LI, YUNFEI, M.M. *Sequence*: For Clarinets, Electric Guitar, Double Bass and Drum Set. (2019)
Directed by Dr. Alejandro Rutty. 48 pp.

This thesis, *Sequence*, is a composition for clarinet (doubling bass clarinet), electric guitar, double bass, and drum set. Working within the boundaries of a minimalist musical style, my goal for this piece was to create structural motion by means of rhythm, registration, and color in the context of static harmonies. I modeled my music on works by Steve Reich and Hans Zimmer, who composed *Electric Counterpoint* (1997), and *Supermarine* (2017), respectively. This paper focuses on procedures.

SEQUENCE: FOR CLARINETS, ELECTRIC GUITAR, DOUBLE BASS AND DRUM SET

by

Yunfei Li

A Thesis Submitted to
the Faculty of The Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Master of Music

Greensboro
2019

Approved by

_____
Committee Chair

APPROVAL PAGE

This thesis, written by Yunfei Li, has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

Committee Chair _____

Committee Members _____

_____

_____

Date of Acceptance by Committee

_____

Date of Final Oral Examination

TABLE OF CONTENTS

Page

LIST OF FIGURES iv

CHAPTER

I. INTRODUCTION 1

II. TECHNIQUES AND PROCEDURES FROM *ELECTRIC COUNTERPOINT* AND *SUPERMARINE* 2

Electric Counterpoint (3rd movement) 2
Supermarine 3

III. *SEQUENCE* 5

Rhythmic Repetition and Permutation 5
Shifting Registration and Metrical Displacement 10

IV. CONCLUSION 12

BIBLIOGRAPHY 13

APPENDIX A. SCORE 14

LIST OF FIGURES

Page

Figure 1. *Electric Counterpoint* Form 2

Figure 2. *Electric Counterpoint*, Third Movement, mm. 1-2 3

Figure 3. *Electric Counterpoint*, Third Movement, mm. 7-10 3

Figure 4. Structure of *Supermarine* 3

Figure 5. Registration of *Supermarine* 4

Figure 6. Sections of the First Movement of *Sequence* 5

Figure 7. Basic Pattern of the First Movement of *Sequence* 5

Figure 8. Electric Guitar Basic Pattern 6

Figure 9. Electric Guitar of *Sequence*, mm. 1-2 7

Figure 10. Patterns, First Movement of *Sequence* 7

Figure 11. Permutations of *Sequence* 8

Figure 12. Entrance of Each Instrument of *Sequence* 9

Figure 13. Note Distribution of Second Movement of *Sequence* 10

Figure 14. Double Bass Part of *Sequence*, mm. 118-120 10

Figure 15. Electric Guitar Part of *Sequence*, mm. 106-108 11

Figure 16. Clarinet Part of *Sequence*, mm. 127-129 11

CHAPTER I

INTRODUCTION

This thesis, *Sequence*, is a composition for clarinet/bass clarinet, electric guitar, double bass, and drum set. In this piece, I modeled my music on works by Steve Reich and Hans Zimmer, who composed *Electric Counterpoint* (1997) and *Supermarine* (2017), respectively. Reich's and Zimmer's music make use of procedures such as metrical displacement, shifting keys, rhythmic repetition, and register shifting. These are some of the same procedures I use in *Sequence*.

In Chapter II, I provide an analysis of *Electric Counterpoint* and *Supermarine*. In Chapter III, I discuss the musical techniques and procedures in *Sequence*, particularly the ways in which motion is created in the context of static harmonies by means of rhythm and registration.

CHAPTER II

TECHNIQUES AND PROCEDURES FROM *ELECTRIC COUNTERPOINT* AND *SUPERMARINE*

Electric Counterpoint (3rd Movement)

The third movement of Steve Reich's *Electric Counterpoint* is scored for guitar solo, guitar ensemble (9 guitars), and tape. In this movement, one short pattern is repeated multiple times by guitar 1. Displaced and fragmented imitations of the main pattern appear gradually on the other instruments. The pattern displacements create audible and non-audible canons as the polyphony thickens. Although the piece does eventually have some harmonic motion, it mostly remains within a harmonic field, somewhat centered around E minor.

The form is binary: A-B with Coda (see Figure 1). Section A is from m. 1 to m. 73, in E minor. Section B is from m. 74 to m. 113. The coda is from mm. 114-140. In the beginning of the movement, Reich used a one-bar ostinato with guitar 1 and then built a four-part canon following the live guitar, guitar 2, guitar 3, and guitar 4. In section B, Reich used repeated key shifts between C minor and E minor.

Music section	Section A	Section B							Coda
Measures	1-73	74-81	75-89	90-97	87-101	102-105	106-109	110-113	114-140
Key	E minor	C minor	E minor	C minor	E minor	C minor	E minor	C minor	E minor
Musical Content	Ostinatos, four-part canon, adding strummed chords by live guitar and guitar 5-7, building rhythmic counterpoint.	All parts play together by ostinatos, chords and long notes, shifting keys.							Four-part canon

Figure 1. *Electric Counterpoint* Form.

As seen in Figure 2, Reich built an ostinato in guitar 1 as the basic pattern, with metrical displacement in other parts (see Figure 3). Figure 2 and Figure 3 show that guitar 2 is metrically displaced because Reich gave different rests to guitar 2. This metrical displacement will add more layers as the texture gradually builds up.

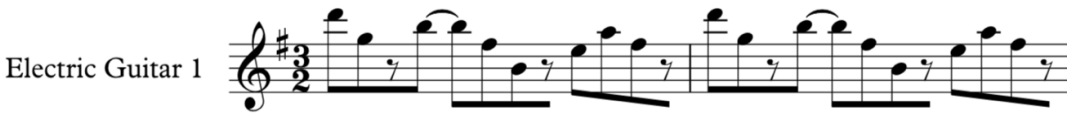


Figure 2. *Electric Counterpoint*, Third Movement, mm. 1-2.

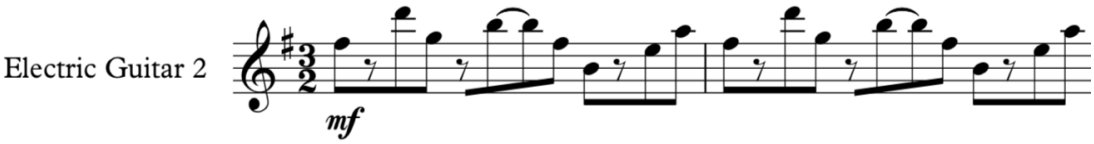


Figure 3. *Electric Counterpoint*, Third Movement, mm. 7-10.

Supermarine

Another piece relevant to *Sequence* is *Supermarine* (2017) by Hans Zimmer, composed for the film *Dunkirk*. Zimmer used synthesizer sounds with drums, strings, and brass. *Supermarine* makes use of shifting registration. See Figure 4.

Section	Time	Registration	Instrumentation	Dynamics
1	0-40'	A2, A3	Drum, bass, syth	p, cresc, dim
2	41'-2:53'	A2, A3,A4	Drum, bass, brass, syth	mf, cresc
3	2:54'-3:47'	A1, A2	Drum, bass, brass, syth	f, cresc
4	3:48'-4:28'	A2, A3, A6	Drum, bass, brass,syth	f, cresc
5	4:29'-5:31'	A4, A5	Drum, strings, syth	pp
6	5:32'-8:03'	A2, A3, A4, A5	Drum, bass, brass, strings,syth	fff,cresc

Figure 4. Structure of *Supermarine*.

Zimmer shapes his piece in six sections; in all the beat is present and driving. The piece gradually leads to the climax in the fourth section. This is achieved by means of widening the register ranges, dynamics, and instrumentation. The trajectory is not linear; the third section reduces the register by cutting all high notes and restarting the growth. After the climax in the fourth section, again the piece narrows the register, this time to the higher register, to end in another climactic section. See Figure 5.

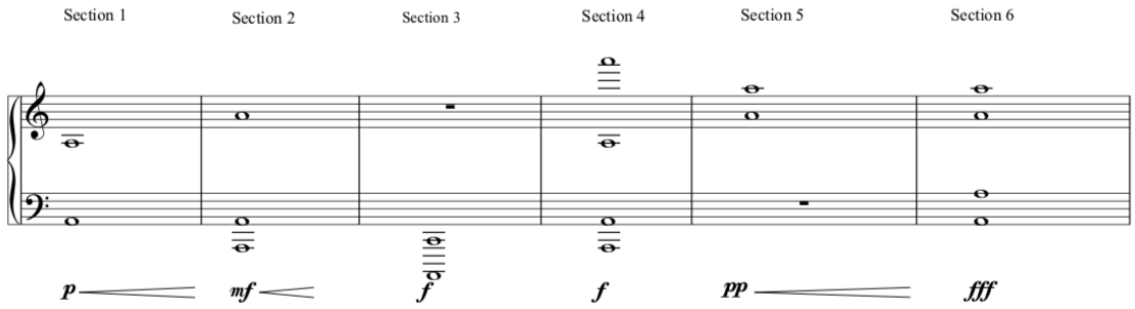


Figure 5. Registration of *Supermarine*.

In this Chapter, I have discussed the procedures and techniques of *Electric Counterpoint* and *Supermarine* by means of metrical displacement, shifting keys, and shifting registration. In next Chapter, I show the procedures for *Sequence*.

CHAPTER III

SEQUENCE

Rhythmic Repetition and Permutation

Sequence is a piece in two movements based on a series of patterns that are shifted in terms of metrical displacement, instrumentation, and register. I will now discuss the musical techniques of the first movement.

The first movement is in five sections, the A section is mm. 1-17; the B section is mm. 18-33; the C section is mm. 34-49; the D section is mm. 50-67; and the E section (recapitulation) is mm. 68-105. See Figure 6.

Section A	Section B	Section C	Section D	Section E
mm.1-17	mm.18-33	mm.34-49	mm.50-67	mm.68-105

Figure 6. Sections of the First Movement of *Sequence*.

There are three versions of the basic pattern, which are based on arpeggiation of F major 7th chord over two bars. Guitar, bass clarinet, and double bass introduce these versions. See Figure 7.

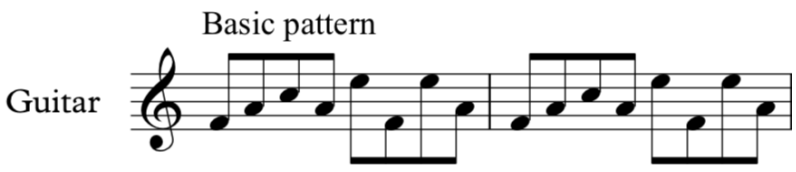


Figure 7. Basic Pattern of the First Movement of *Sequence*.

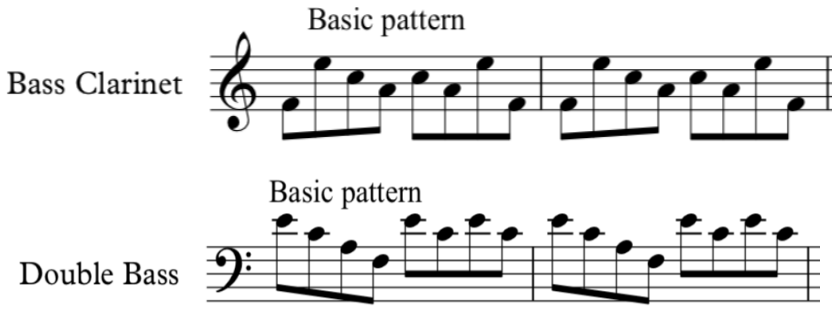


Figure 7. Cont.

Although I used one chord (F major 7th) throughout the whole movement, the piece offers variety through its rhythmic usage. Loosely based on Reich's procedures in *Electric Counterpoint*, the patterns in the first movement of *Sequence* are permutated in eight-bar phrases by altering the placement of notes and rests. Taking the first pattern, I used "1234" to indicate each eighth note. From this basic pattern, a series of permutations will be built through the rest of the movement. See Figure 8.

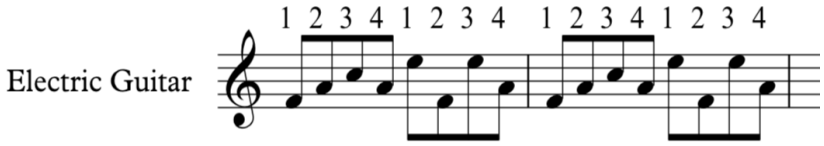


Figure 8. Electric Guitar Basic Pattern.

I created four different permutations, shown below. These permutations affect the patterns by turning notes into rests. The numbers indicate the position within the pattern. See Figure 9.

4321
3214
2143
1423

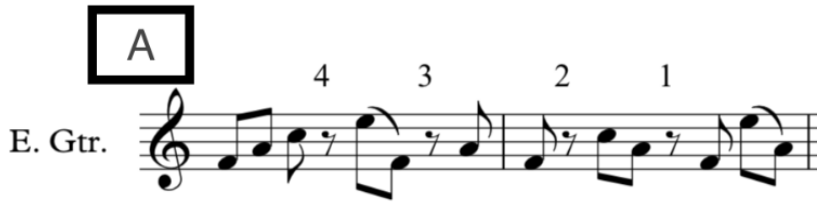


Figure 9. Electric Guitar of *Sequence*, mm. 1-2.

I used the "3214" permutation for the second group, "2143" for the third group, and "1432" for the last group. See Figure 10.

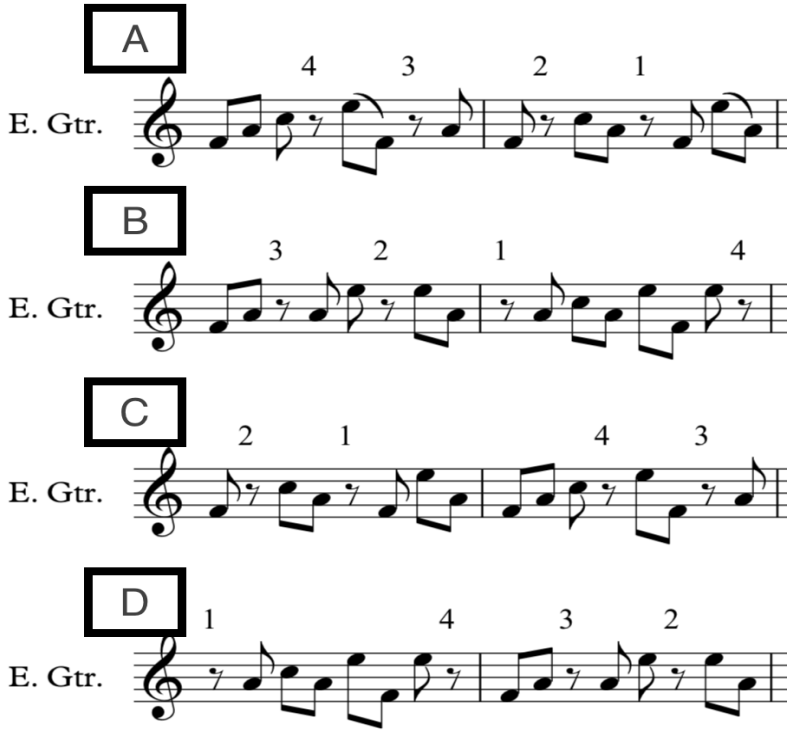


Figure 10. Patterns, First Movement of *Sequence*.

I used the same procedure on the basic patterns of the bass clarinet and the double bass. See Figure 11 for the four sections of the permutation.

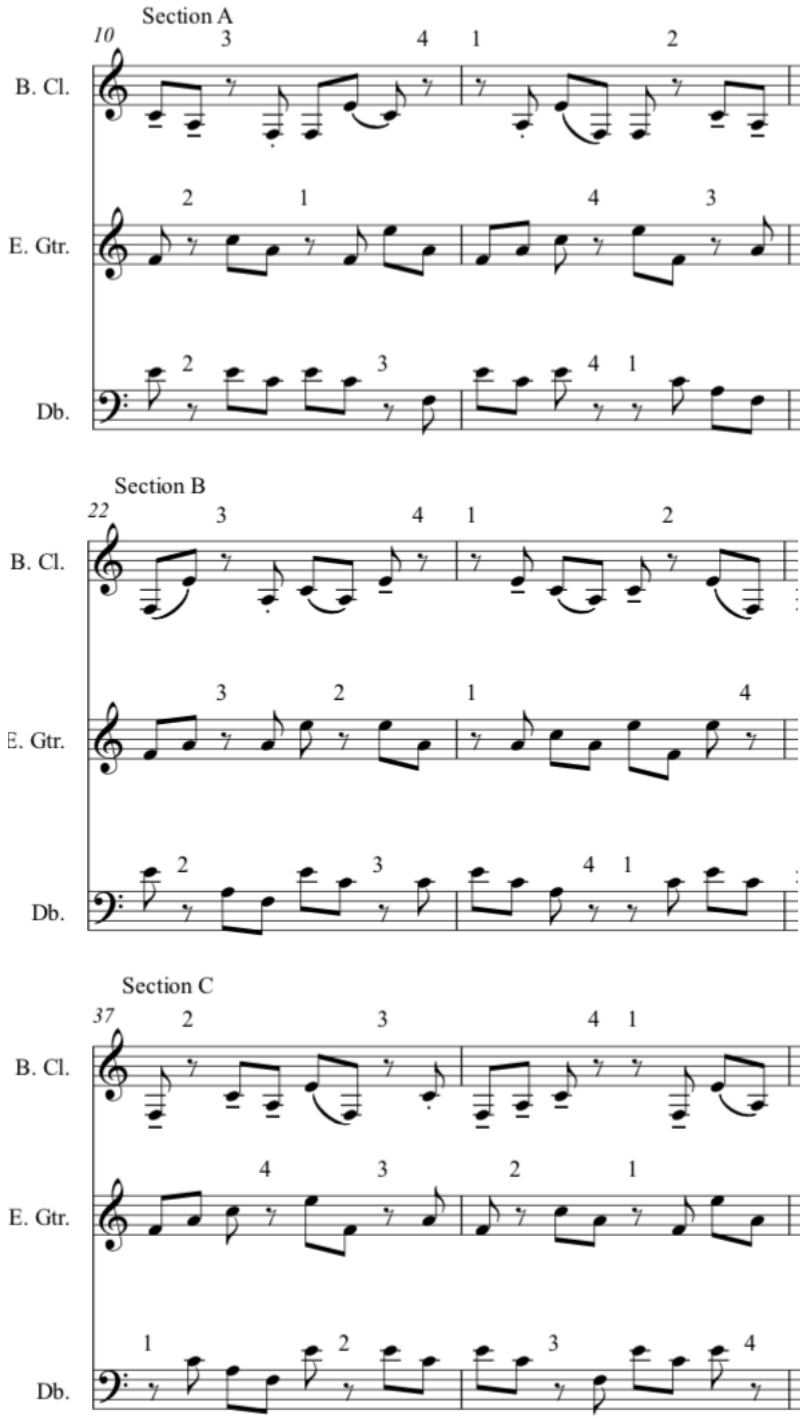


Figure 11. Permutations of *Sequence*.

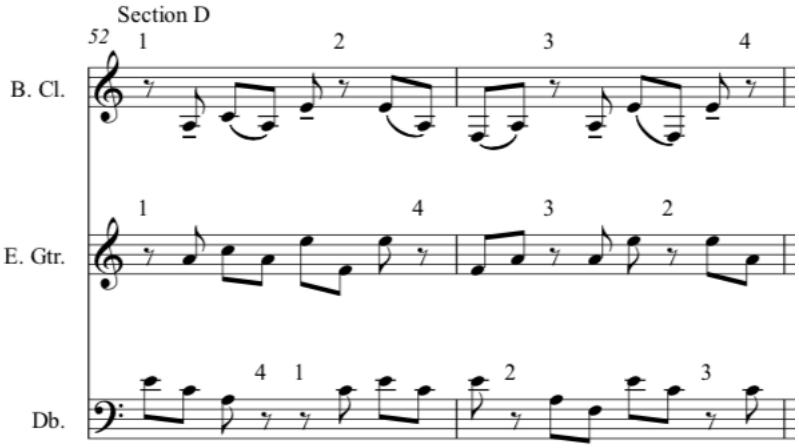


Figure 11. Cont.

In addition, each instrument starts the pattern in a different place of the measure. For example, in the first section, the electric guitar starts on the first beat. The double bass starts to play on the upbeat, and then the drum set plays hi-hat in the downbeat of the fourth beat. Finally, the bass clarinet enters in the third beat. See Figure 12.

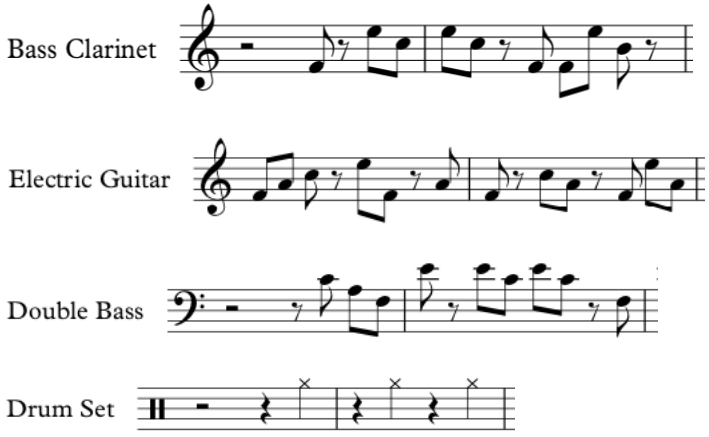


Figure 12. Entrance of Each Instrument of *Sequence*.

