5-2021

Compositions for 0 or 1 Performers

Rodrigo Valente Pascale
Western Michigan University, rodrigo.pascale@yahoo.com

COMPOSITIONS FOR 0 OR 1 PERFORMERS

by

Rodrigo Valente Pascale

A thesis submitted to the Graduate College
in partial fulfillment of the requirements
for the degree of Master of Music
School of Music
Western Michigan University
May 2021

Thesis Committee:

Lisa Renee Coons, Ph.D.
Christopher Biggs, D.M.A.
Maria Cristina Fava, Ph.D.

COMPOSITIONS FOR 0 OR 1 PERFORMERS

Rodrigo Valente Pascale, M.M.

Western Michigan University, 2021

This thesis includes a collection of pieces composed for 0 or 1 performers – unaccompanied solo, solo and electronics or fixed media. The compositions for solo instruments include "*Unnest*" for bassoon solo, premièred by Ariane Petri during the V Congress of Music and Mathematics in 2020, and "*Assemblage*" for baritone saxophone solo, premièred by Erin Rogers in 2020. "*Reizantwort*" is a composition for viola and electronics which was first recorded by Laura Parra in summer 2020. Finally, "*Discontinuous Mediation I*" and "*Discontinuous Mediation II*" are fixed media compositions that were composed in Summer 2020 and Spring 2021, respectively. This collection of pieces for 0-1 performers demonstrates my current greatest interests in composition and how I engage with it.

ACKNOWLEDGEMENTS

I would like to acknowledge Dr. Coons and Dr. Biggs for their constant support in my artistic development as a composer and musician. In these two years of my master's degree, their support and advice were fundamental, not only in the making of this thesis, but also in my most recent achievements as a composer. Also, I would like to acknowledge Dr. Fava for always being available to help and for her willingness to get to know the part of my work represented in this thesis.

Finally, I would like to acknowledge my family, my friends, and my previous composition professors Dr. Pitombeira and Dr. Kampela, that always gave me support in my studies and in my career. It was thanks to this support that I decided to take this important step in my career and come to study in the United States of America. Without them, this master thesis would not be possible.

Rodrigo Valente Pascale

TABLE OF CONTENTS

CHAPTER I

UNNEST

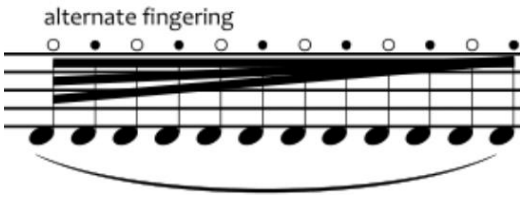
Instrumentation

Bassoon Solo

Performance Notes

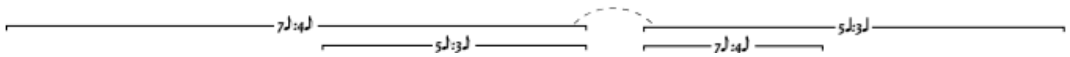
Feathered beaming
(ritardando)

(accelerando)



The filled and the empty circles mean dark fingering tone and light fingering tone, respectively. These symbols are used in the context of timbristic color variation.

Smorz. (smorzato) is a technique obtained by pressing the reed with subtle movements of the lips caused in turn by corresponding movements of the jaw. This instruction is accompanied by a graph whose axis (y) signifies the intensity of the oscillation over time (x).



The dotted curve between the two tuplet brackets indicate that a micrometric modulation occurs, therefore the second tuplet level of these two tuplet has the same resulting ratio.

Multiphonics

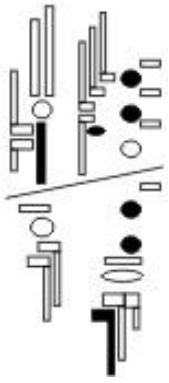
The information regarding multiphonics was consulted on the website http://www.leslieross.net/multiphonics.html, which addresses multiphonics, their resulting sounds, their notations and their typing.

p.3 – c.39

p.3 – c.40

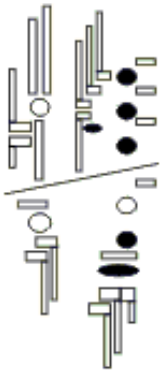
p.3 – c.43

p.3 – c.47



p.3 – c.53

p.3 – c.56



p.3 – c.59

Program Notes

The title “Unnest” references to the nested tuplets in this work and the unnesting trajectory of the work, which starts with complex rhythms of overlapping tuplets that gradually unravels, becoming less complex and giving more freedom to the performer.

I compose this work using Open Music software to generate the time signatures. The time signatures were generated using the mathematical concepts of rotation and permutation. The numerators were generated using rotation and the denominators were generated using permutation. For the numerators, all values resulting from the rotation of the list (2 3 4 5 7 12) were used, and for the denominators 6 of the permutations of the list (4 4 4 8 8 16) were used. Finally, I performed another permutation using the results of the previous efforts, and that permutation generated 36 possibilities of measure sequences.

The Open Music software is based on the Lisp language, which influenced and became a structuring factor in the work Unnest. During the process of generating the rhythm parameter, the software a series of list that would determine the proportion of the rhythmic figures within each measure, established a priori. After the software generated a first rhythmic layer and the materials were established, I reused the previously created lists to refound the rhythmic figures already created. This procedure was repeated, which generated a third layer of rhythms.

Of the 108 generated rhythms, only 8 of them were selected and organized in such a way that there was a decompression of the rhythm, which established the unnesting trajectory of the work. Some rhythms and time signatures were rewritten to maintain the central idea but to make it easier to perform. In this process, the use of micrometric modulations stands out. Micrometric

modulations is a concept created by Arthur Kampela that facilitates transitions between two different nested tuplets through a common ratio.

Finally, metric modulations were also employed to reinforce the unnesting trajectory. The first *tempo* indication of *Unnest* indicates “quarter note equal to 60 bpm”. Then, at bar 10 it changes to “quarter note equal to 48 bpm”. Between these two *tempi*, there is a ratio of 4/5, which would be the same relationship between a sixteenth note and a quintuplet of a sixteenth note. Thus, the musical idea implied by this change is that all previous material was inside a quintuplet and after the adoption of the new *tempo*, the music is freed from this quintuplet. A similar metric modulation is established in bar 34, but this time the proportion is 2/3 – the same relationship between an eighth note and a triplet of an eighth note.

Furthermore, the tonal trajectory of this work conveys a similar unnesting idea. Several harmonic series were generated from the Bb harmonic series partials (2 3 4 5 7 12). The frequencies of these partials became fundamental frequencies of the new series, creating a new layer of series. This procedure was repeated using the same list, creating a third layer. After creating these 3 layers, they were organized backwards – that is, the biggest amount of generated harmonic series was reduced throughout the piece until only the harmonic series of the fundamental Bb remains in the last section.

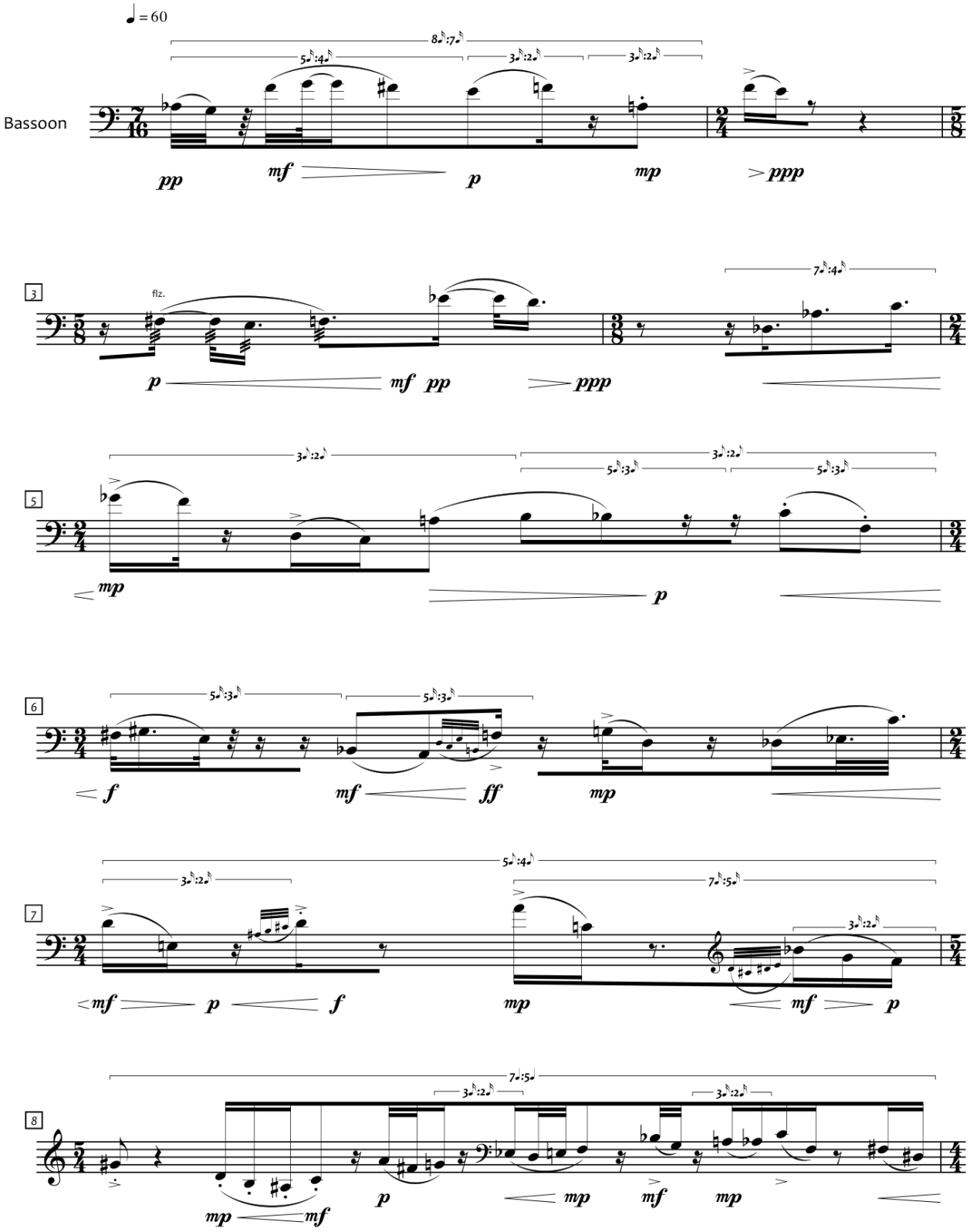
Along with the process of generating harmonic material, the process of selecting pitches played a fundamental role in the context of this composition. The row (2 3 4 5 7 12 1 6 8 9 10 11) was used. In this row, each number refers to a partial of the harmonic series. Depending on the section of the piece, partials of the 3rd, 2nd or 1st layers of harmonic series could be selected, increasing or decreasing the number of possibilities.

