MTO a journal of the Society for Music Theory

MTO 20.1 Examples: Willey, Editing and Arrangement

(Note: audio, video, and other interactive examples are only available online)
http://www.mtosmt.org/issues/mto.14.20.1/mto.14.20.1.willey.php

Figure 1. Piano 1, with wood surrounded by felt, covered with a leather strap, and finished with a metal fastener (Sandoval 2012)

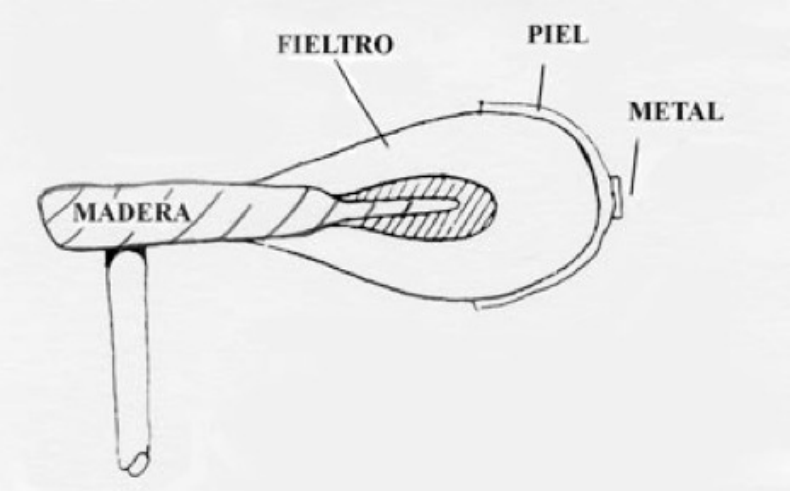

Figure 2. Piano 2, with wooden hammers finished with a metal strap (Sandoval 2012)

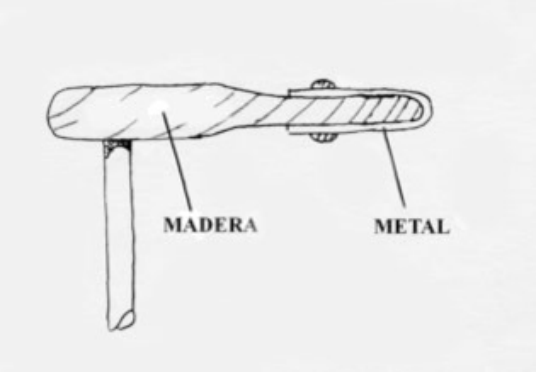

Figure 3. Photograph of tracker bar from an Ampico mechanism (Hocker 2012b)

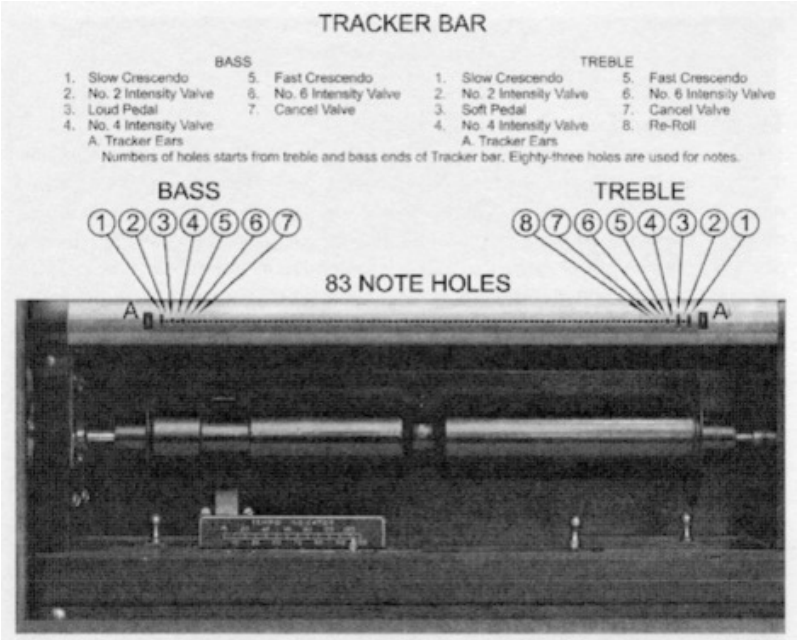

Table 1. Dynamic levels are controlled by punching single or combinations of holes in the margins of the rolls