Shifting Registration and Metrical Displacement

The second movement is divided into 6 sections (section A-F). The harmony—centered on A—remains constant throughout, but the melodic contour creates the structural progress of the piece as shown in Figure 13. The top line gradually climbs to section D, then takes a step back in section E and moves up again to the climactic section F.

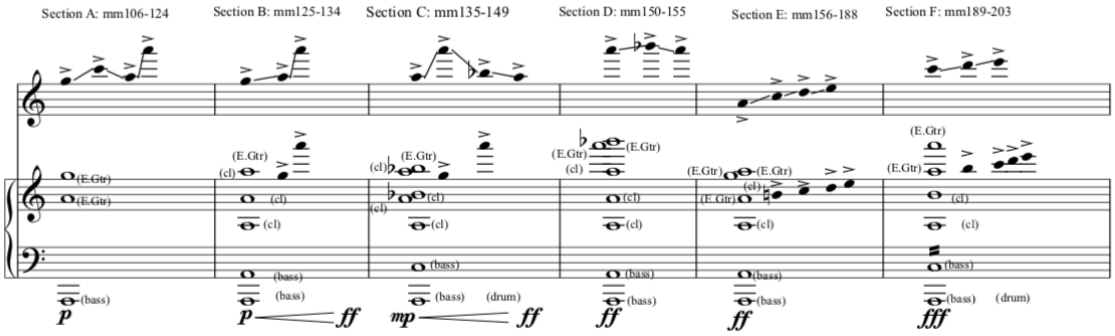


Figure 13. Notes Distribution of Second Movement of *Sequence*.

The double bass plays an ostinato rhythm in the low register as a way to build the somber mood of the piece. See Figure 14.

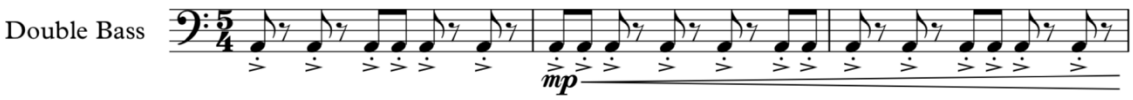


Figure 14. Double Bass Part of *Sequence*, mm. 118-120.

Accented octave shifts are used as a way for one instrument to occupy two or more octaves. See examples in Figure 15 and 16. I created accented notes in the higher register (G5 and D6), in order to highlight them. See Figure 15.

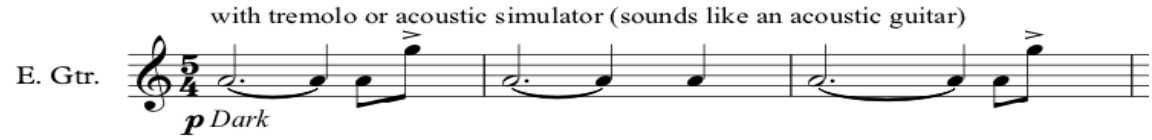


Figure 15. Electric Guitar Part of *Sequence*, mm. 106-108.

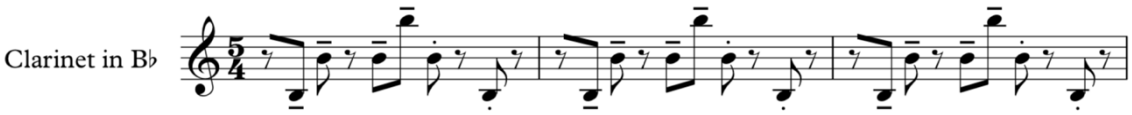


Figure 16. Clarinet Part of *Sequence*, mm. 127-129.

Careful and gradual melodic motion, and instrumental expansion of lines through octave shifts while in a static harmony are the means by which this piece operates its structure.

CHAPTER IV

CONCLUSION

In conclusion, in this piece I attempted to create structural motion by means of rhythm and register while in the context of static harmonies. Both pieces center on different ways of using permutation, ostinato, metrical displacement, and register shifts, while working within the boundaries of a minimalist musical style.

BIBLIOGRAPHY

Auner, Joseph. *Music in the Twentieth and Twenty-First Centuries.* New York: W.W. Norton & Company, Inc, 2014.

Bowman, Durrell. "Zimmer, Hans Florian." *Grove Music Online*. 2013. http://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-1002103654?rskey=mVu7qX&result=2.

Elliott, Antokoletz. *A History of Twentieth-Century Music in a Theoretic-Analytical Context.* New York: Routledge, 2014.

Griffiths, Paul. "Reich, Steve [Stephen] (Michael)." *Grove Music Online*. 2001. http://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000023091?rskey=gigphQ&result=1.

Potter, Keith. *Four Musical Minimalists: La Monte Young, Terry Riley, Steve Reich.* Cambridge, UK, and New York: Cambridge University Press, 2000.

Potter, Keith. "Minimalism (USA)." Grove Music Online. 2013. http://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-1002257002.

Reich, Steve. *Electric Counterpoint*. CD. Naxos Digital Services/Signum Classics. https://uncg.naxosmusiclibrary.com/streamw.asp?ver=2.0&s=7696%2Funcg15%2F4576664. 2015.

Reich, Steve. *Electric Counterpoint*. Hendon Music, Inc, 1987.

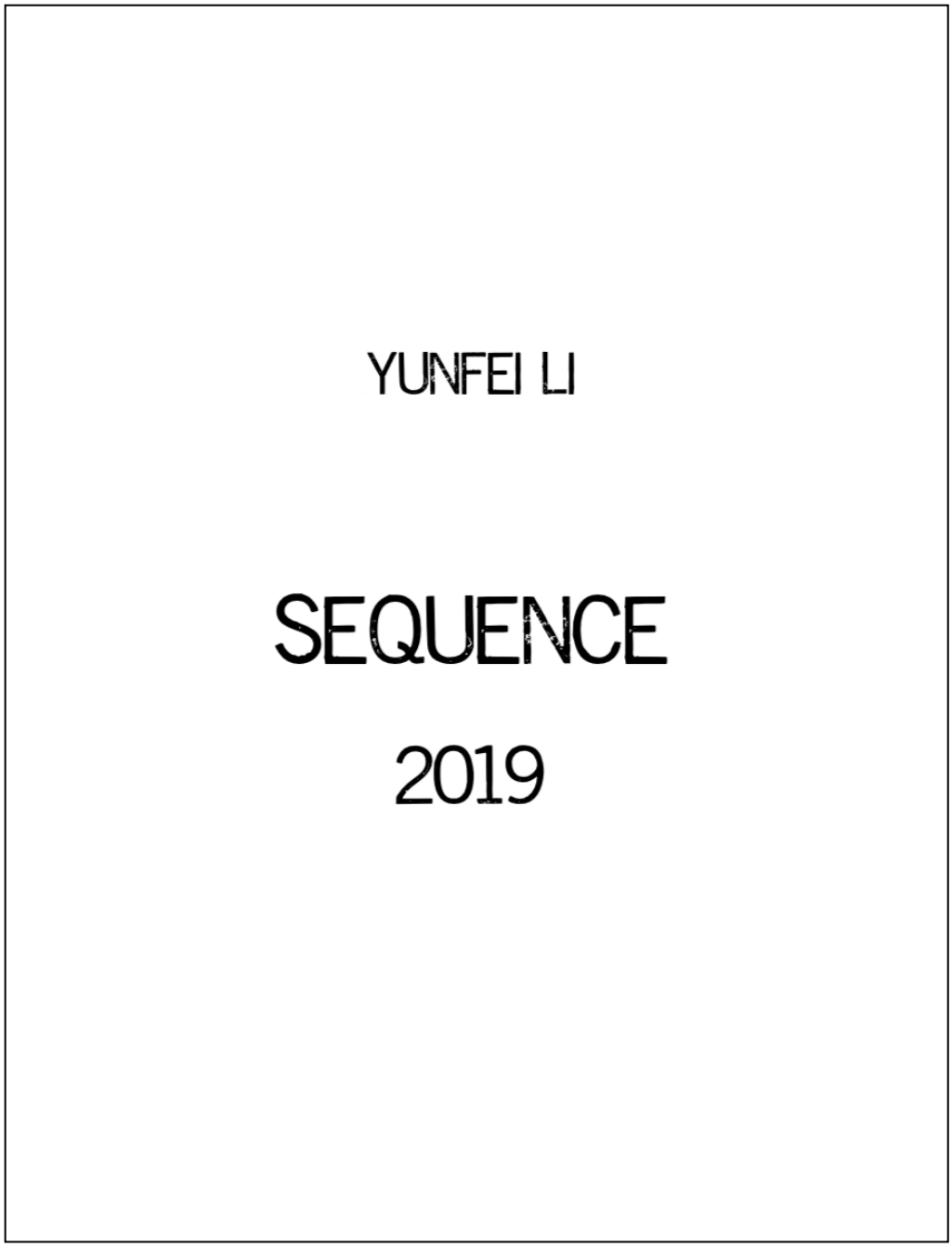
Reich, Steve, and Paul Hillier. *Writing on Music, 1965-2000.* New York: Oxford University Press, 2002.

Strickland, Edward. *American Composers: Dialogue on Contemporary Music.* Indiana University Press, 1987.

Zimmer, Hans. *Supermarine*. CD. WaterTower Music. 2017.

