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Mal_Functions for String Quartet and Live Electronics

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Mal_Functions
For String Quartet and Live Electronics

by
Elliott Andrew Lupp

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
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Mal_Functions
For String Quartet and Live Electronics

Elliott Andrew Lupp, M.M.

Western Michigan University, 2019

Mal_Functions is a four-movement work for string quartet and live electronic that takes as its subject the timbrally rich and expansive acoustic capabilities of a string quartet and twists, warps, and expands upon them with the addition of the live electronic processing. The addition of electronics acts as only an extension of the performer, and therefore, appears to be generated by the performers themselves - as opposed to the computer. The overall goal of this piece is to take a well-established object of the musical past (the string quartet) and add to it something from the present day (live electronic processing).

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Score.....	60
------------	----

The Patch

Effects:

Each effect has a wet/dry knob and various other controllable parameters

Master:

MiraWeb Link: for Performers to view Cues

Signal in smooth

Delay Lines

Pitch Shifter (in cents)

Reverb wet/dry

Bit Shifter/Granular Effect

Effects and Dry Signal display

Panning

Clear Delay: will flash when delay line is cleared

Master Control for Delay Lines

Cue Data Storage

Master Reverb Control

Main Balance

Cue Information

Master Out



Independent Signal Processors: Each instrument has its own effects chain given the cue.

Performance Notes

Bridge Play directly on bridge

MSP Molto Sul Ponticello

Ord. Ordinary Bow Placement

MST Molto Sul Tasto

Clb. Col Legno Battuto

Clt. Col Legno Tratto

SH **(Shakey hand)** Your bowing should be shakey, inaccurate, and like that of someone who has barely played your instrument.

NH **(Normal hand):** Control your right hand as you normally would.



Hold the bow normally.



Slant the bow at a vertical angel, with your elbow slightly pressed into your body. The frog should be closer to you.



Slant the bow at a vertical angel, with your elbow slightly extended from your body so that the tip is closer to you than the frog.



Slant the bow at an extreme vertical angle, with your elbow as close to your body as possible and the bow is nearly parallel to your instrument.



Slant the bow at an extreme vertical angle, with your elbow as far away from your body as possible and the bow is nearly parallel to your instrument



Transition evenly between two bow positions. When this is not indicated, the transition between positions should be as abrupt as possible



Circular bowing



Ricochet into arco MORE CONTROL: allow the bow to bounce with some pressure applied and transition into arco



Ricochet into arco LESS CONTROL: allow the bow to bounce freely and transition into arco



Jete (ricochet): fully controlled



Accented overpressure: overpressure should be brief



Bow behind the bridge



Sub tones (scratch)



Vibrato contour: perform with vibrato according to contour



As fast as possible



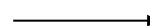
Finger pitches without bowing. This notehead is often used in tandem with improvisatory guidelines for a variety of bowing techniques (instructed within the score).
*When a regular notehead is used within this texture, bow normally.



Finger random pitches around notated range.



As high as possible



Gradually transition from one effect to the other

All Tremolos are very dense EXEPT:

- When measured tremolos are given, bow speed changer should be gradual.
- Pitch successions without articulations or slurs are to be played quasi legatissimo (one note to a bow).



Gradually apply overpressure

Elliott Lupp
Mal Functions
For String Quartet and Live Electronics

I
Adagio ♩ = 40

Violin I

Violin II

Viola

Cello

Electronics

full bow (bow as needed)
as still and steady as possible

MST

to Ord.

Ord.

to MSP

MSP

to Ord.

Ord.

n

p

ppp

pp

ppp

1

8 MSP

A

to Ord. → Ord.

to MSP → MSP

Vln. I

p *ppp* *p*

3

full bow (bow as needed)
as still and steady as possible

Ord. → MSP

to Ord. → Ord.

to MSP → MSP

Vln. II

mp *ppp* *mp*

II

Ord.

to MSP → MSP

to Ord. → Ord.

Ord. → MSP

Vla.

p *n* *mp*

to MST → MST

to MSP → MSP

Vc.

p *ppp* *p*

3

8

Elec.