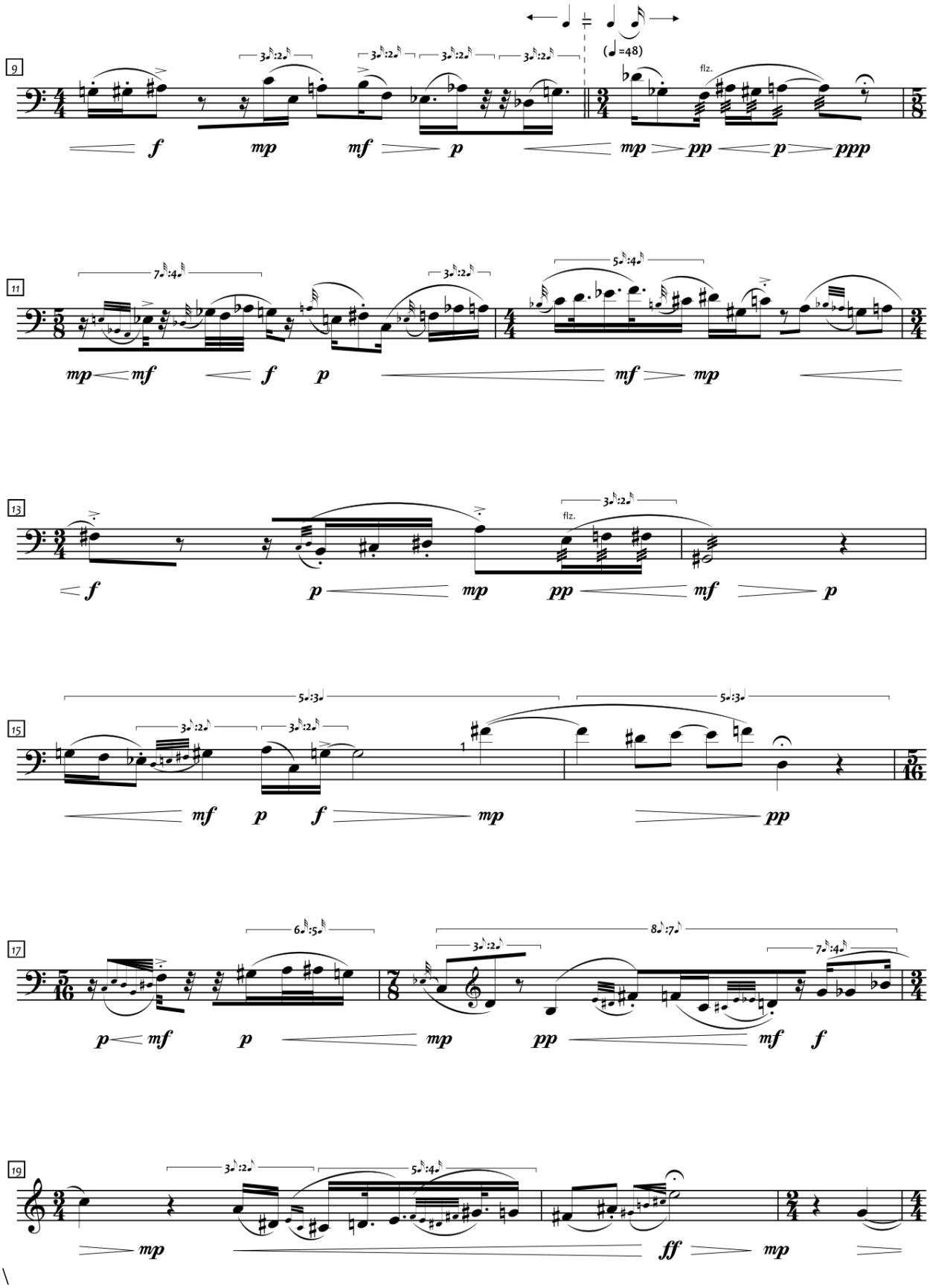
This composition was written for the V Congress of Music and Mathematics (MUSMAT) in Brazil and it was premièred by Ariane Petri in an online concerto on December 10th, 2020.