APPENDIX A

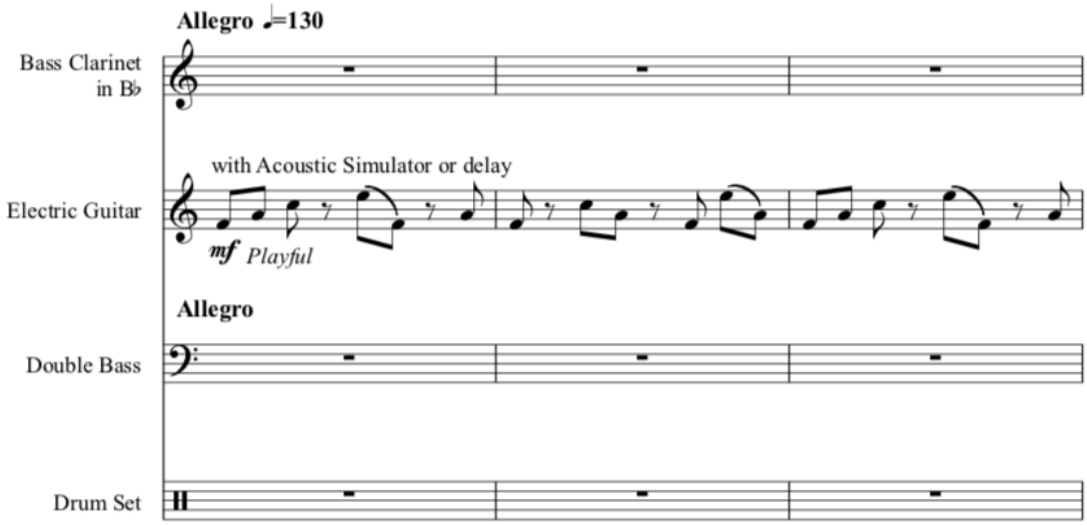
SCORE

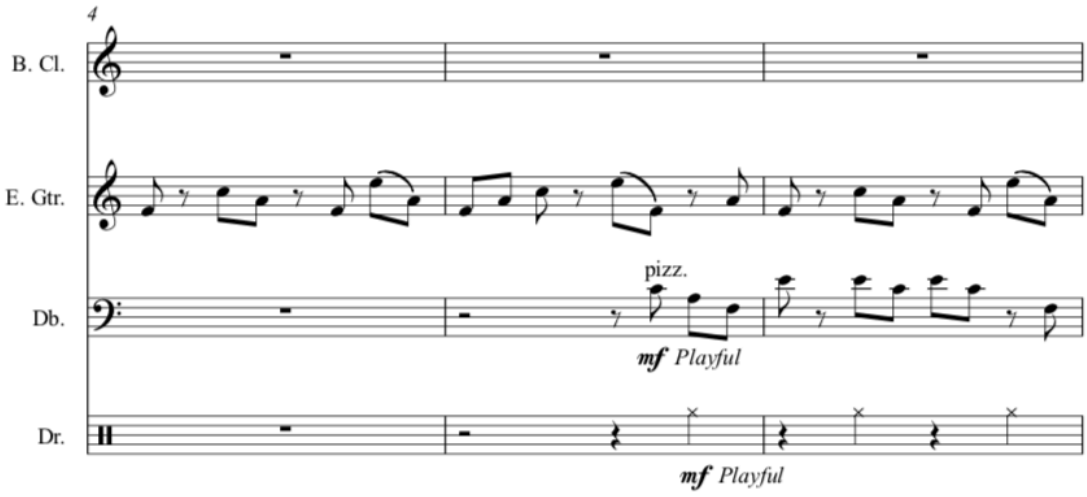


Transposed score

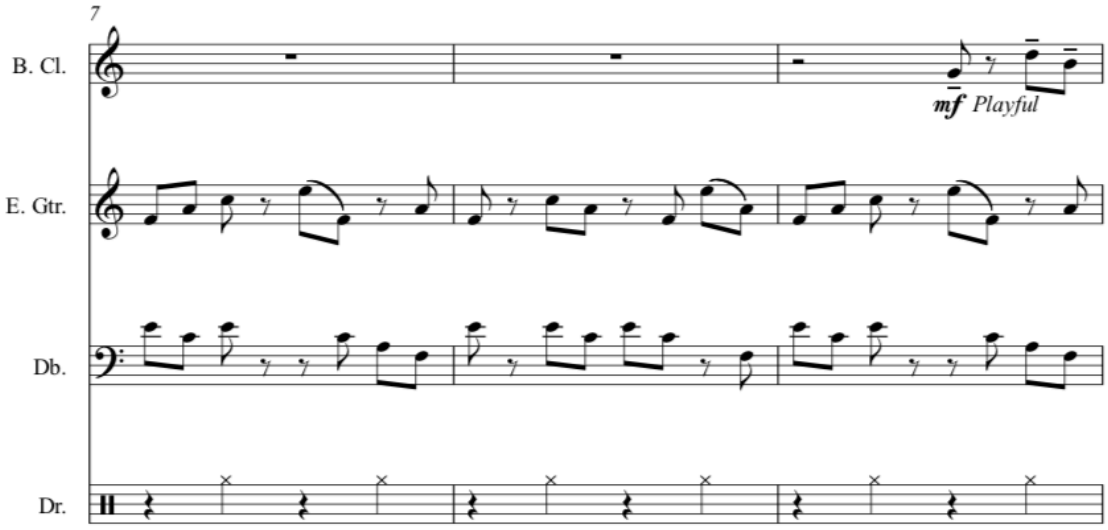
Sequence
I

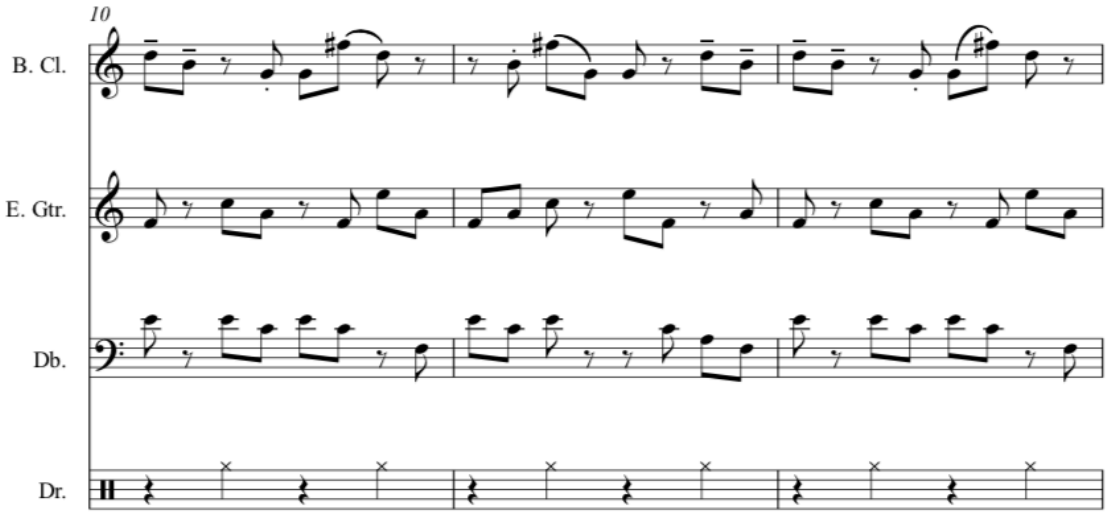
Yunfei Li

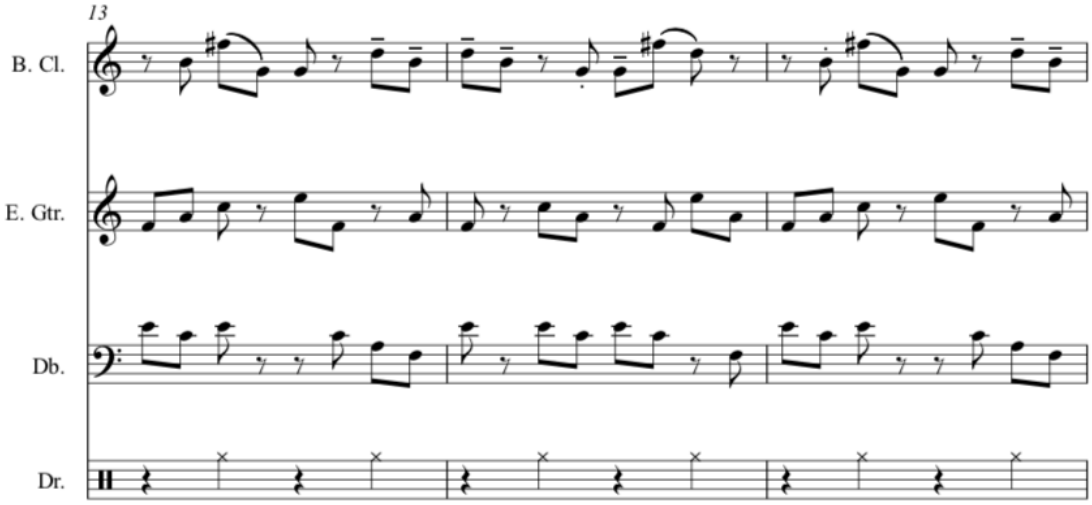


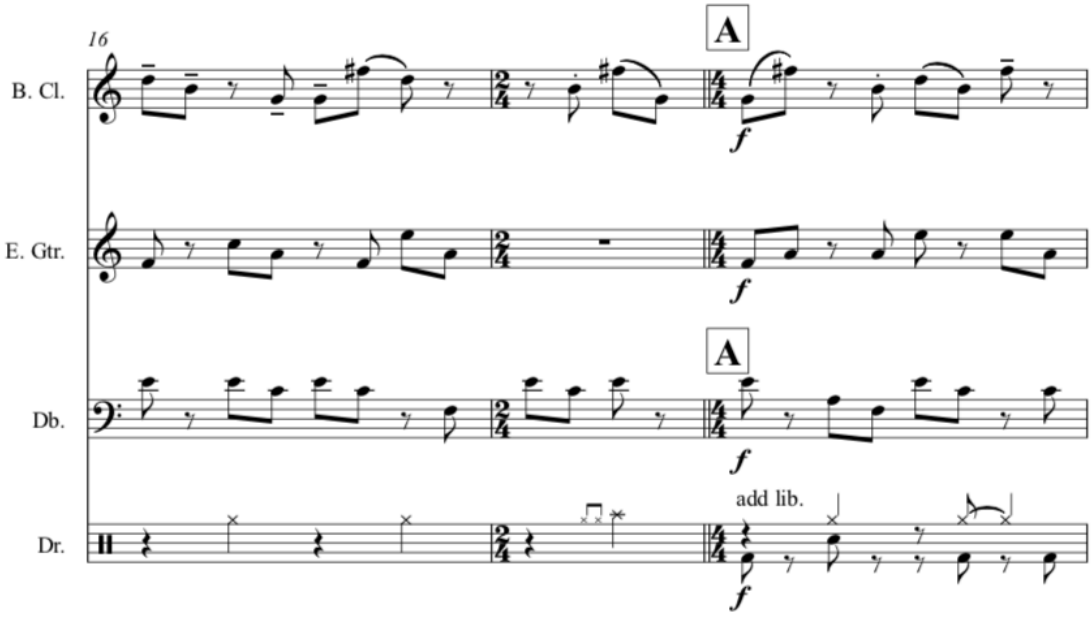


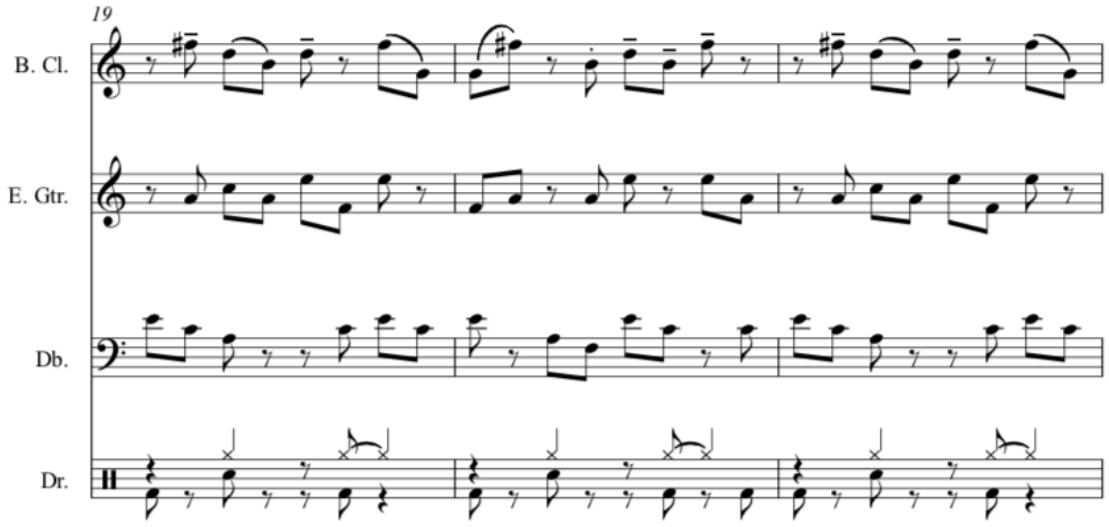
Yunfei Li 2019 ©

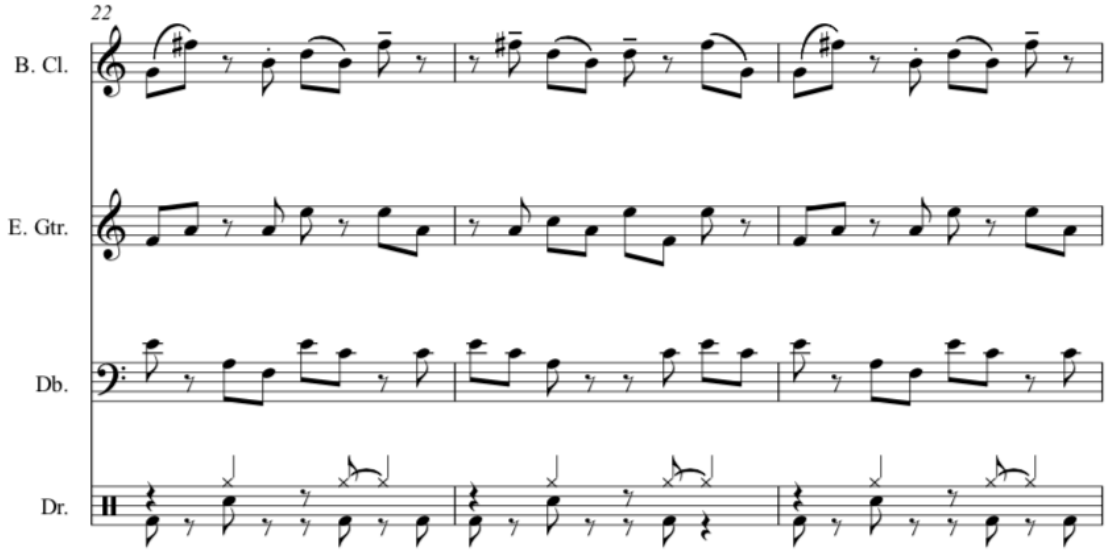

7
B. Cl.
mf Playful
E. Gtr.
Db.
Dr.

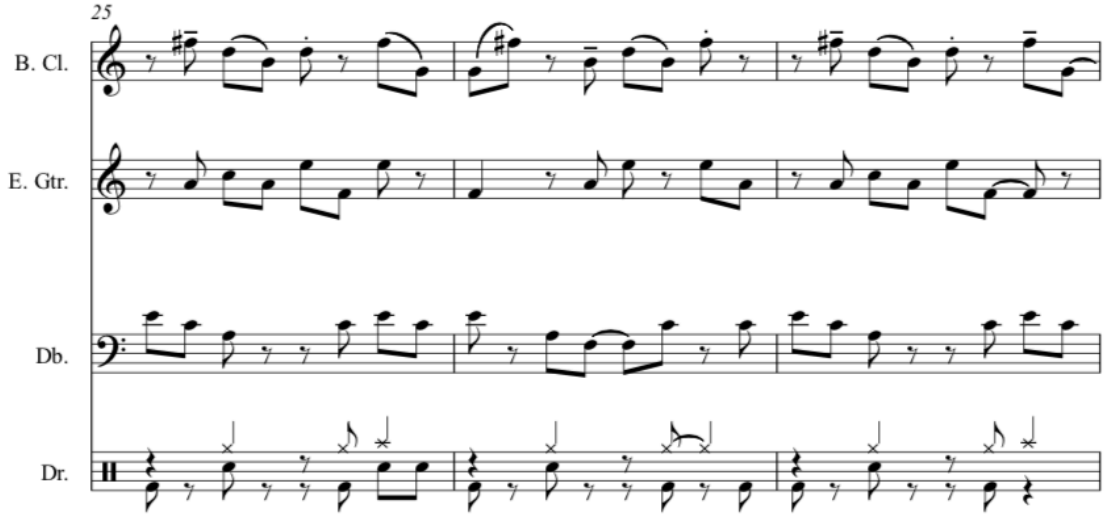

10
B. Cl.
E. Gtr.
Db.
Dr.

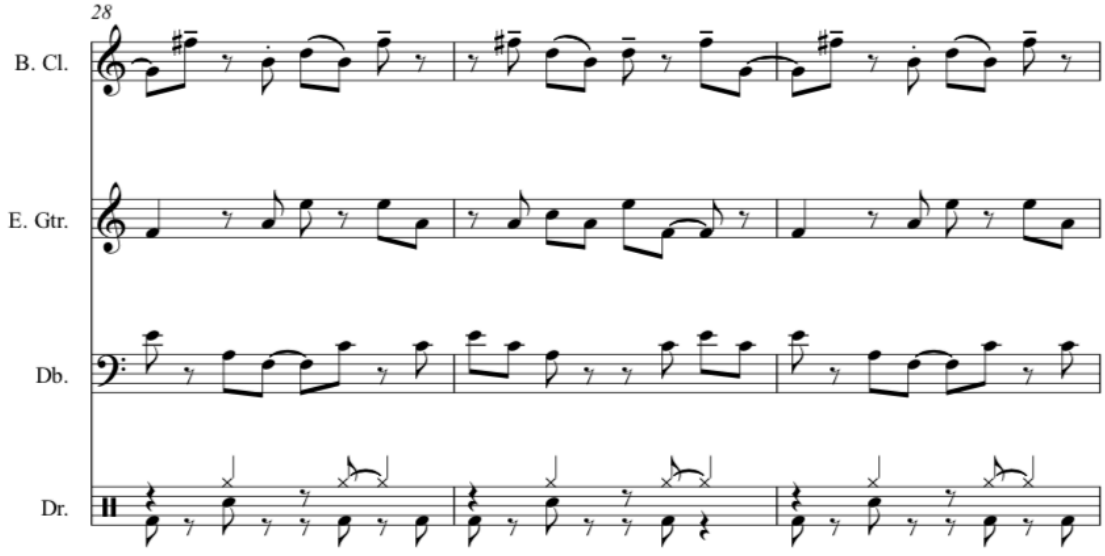

13
B. Cl.
E. Gtr.
Db.
Dr.

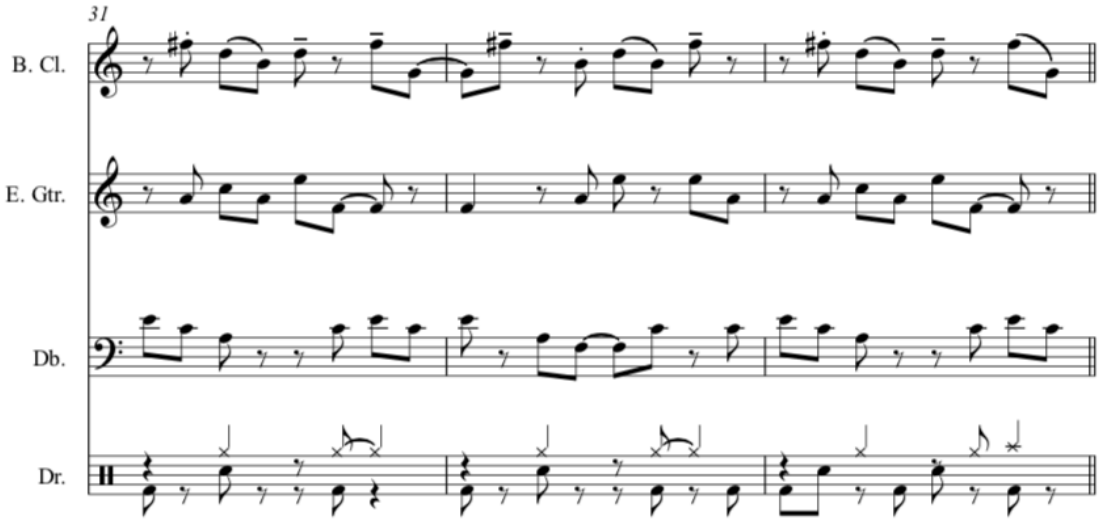

16
A
A
B. Cl.
E. Gtr.
Db.
Dr.
f
add lib.

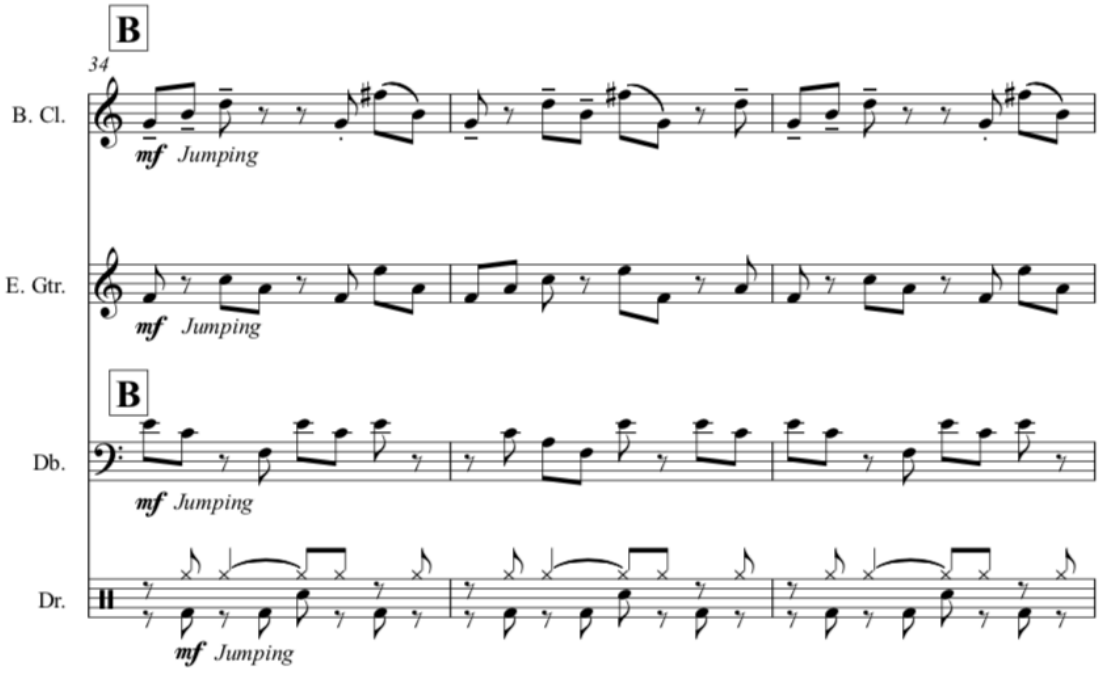

19
B. Cl.
E. Gtr.
Db.
Dr.

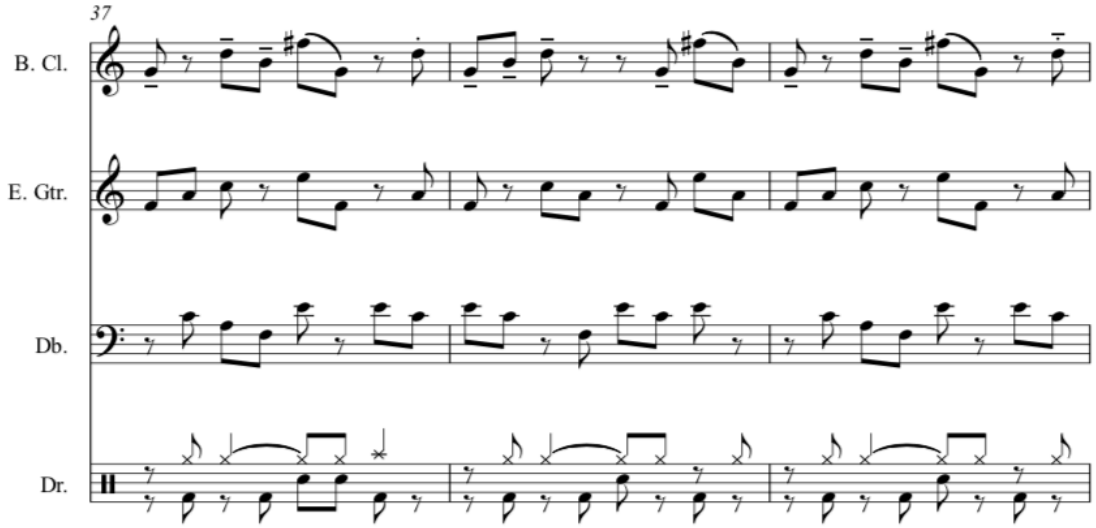