Intensity	Dynamic	Key	
		Bass zone	Treble zone
1	*pp*	Bb1	B6
2	*p*	F1	Bb6
3	*mp*	G1	D7
4	*mf*	A1, or F1 and G1	C7, or Bb6 and D7
5	*f*	F1 and A1	Bb7 and C7
6	*ff*	G1 and A1	D7 and C7
7	*fff*	F1, G1, and A1	Bb6, D7, and C7

Table 2. Additional tracks in the margins used for other functions

Function	Key	
Cancel previous intensity (thereby leaving intensity 1)	Bb1	B6
Sustain pedal	F#1	
Soft pedal rail		Eb7
Slow crescendo	E1	F7
Fast crescendo	Ab1	C#7

Figure 4. An excerpt from the punching score for Study 49c

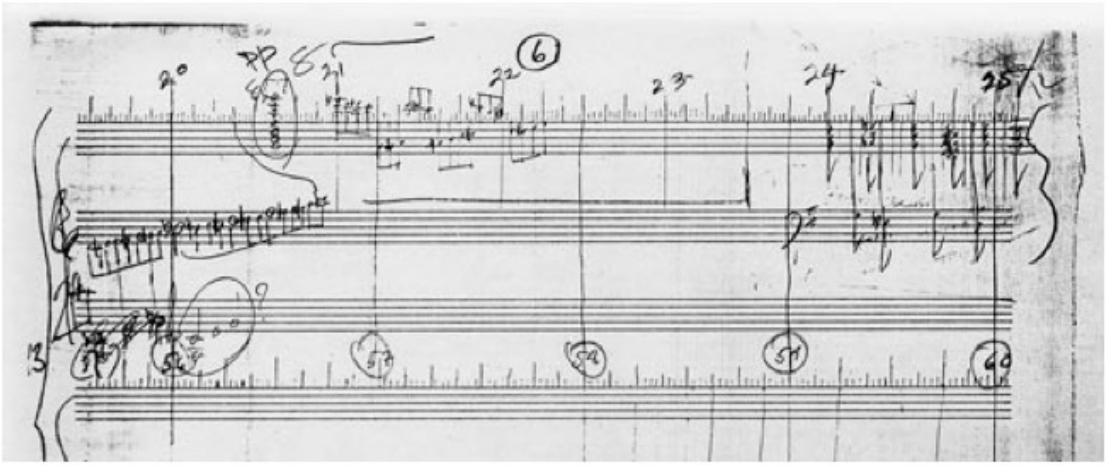

Table 3. One possible translation of Ampico dynamics to MIDI velocities for performance on a synthesizer

Dynamic	MIDI Velocity	Increase from lower level
pp	37	
p	52	15
mp	67	15
mp	82	15
f	97	15
ff	97	15
fff	112	15

Table 4. Trimpin's translation to MIDI velocities for performance on acoustic pianos using his Vorsetzer

Dynamic	MIDI Velocity	Increase from lower level
pp	16	
p	24	8
mp	32	8
mf	48	16
f	64	16
ff	80	16
fff	120	40

Figure 5. (a) Original, before editing, with the interruption of a sustained note. (b) After editing, the note is held out on the "blue" MIDI channel and the same pitch played on the "green" channel as part of the run.