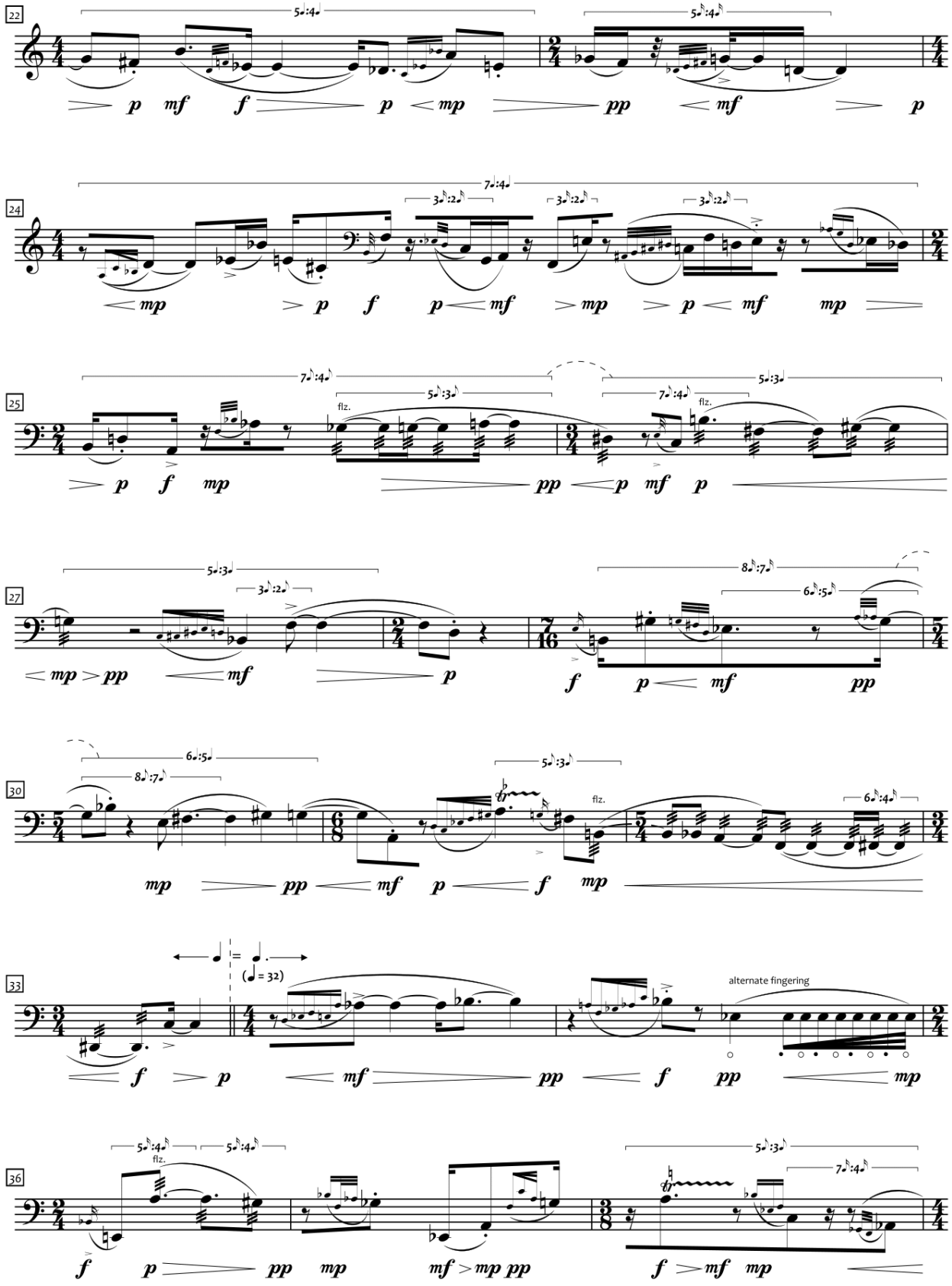
Score

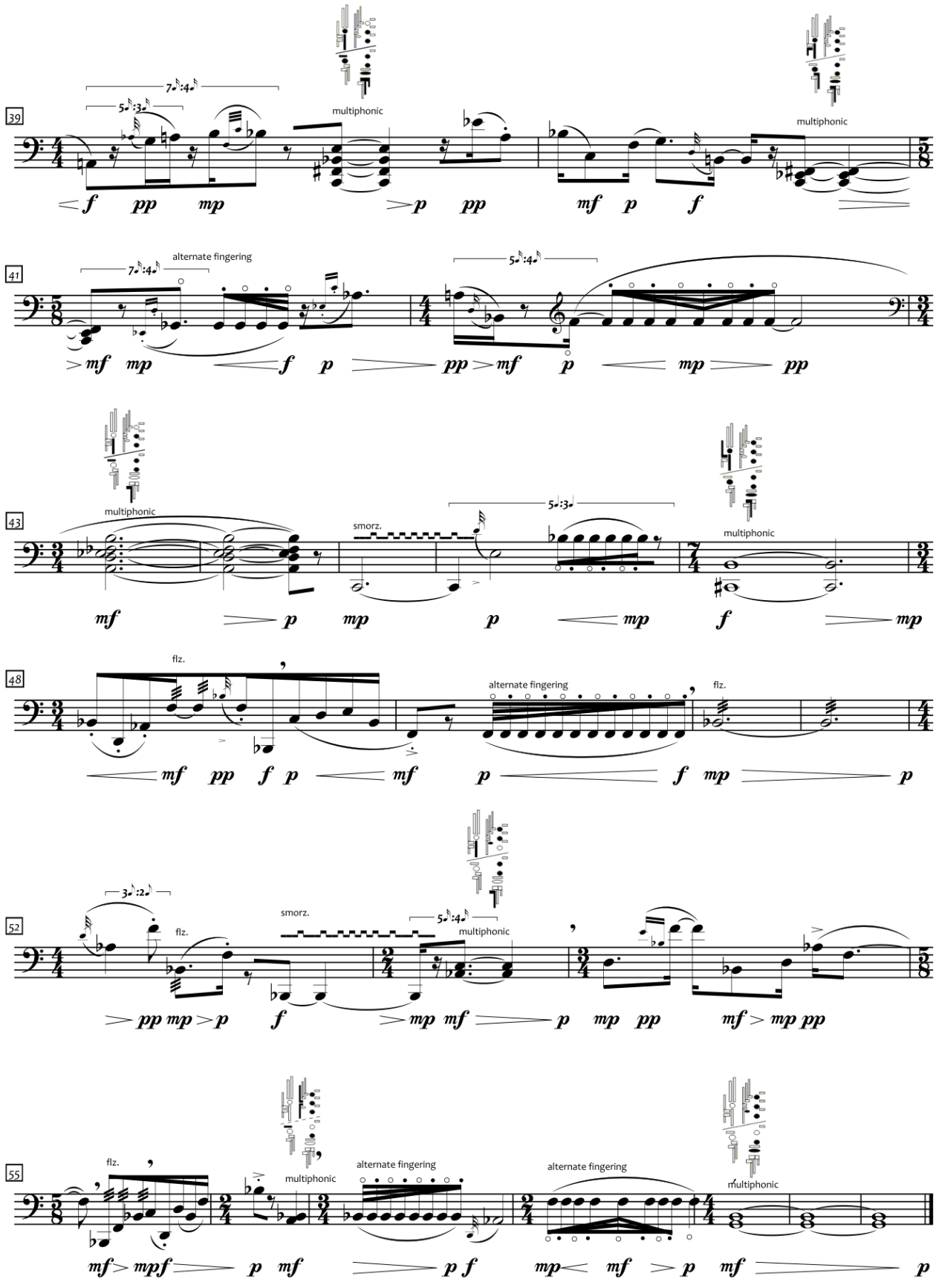
UNNEST

RODRIGO PASCALE
OPUS 39, 2020




9
(♩=48)
flz.
11
13
flz.
15
17
19


22
24
25
27
30
33
36
flz.
alternate fingering


39
multiphonic
multiphonic
41
alternate fingering
43
multiphonic
smorz.
multiphonic
48
flz.
alternate fingering
flz.
52
flz.
smorz.
multiphonic
55
flz.
multiphonic
alternate fingering
alternate fingering
multiphonic

CHAPTER II

ASSEMBLAGE

Instrumentation

Baritone Saxophone solo

Performance Notes

Feathered beaming

(ac*celerando)*

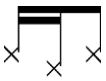
Microtonal symbols

- ¾ tone

- ¼ tone

+ ¼ tone

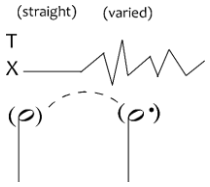
+ ¾ tone



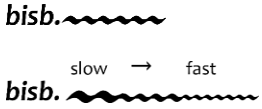
"X" noteheads mean key clicks. When those are used in combination with the tremolo symbol, the noted key click should be repeated several times as fast as possible.

Both these symbols above the note mean slap tongue. The one in the left is a closed slap tongue and the one on the right is an open slap tongue.

"Square" noteheads mean air sound. It can also be followed by the indication "X", "F" or "S", indicating what kind of consonant sound the performer should use.



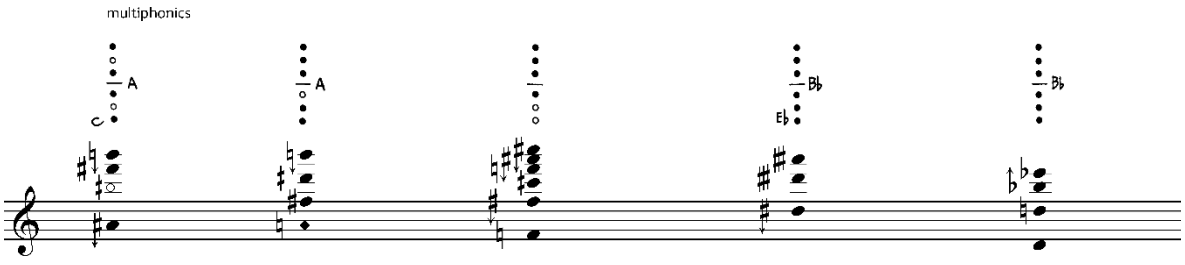