22
B. Cl.
E. Gtr.
Db.
Dr.

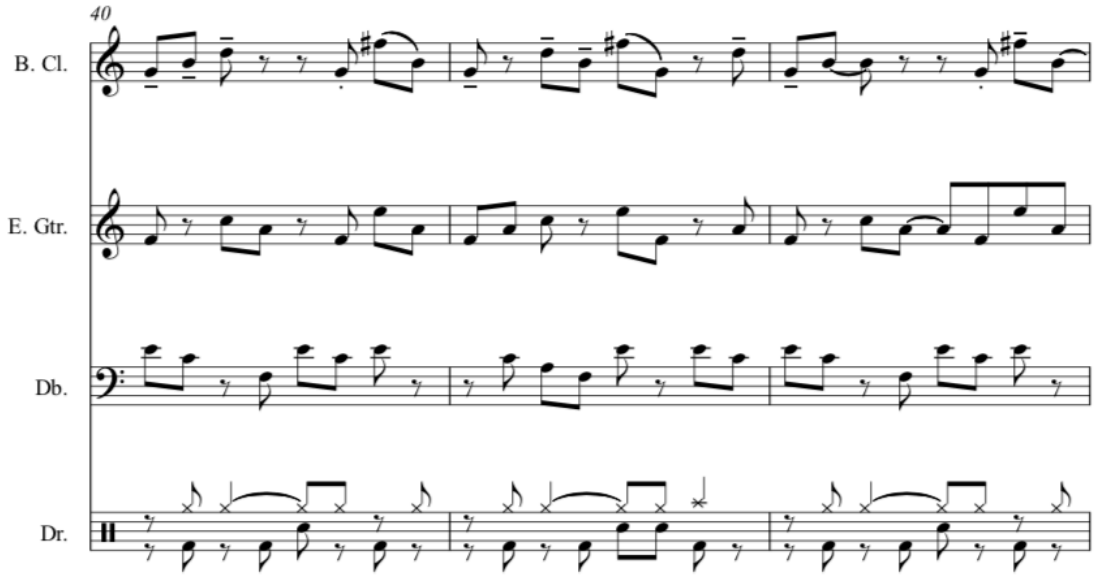

25
B. Cl.
E. Gtr.
Db.
Dr.

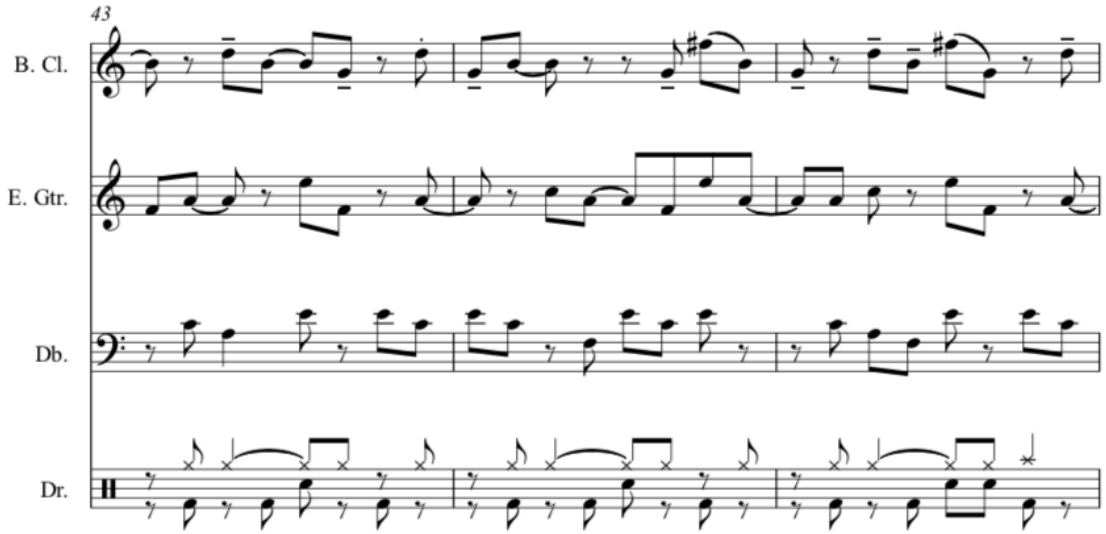

28
B. Cl.
E. Gtr.
Db.
Dr.

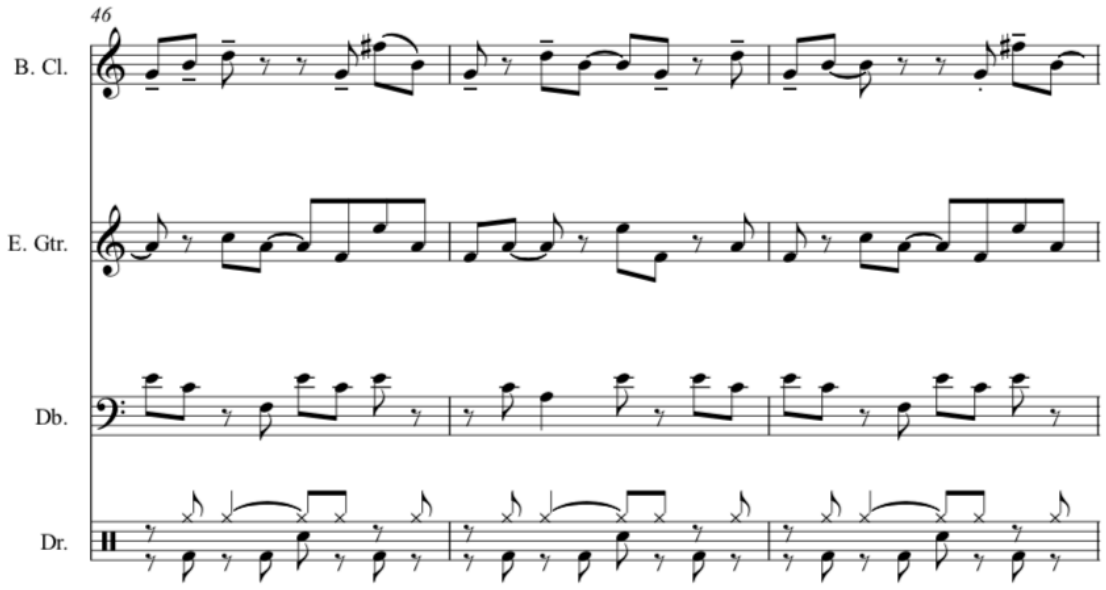

31
B. Cl.
E. Gtr.
Db.
Dr.

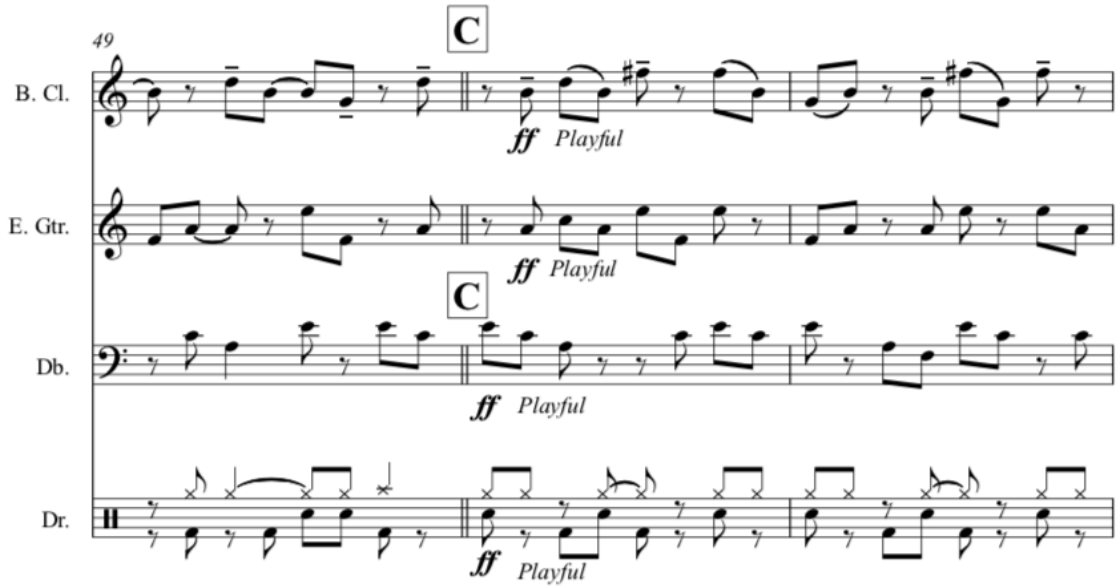

B
34
B. Cl.
mf Jumping
E. Gtr.
mf Jumping
B
Db.
mf Jumping
Dr.
mf Jumping

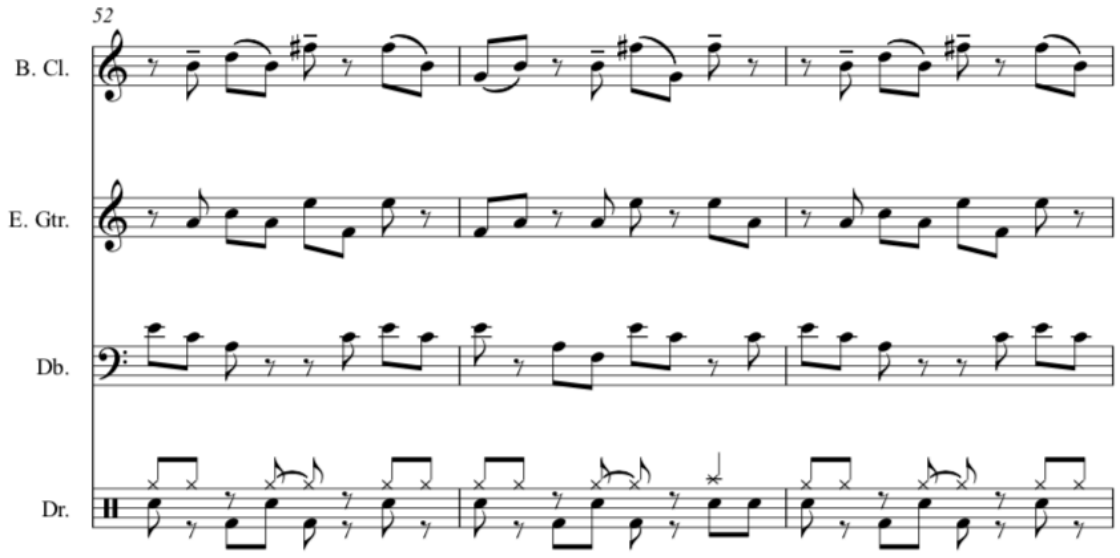

37
B. Cl.
E. Gtr.
Db.
Dr.

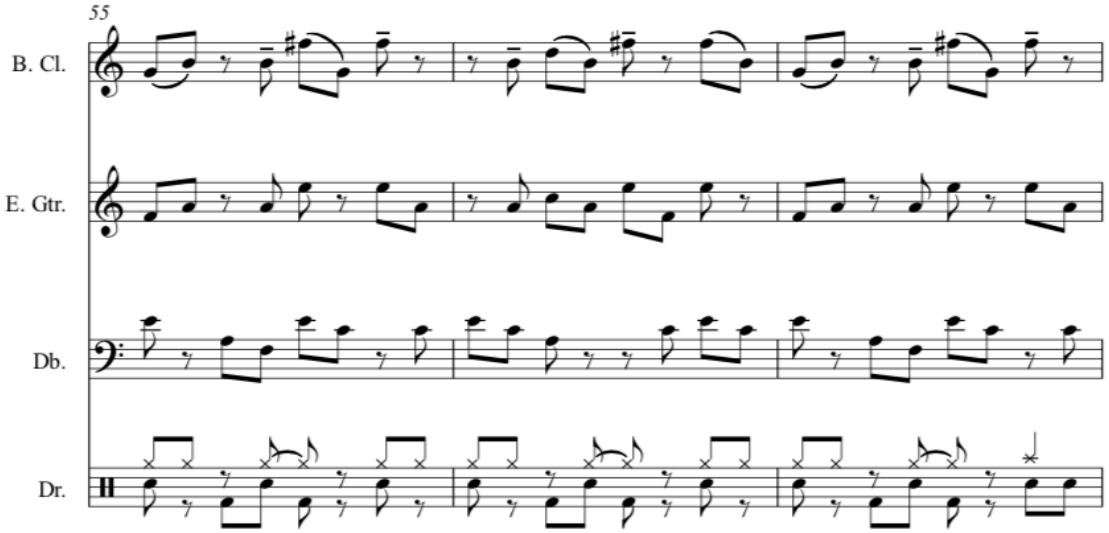

40
B. Cl.
E. Gtr.
Db.
Dr.

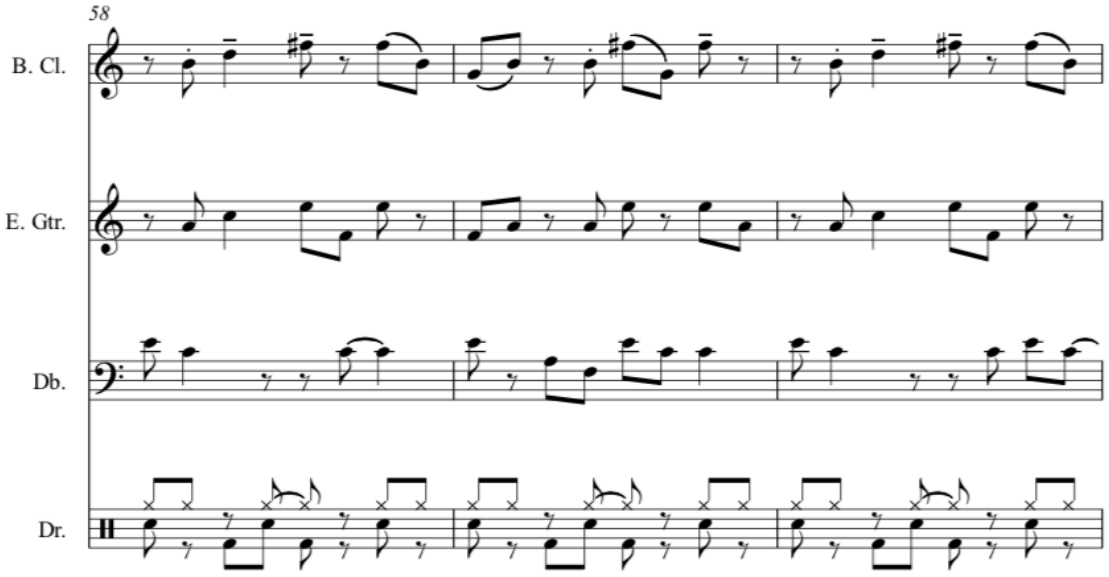

43
B. Cl.
E. Gtr.
Db.
Dr.

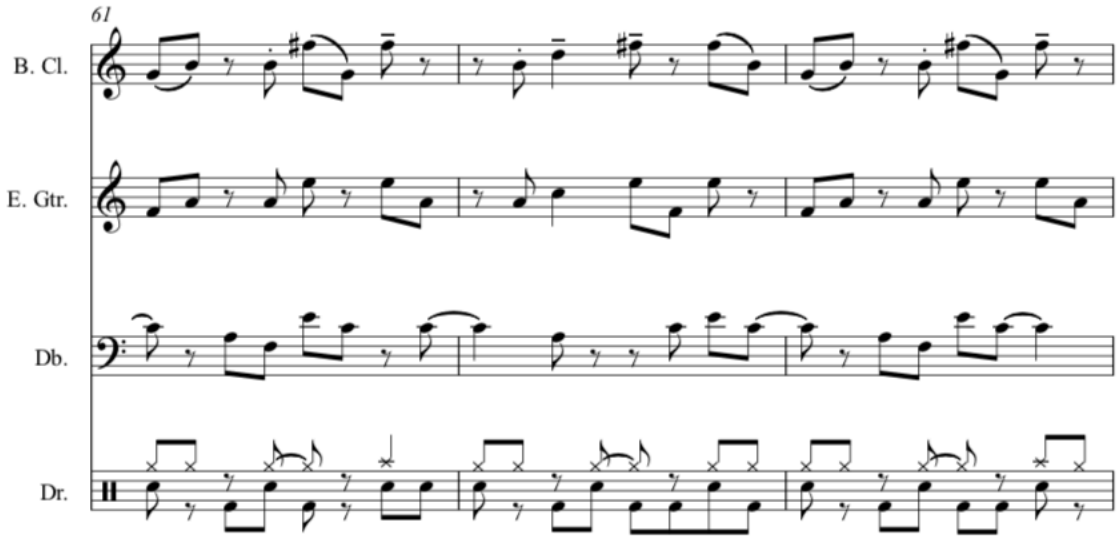

46
B. Cl.
E. Gtr.
Db.
Dr.

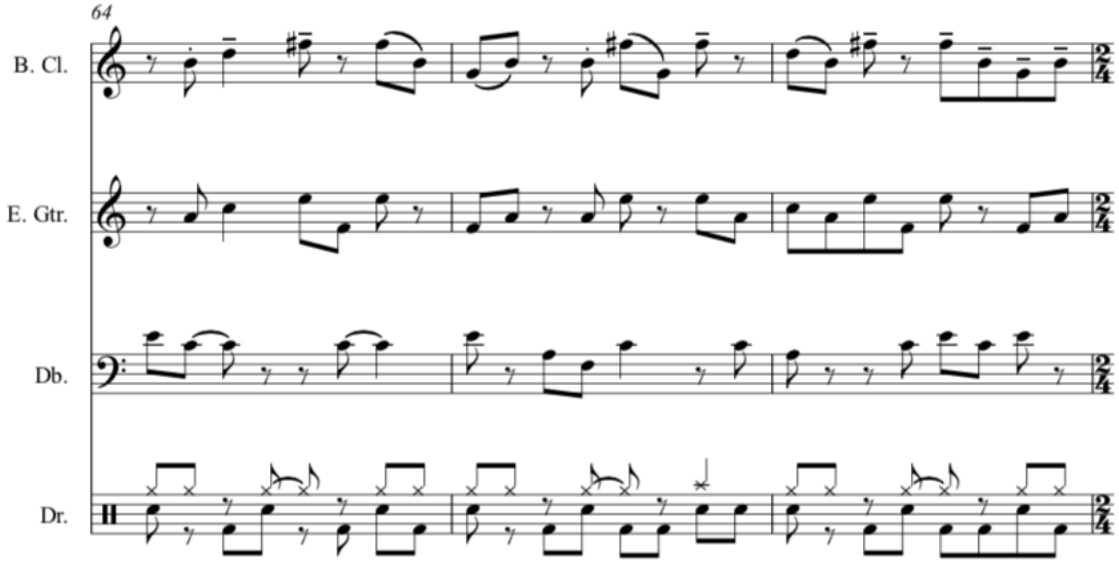

49
C
B. Cl.
E. Gtr.
Db.
Dr.
ff Playful
ff Playful
C
ff Playful
ff Playful

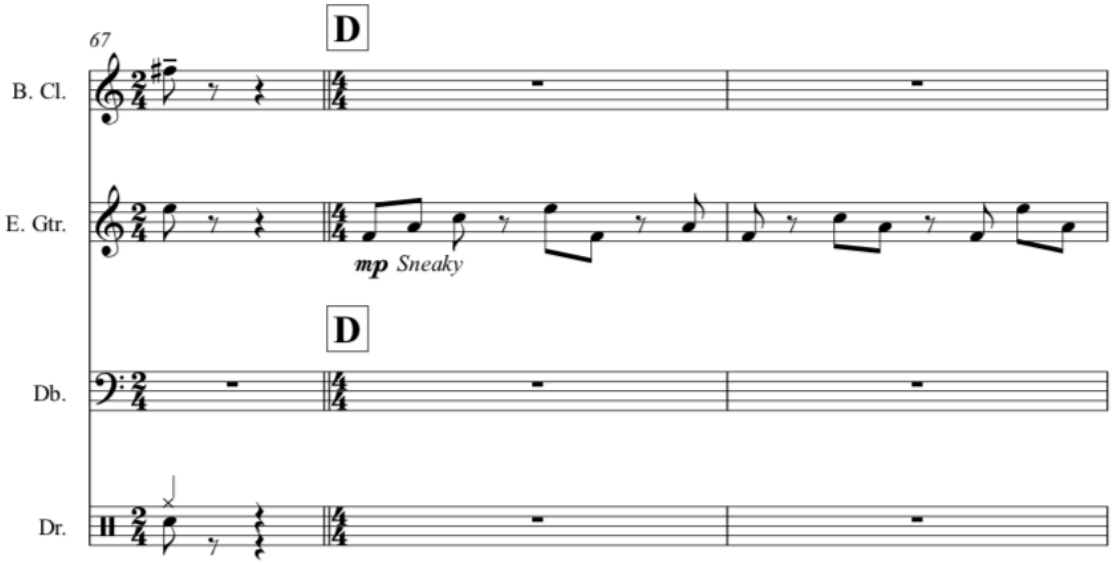

