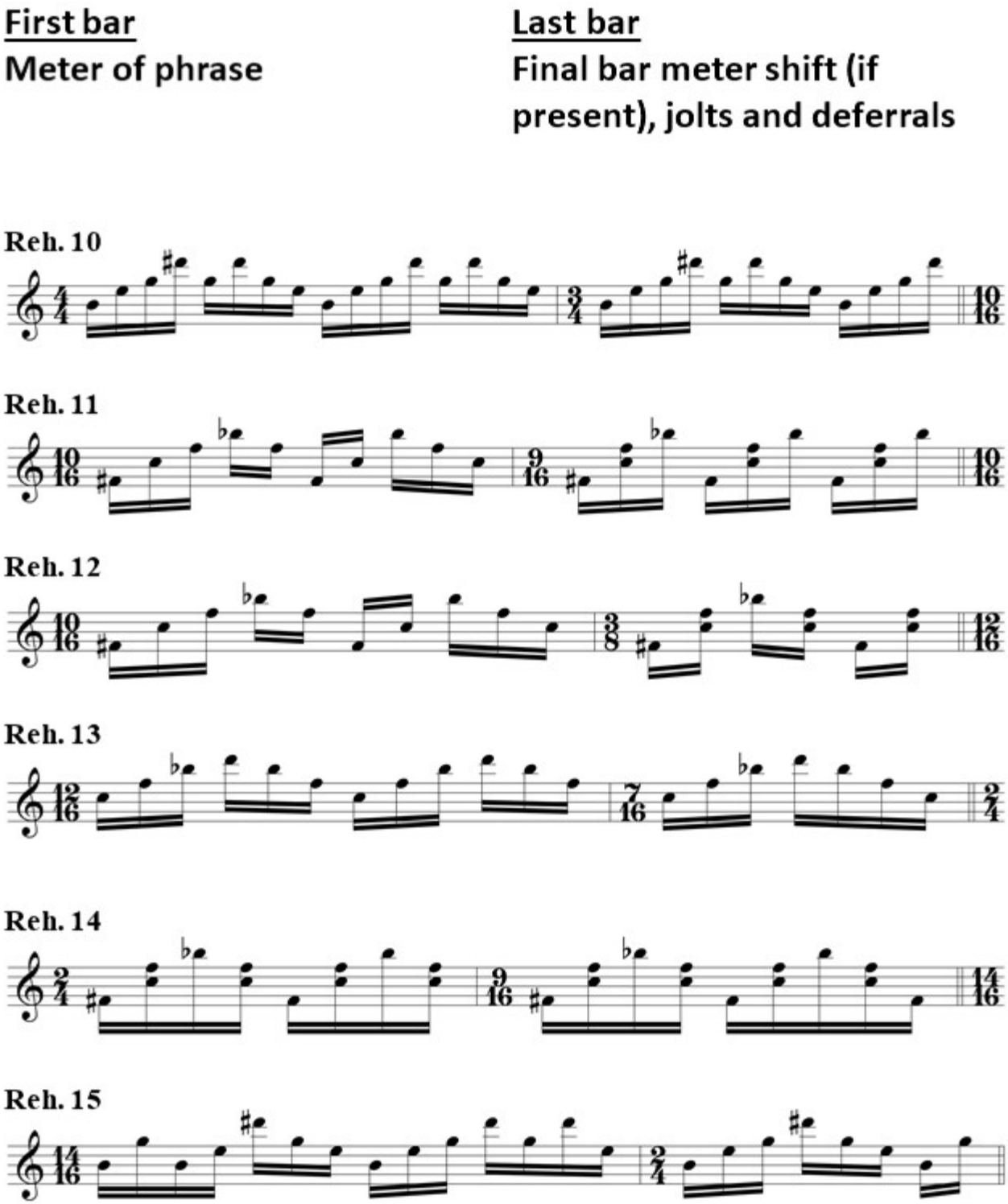
Example 16. Second Stage



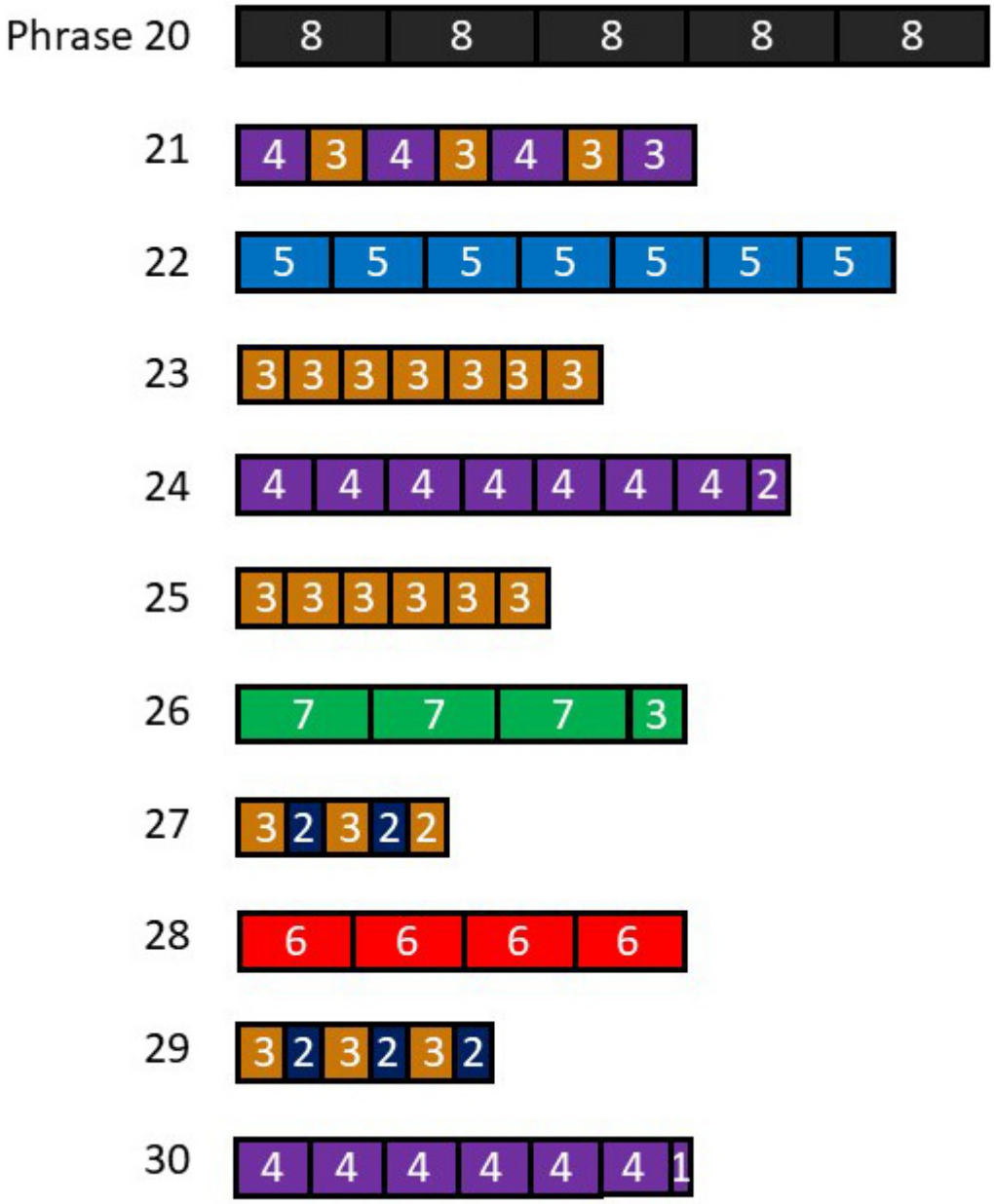
Example 17. Third Stage