The letters T and X indicate the technique teeth on the reed, which can be played straight or with variation.

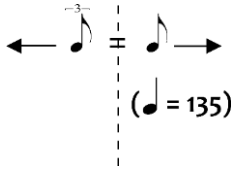


The text instruction “bisb.” followed by a wavy line means *Bisbigliando*. It can come with variations (ex.: fast-slow, slow-fast).

This symbol means Flutter-tonguing. It can come with variations, such as ord.-flz. or flz.-ord.

Multiphonics on this score are indicated by the text instruction “multiphonic” and they are followed by their fingering and the resultant notes.





This indication states that a metric modulation is taking place.

Program Notes

In this composition the concept of assemblage is conveyed by the procedure of pitch accumulation using multiphonics, in which more than one note sounds at the same time. The tonal material that is explored in a linear fashion in the first sections of *Assemblage* was built by the series of multiphonics that takes place later in the piece, creating a new harmonic dimension where several notes sound simultaneously.

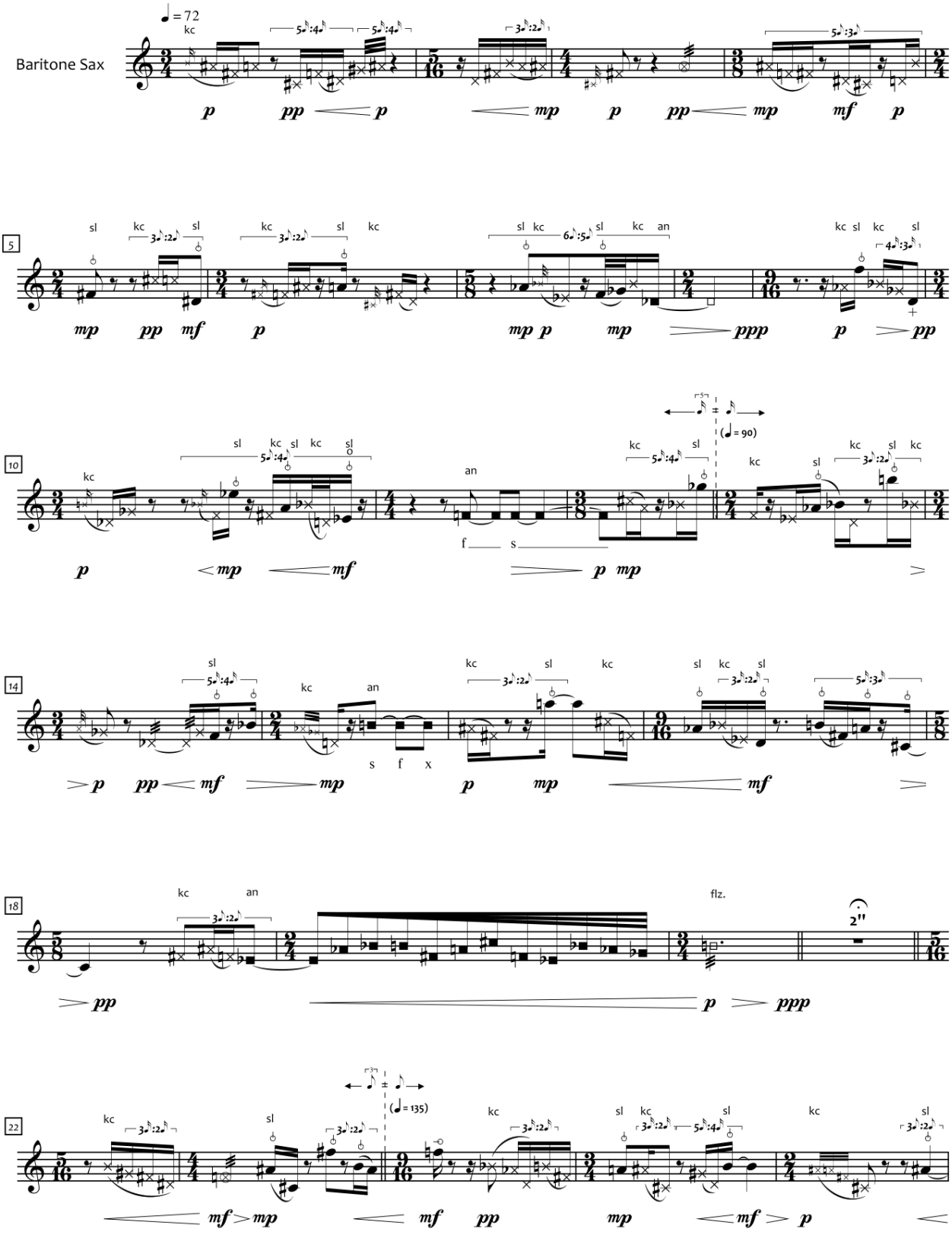
This piece was written during the Hypercube Workshop in a collaboration with the New York-based saxophonist Erin Rogers, who enlightened me about the saxophone's possibilities and musical ideas.