2 **3**

Detailed description: This is a page of a musical score for a string quartet and electronics. It features five staves: Violin I, Violin II, Viola, Violoncello, and Electronics. The score includes various musical notations such as notes, rests, slurs, and triplets. Performance instructions like 'full bow (bow as needed) as still and steady as possible' and 'as still and steady as possible' are present. Dynamics markings include *p*, *ppp*, *mp*, and *n*. There are also markings for 'MSP' (Musical Score Page) and 'Ord.' (Ordinary). The page is numbered '4' on the right margin. At the bottom, there are two black boxes with the numbers '2' and '3' inside them, likely indicating measure numbers or section markers. The Electronics staff at the bottom has a series of vertical lines and some numerical markings.

16

Ord. → MSP → Ord. → MSP → Ord. → MSP → Ord. **B** to MSP → MSP to Ord. → Ord. → MSP

Vln. I

ppp *p* *ppp* *p* *ppp* *p* *ppp* *mp*

Vln. II

to Ord. → Ord. to MSP → MSP slowly transition to natural harmonic while glissing (E♭ - E♮)

ppp *p* *mp*

Vla.

to Ord. → Ord. to MSP → MSP Ord.

ppp *p* *ppp*

Vc.

to Ord. → Ord. to MSP → MSP to Ord.

ppp *mp* *ppp*

16

Elec.

4

24

Vln. I

p *mf* *ppp* *mp*

Ord. → MSP

improv occasional burst of tremolo

as steady as possible to Ord. → Ord. → Ord. →

Vln. II

p *n* *n* *p* *ppp* *mp*

MST → Ord. → MSP → Ord. → MSP →

Vla.

to MSP → MSP → MST

mp *pppp* *p* *ppp* *mp*

to MSP → MSP Ord. → MSP

Vc.

Ord. → to MST → MST

mp *pppp* *mf* *ppp* *mp*

Ord. → to MSP → MSP

Elec.

24

5 6

Detailed description: This is a musical score page for five instruments: Violin I, Violin II, Viola, Violoncello, and Electric. The score is written in treble and bass clefs. It includes various dynamic markings such as *p* (piano), *mf* (mezzo-forte), *ppp* (pianissimo), and *mp* (mezzo-piano). Performance instructions like 'Ord.' (Ordinary), 'MSP' (Musical Structure Plan), and 'MST' (Musical Structure Table) are used to guide the musicians. A specific instruction 'improv occasional burst of tremolo' is noted for Violin I. The score is divided into measures, with a timeline at the bottom indicating measures 5 and 6. The page number 24 is visible at the top left and bottom left.

32

improv
occasional
burst of tremolo
MSP

as steady as possible

begin a slow "tremolo"
and overtime build up speed
eventually reaching an extreme tremolo

to Ord.

with great stress and aggression

Ord.

Vln. I

p *fff*

improv
occasional
burst of tremolo

Ord.

MSP

Ord.

MSP

Ord.

with great stress and aggression

Vln. II

pp *mf* *p* *f* *fff*

Ord.

MSP

Ord.

MSP

to Ord.

Ord.

with great stress and aggression

Vla.

pp *mf* *p* *f* *p* *fff*

begin a slow "tremolo"
and overtime build up speed
eventually reaching an extreme tremolo

to Ord.

Ord.

with great stress and aggression

Vc.

pp *f* *p* *fff*

32

Elec.

7

8

E

Vln. I

39

to MSP → MSP

begin gradually slowing down tremolo → MSP

f *ppp*

bow at different paces accent re-bows

Vln. II

to MSP → MSP

begin gradually slowing down tremolo

pp *f* *ppp*

bow at different paces accent re-bows

to Ord. → Ord.

Vla.

to MSP → MSP

begin gradually slowing down tremolo → MSP

pp *f* *ppp*

bow at different paces accent re-bows

to Ord. → Ord. → MSP

Vc.

begin gradually slowing down tremolo

to MSP → MSP

pp *f* *ppp*

bow at different paces accent re-bows

Elec.

39

9

10

47

Vln. I

to Ord. → Ord. → MSP → Ord. → MSP → Ord. → MSP → Ord.

p *ppp* *mf* *p*

Vln. II

MSP → Ord. → MSP → Ord. → MSP → Ord. → MSP → Ord.

p *ppp* *mf* *p*

Vla.

