

Gilberto Agostinho

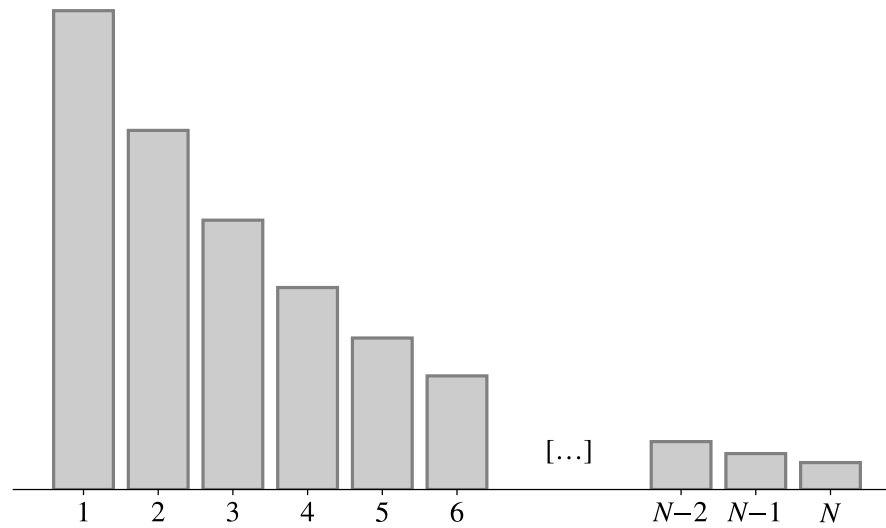
Cartography #9

for clarinet, viola, vibraphone, and piano

2018

Full Score

All pieces in this series were composed using the following distribution:



$$P(n) = (3/4)^k \times P(n - k)$$

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Mapping and rules

pitches		durations	
set size	$N = 6$	set size	$N = 5$
transformation period	$1 \times \text{bar}$ (pre-loop)	transformation period	$2 \times \text{bars}$ (pre-loop)
transformation mechanism	$[a, b, c, d, e, f] \rightarrow [b, c, d, e, f, g]$, with $g \bmod 12 = (f \bmod 12) + 1$, and g at a uniformly randomly selected octave transposition. At every sixth bar (pre-loop), the whole set of six pitches is replaced by a new one in which each new pitch is uniformly randomly selected within the instrumental range and making sure that each pitch class is unique. The process of selecting a new pitch after that will continue to follow $g \bmod 12 = (f \bmod 12) + 1$, and g .	transformation mechanism	$[a, b, c, d, e] \rightarrow [b, c, d, e, f]$, with $f = e - 1$.
initial set	$[C4, C\sharp4, D4, E\flat4, E4, F4]$	initial set	$[10, 9, 8, 7, 6]$
dynamics		looping mechanism	
set size	$N = 5$	window size	$16 \times \text{♪}$ (post-loop)
transformation period	fixed	shift size	semiquaver
set	$[ppp, pp, p, mp, mf]$	mechanism	the algorithm first creates a non-looped version of the music using the maps and transformation mechanisms to select pitches, durations and dynamics as described above. After this music is generated, the next stage is to use a 16 semiquavers-long window which is shifted to the right by a single semiquaver after every cycle. The process ends when the last note of the pre-looped music leaves the looping window.
selection mechanism	the dynamics map is tied to the duration map, so that a same random index is used to select elements from both. For instance, if the duration at the first index has been selected, the dynamic <i>ppp</i> is then also selected.	constraints	
		<ul style="list-style-type: none">• number of bars (pre-loop): 12.• range: F3–B♭5.	

General performance notes

- the piano's sustain pedal should be held half down throughout the piece. Some instruments and acoustic spaces might call for full pedalling, at the discretion of the performer.
- the vibraphone's pedal should be held down throughout the piece.
- after the last note of the piece, both the vibraphone and the piano should let the resonance disappear before raising the sustain pedal.
- the vibraphone's motor should remain off throughout the piece.
- medium mallets are recommended for the vibraphone.
- both the clarinet and viola should play without vibrato.
- the clarinettist should add breathing points after longer notes but preferably not at bar lines.
- if necessary, the clarinettist may take up to two bars of rest at any point in the performance at their own discretion.
- the viola should use a mute throughout this piece.
- the viola player may decide to play any notes in the piece using harmonics, in particular when that helps with larger leaps.