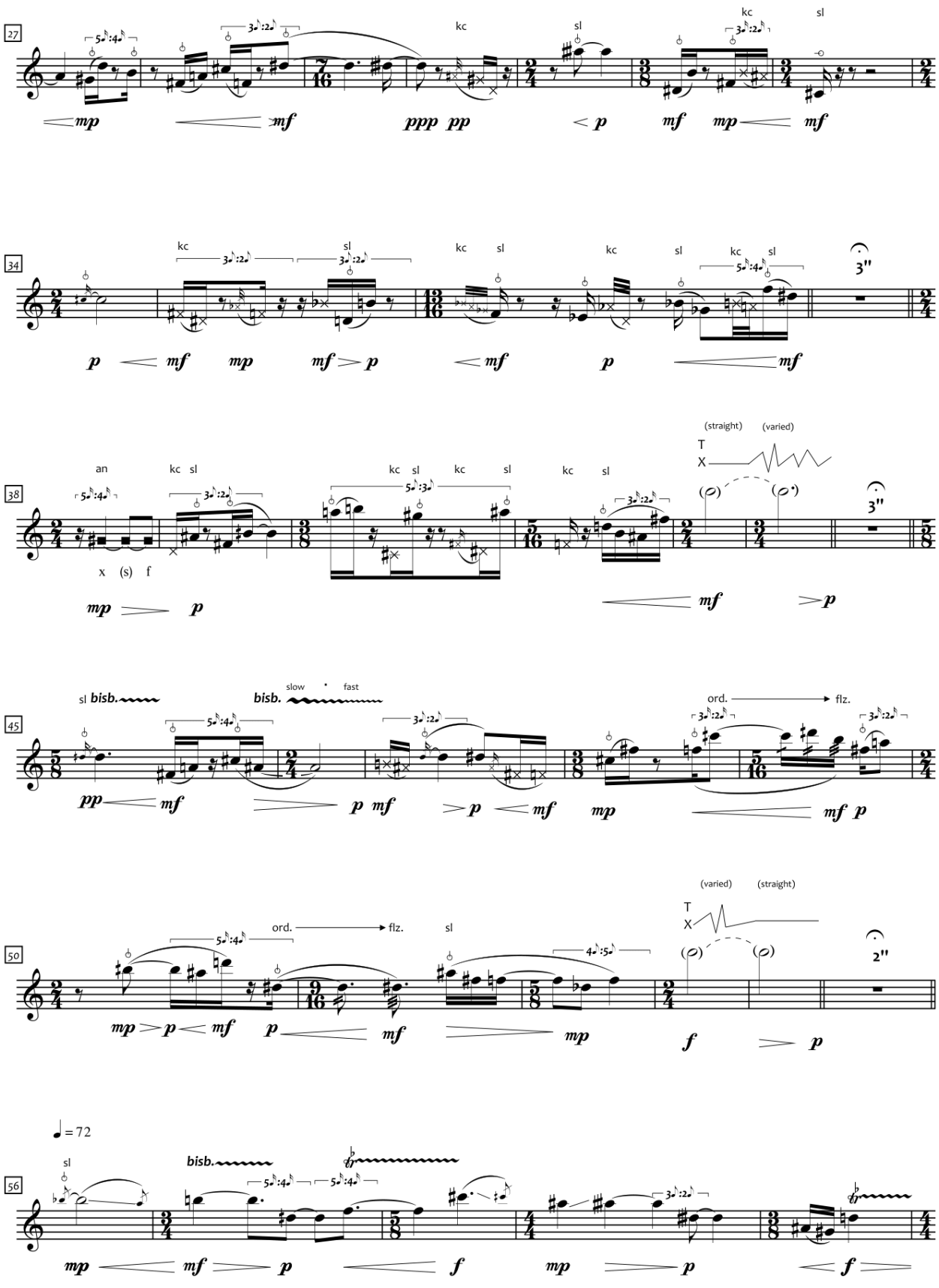
Score

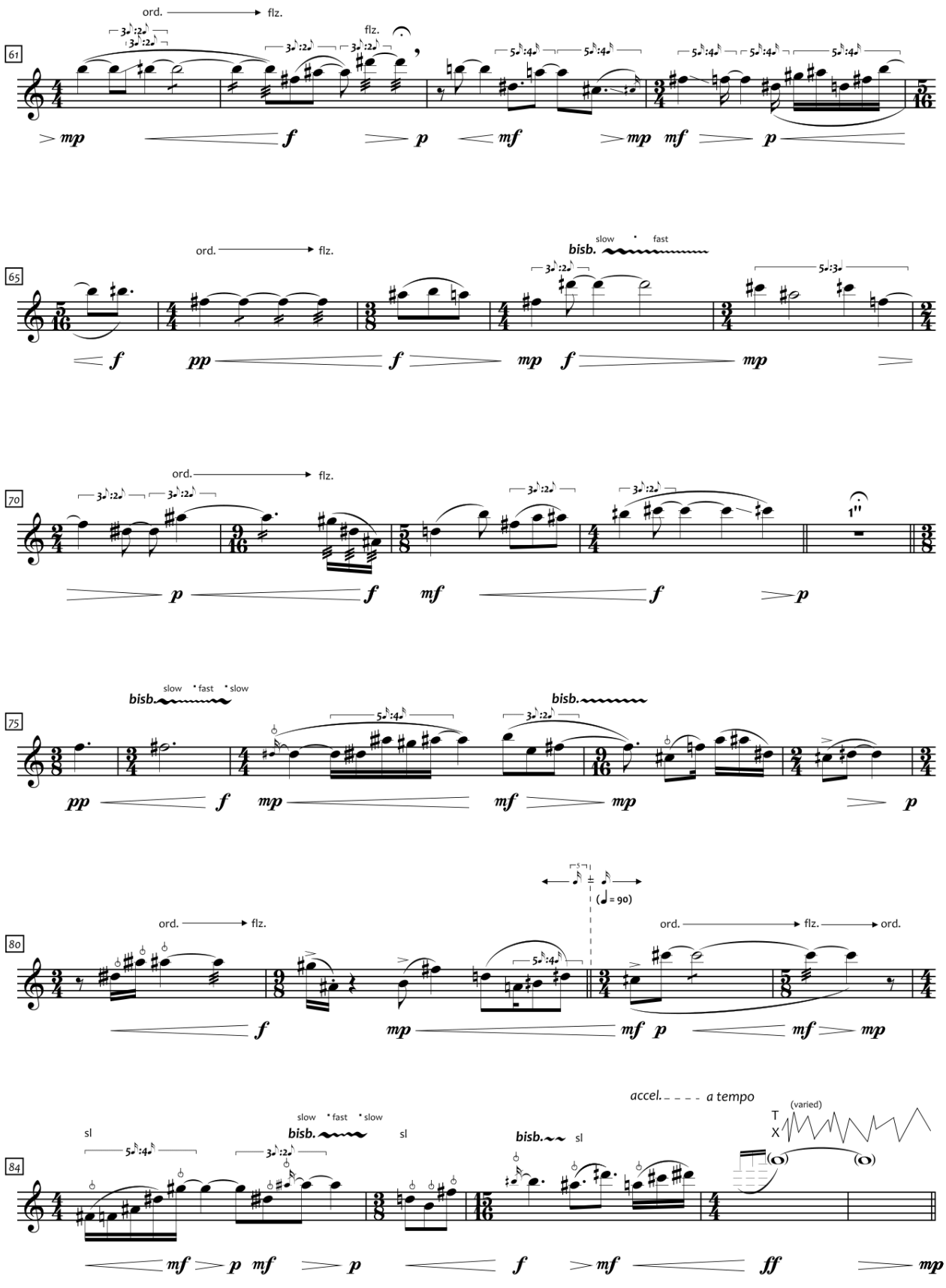
ASSEMBLAGE

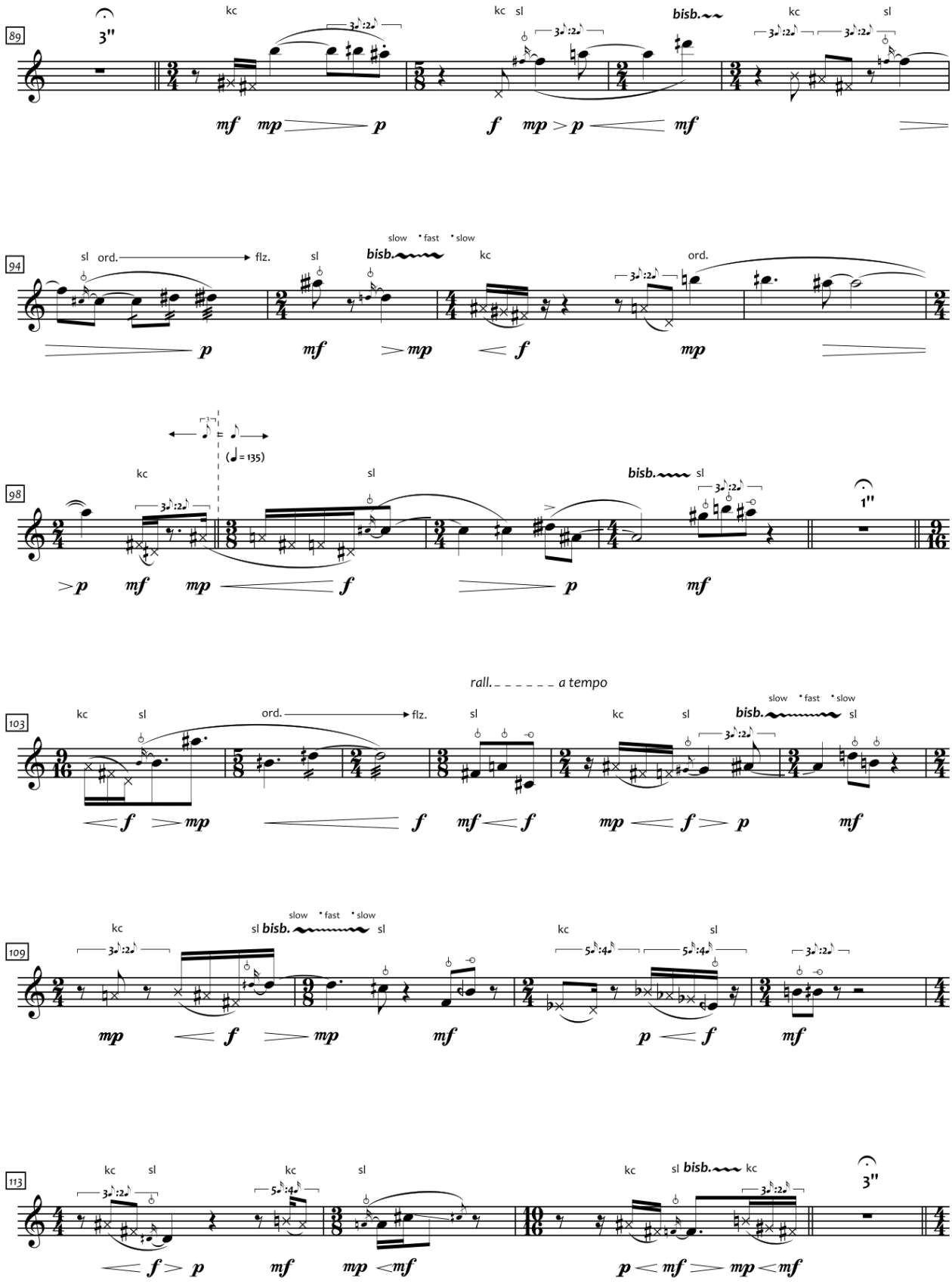
RODRIGO PASCALE
OPUS 40, 2020

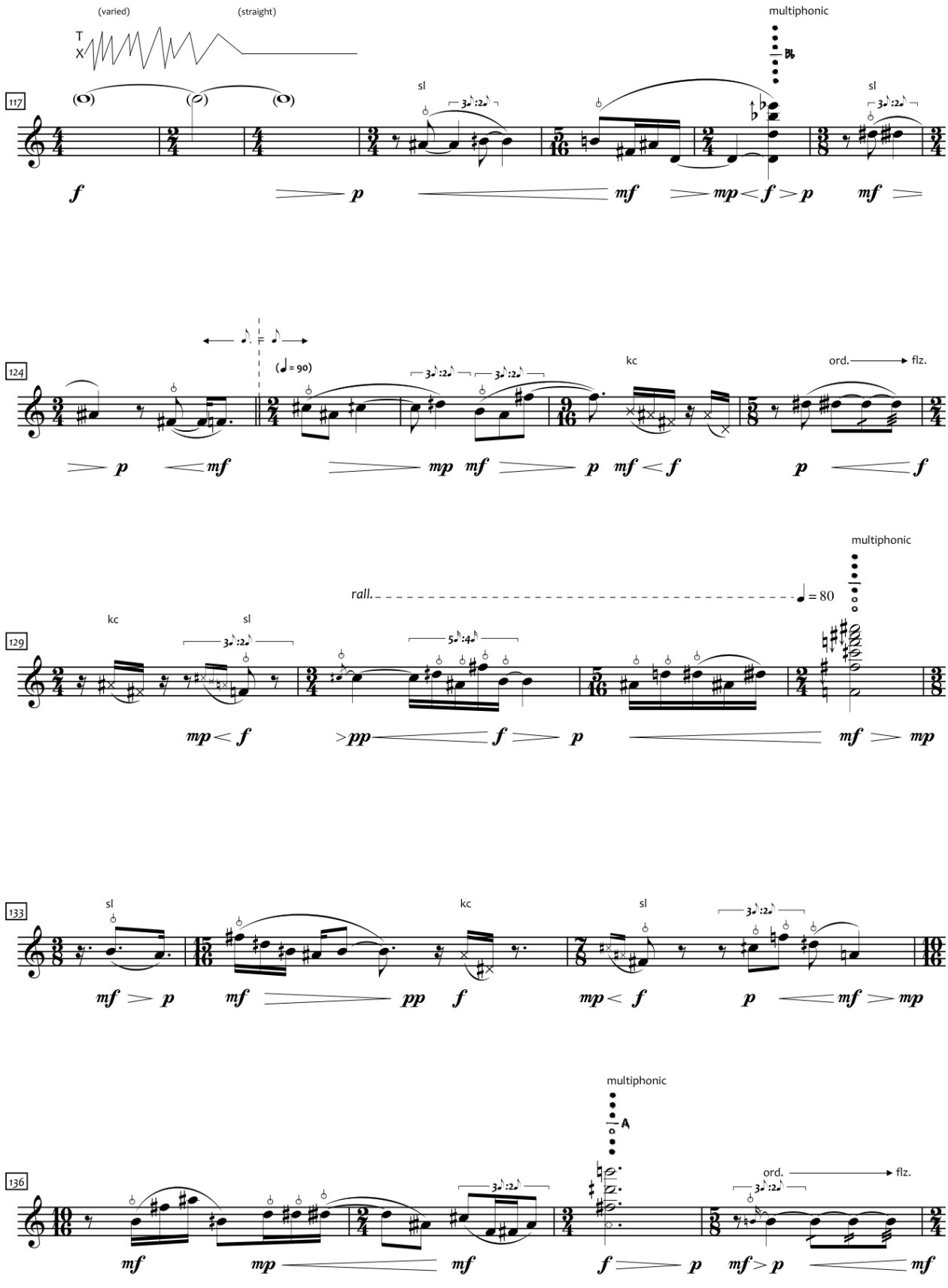
Baritone Sax

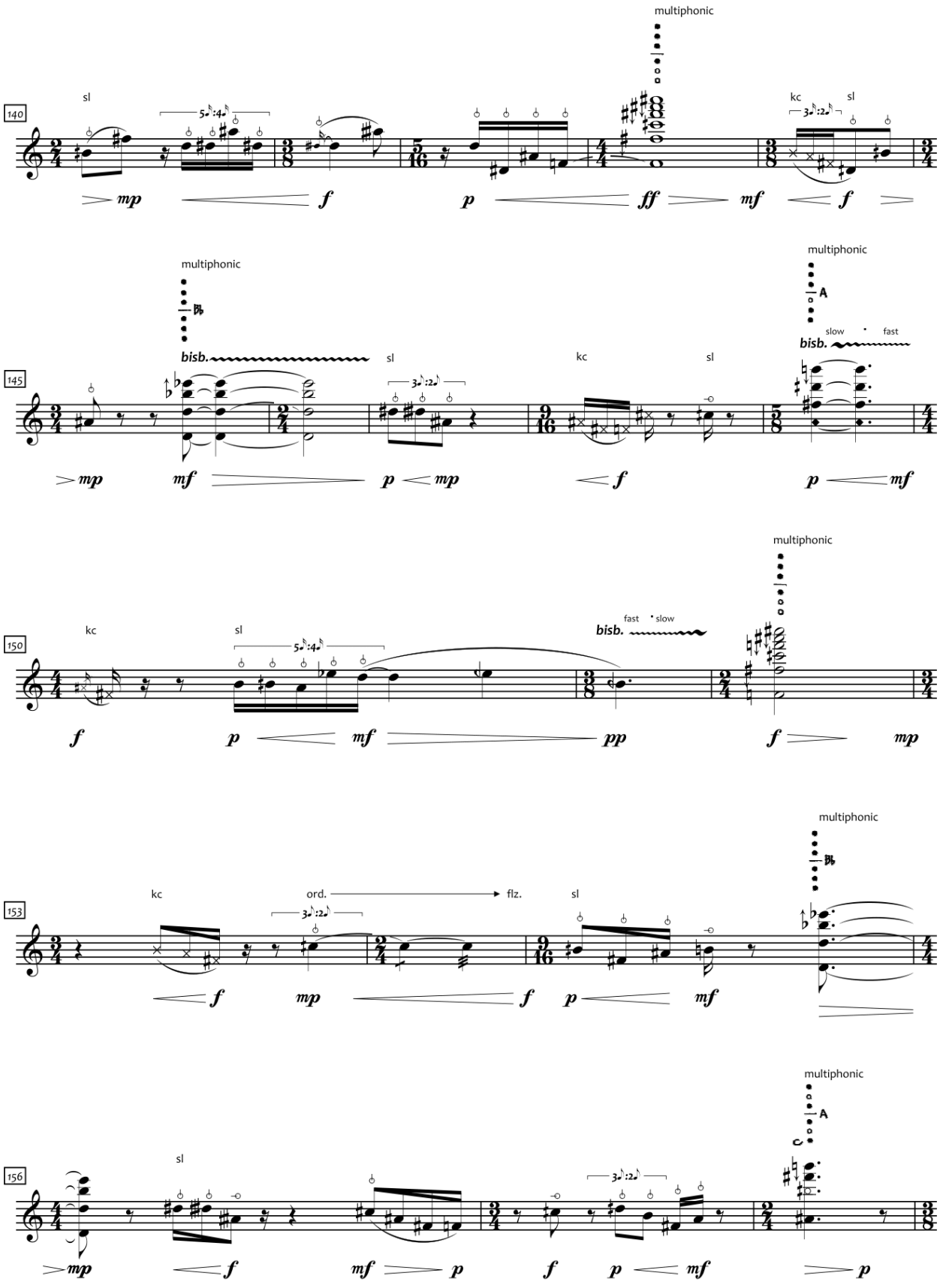


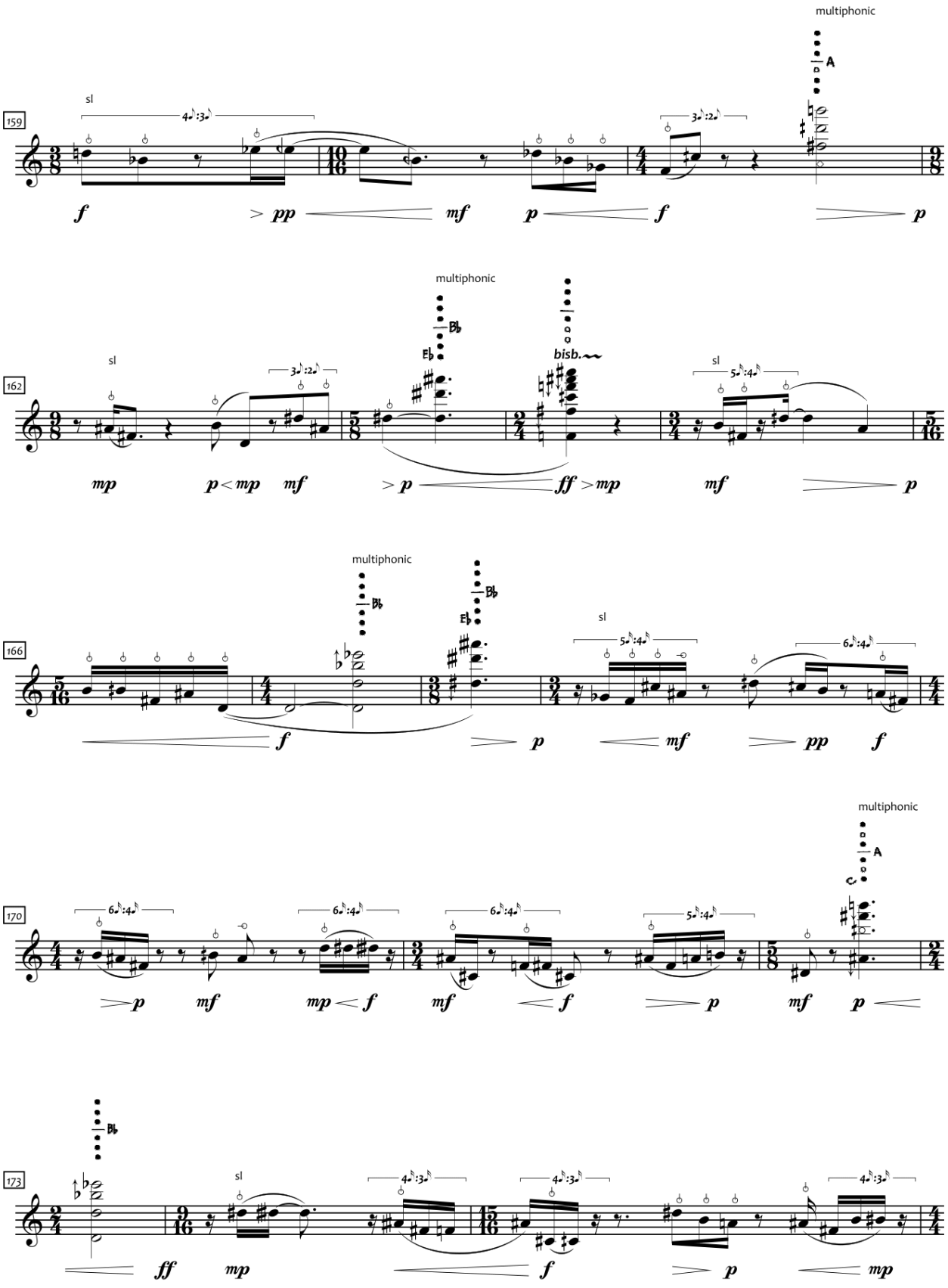

27
kc
sl
kc
sl
mp
mf
ppp pp
p
mf
mp
mf
34
kc
sl
kc
sl
kc
sl
kc
sl
3"
p
mf
mp
mf
p
mf
p
mf
38
an
kc
sl
kc
sl
kc
sl
kc
sl
(straight)
(varied)
T
X
3"
x (s) f
mp
p
mf
p
45
sl bisb.
bisb.
slow
fast
ord.
flz.
pp
mf
p
mf
p
mf
mp
mf
p
50
ord.
flz.
sl
(varied)
(straight)
T
X
2"
mp
p
mf
p
mf
mp
f
p
56
sl
bisb.
mp
mf
p
f
mp
p
f