→ Ord. → MSP → Ord. → MSP → Ord. → MSP → Ord.

p *ppp* *mp* *ppp* *f*

try to match bowing of another performer
DO NOT accent re-bows

Vc.

try to match bowing of another performer
DO NOT accent re-bows

p *ppp* *mp* *ppp* *f*

47

Elec.

11 12

55

Vln. I

Vln. II

Vla.

Vc.

Elec.

55

13

14

F

try to match bowing of another performer
DO NOT accent re-bows

MSP

Ord.

as high as possible

hold for 10 sec.

fff

ff

mp

fff

n

II

$\text{♩} = \text{c. } 80$
Nervous MSP pizz.

Violin I

sfz

bridge SH frantic - non-exact

ppp

to NH 6

NH as steady as possible

Violin II

Ord. ———→ bridge
NH as steady as possible

ppp

bridge SH frantic - non-exact

ppp

Ord. ———→
NH

ppp

Viola

MSP pizz.

sfz

bridge SH frantic - non-exact

ppp

3

Cello

MSP pizz.

sfz

Ord. ———→
NH as steady as possible

n

Electronics

4 15 4

A

MSP
SH

Vln. I

7

n

mf *n*

Vln. II

bridge
SH

mf *n*

mf *pppp*

6

3

3

3

5

to MSP

MSP

Vla.

3

3

to MSP

MSP

bridge

6

Vc.

bridge

frantic - non-exact
SH

to NH

NH

SH

ppp

7

Elec.

16

as steady as possible
MSP
NH

B

Ord. → bridge
SH frantic - non-exact

to Ord. →

Vln. I

n *sfzppp*

5

sfz

6

sfz

5

6

Vln. II

bridge

mf ppp

6

f

sfzppp

sfz

5

Vla.

mf ppp

5

sfz

mf

sfz

sfz

sfz

3

Vc.

to NH → NH

to MSP → MSP

sfz

sfz

mp

13

Elec.

17

Ord. to NH → NH

to MSP → MSP

C

Ord. → bridge

to Ord. → Ord.

Vln. I

fff

pppp

fff

ppp

fff

Vln. II

to Ord. → Ord.

to NH → NH

NH MSP

Ord. → bridge

to Ord. → Ord.

fff

pppp

fff

ppp

fff

Vla.

to Ord. → Ord.

to Ord. → bridge

to Ord. → Ord.

fff

pppp

fff

ppp

fff

Vc.

ppp

sfz

sfz

fff

pppp

MSP pizz.

sfz

pppp

arco MSP

to Ord. → Ord.

fff

Elec.

17

2/4

5/4

17

4/4

20

Vln. I

MSP pizz.

arco
Ord.
NH

to bridge
to SH

bridge
SH

5

6

Ord. → bridge

Ord. → bridge

fff

sfz

pppp

sfzpppp

fff

ppp

fff

5

Vln. II

MSP pizz.

Ord.
NH

bridge
SH

5

6

Ord. → bridge

Ord.

bridge

Ord.

bridge

fff

pppp

sfzpppp

6

fff

ppp

Vla.

Ord.
NH

bridge
SH

Ord.

bridge

Ord.

bridge

Ord.

bridge

fff

pppp

fff

ppp

fff

pppp

sfzpppp

fff

ppp

3

5

6

to MSP

Vc.

MSP pizz.

Ord.
NH

bridge
SH

Ord.

bridge

Ord.

bridge

fff

pppp

sfzpppp

7

fff

ppp

V

Elec.

20

4

4

18

23

Vln. I

ppp *fff* *ppp* *fff* *ppp*

Vln. II

fff *ppp* *fff* *ppp* *fff* *ppp* *fff* *ppp* *fff* *ppp*

Vla.

fff *ppp* *fff* *ppp* *fff* *ppp* *fff* *ppp* *fff* *ppp*

Vc.

fff *ppp* *sfz* *fff* *ppp* *fff* *ppp* *fff* *ppp* *fff* *ppp* *fff*

23

Elec.

19

17

30

to MSP → MSP

Vln. I

7 6 5 6 7 6 5

Vln. II

3 4

Ord. → MSP
NH → SH

f *pppp*

5 6 7

Vla.

3 4

Ord. → MSP
NH → SH

f *pppp*

5 6 7 6 5 6

Vc.