Cartography #9

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Score in C

♩ = ca. 80

Clarinet in B♭

Viola
con sord.

Vibraphone
motor off

Piano

Cl.

Vla.

Vib.

Pno.

11

Cl. *mf pp*

Vla. *pp p*

Vib. *pp ppp*

Pno. *mp ppp mf mp ppp mf mp ppp mf mp ppp mf mp ppp mf*

16

Cl. *mf pp*

Vla. *pp p*

Vib. *ppp pp*

Pno. *ppp mf ppp mf ppp mf ppp mf ppp*

21

Cl. *pp* *mf* *pp* *mf* *pp* *mf* *pp* *mf* *pp* *mf*

Vla. *p* *pp* *p* *pp* *p* *pp* *p* *pp* *p* *pp* *p*

Vib. *ppp* *pp* *ppp* *pp* *ppp* *pp* *ppp* *pp* *ppp* *pp* *ppp* *pp* *mf* *ppp* *pp* *mf*

Pno. *mf* *ppp* *mf* *ppp* *mf* *ppp* *mf* *ppp* *mf* *ppp* *mf* *ppp* *mf* *ppp* *mf* *ppp*

27

Cl. *pp* *mf* *pp* *mf* *p* *pp* *mf* *p* *pp* *mf* *p* *pp* *mf* *p*

Vla. *pp* *p* *pp* *p* *pp* *p* *pp* *p* *pp* *p* *pp* *p*

Vib. *ppp* *pp* *mf* *ppp* *pp* *mf* *ppp* *pp* *mf* *pp* *mf* *pp* *mf* *pp* *mf*

Pno. *mf* *ppp* *mf* *ppp* *mf* *ppp* *mf* *ppp* *mf* *ppp* *mf* *ppp* *mf* *ppp* *mf* *ppp*

32

Cl. *pp mf p mf p mf p mf*

Vla. *pp p pp p mf pp p mf pp p mf pp p mf*

Vib. *pp mf pp mf pp mf pp mf pp mf pp*

Pno. *p*

37

Cl. *mf p mf p mf p mf ppp mf p mf ppp*

Vla. *pp p mf pp p mf mp pp p mf mp pp p mf mp p mf mp*

Vib. *mf pp mf pp mf pp mf pp mf pp mf pp*

Pno. *ppp p ppp p ppp p ppp p ppp p*

42

Cl. *mf p mf ppp p mf ppp p mf ppp p mf ppp*

Vla. *p mf mp p mf mp p mf mp p mf mp p*

Vib. *mf pp p mf pp p mf pp p mf pp p*

Pno. *ppp p ppp p mf ppp p mf ppp p mf ppp p mf*

47

Cl. *p mf ppp p mf ppp p mf ppp p mf ppp p*

Vla. *mf mp p mf mp p mf mp p mf mp p mp*

Vib. *mf pp p mf pp p pp mf p pp p pp*

Pno. *ppp p mf ppp p mf pp ppp p mf pp ppp p mf pp p mf pp*

52

Cl. *mf ppp p mf ppp p ppp p pp*

Vla. *mf mp p mp p mp p mp p mp ppp*

Vib. *p pp p pp p pp p pp*

Pno. *p mf pp p mf pp p mf pp p mf pp*

57

Cl. *ppp p pp ppp p pp ppp p pp ppp p pp ppp p pp*

Vla. *mp p mp ppp mp p mp ppp mp ppp mp ppp p mp ppp*

Vib. *p pp mf p pp mf p pp mf p pp mf p pp mf p*

Pno. *p mf pp ppp mf pp ppp mf pp ppp mf pp ppp mf pp ppp*

63

Cl.

Vla.

Vib.

Pno.

Musical score for measures 63-68, featuring Clarinet (Cl.), Viola (Vla.), Vibraphone (Vib.), and Piano (Pno.). The score is written in treble clef with a key signature of one flat (B-flat). The music consists of six measures. The Clarinet part features a melodic line with dynamics ranging from *ppp* to *p*. The Viola part provides harmonic support with dynamics from *p* to *mp*. The Vibraphone part has a rhythmic pattern with dynamics from *pp* to *mf*. The Piano part has a steady accompaniment with dynamics from *pp* to *ppp*.

69

Cl.

Vla.

Vib.

Pno.