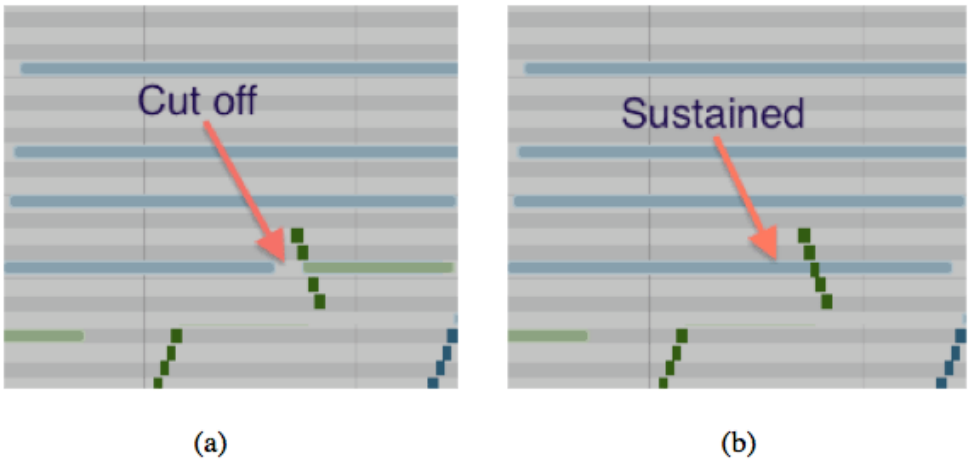

Figure 6. Assigning a different timbre to each of the 12 voices makes them easier to hear, as colorizing the notes in a sequencer view makes them easier to see

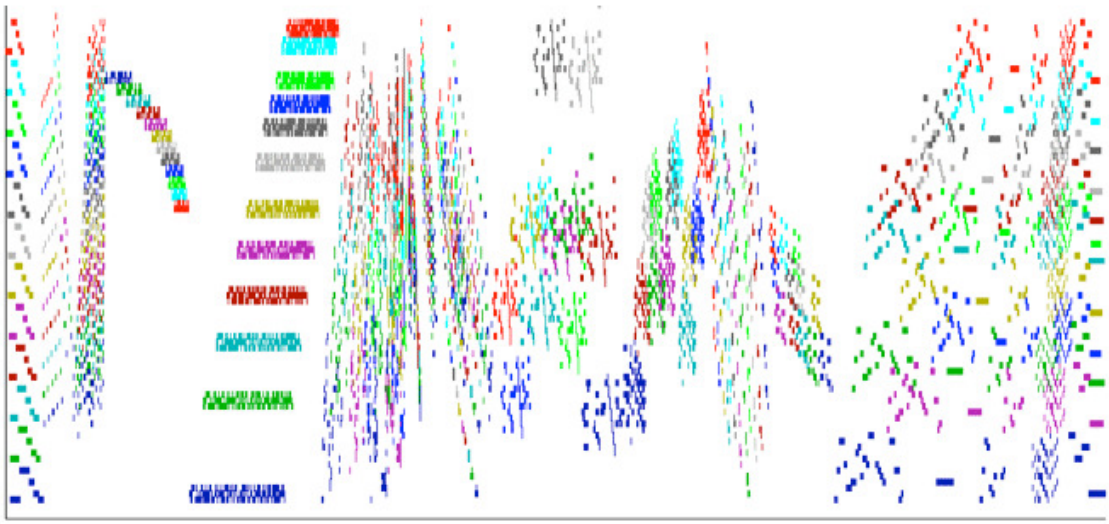

Figure 7. The second, mono-timbral version, with all 12 synthesizers playing all 12 voices in unison