52
B. Cl.
E. Gtr.
Db.
Dr.

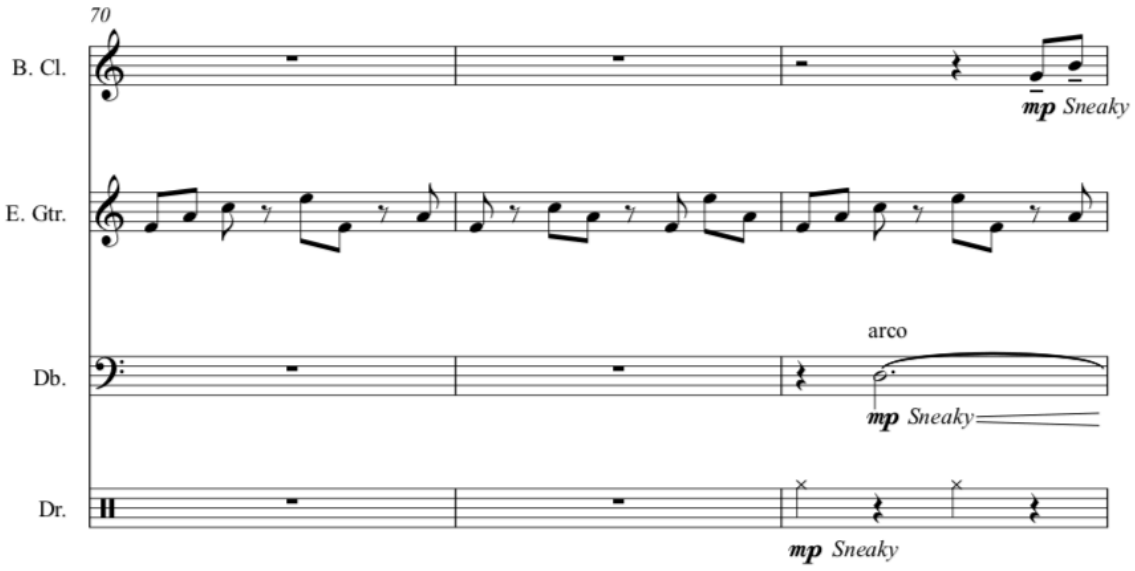

55
B. Cl.
E. Gtr.
Db.
Dr.

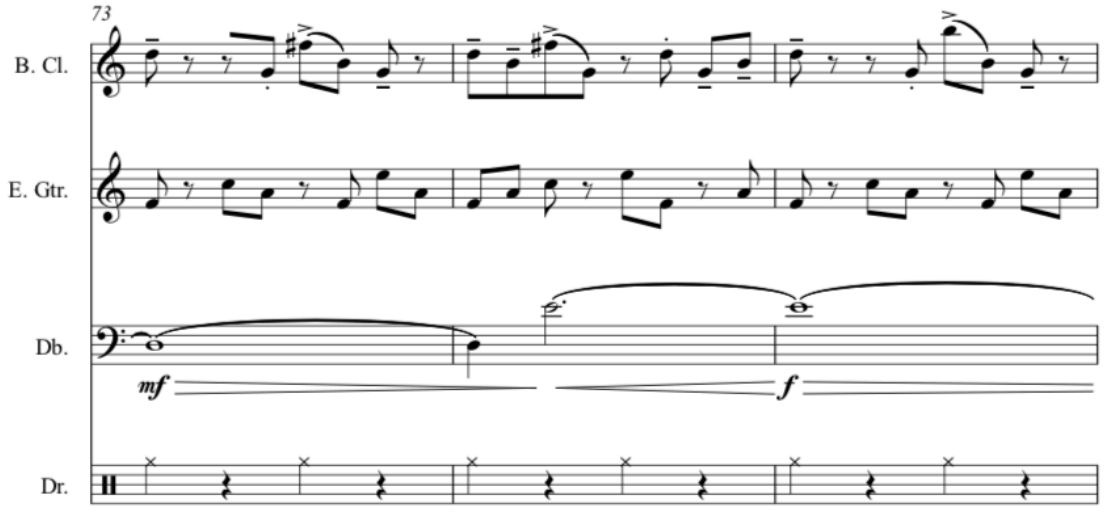

58
B. Cl.
E. Gtr.
Db.
Dr.

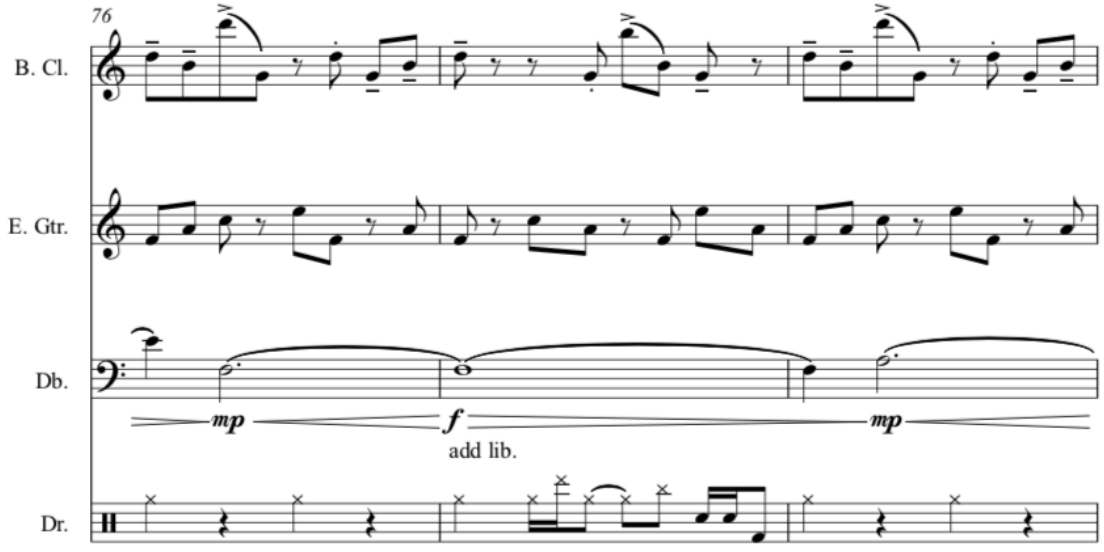

61
B. Cl.
E. Gtr.
Db.
Dr.

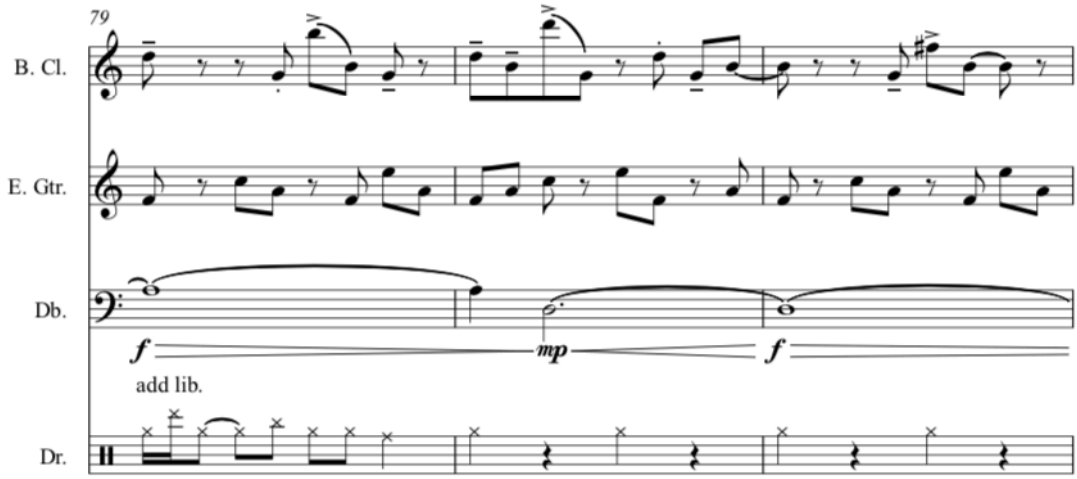

64
B. Cl.
E. Gtr.
Db.
Dr.

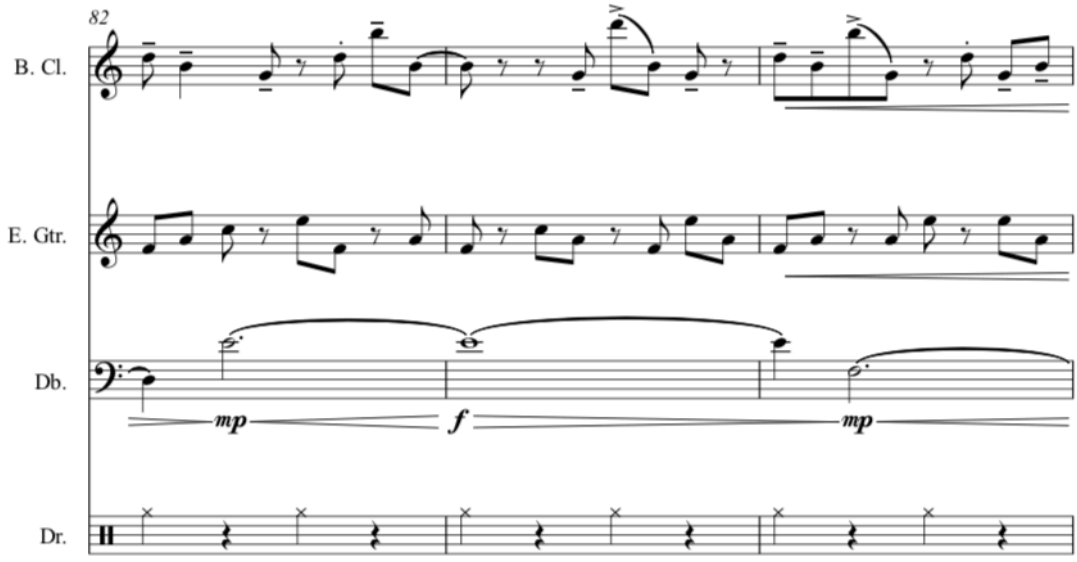

67
D
B. Cl.
E. Gtr.
mp Sneaky
D
Db.
Dr.

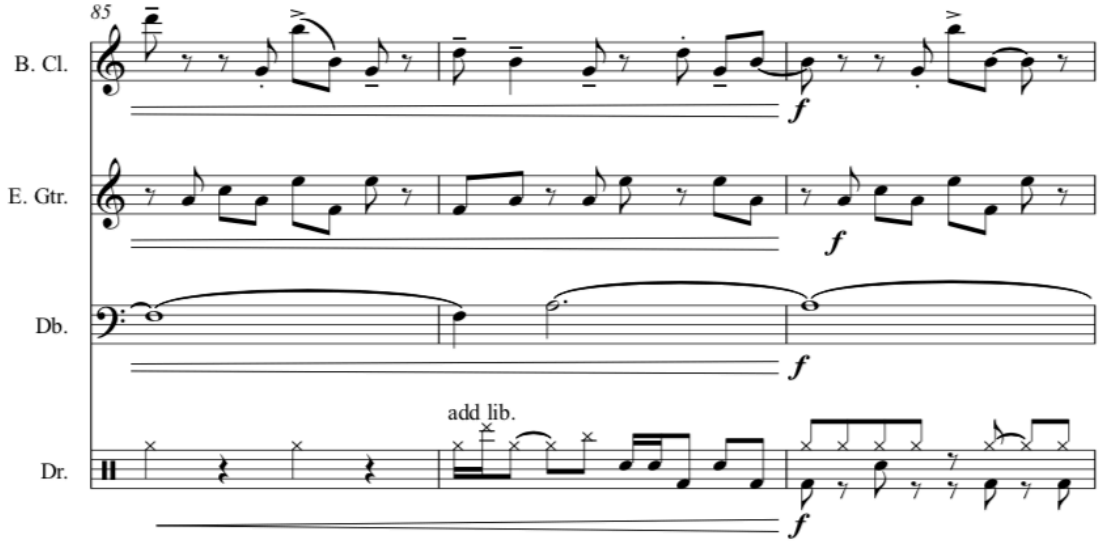

70
B. Cl.
mp Sneaky
E. Gtr.
arco
Db.
mp Sneaky
Dr.
mp Sneaky

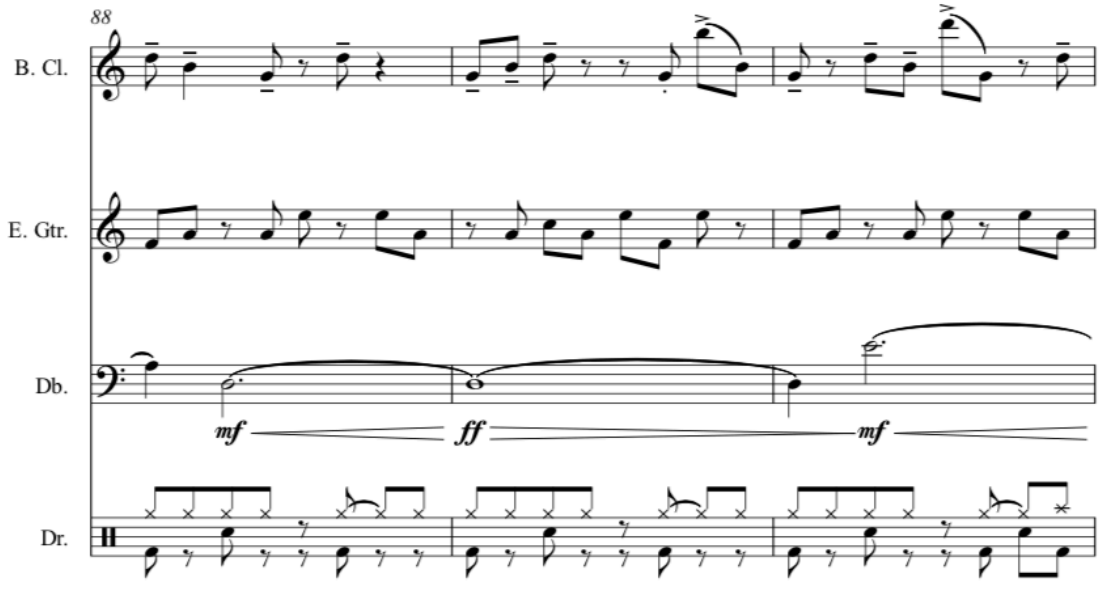

73
B. Cl.
E. Gtr.
Db.
mf
f
Dr.

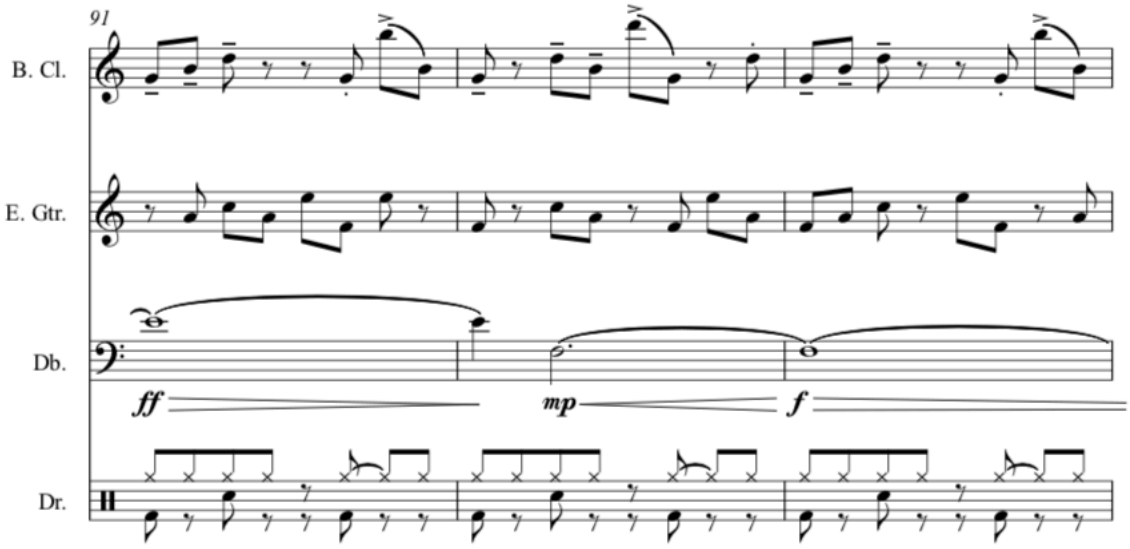

76
B. Cl.
E. Gtr.
Db.
mp
f
mp
add lib.
Dr.

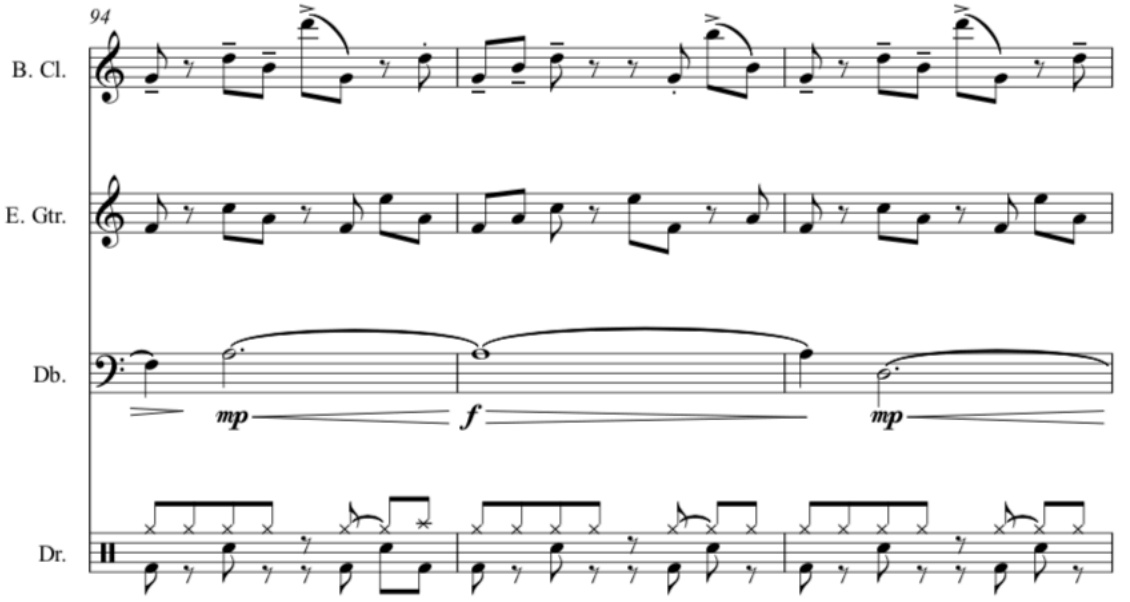

79
B. Cl.
E. Gtr.
Db.
f
mp
f
add lib.
Dr.

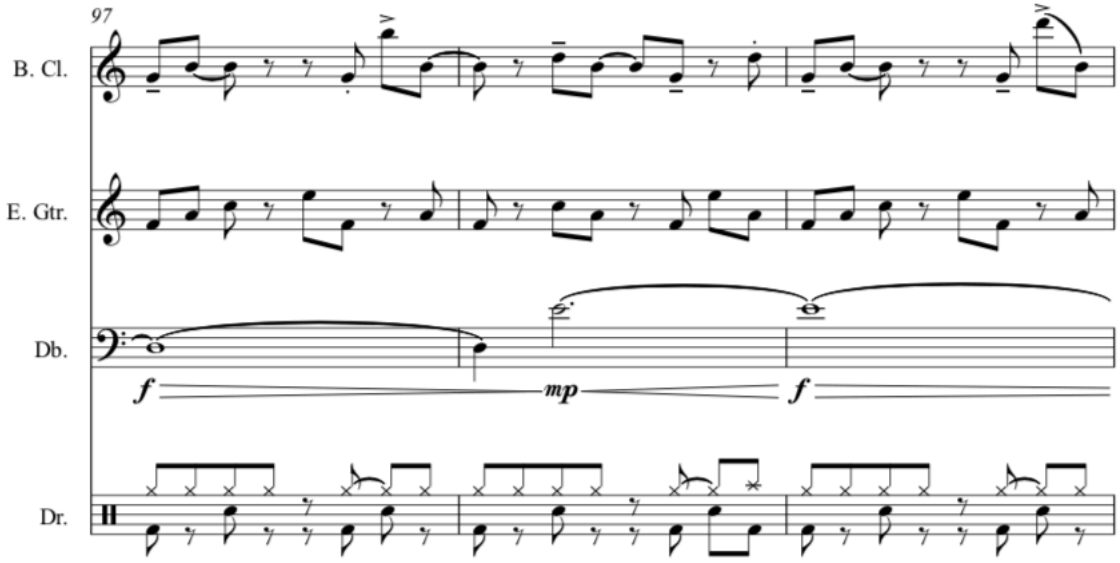