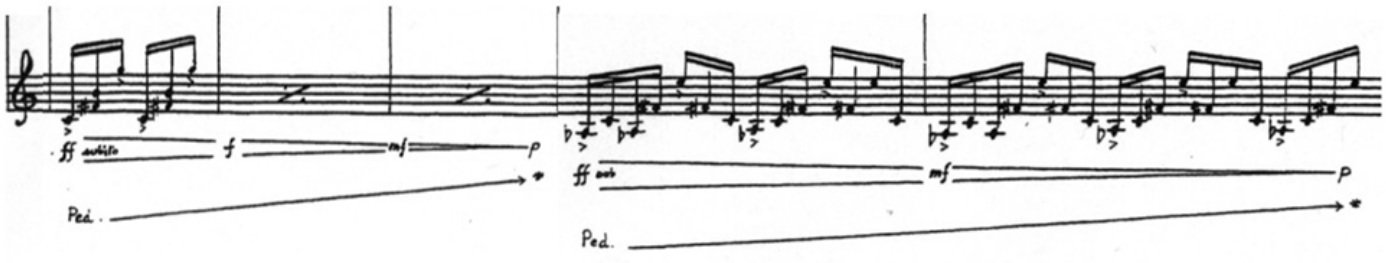
Example 18. *Vortex Temporum I,* Reh. 10–15, reduction. First and last bars of each prhase (piano part) are shown in each line.