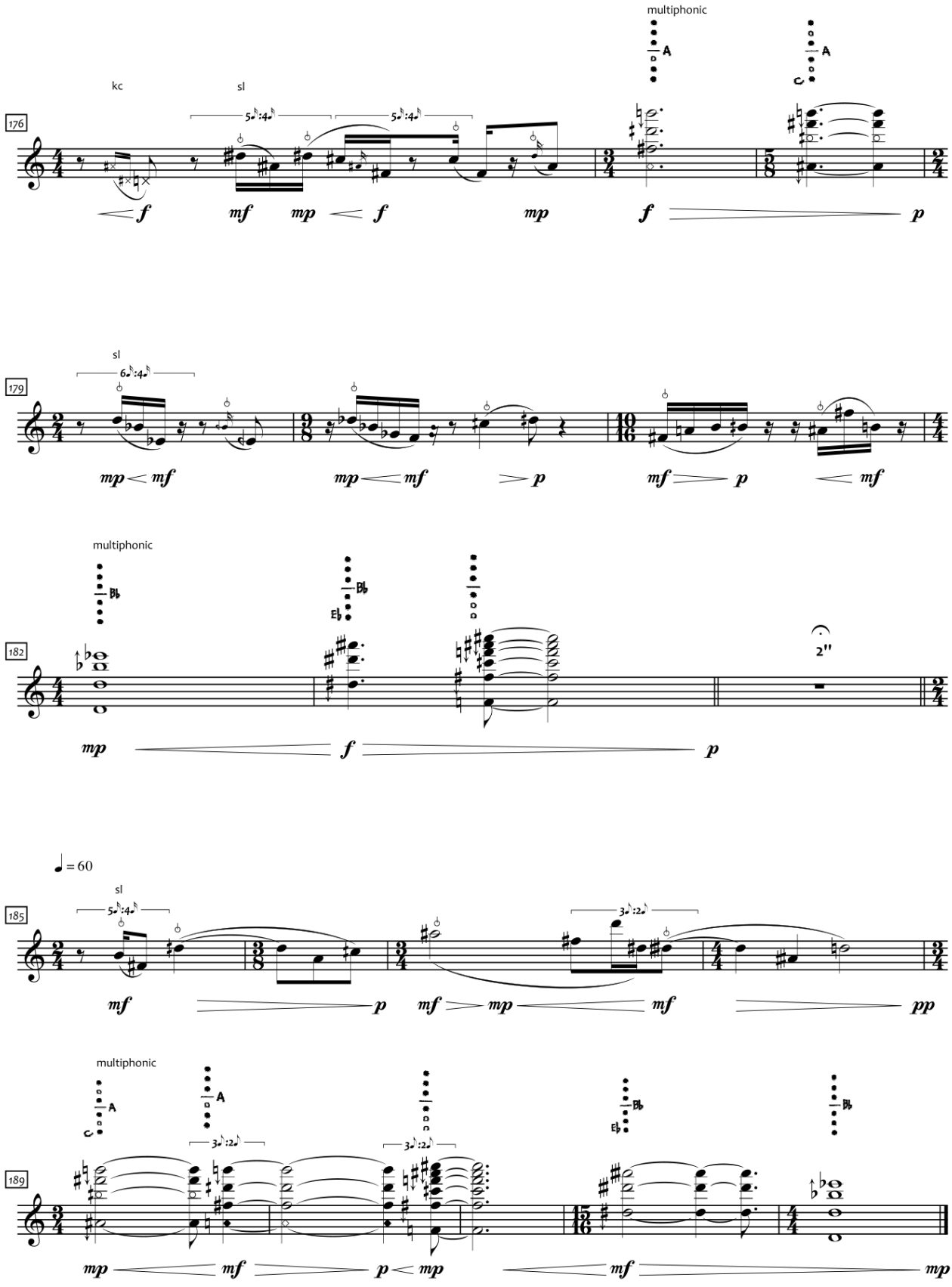

61
ord.
flz.
flz.
65
ord.
flz.
bisb.
slow
fast
70
ord.
flz.
1"
75
bisb.
slow
fast
slow
bisb.
80
(♩ = 90)
ord.
flz.
ord.
flz.
ord.
84
accel.
a tempo
(varied)
T
X
sl
slow
fast
slow
bisb.
sl
sl
bisb.


89
3"
kc
kc sl
bisb.
kc sl
94
sl ord.
flz.
sl
slow fast slow
bisb.
kc
ord.
98
(♩ = 135)
kc
sl
bisb. sl
1"
103
rall. a tempo
kc sl
ord.
flz.
sl
kc sl
slow fast slow
bisb. sl
109
kc
sl bisb.
slow fast slow
sl
kc
sl
113
kc sl
kc
sl
kc
sl bisb. kc
3"


(varied)
(straight)
T
X
multiphonic
117
sl
3:2
sl
3:2
f
p
mf
mp < f > p
mf
124
(♩. = ♪) (♩ = 90)
3:2
3:2
kc
ord.
flz.
p
mf
mp
mf
p
mf < f
p
f
multiphonic
rall.
♩ = 80
129
kc
sl
3:2
5:4
mp < f
>pp
f
p
mf
mp
133
sl
kc
sl
3:2
mf
p
mf
pp
f
mp < f
p
mf
mp
multiphonic
A
136
3:2
ord.
flz.
3:2
mf
mp
mf
f
p
mf > p
mf


multiphonic
sl
kc
sl
multiphonic
multiphonic
bisb.
sl
kc
sl
bisb.
slow
fast
kc
sl
fast
slow
bisb.
multiphonic
kc
ord.
flz.
sl
multiphonic
sl
multiphonic


159
sl
multiphonic
A
162
multiphonic
bisb.
sl
166
multiphonic
sl
170
multiphonic
A
173
sl


multiphonic
kc
sl
176
f
mf
mp
f
mp
f
p
sl
179
mp
mf
mp
mf
p
mf
p
mf
multiphonic
182
mp
f
p
2"
♩ = 60
sl
185
mf
p
mf
mp
mf
pp
multiphonic
189
mp
mf
p
mp
mf
mp

CHAPTER III

REIZANTWORT

Instrumentation

Viola and Electronics

Performance Notes

The sections of this piece are divided into 3 pages. The systems of the first page (1, 2, 3, 4, 5 and 6) must be played in the order they appear, and they must be intercalated with the systems of the second page (A, B, C, D and E) that do not need to be performed in a specific order. The systems in the third page (Δ, □, ⌂) can be introduced in between the systems of the first and the second page. Many of the parameters are not determined - for instance, durations, rhythms, and some pitches. Therefore, the performer needs to choose them. It is paramount that the performer considers the output of the electronics to make these choices. The Max Patch output is generated randomly, so every performance will sound differently. Therefore, the concept of adaptability is conveyed by the performer's responses to these unpredictable stimuli.

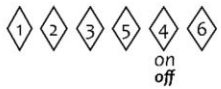
The symbol "" means scratch sound. To produce this effect, the performer should overpressure the bow.

The symbol "  " means left-handed pizzicato.

When used as a notehead, this symbol "" means behind the bridge. In order to produce this effect, the performer should play the string behind the bridge with the bow, overpressure with the bow or pluck as pizzicato depending on the instructions written in the score.

This symbol "  " means hammer-on. This effect consists of the sound produced by the left hand hammering the strings.

This symbol "  " means mute sound. To produce this effect, the performer should press the string with her left hand with less strength in a way that when plucked the note will sound mute.

The indication of pedal is notated by the following symbols: 

Every time one of them appears, the performer should press the respective pedal.

Program Notes

In "*Reizantwort*" (*stimulus response* in German), the capacity of the performer to respond to stimuli plays a structural role. The software Max MSP is responsible for generating random values for the parameters of the effects that are used during the performance (for example delay, distortion, and granular synthesis). Moreover, some of the triggered sounds are also randomly selected during the performance. The randomly generated situations influencing the performance and the performer's adaptation to situations that the electronics present convey the concept of adaptability. To make this influence explicit, some of the parameters on the score are left undefined – such as durations, rhythms, pitches, and the form itself – so the performer can make her own choices.