Musical score for measures 69-74, continuing from the previous system. The instrumentation remains the same: Clarinet (Cl.), Viola (Vla.), Vibraphone (Vib.), and Piano (Pno.). The music consists of six measures. The Clarinet part continues its melodic line with dynamics from *p* to *ppp*. The Viola part has a more active role with dynamics from *mp* to *mf*. The Vibraphone part maintains its rhythmic pattern with dynamics from *pp* to *mf*. The Piano part continues its accompaniment with dynamics from *pp* to *ppp*.

74

Cl. *pp ppp p ppp ppp p ppp p ppp*

Vla. *ppp p mf ppp p mf ppp p mf ppp p mf ppp*

Vib. *mf p mp ppp mf p mp ppp p mp ppp p mp ppp*

Pno. *ppp p ppp p ppp p ppp p ppp p ppp*

79

Cl. *p ppp p ppp p ppp p ppp*

Vla. *p mf pp p mf pp p mf pp p mf pp*

Vib. *p mp pp p mp pp p mp pp mp pp mp pp*

Pno. *p ppp p ppp p ppp p ppp*

84

Cl. *p ppp p ppp pp p ppp pp p ppp pp*

Vla. *p mf pp pp mf pp pp mf pp mf pp mf pp pp*

Vib. *mp pp mp pp mp pp pp pp pp pp pp*

Pno. *p ppp p ppp p ppp p ppp p ppp p*

89

Cl. *p ppp pp p ppp pp mp ppp pp mp ppp pp mp*

Vla. *mf pp ppp mf pp ppp mf pp ppp mf pp ppp pp*

Vib. *pp ppp pp ppp pp ppp pp ppp p*

Pno. *ppp p ppp p ppp p ppp p ppp p pp p pp ppp p pp*

94

Cl.

Vla.

Vib.

Pno.

Musical score for measures 94-98. The score is arranged in four staves: Clarinet (Cl.), Viola (Vla.), Vibraphone (Vib.), and Piano (Pno.). The Clarinet part features a melodic line with dynamics *ppp*, *pp*, and *mp*. The Viola part has a melodic line with dynamics *ppp* and *pp*. The Vibraphone part has a melodic line with dynamics *pp* and *p*. The Piano part has a melodic line with dynamics *ppp* and *p*. The score is divided into five measures, each with a vertical bar line.

99

Cl.

Vla.

Vib.

Pno.

Musical score for measures 99-103. The score is arranged in four staves: Clarinet (Cl.), Viola (Vla.), Vibraphone (Vib.), and Piano (Pno.). The Clarinet part features a melodic line with dynamics *ppp*, *pp*, and *mp*. The Viola part has a melodic line with dynamics *pp*, *ppp*, and *p*. The Vibraphone part has a melodic line with dynamics *pp* and *p*. The Piano part has a melodic line with dynamics *p*, *pp*, and *ppp*. The score is divided into five measures, each with a vertical bar line.

104

Cl. *pp mp ppp pp mp ppp p mp ppp p mp ppp*

Vla. *pp p ppp pp p ppp pp p ppp pp p ppp*

Vib. *ppp p pp ppp p pp ppp p pp ppp p pp*

Pno. *p pp ppp p pp ppp pp ppp ppp ppp ppp*

109

Cl. *mp ppp p mp ppp p mp ppp p mp ppp p mp ppp*

Vla. *pp p ppp pp p ppp pp p ppp p p ppp*

Vib. *p pp ppp p pp ppp p pp ppp p pp ppp*

Pno. *pp ppp pp ppp pp ppp p p ppp p ppp*

114

Cl. *p ppp*

Vla. *p ppp*

Vib. *p pp ppp*

Pno. *ppp p ppp*

119

Cl. *p ppp*

Vla. *ppp mf ppp*

Vib. *ppp pp*

Pno. *p ppp*

124

Cl. *p ppp* *p ppp*

Vla. *mf ppp* *mf ppp* *mp ppp* *mf ppp* *mp ppp* *mf ppp* *mp p*

Vib. *ppp* *pp* *ppp* *pp* *ppp* *pp* *ppp* *pp* *ppp* *pp*

Pno. *p ppp* *p ppp* *p ppp* *p ppp* *p ppp* *p ppp* *p ppp* *mf*

129

Cl.