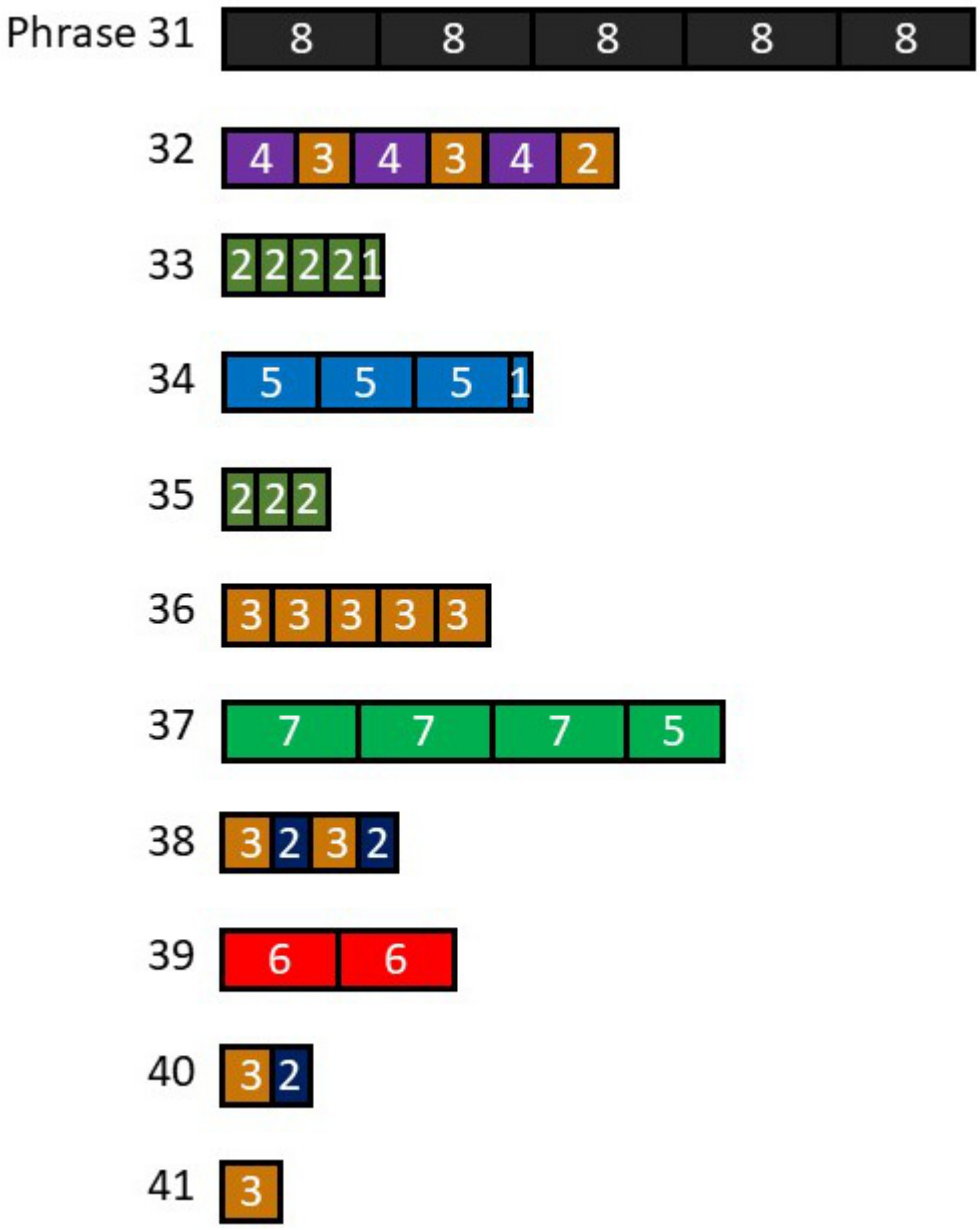
Example 19. Fourth Stage



Example 20. Shift between different metric levels, Reh. 25–26. The tactus of the preceding phrase shares the duration of one of the following phrase's subdivision units.



Three-pulse tactus
Tactus = 3
Subdivision = 1?

Seven-pulse tactus
Tactus = 7
Subdivision = 4 + 3

Example 21. Fifth Stage