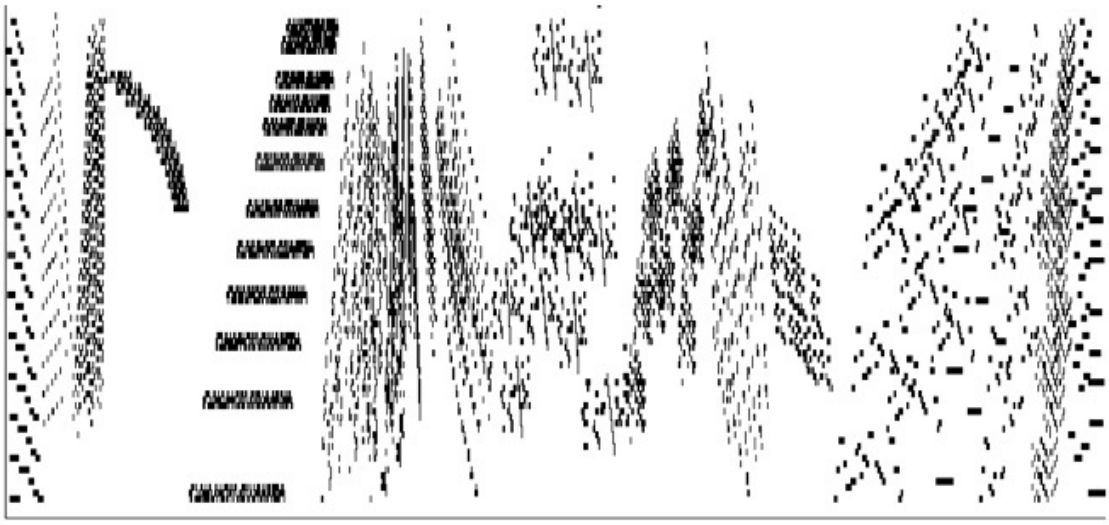

Figure 8. Mono-timbral version of the fifth canon in Study No. 37

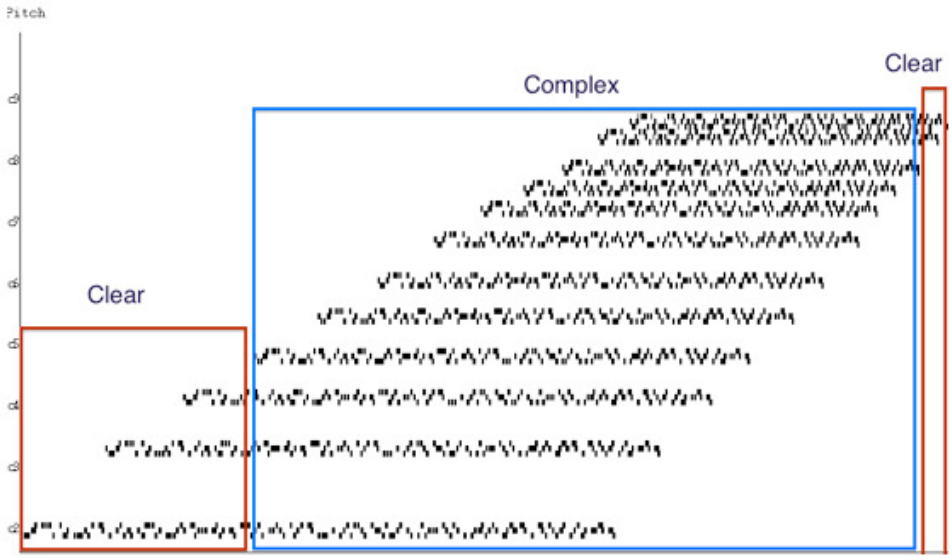

Figure 9. Multi-timbral version of the fifth canon in Study No. 37

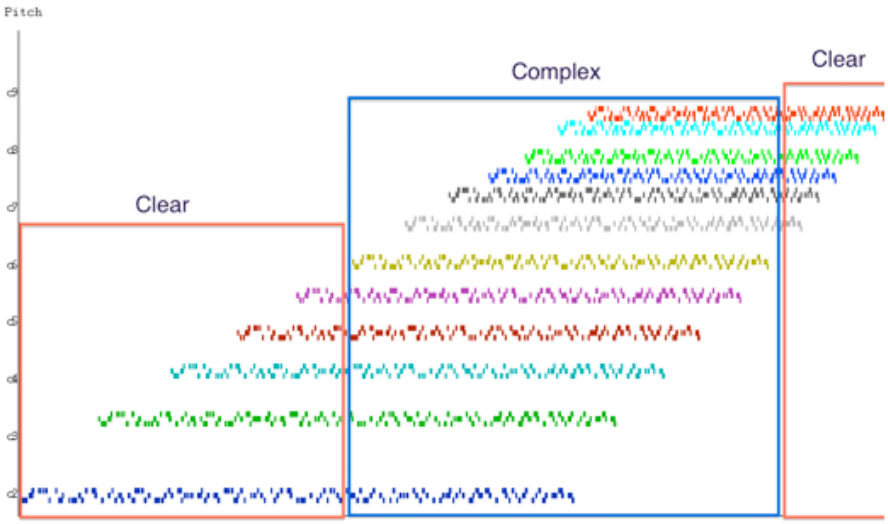