Score

dedicated to Laura Parra

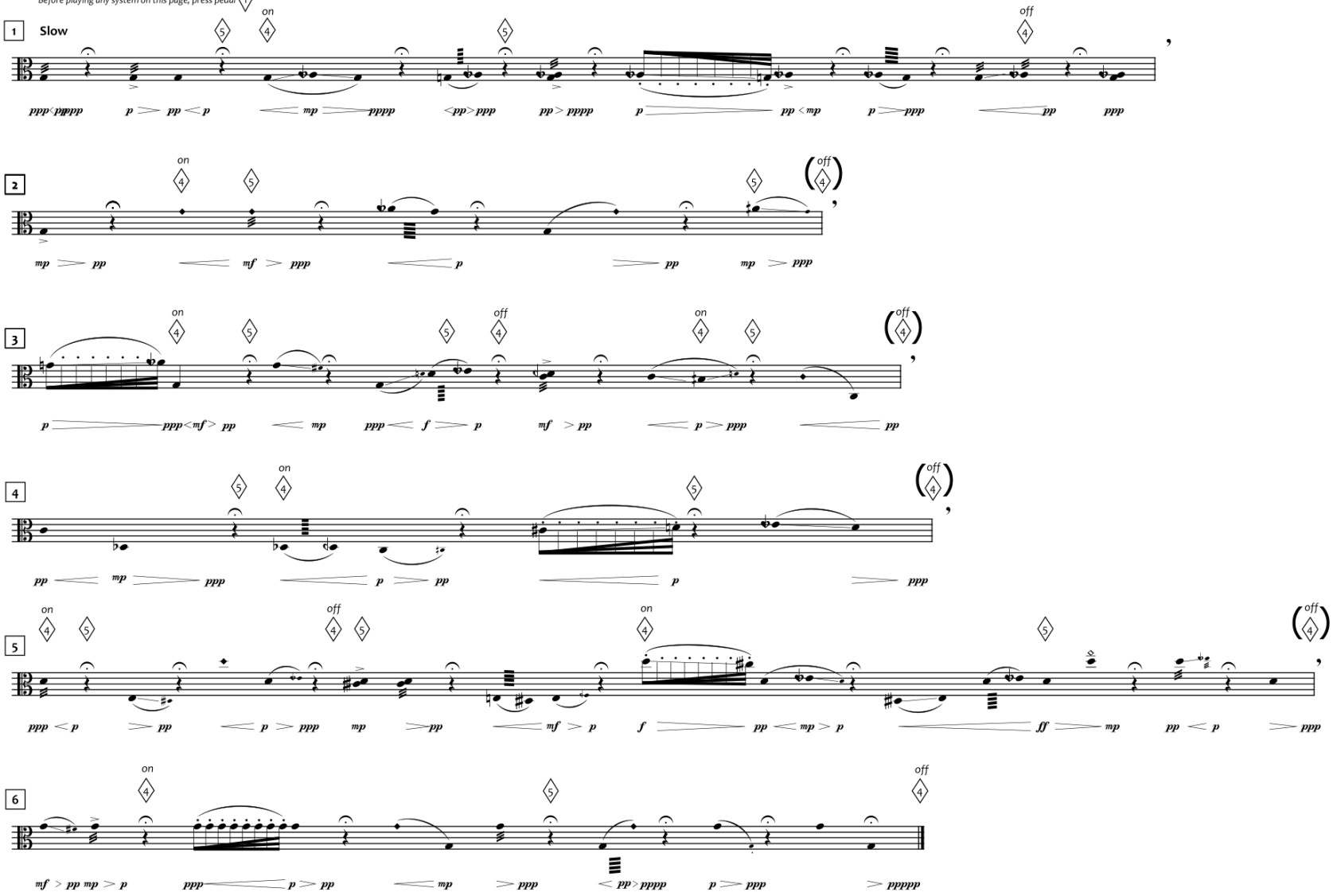
REIZANTWORT

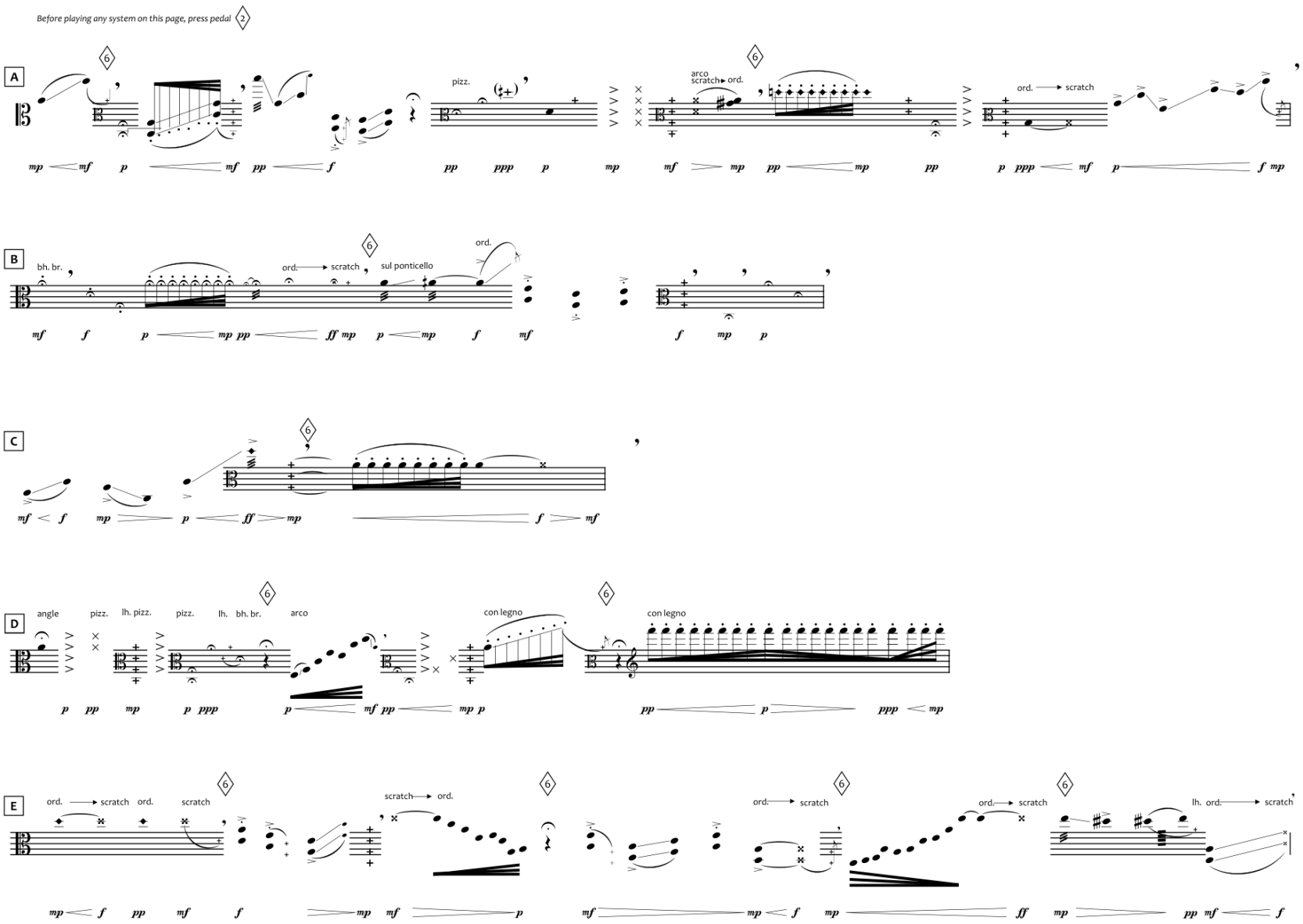
RODRIGO PASCALE
OP. 36, 2020

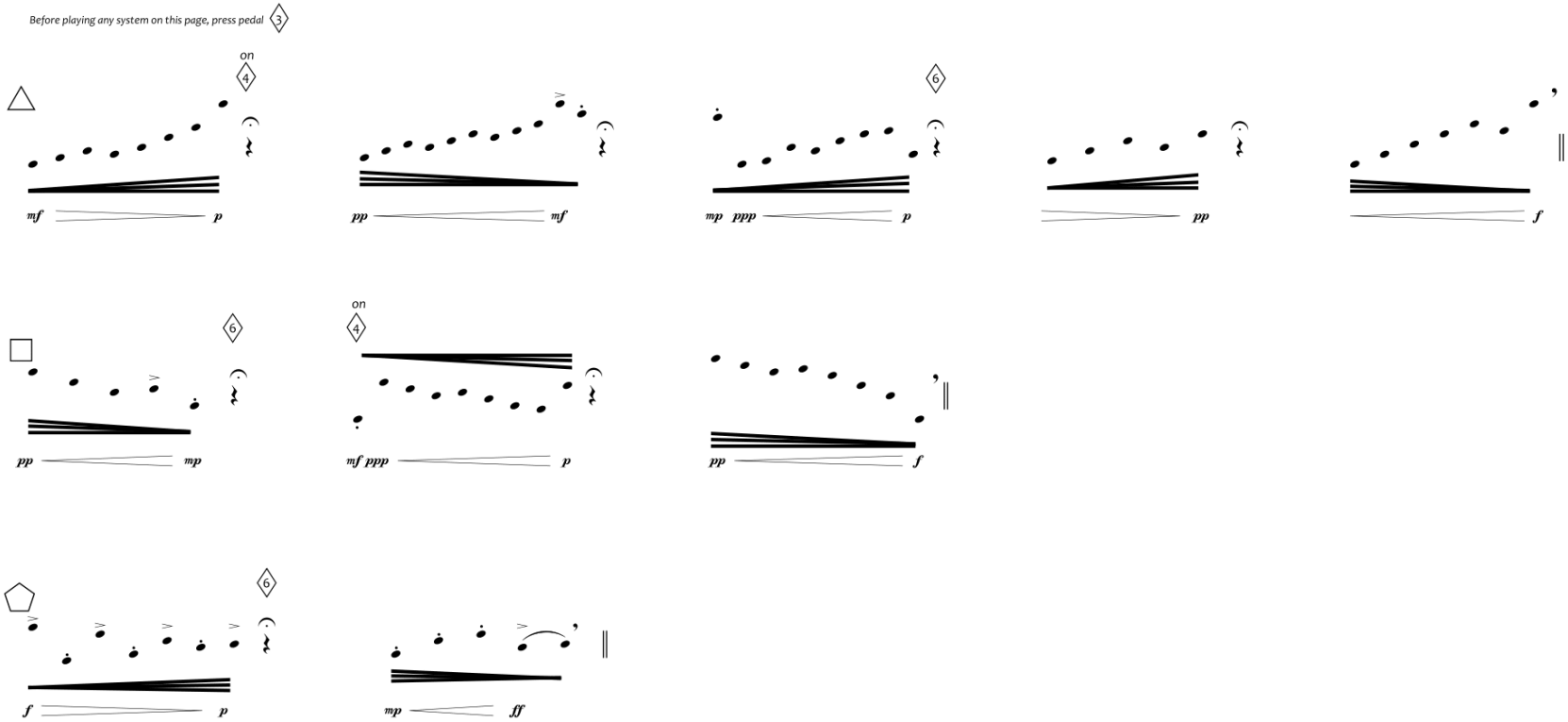
Before playing any system on this page, press pedal 1

1 **Slow**

Viola




Before playing any system on this page, press pedal 2
A
pizz.
arco
scratch
ord.
ord.
scratch
B
bh. br.
ord.
scratch
sul ponticello
ord.
C
D
angle
pizz.
lh. pizz.
pizz.
lh.
bh. br.
arco
con legno
con legno
E
ord.
scratch
ord.
scratch
scratch
ord.
ord.
scratch
ord.
scratch
lh.
ord.
scratch


Before playing any system on this page, press pedal 3
on
4
mf
p
pp
mf
6
mp ppp
p
pp
f
6
pp
mp
on
4
mf ppp
p
pp
f
6
f
p
mp
ff

CHAPTER IV

DISCONTINUOUS MEDIATION I

Program Notes

The concept behind the fixed media composition *Discontinuous Mediation I* was born from reflections on the relationship between the concrete and the virtual. In contrast to the virtual binary environment, humans understand reality in a continuous way. Therefore, machines translate our perception of the physical world into their language. Based on this reflection, I developed a discontinuous procedure to understand the object, "guitar", that is represented by this work. A collection of sounds was recorded and organized based on a previously determined segmentation, building a structure totally biased by this mediation. In this composition, the discontinuous and continuous universes crash and coexist, with the first trying to represent the last.

I am grateful that Discontinuous Mediation I was selected for the Espasios Sonoros festival in Argentina and it was premièred on their online concert. I am always willing to spread my artistic works, and I am also really thankful for getting an honorable mention on the Tesselat Call for Scores and for being one of the winners in the International Call for Artworks organized by Sound Silence Thought with this composition.

CHAPTER V

DISCONTINUOUS MEDIATION II

Program Notes

Discontinuous Mediation II is the second composition of this series. Unlike the first composition, in which pre-recorded guitar sounds were used, here pre-recorded clarinet sounds are used as sonic material. However, this composition has many similarities with its predecessor in terms of the conceptual environment and planning. As in “Discontinuous Mediation I”, the sounds were organized in a segmented way, which was responsible for forming a structure biased by my compositional procedure. This method was applied to explore the conceptual idea of a perceptually continuous world being interpreted by a concrete mediation.