3 4

MSP
SH

f

7

Elec.

30

4 4

3 4

33

Vln. I

to bridge → bridge

mf *pppp* *ffff*

one bow per note
unrelenting
Ord.
NH

6 7 6 7

rit. -----

Vln. II

to bridge → bridge

6 5

mf *pppp* *ffff*

one bow per note
unrelenting
Ord.
NH

7 6 7 6

Vla.

to bridge → bridge

6 5

mf *pppp* *ffff*

one bow per note
unrelenting
Ord.
NH

6 5 5

Vc.

→ bridge

6 5

pppp *ffff*

one bow per note
unrelenting
Ord.
NH

5 5 6

33

Elec.

4 4

22

2 4

35

F

$\text{♩} = \text{c. } 60$

Vln. I

as steady as possible
bow as needed
MST (floutondo)

ppp

Vln. II

as steady as possible
bow as needed
MST (floutondo)

ppp

Vla.

as steady as possible
bow as needed
MST (floutondo)

ppp

Vc.

as steady as possible
bow as needed
MST (floutondo)

ppp

IV

to MSP

Elec.

35

$\frac{2}{4}$ **23** $\frac{4}{4}$

41

G

Vln. I

to MSP
to SH

MSP SH

bridge NH

Ord.

MST SH

bridge

MST

bridge

MSP

6

to NH
bridge

NH

MST (floutondo)

mp

pppp

f

ppp

mf

pppp

mp

ppp

mp

pppp

mf

Vln. II

to SH

to MSP SH

MSP bridge

Ord.

MST SH

NH

SH

bridge

MSP

6

mp

3

5

pppp

f

ppp

mp

ppp

f

Vla.

III vib.

to MSP
to SH

MSP SH

MST to NH

NH

vib.

mf

n

mp

6

ppp

3

Vc.

→ MSP

to MST (floutondo)

MST (floutondo) to MSP

MSP

NH

SH

to NH

5

bridge

Ord.

mp

ppp

mp

pppp

f

7

3

41

Elec.

24

H

Vln. I

Vln. II

Vla.

Vc.

Elec.

47

ppp f

MSP

Ord.

MST

pizz.

arco bridge

MST

bridge

MSP

one bow per note

pppp

f

pppp

f

pppp

f

ppp

bridge NH

Ord.

bridge

Ord.

pizz.

arco bridge

MSP

pppp

f

pppp

f

ppp

f

bridge

Ord.

bridge

Ord.

pizz.

arco bridge

MSP

pppp

f

ppp

pizz.

MSP

bridge

Ord.

MST (floutondo)

vib.

to MSP

MSP

MST (floutondo)

mp

pppp

f

ppp

one bow per note

mf

ppp

(J)

(J)

51

Vln. I

bridge

f *ppp* *ppp* *f* *pppp* *mf pppp*

MSP

to bridge

bridge

rit.

MST (floutondo)
as steady as possible

Vln. II

(J) → MST

one bow per note

ppp *mf* *pppp* *p* *ppp* *mf*

to bridge

bridge

MST (floutondo)
as steady as possible

to SH → SH

Vla.

(J)

mf *pppp* *sfz* *ppp* *mf*

arco

MST (floutondo)
as steady as possible

to SH → SH

Vc.

bridge IV

pppp *f* *ppp* *mf*

MST (floutondo)
as steady as possible

to SH → SH

51

Elec.

61

Vln. I

punta d'arco

to bridge

bridge

norm d'arco

MSP

to Ord.

Ord.

J

ppp

f

ppp

fff

ppp

Vln. II

punta d'arco

←MSP

to bridge

bridge

norm d'arco

MSP

to Ord.

Ord.

ppp

f

ppp

fff

ppp

Vla.

pizz.

arco

NH bridge

→ MSP

→ Ord.

3

MSP

→ Ord.

3

n

fff

ppp

fff

ppp

Vc.

3

arco

Ord.

NH III

6

fff

ppp

Elec.