Figure 10. Unaligned chords

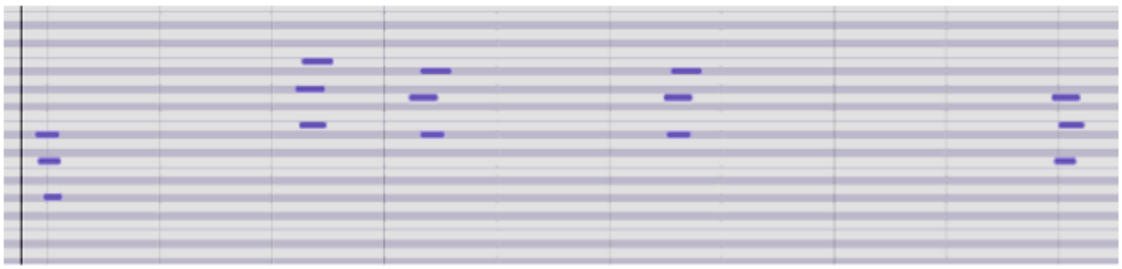

Figure 11. After deflamming to tighten the alignment

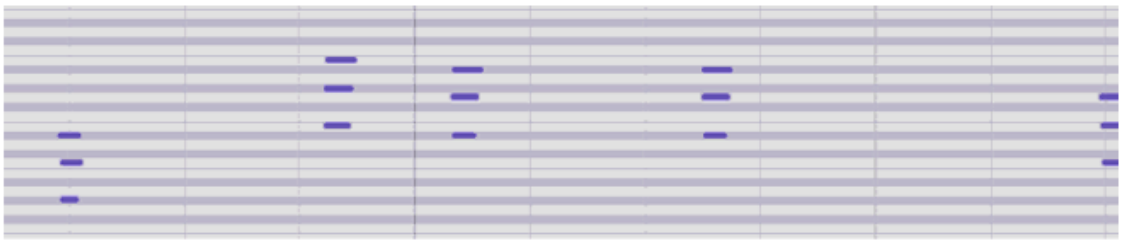

Figure 12. Excerpt of roll from Study No. 25 (Hocker 2012a), rotated

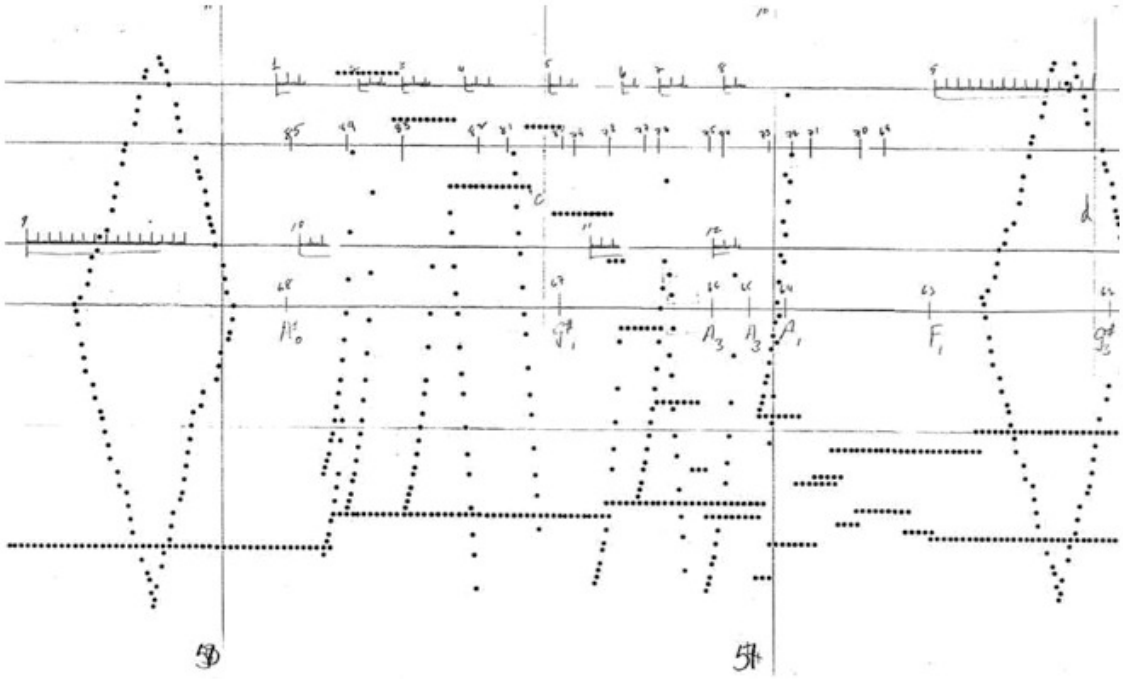