82
B. Cl.
E. Gtr.
Db.
mp
f
mp
Dr.

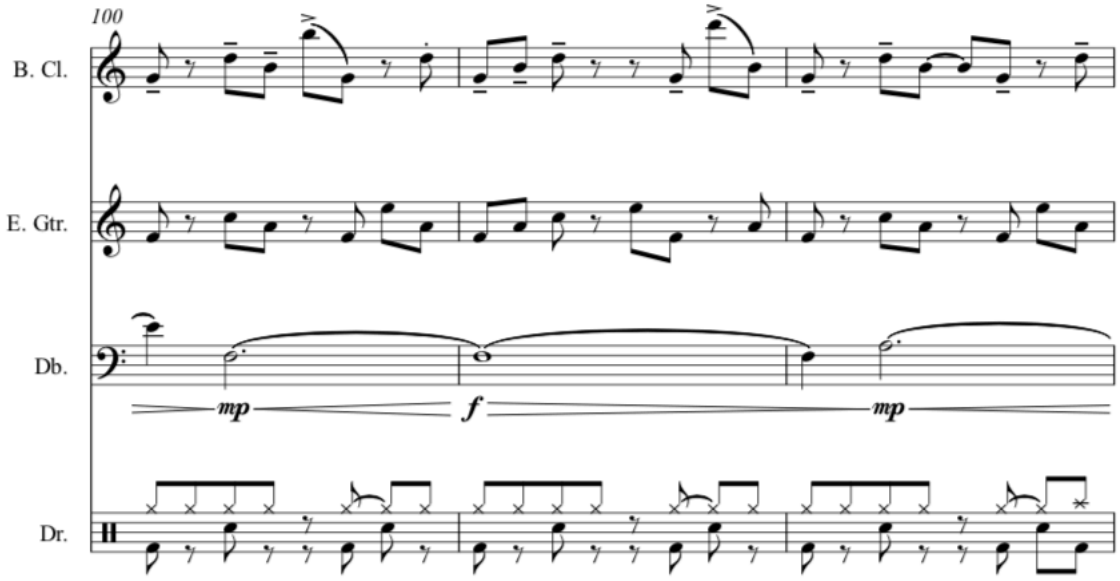

85
B. Cl.
E. Gtr.
Db.
Dr.
add lib.
f

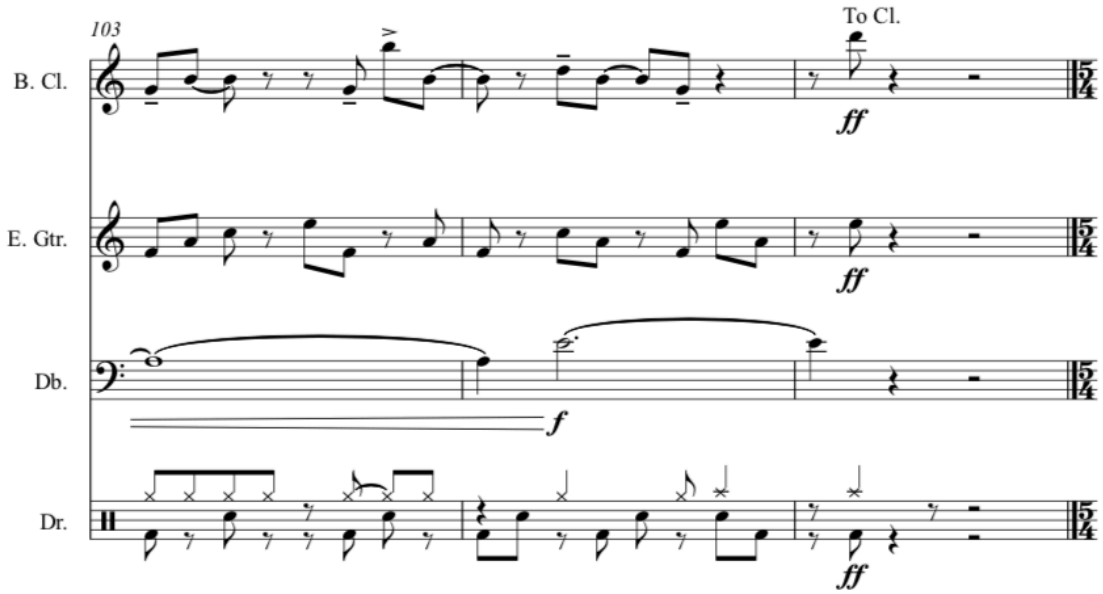

88
B. Cl.
E. Gtr.
Db.
Dr.
mf
ff
mf


91
B. Cl.
E. Gtr.
Db.
Dr.
ff
mp
f

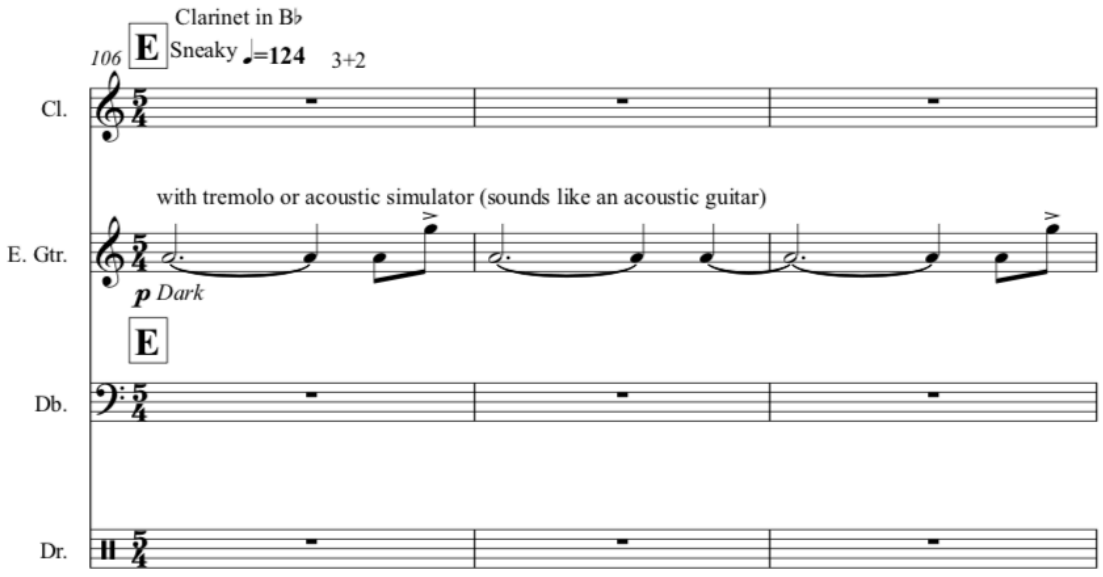

94
B. Cl.
E. Gtr.
Db.
Dr.
mp
f
mp

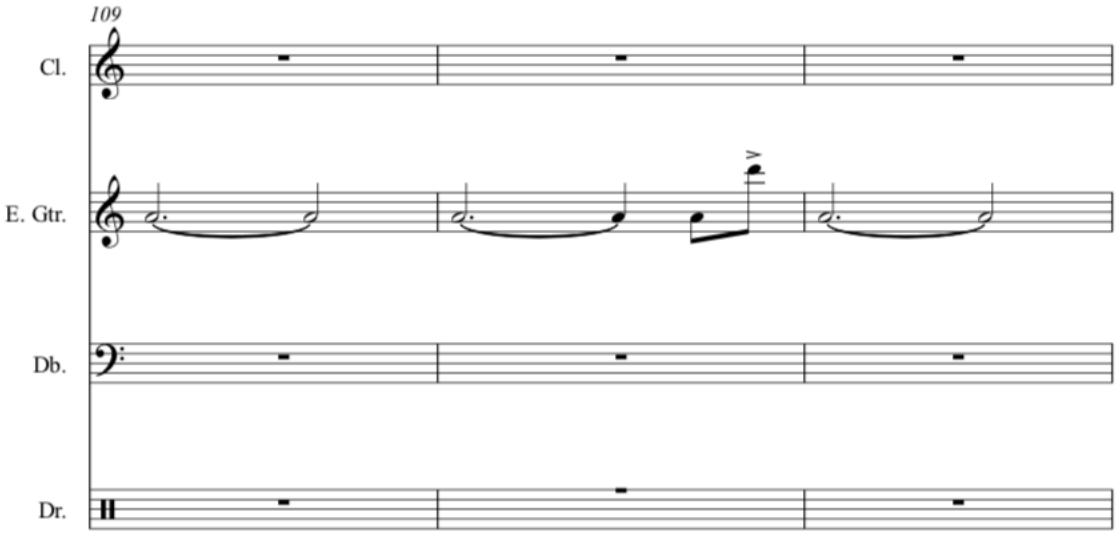

97
B. Cl.
E. Gtr.
Db.
Dr.
f
mp
f

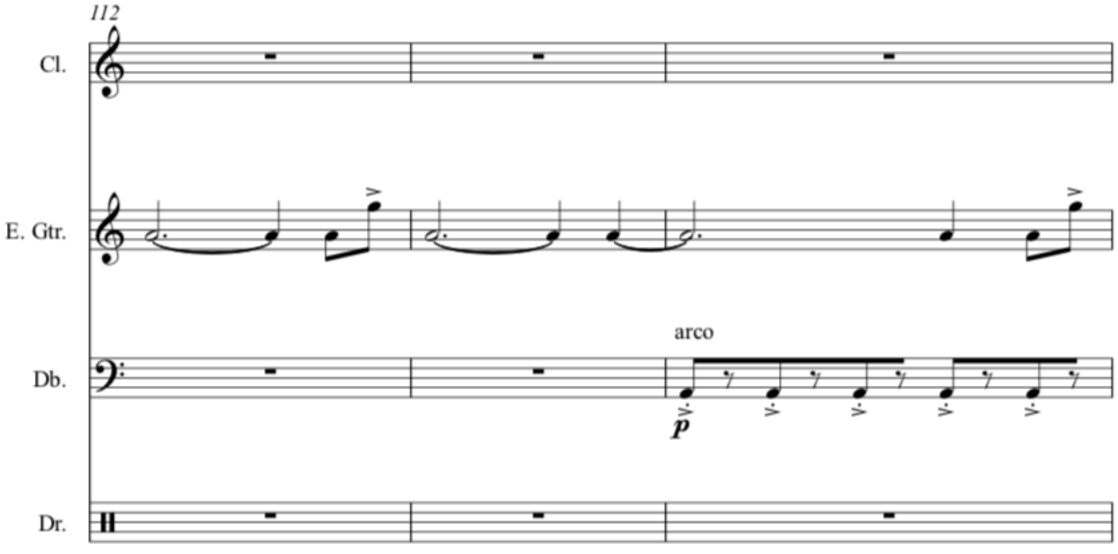

100
B. Cl.
E. Gtr.
Db.
Dr.
mp
f
mp

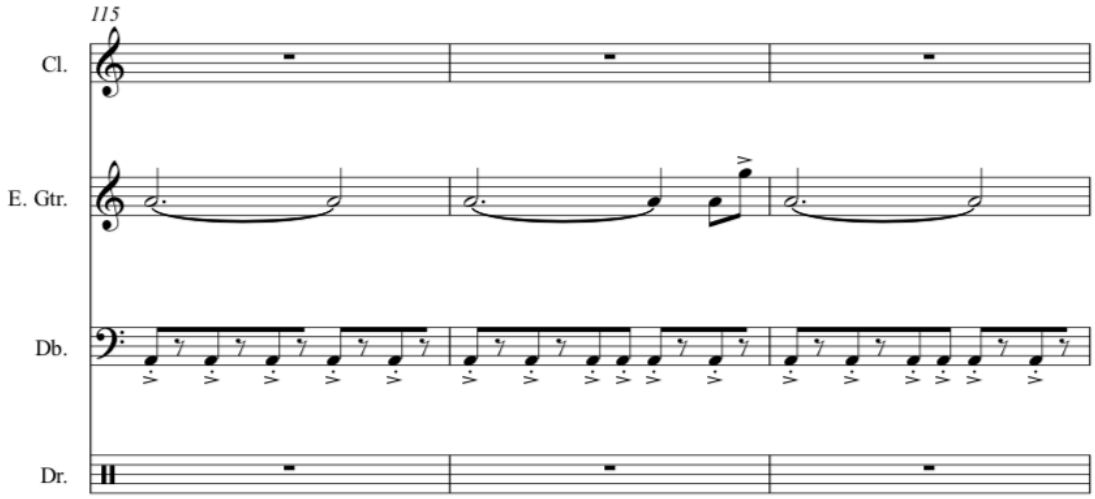

103
To Cl.
B. Cl.
E. Gtr.
Db.
Dr.
ff
f

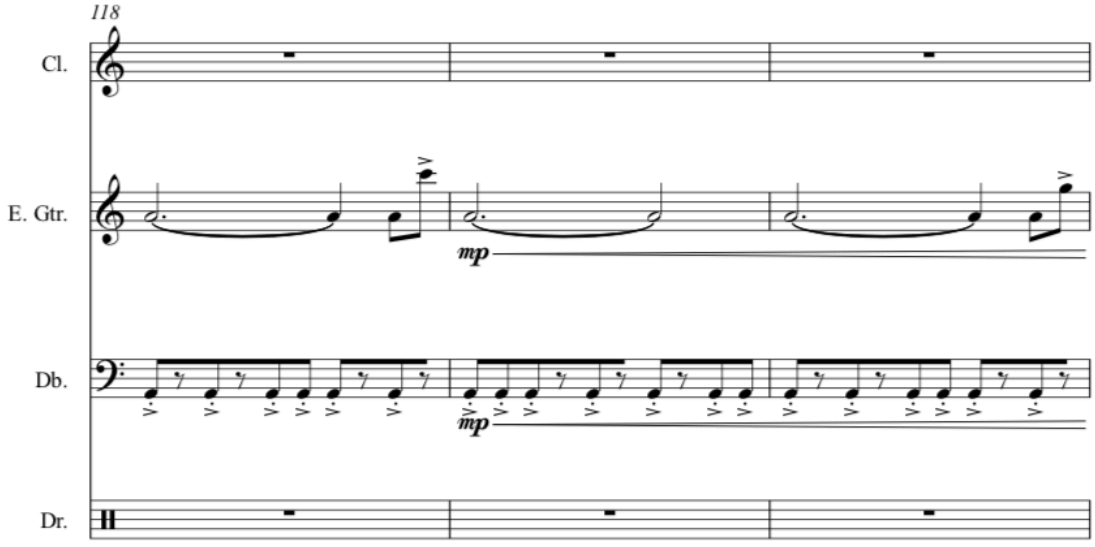
II

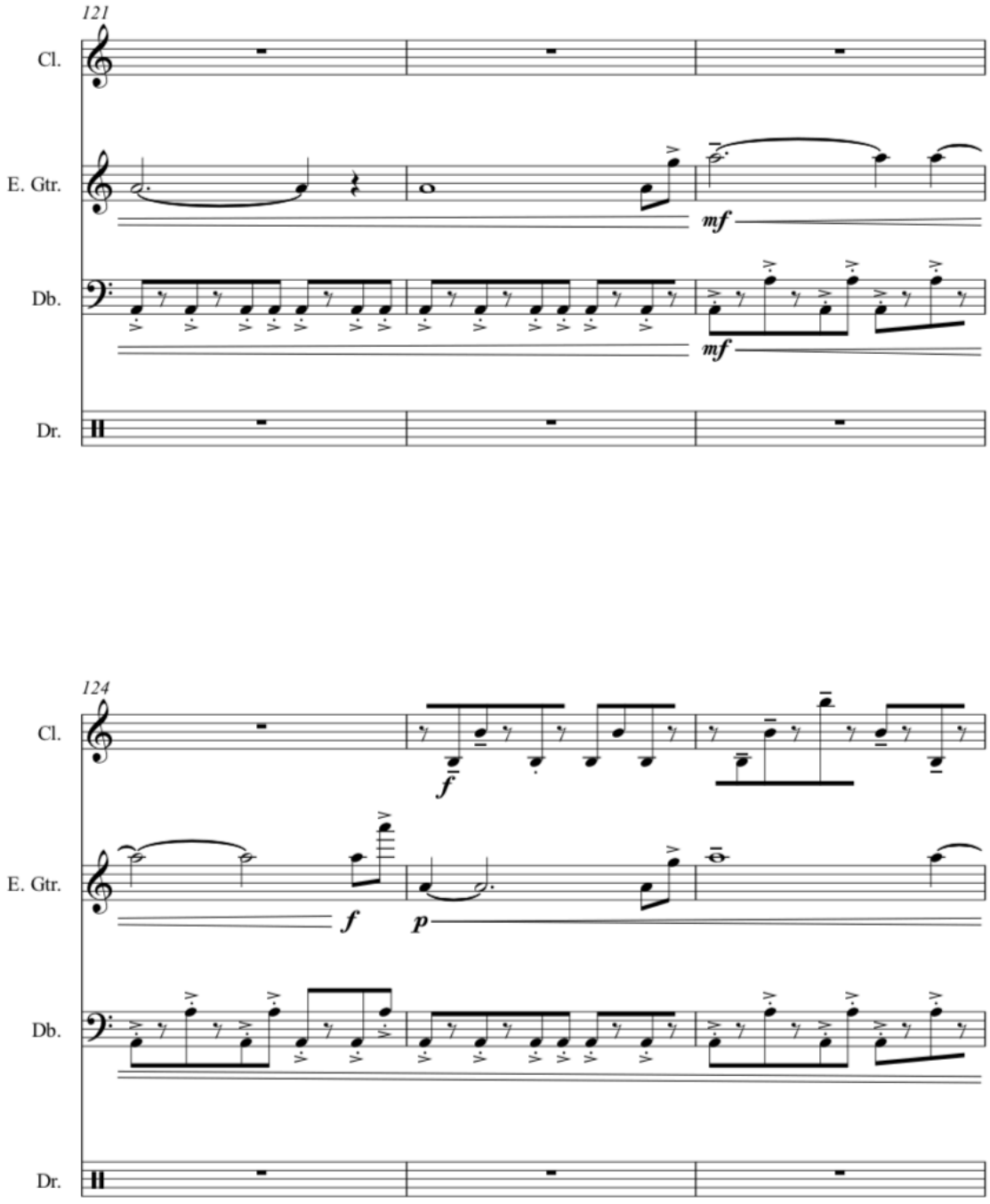

Clarinet in B♭
106
E
Sneaky ♩=124
3+2
Cl.
with tremolo or acoustic simulator (sounds like an acoustic guitar)
E. Gtr.
p Dark
E
Db.
Dr.