61

3

4

4

26

3

4

4

27

5

4

[illegible]

rit. ----- *a tempo*

L Ord. NH → bridge SH → frantic - non-exact

Vln. I *sfzppp* *f* *ppp* *ffff* *ppp*

Vln. II *sfzppp* *f* *ppp* *ffff* *ppp*

Vla. *f* *f* *ppp* *ffff* *ppp* *f*

Vc. *fff* *sfzppp* *f* *ppp* *ffff* *ppp*

Elec. 72 4/4 **30** 5/4 || 4/4 **31**

The musical score is for measures 72 to 31. It features five staves: Vln. I, Vln. II, Vla., Vc., and Elec. The time signature changes from 4/4 to 5/4 at measure 30 and back to 4/4 at measure 31. The score includes various dynamics such as *sfzppp*, *f*, *ppp*, *ffff*, and *f*. There are also articulations like *vib.* and *MSP*. The Vln. I staff has a section marked 'L' with 'Ord. NH' and 'bridge SH' leading to 'frantic - non-exact'. The Vln. II staff has a section marked 'Ord. NH' and 'bridge SH'. The Vla. staff has a section marked 'Ord. NH' and 'bridge SH'. The Vc. staff has a section marked 'Ord. NH' and 'bridge SH'. The Elec. staff has a section marked 'Ord. NH' and 'bridge SH'.

75

Vln. I

6 5 6 7

to MSP

5 6

MSP

measured trem. (2)

7

Vln. II

frantic - non-exact
bridge
SH

Ord. NH

5 6 7 6 5

f *pppp*

Vla.

frantic - non-exact
bridge
SH

6 7 6 5 6 7 6 5

pppp

to MSP

5

Vc.

frantic - non-exact
bridge
SH

Ord. NH

7 6 5 6

f *pppp*

75

Elec.

M

rit. to $\text{♩} = 60$

measured trem. (1) one bow per note

Vln. I

Vln. II

(still SH) MSP

measured trem. (2) measured trem. (1) to Ord. one bow per note

Vla.

to MSP

Vc.

77

Elec.

♩ = c. 60

to NH

to Ord. NH as exact as possible

79

Vln. I

Vln. II

measured trem. (2) - - -, measured trem. (1) - - - - one bow per note

7 6 5

(♩) (♩)

3

pppp

to Ord.

to NH

5 5 5 5

5 5 5 5

(still SH) MSP

7 6 5 6 7 6 5 6

measured trem. (2) measured trem. (1) one bow per note

79

Elec.

accel.

81 Ord.

Vln. I

Vln. II

to Ord. Ord. to NH

as exact as possible NH

Vla.

5

Vc.

6

Ord. to NH

as exact as possible NH

81

Elec.

5/4

Detailed description: This page contains the musical notation for measures 81 through 84. The score is written for five parts: Violin I, Violin II, Viola, Violoncello, and Electric Bass. The key signature has one sharp (F#) and the time signature is 5/4. Measure 81 is marked with a first ending bracket and the instruction 'Ord.'. Violin I and II have first endings. Violin II has triplets (3) in measures 81, 82, and 84. Viola has quintuplets (5) in measures 81, 82, 83, and 84, with the instruction 'as exact as possible NH' above the first. Violoncello has sextuplets (6) in measures 81, 82, 83, and 84, with the instruction 'as exact as possible NH' above the last. Electric Bass is a whole rest in measure 81. Measure 82 has a first ending bracket and the instruction 'Ord.'. Measure 83 has a first ending bracket and the instruction 'Ord.'. Measure 84 has a first ending bracket and the instruction 'Ord.'. The page number 32 is on the right.

Allegro (M.M. ♩ = c. 120)

83

Vln. I

Vln. II

Vla.

Vc.

Elec.

as exact as possible
NH

fff

fff

fff

fff

5
4

32

III

like walking on thin ice ♩ = c. 50
rubato sempre

full bow (bow as needed)
 as steady as possible
 MST (*flautando*)
 no vib. (*stasis*)

(*vibrato-like*)
 bow rhythm legato

Violin I

full bow (bow as needed)
 as steady as possible
 MST (*flautando*)
 no vib. (*stasis*)

vib.