Figure 13. The same section (from Study No. 25) viewed as MIDI data in Performer

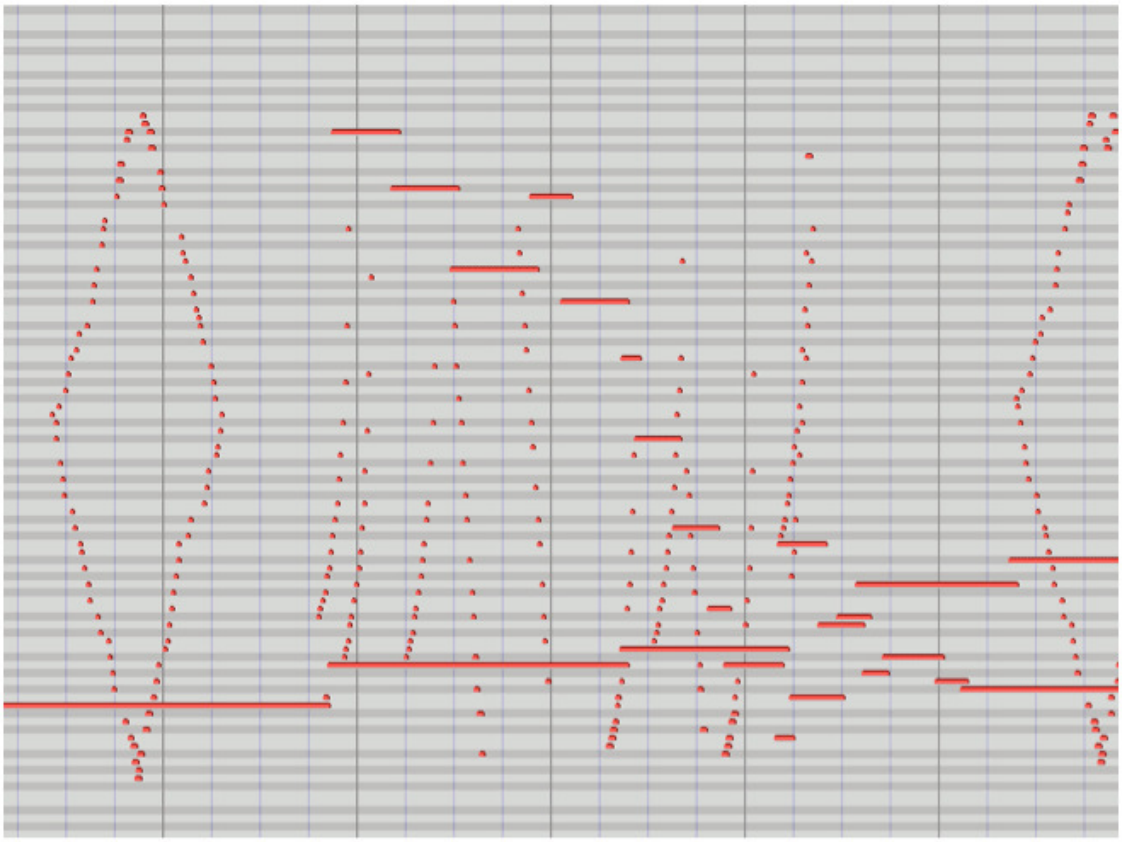

Figure 14. (a) Glissandi when scanned frequently have articulation anomalies. (b) Consistent durations after editing