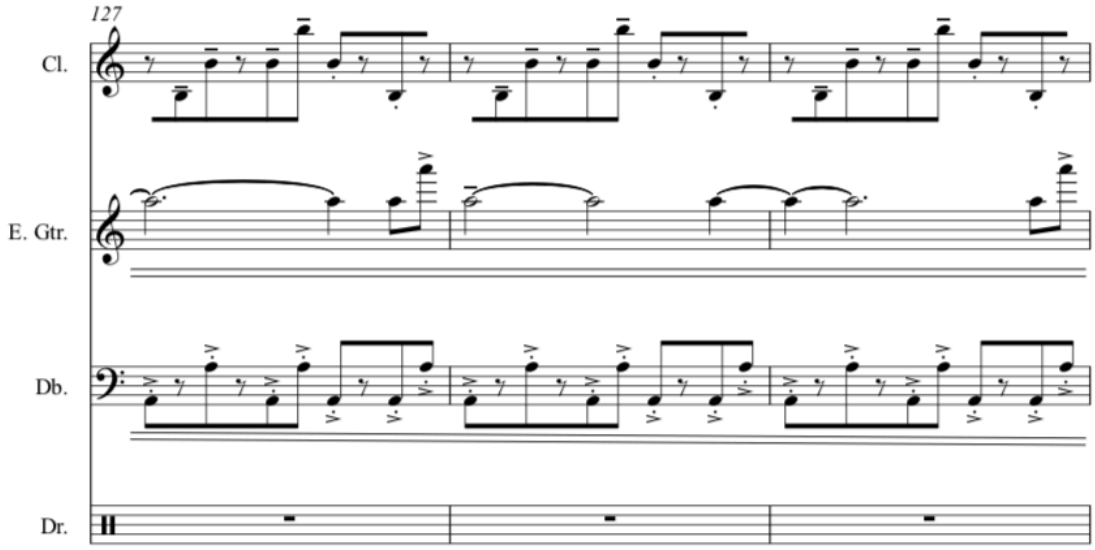

109
Cl.
E. Gtr.
Db.
Dr.

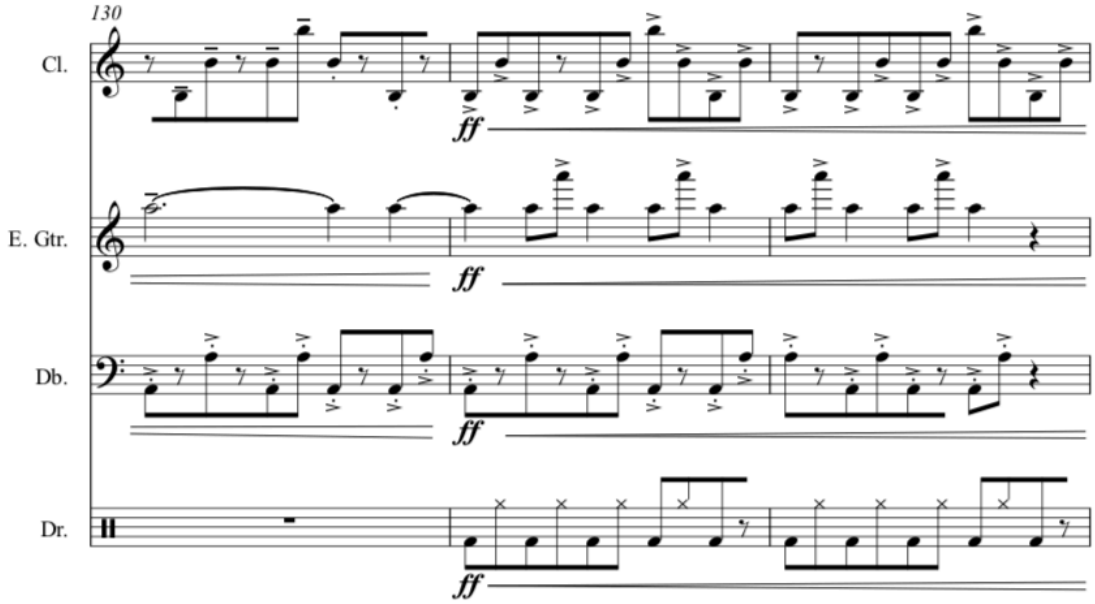

112
Cl.
E. Gtr.
arco
Db.
p
Dr.

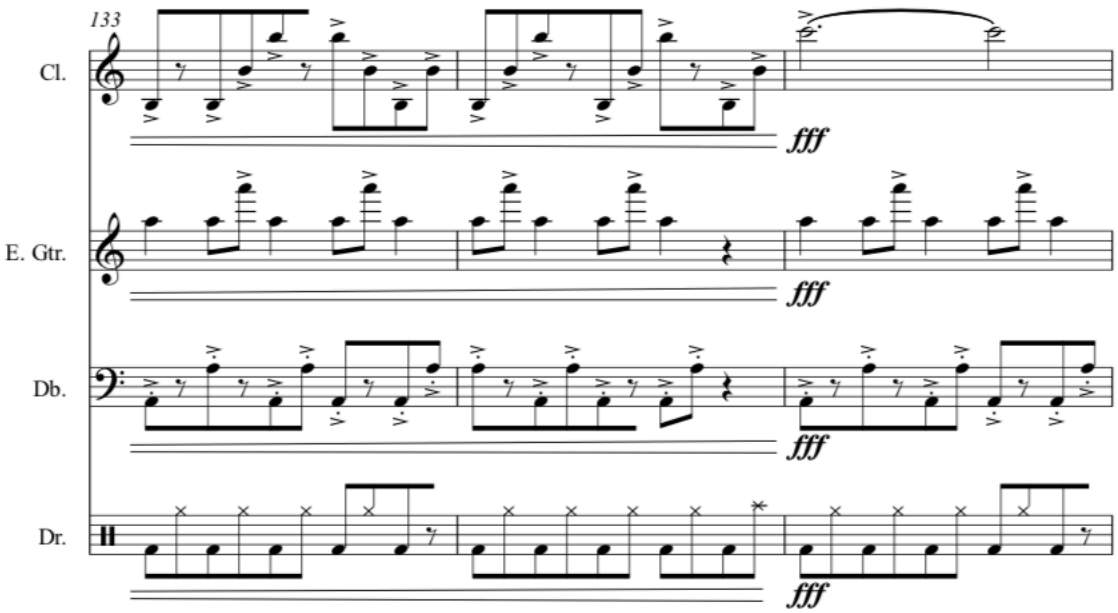

115
Cl.
E. Gtr.
Db.
Dr.

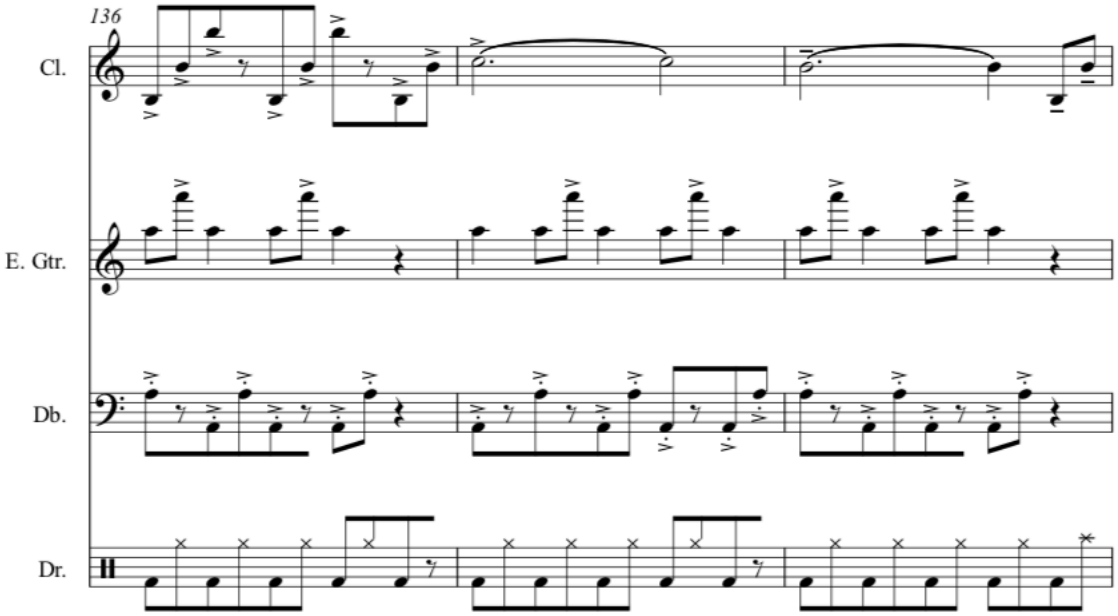

118
Cl.
E. Gtr.
mp
Db.
mp
Dr.

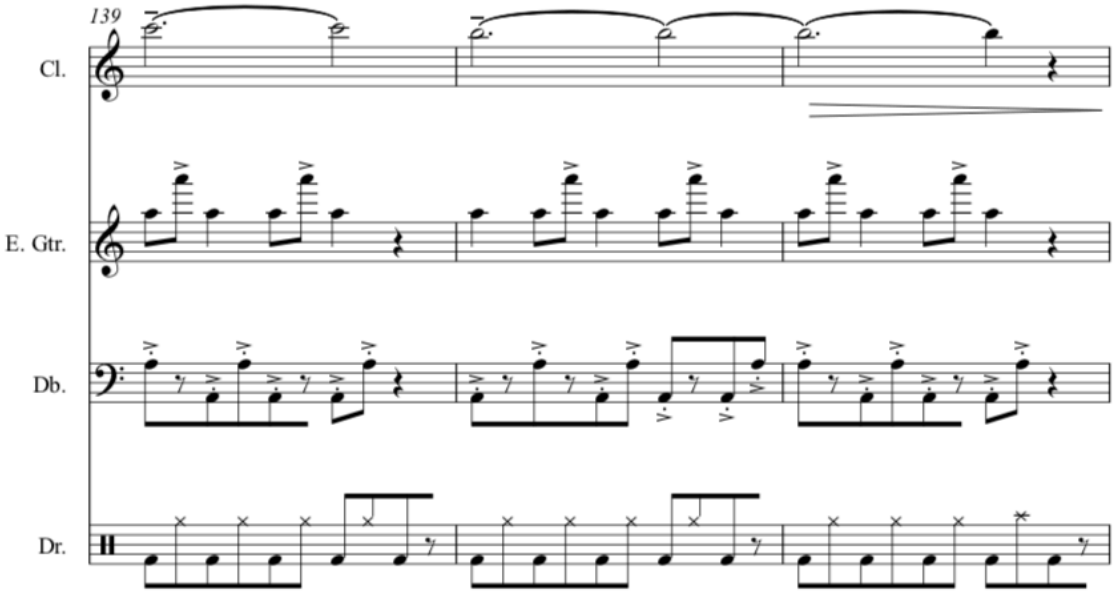

121
Cl.
E. Gtr.
mf
Db.
mf
Dr.
124
Cl.
f
E. Gtr.
f
p
Db.
Dr.

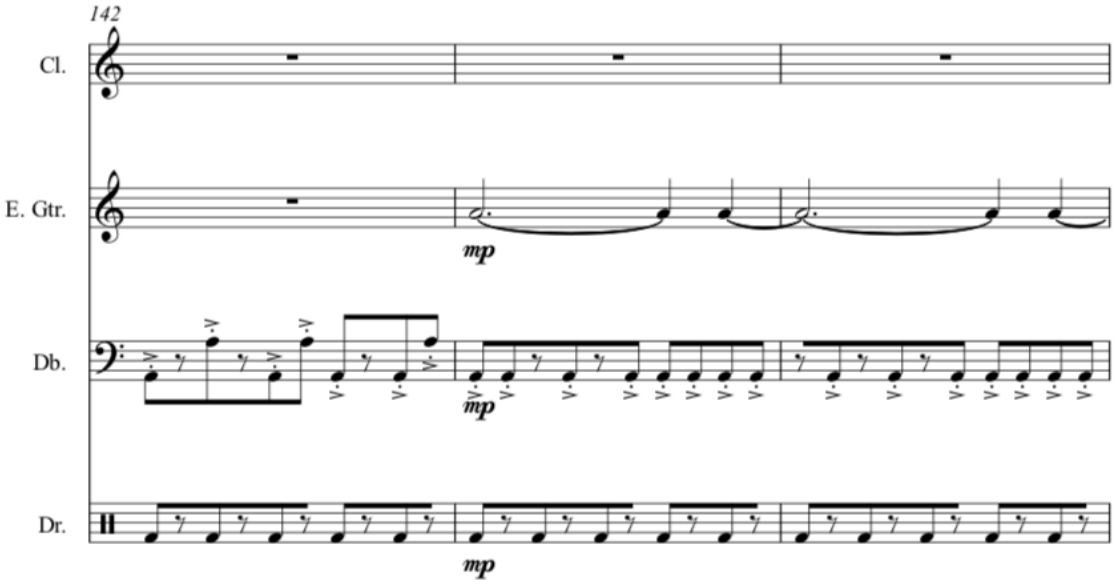

127
Cl.
E. Gtr.
Db.
Dr.


130
Cl.
E. Gtr.
Db.
Dr.
ff
ff
ff
ff

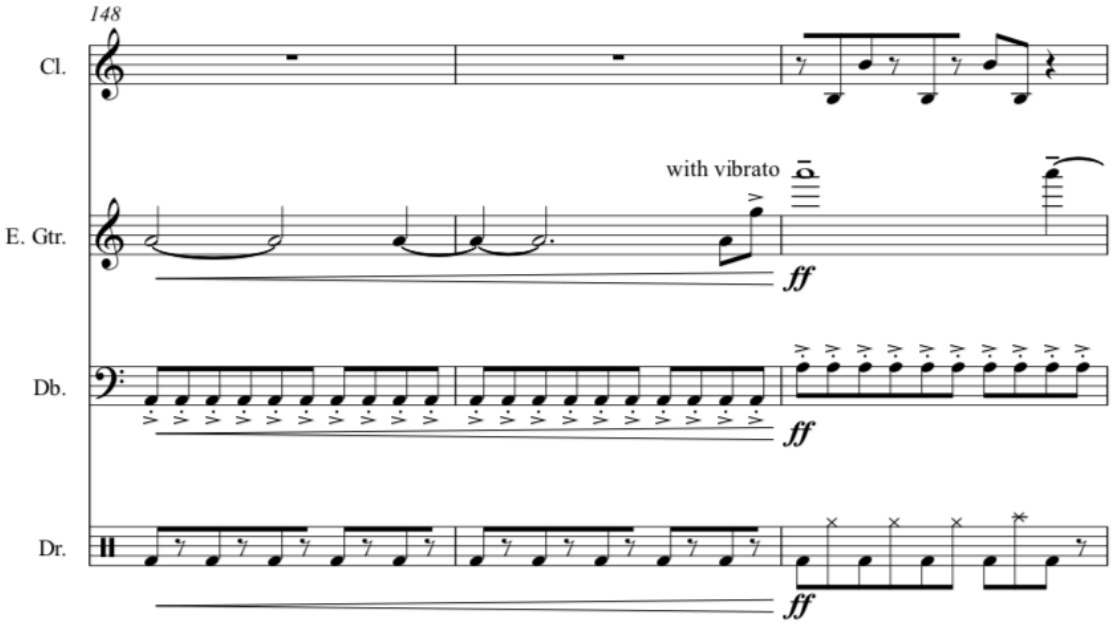

133
Cl.
E. Gtr.
Db.
Dr.
fff

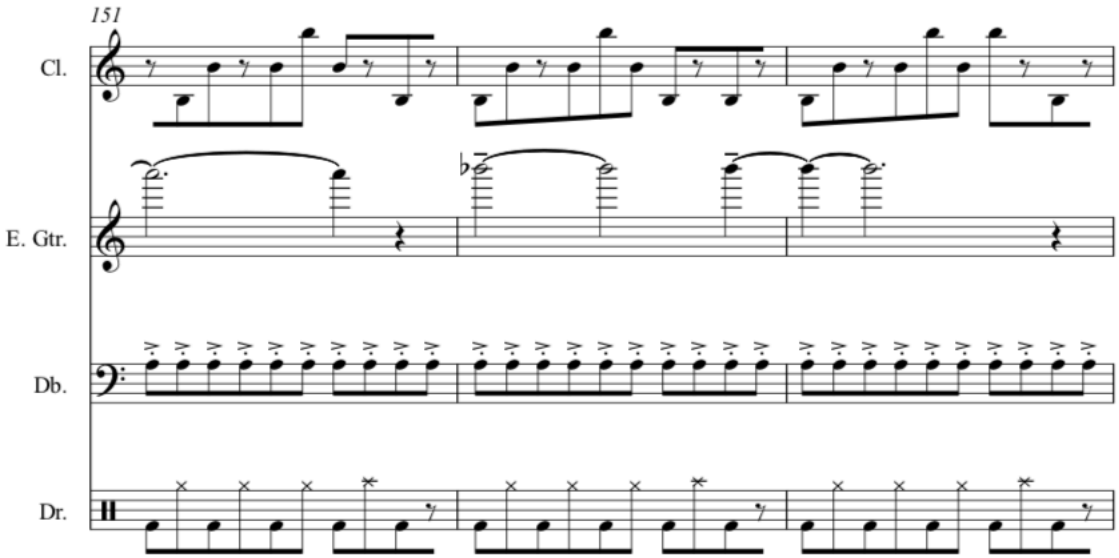

136
Cl.
E. Gtr.
Db.
Dr.

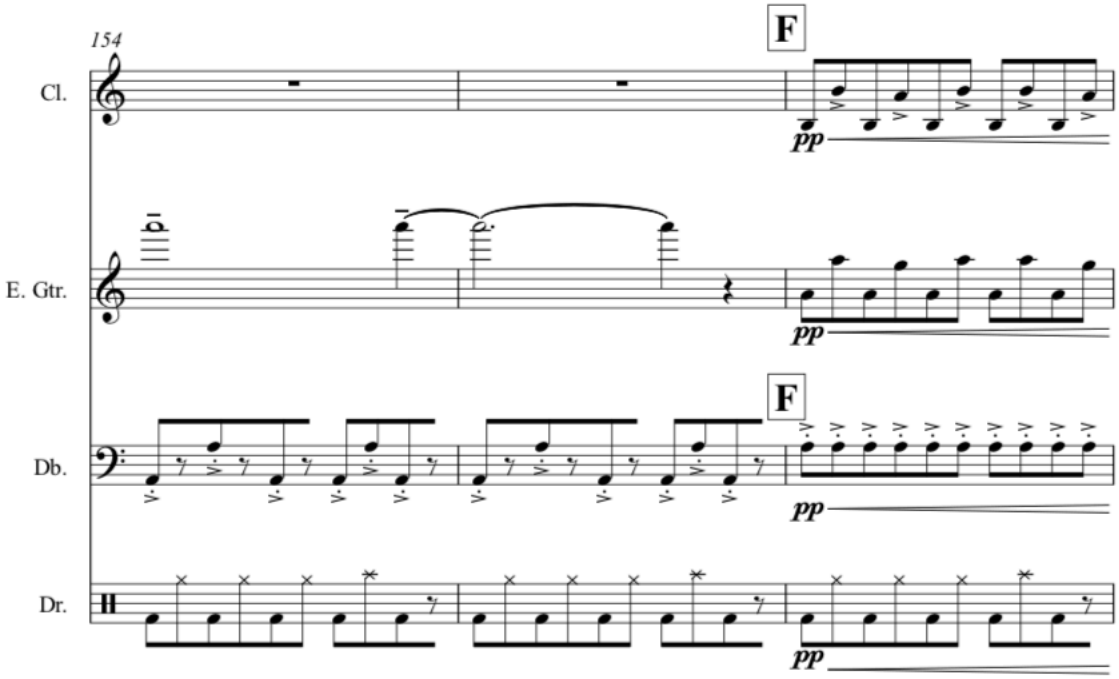

139
Cl.
E. Gtr.
Db.
Dr.

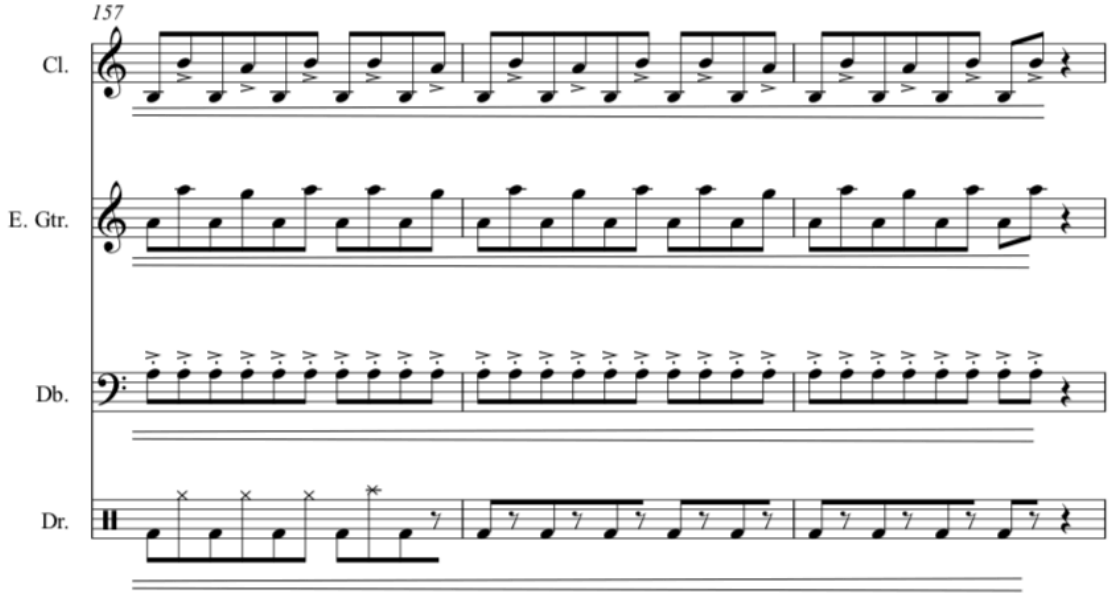

142
Cl.
E. Gtr.
mp
Db.
mp
Dr.
mp

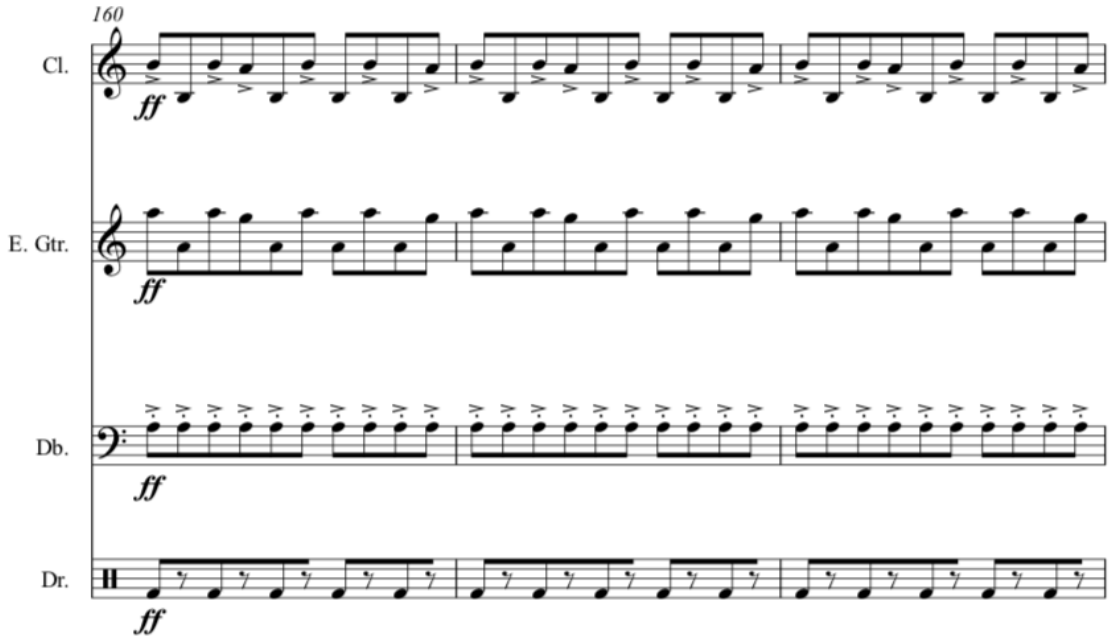
145
Cl.
E. Gtr.
Db.
Dr.