Violin II

full bow (bow as needed)
 as steady as possible
 MST (*flautando*)
 no vib. (*stasis*)

Viola

full bow (bow as needed)
 as steady as possible
 MST (*flautando*)
 no vib. (*stasis*)

Cello

Electronics

8

Vln. I

to MSP

MSP

Ord.

ppp

p

ppp

ff

bow rhythm legato
MST (flautando)
no vib.

n

ppp

n

mf

Vln. II

MST (flautando)
bow rhythm legato
no vib.

to MSP

5

MSP

Ord.

n

p

ppp

ff

III

MST

mp

to MST

Vla.

bow rhythm legato
to MSP

MSP

Ord.

ff

IV

MST

mp

to MST

Vc.

bow rhythm legato

to MSP

MSP

Ord.

MST (flautando)

p

3

3

ppp

ff

ppp

pp

n

pp

n

pp

8

Elec.

Vln. I *(stasis)* 16 *MST (flautando)* *vib.* *to MSP* *MSP* *Ord.* **A** ♩ = c. 80 *frantically*
ppp *ff* *fff*

Vln. II *(stasis)* *MST (flautando)* *vib.* *to MSP* *MSP* *Ord.* *frantically*
ppp *ff* *fff*

Vla. *(stasis)* *MST (flautando)* *to MSP* *MSP* *Ord.* *frantically*
ppp *ff* *fff*

Vc. *(stasis)* *to MSP* *MSP* *Ord.* *frantically*
ppp *ff* *fff* *pppp*

Elec. 16 *3* *5* **35** *4*
4 *4* *4*

20

Vln. I

MSP to MST

3

5

6

ppp

ff

ppp

ff

ppp

Vln. II

MSP to MST

ppp

ff

ppp

ff

ppp

ff

MSP

ppp

Vla.

MSP to MST

MSP to MST

MSP to MST

5

6

6

ppp

ff

ppp

ff

ppp

fff

Vc.

MSP to MST

MSP to MST

5

6

6

ppp

ff

ppp

fff

5

6

6

Elec.

20

4/4

2/4

36

4/4

2/4

4/4

25

Vln. I

4/4

fffppp

mp

ppp

fff

fff

ppp

3

4

Vln. II

4/4

MST → MSP → MST → MSP → MST → to MSP → MSP

fffppp

fffppp

3

4

Vla.

4/4

n sfz

ppp

pppp

fff

fff

ppp

ppp

3

4

Vc.

4/4

n sfz

ppp

fff

ppp

ppp

3

4

Elec.

25

4/4

3

4

Violin I (Vln. I) and Violin II (Vln. II) parts are in 3/4 time. Violin I starts with a forte (ff) dynamic, followed by piano (ppp) and then forte (f). Violin II starts with fortissimo (fff), followed by pianissimo (pppp), then forte (ff), and finally forte (f). Both violins have markings for Music Stand Transfer (MST) and Music Stand Position (MSP). The Viola (Vla.) part is in 3/4 time, starting with forte (ff), followed by piano (ppp), then forte (ff), and finally sforzando (sfz). The Cello (Vc.) part is in 3/4 time, starting with fortissimo (fff), followed by piano (ppp), then forte (ff), mezzo-piano (mp), and finally sforzando (sfz). The Electric Bass (Elec.) part is in 3/4 time, starting with forte (ff), followed by piano (ppp), then forte (ff), and finally mezzo-piano (mp). The score includes various musical notations such as slurs, accents, and dynamic markings.

C Moderato (♩ = c. 108)

Score for Violins I and II, Viola, Violoncello, and Electric Bass.

Vln. I

4/4 time signature. *fff* dynamic. *n* (piano) dynamic. *fff* dynamic. *MST* (Musical Time Signature) change to 3/4. *fff* dynamic. *MST* change to 5/4. *fff* dynamic. *MST* change to 4/4. *fff* dynamic.

Vln. II

4/4 time signature. *fff* dynamic. *n* (piano) dynamic. *fff* dynamic. *MST* change to 3/4. *fff* dynamic. *MST* change to 5/4. *fff* dynamic. *MST* change to 4/4. *fff* dynamic.

Vla.

4/4 time signature. *fff* dynamic. *n* (piano) dynamic. *fff* dynamic. *MST* change to 3/4. *fff* dynamic. *MST* change to 5/4. *fff* dynamic. *MST* change to 4/4. *fff* dynamic.

Vc.

4/4 time signature. *fff* dynamic. *n* (piano) dynamic. *fff* dynamic. *MST* change to 3/4. *fff* dynamic. *MST* change to 5/4. *fff* dynamic. *MST* change to 4/4. *fff* dynamic.