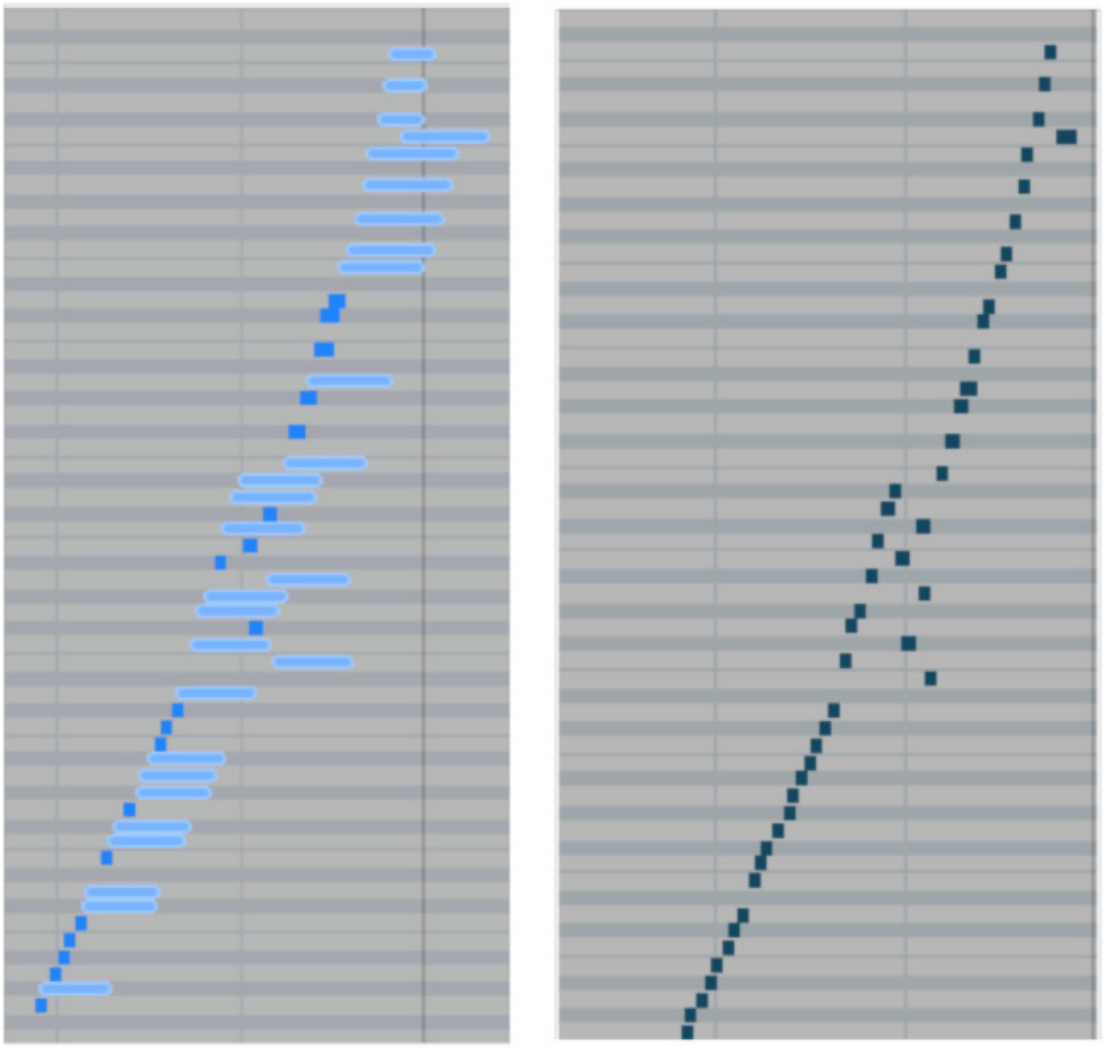

Figure 15. Independent volume control of treble and bass zones seen in one of Trimpin's unedited MIDI files (with horizontal lines added to show the zones)