Vla. *ppp* *mf ppp* *mp p* *ppp* *mf ppp* *mp p* *ppp* *mf ppp* *mp p* *mf*

Vib. *ppp* *pp* *ppp* *pp* *ppp* *pp* *mf* *pp* *mf*

Pno. *p ppp* *mf* *p ppp* *mf ppp* *mf ppp* *mf ppp* *mf ppp*

133

Cl.

Vla.

Vib.

Pno.

137

Cl.

Vla.

Vib.

Pno.

141

Cl. *ppp* *pp* *p* *ppp* *pp* *p* *ppp* *pp* *p*

Vla. *mp* *p* *mf* *mp* *ppp* *mp* *p* *mf* *mp* *ppp* *p* *mf* *mp* *ppp* *p* *mf* *mp* *ppp*

Vib. *pp* *mf* *ppp* *mp* *pp* *mf* *ppp* *mp* *p* *pp* *mf* *ppp* *mp* *p* *pp* *mf* *ppp* *mp* *p*

Pno. *ppp* *mf* *ppp* *p* *pp* *ppp* *mf* *ppp* *p* *pp* *mf* *ppp* *p* *pp* *mf* *ppp* *p* *pp*

145

Cl. *ppp* *pp* *p* *ppp* *pp* *p* *ppp* *pp* *p* *ppp* *pp* *p* *ppp*

Vla. *p* *mf* *mp* *ppp* *p* *mf* *mp* *ppp* *mf* *mp* *ppp* *mf* *mp* *ppp*

Vib. *pp* *mf* *ppp* *mp* *p* *mf* *ppp* *mp* *p* *mp* *mf* *ppp* *mp* *p* *mp* *ppp* *mp* *p* *mp* *ppp*

Pno. *ppp* *p* *pp* *mf* *ppp* *p* *pp* *mf* *ppp* *p* *pp* *mf* *ppp* *p* *pp* *mf* *pp* *ppp* *p* *pp* *mf* *pp*

149

Cl. *pp p ppp mp*

Vla. *mp ppp mp*

Vib. *mp p mp ppp mp p mp ppp mp p mp ppp*

Pno. *ppp p pp mf pp ppp p pp mf pp p pp mf pp p pp mf pp*

153

Cl. *pp p ppp mp p ppp mp p ppp mp p ppp*

Vla. *p ppp p ppp p ppp p*

Vib. *mp p mp ppp mp p mp ppp mp p mp ppp*

Pno. *p pp mf pp ppp p pp mf pp ppp pp mf pp ppp pp mf pp ppp mp*

157

Cl.

Vla.

Vib.

Pno.

This musical system covers measures 157 to 160. It features four staves: Clarinet (Cl.), Viola (Vla.), Vibraphone (Vib.), and Piano (Pno.). The Clarinet part begins with a dynamic of *p* and includes a *ppp* marking. The Viola part starts with *ppp*. The Vibraphone part begins with *p*. The Piano part starts with *pp* and includes *mf* markings. The music is characterized by melodic lines with various dynamics and articulations, including slurs and accents.

161

Cl.

Vla.

Vib.

Pno.

This musical system covers measures 161 to 164. It features four staves: Clarinet (Cl.), Viola (Vla.), Vibraphone (Vib.), and Piano (Pno.). The Clarinet part begins with a dynamic of *mp* and includes *p* and *ppp* markings. The Viola part starts with *p* and includes *ppp* markings. The Vibraphone part begins with *mp* and includes *ppp* markings. The Piano part starts with *mf* and includes *pp* markings. The music continues with melodic lines and dynamic variations, including slurs and accents.

165

Cl.

Vla.

Vib.

Pno.

Musical score for measures 165-170, first system. The score is for four instruments: Clarinet (Cl.), Viola (Vla.), Vibraphone (Vib.), and Piano (Pno.). The music is in a key with one flat (B-flat major or D minor) and a common time signature. The dynamics range from *ppp* (pianissimo) to *mp* (mezzo-piano). The Clarinet part features a melodic line with slurs and accents, while the other instruments provide harmonic support with chords and moving lines.

170

Cl.

Vla.

Vib.

Pno.

Musical score for measures 170-175, second system. This system continues the music from the first system. The dynamics remain consistent, with *ppp* and *mp* markings. The Clarinet part continues its melodic development, and the other instruments maintain their harmonic roles. The system concludes with a repeat sign at the end of measure 175.