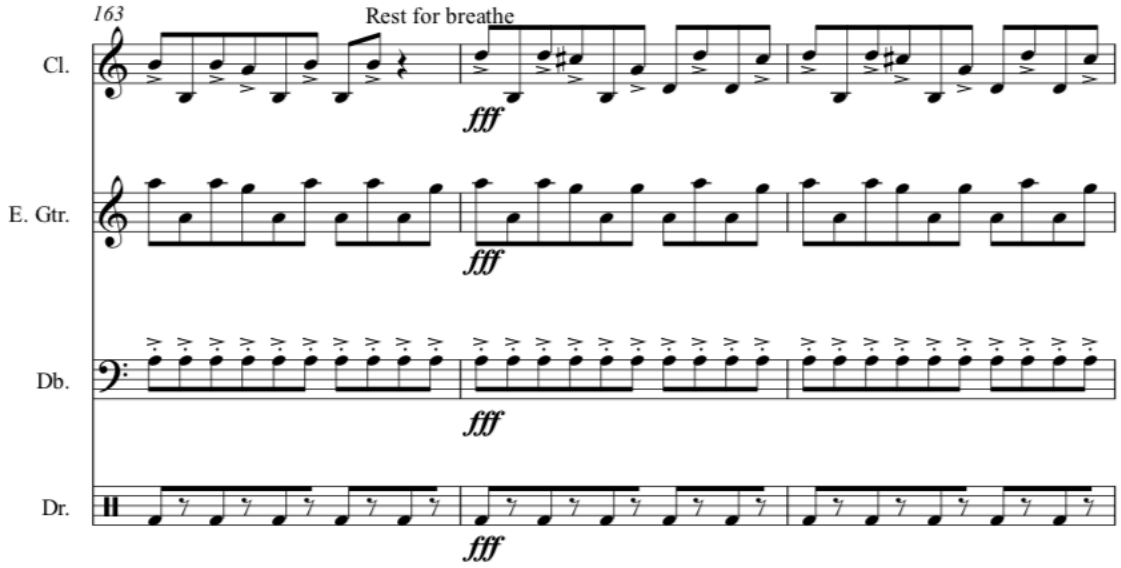

148
Cl.
E. Gtr.
with vibrato
ff
Db.
ff
Dr.
ff

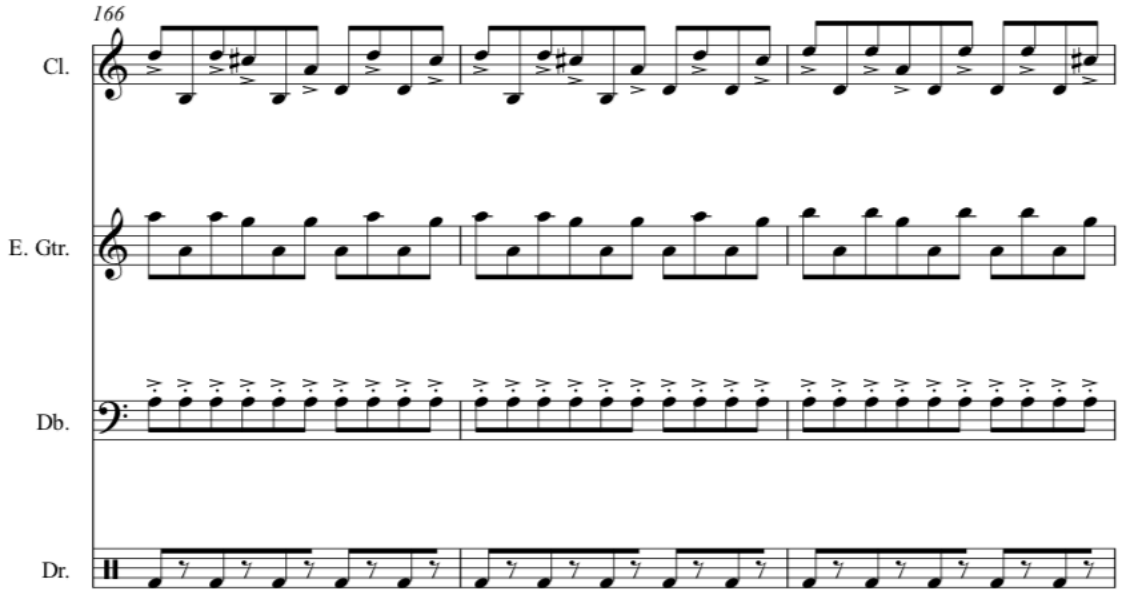

151
Cl.
E. Gtr.
Db.
Dr.

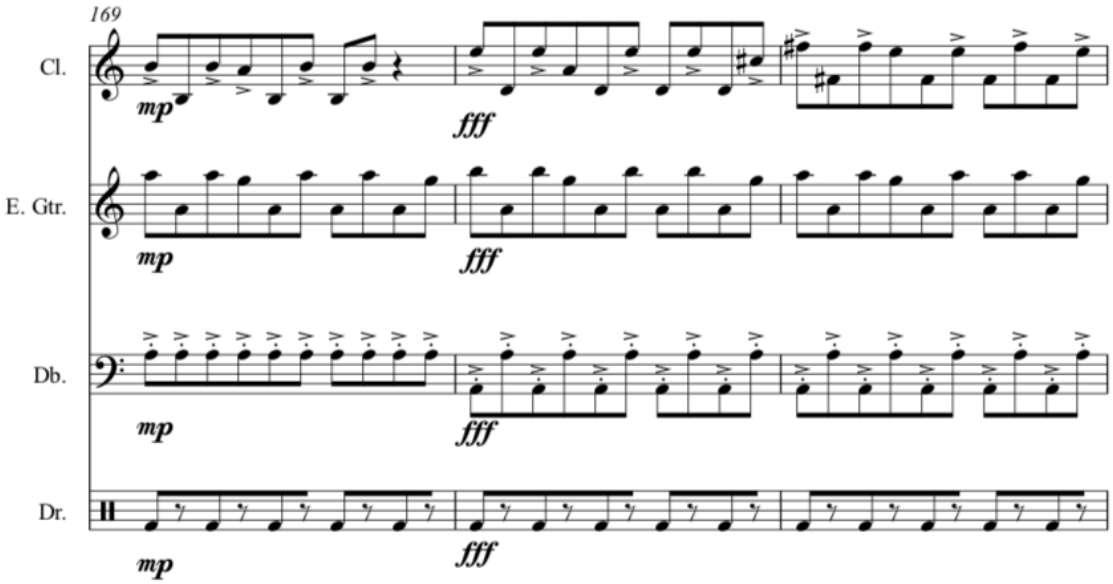

154
F
Cl.
pp
E. Gtr.
pp
F
Db.
pp
Dr.
pp

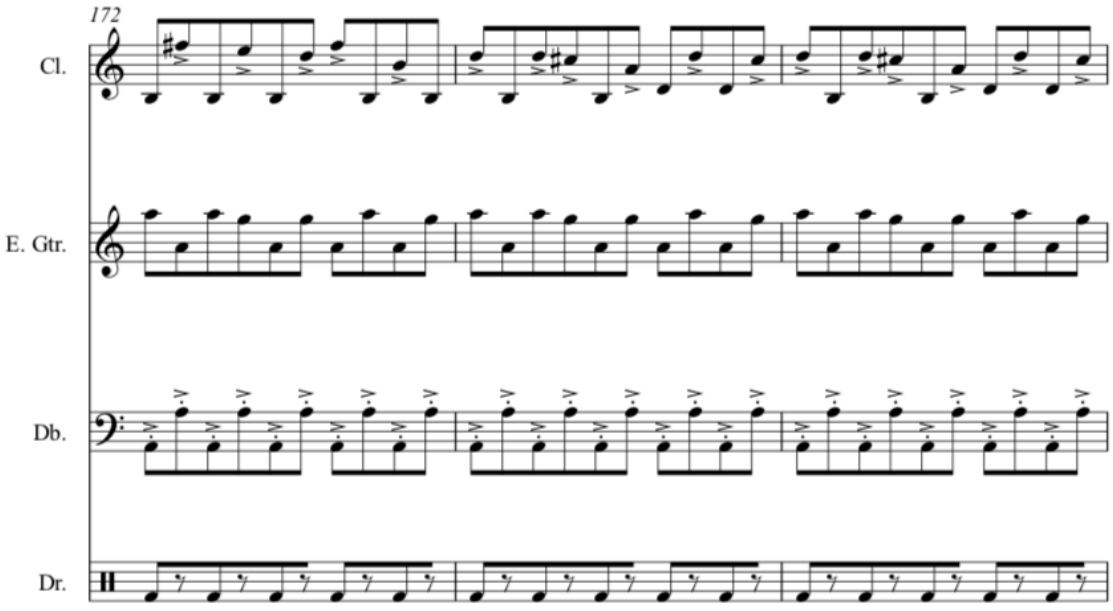

157
Cl.
E. Gtr.
Db.
Dr.

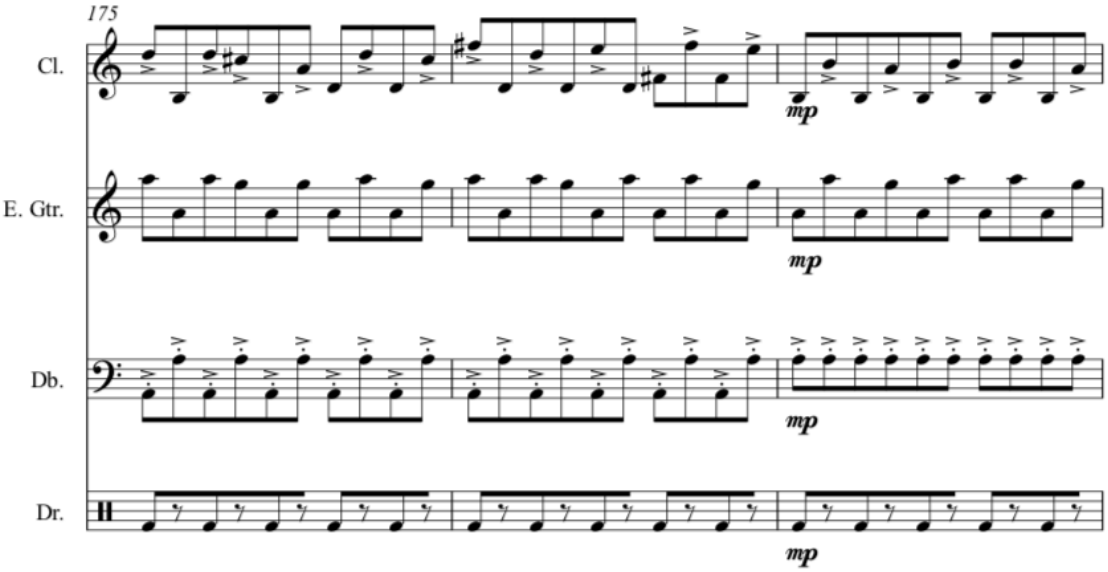

160
Cl.
ff
E. Gtr.
ff
Db.
ff
Dr.
ff

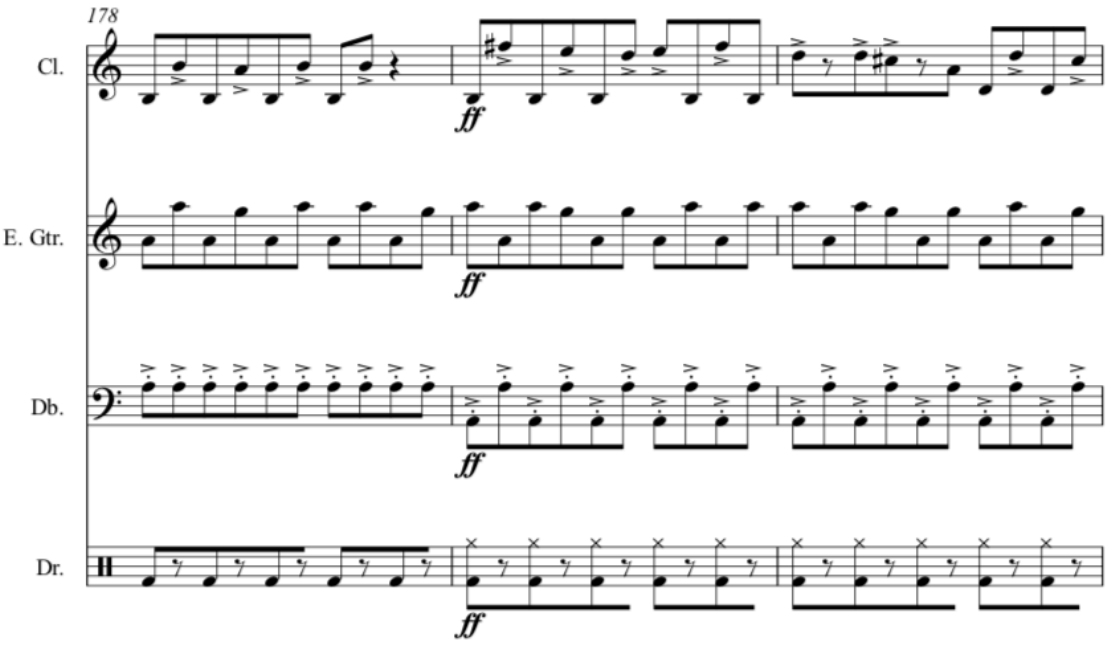

163
Rest for breathe
Cl.
E. Gtr.
Db.
Dr.
fff
fff
fff
fff

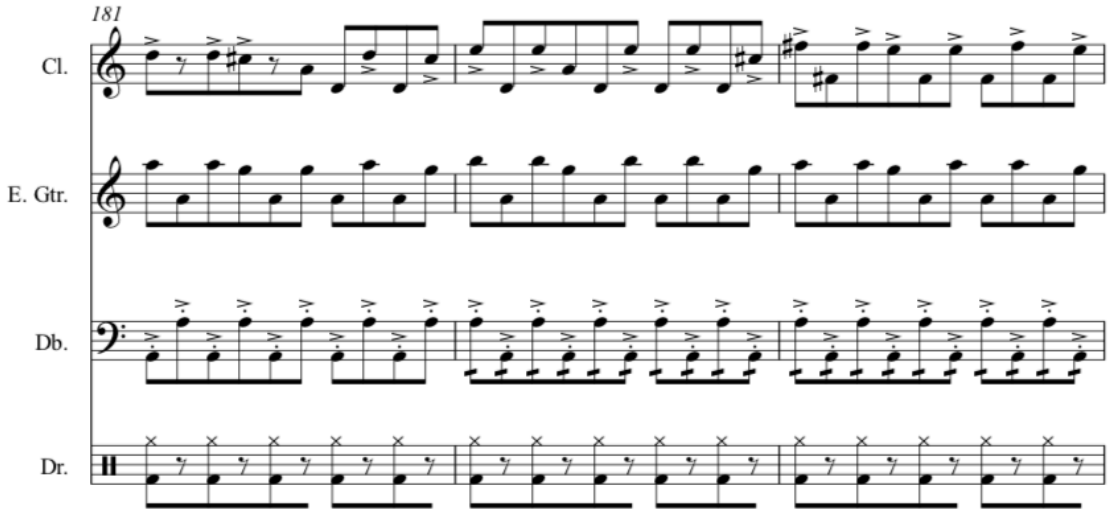

166
Cl.
E. Gtr.
Db.
Dr.

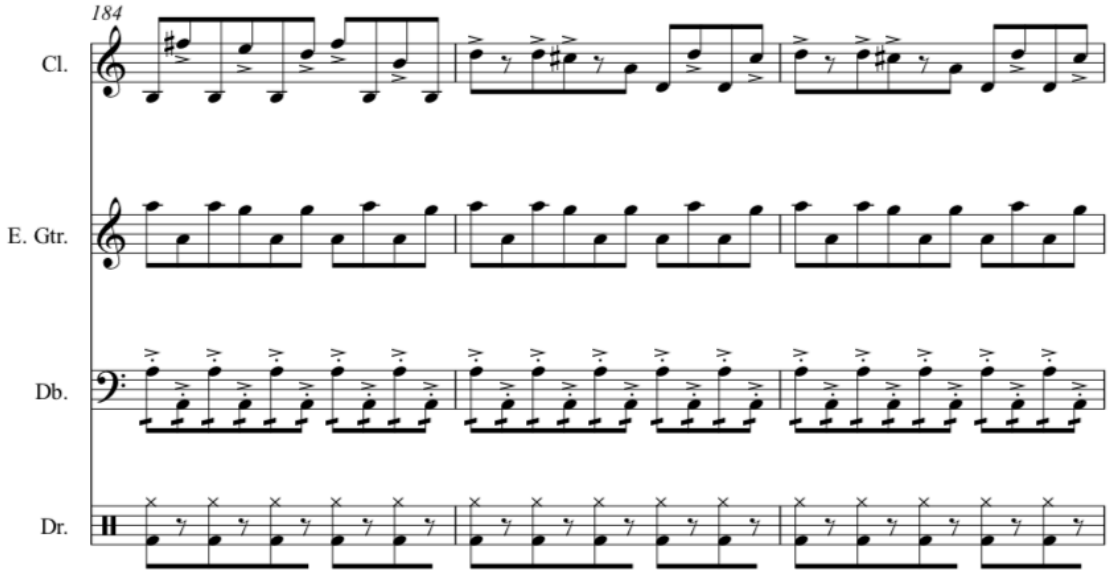

169
Cl.
E. Gtr.
Db.
Dr.
mp
fff

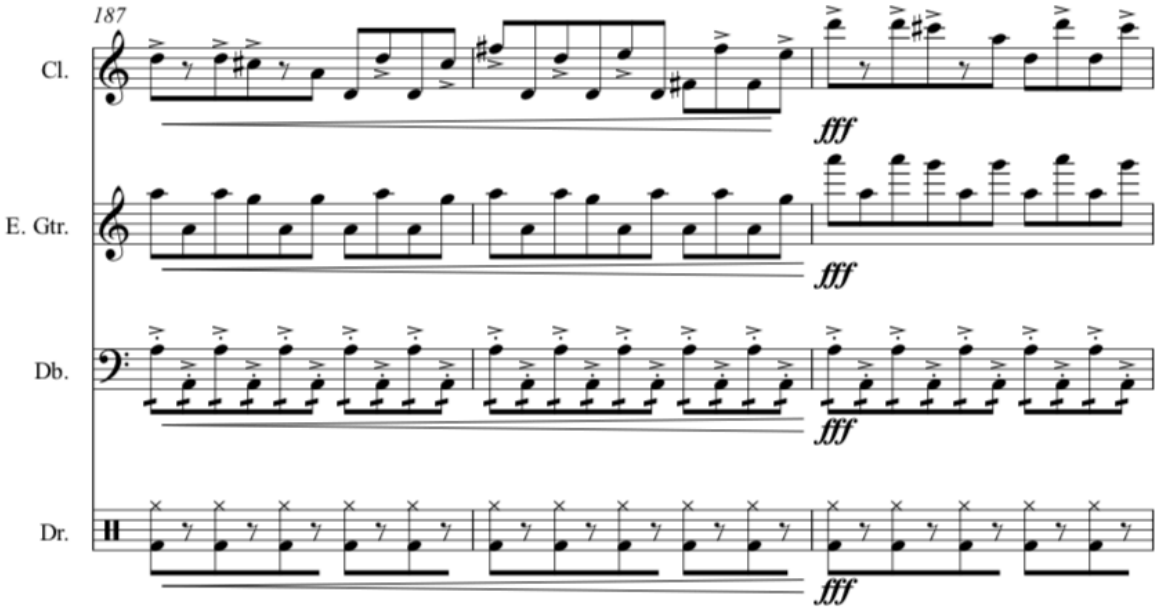

172
Cl.
E. Gtr.
Db.
Dr.

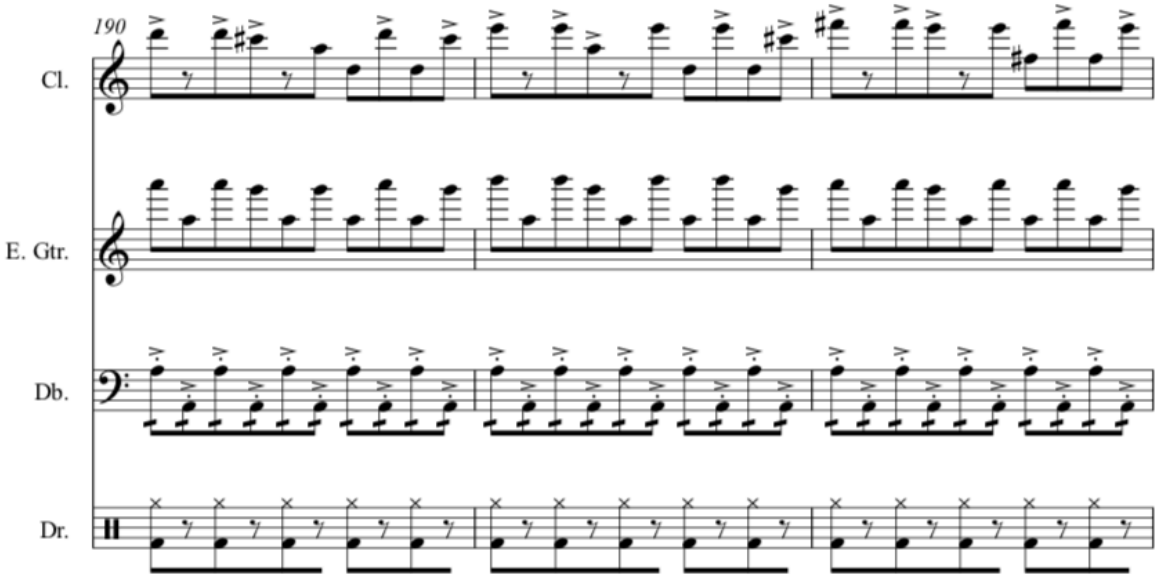

175
Cl.
E. Gtr.
Db.
Dr.
mp
mp
mp
mp

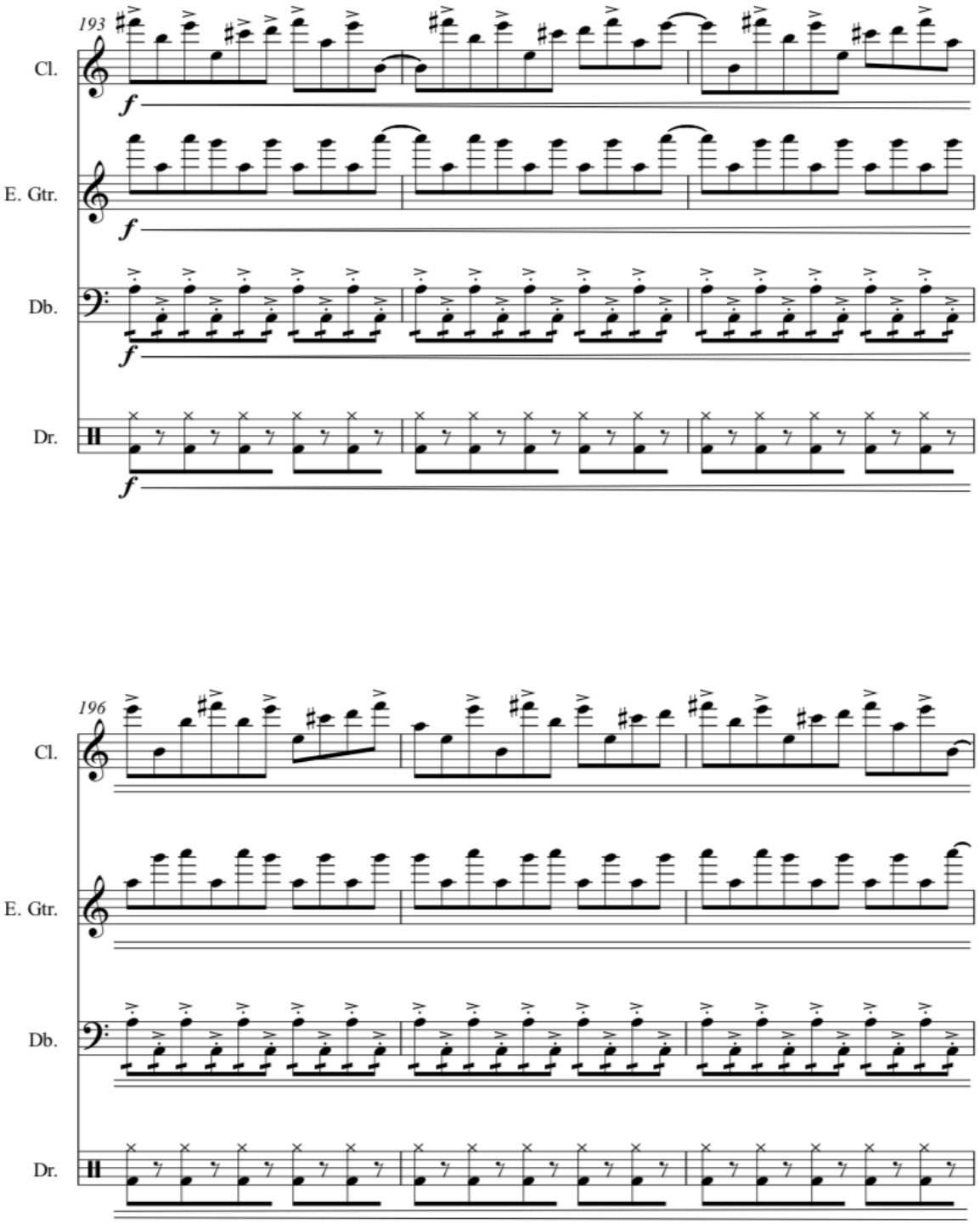

178
Cl.
E. Gtr.
Db.
Dr.
ff
ff
ff
ff

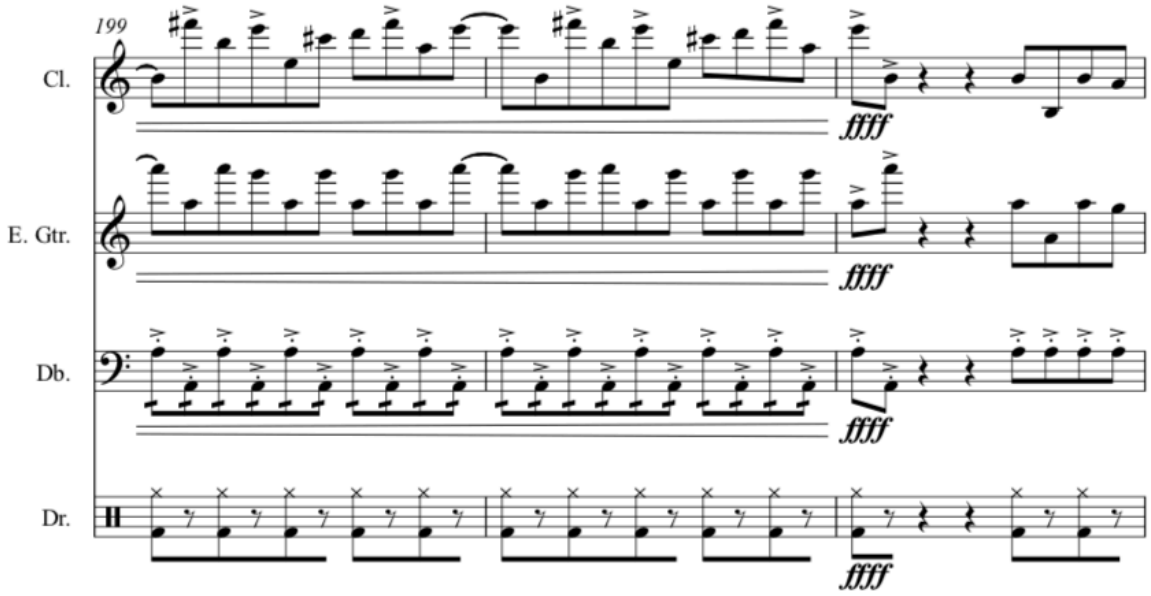

181
Cl.
E. Gtr.
Db.
Dr.

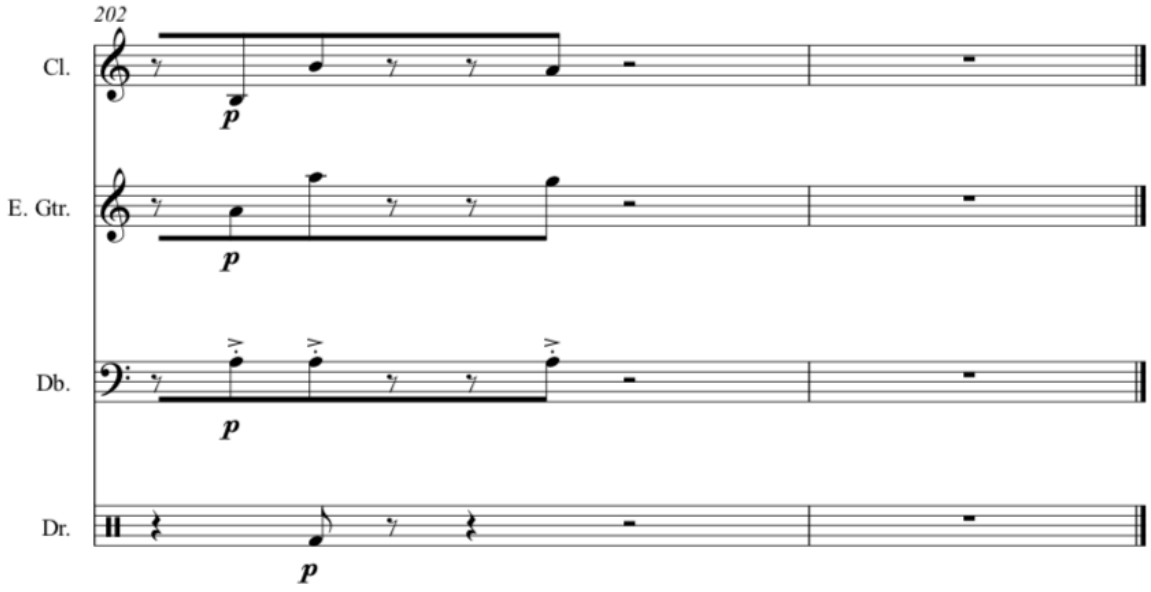

184
Cl.
E. Gtr.
Db.
Dr.


187
Cl.
E. Gtr.
Db.
Dr.
fff
fff
fff
fff


190
Cl.
E. Gtr.
Db.
Dr.


193
Cl.
E. Gtr.
Db.
Dr.
f
196
Cl.
E. Gtr.
Db.
Dr.


199
Cl.
E. Gtr.
Db.
Dr.
ffff


202
Cl.
E. Gtr.
Db.
Dr.
p