Elec.

39. 4/4 time signature. **37** (measure number). *MST* change to 3/4. *MST* change to 5/4. **38** (measure number). *MST* change to 4/4.

42

Vln. I

MSP → MST

rit.

pppp *fff* *ppp*

Vln. II

MSP → MST

bow as needed
MSP → MST

to MSP → MSP

ppp *sfz* *ppp* *f* *pppp* *fffppp*

Vla.

MSP → MST

fff *pppp* *sfz*

Vc.

MSP → MST

fff *pppp* *sfz* *ppp* *ffff*

Elec.

42

4/4 7/4 4/4

39

E ♩ = c. 80

Vln. I

50

pppp

sfz

pppp

ffffpppp

MST

* X noteheads are fingered without bowing
* normal noteheads should be bowed
as rhythmically precise as possible

Vln. II

ffff

pppp

ffffpppp

MST

* X noteheads are fingered without bowing
* normal noteheads should be bowed
as rhythmically precise as possible

Vla.

pppp

ffff

ppp

sfz

pppp

ffffpppp

MST

* X noteheads are fingered without bowing
* normal noteheads should be bowed
as rhythmically precise as possible

Vc.

ffff

ppp

sfz

pppp

ffffpppp

MST

* X noteheads are fingered without bowing
* normal noteheads should be bowed
as rhythmically precise as possible

Elec.

50

5/4

2/4

40

55

slowly become less precise → frantically (not exact)

MSP

Vln. I

slowly become less precise → frantically (not exact)

MSP

Vln. II

slowly become less precise → frantically (not exact)

MSP MST

Vla.

slowly become less precise → frantically (not exact)

MSP MST

Vc.

55

Elec.

The musical score for measures 55-59 is written for five instruments: Violin I, Violin II, Viola, Violoncello, and Electric guitar. Each instrument part begins with a measure number '55'. Above the staves, performance instructions are written: 'slowly become less precise' with a long horizontal line and an arrow pointing to the right, and 'frantically (not exact)' at the end of the line. Specific markings 'MSP' and 'MST' are placed above certain notes in the Violin I, Violin II, Viola, and Violoncello parts. The Violoncello part also has 'MSP' and 'MST' markings. The Electric guitar part is represented by a single horizontal line with no notes. The notation includes various note values, rests, and slurs, indicating a complex rhythmic and melodic structure.

58

Vln. I

mp

frantically
MSP

sfz

pppp

ffff

Vln. II

mp

ffff

pppp

f

pppp

ffff

Vla.

MSP

sfz

pppp

sfz

pppp

sfz

pppp

frantically

ffff

Vc.

MSP

sfz

mp

pppp

f

pppp

frantically

ffff

58

Elec.

3/4

60

F MSP

Vln. I

ffff

MST → Ord. → MSP

ff

pppp

ffff

pppp

frantically frequently/randomly switch bow angles producing scratch tones

Vln. II

Ord. → MSP

ffff

pppp

to Ord. → Ord.

ff

pppp

ffff

Vla.

Ord. → MSP

ffff

pppp

to Ord. → Ord.

ff

pppp

ffff

pppp

ffff

ppp

Vc.

MSP

ffff

to Ord. → Ord.

ff

pppp

ffff

pppp

Elec.

60

3/4

41

5/4

6/4

2/4

3/4

42

65

Vln. I

mp *pppp* *mf* *pp* *ff* *pppp* *ffff*

Vln. II

pppp *ff* *ffff*

Vla.

ffff *ppp* *ff* *pizz.* *ffff*

Vc.

pp *ffff*

frantically
frequently/randomly switch bow angles
producing scratch tones

norm arco

Elec.

65

4/4

G

Vln. I

MST *ffffpppp* *norm arco MSP* *to MST* *ffff* *pppp* *ffff*

Vln. II

MST *ffff* *norm arco Ord. → MSP* *pppp*

Vla.

arco MST *ffff* *norm arco Ord. → MSP* *frantically frequently/randomly bow a harmonic* *pppp*

Vc.

MST *ffffpppp* *norm arco MSP* *to MST* *ffff* *pppp*

Elec.

67 *43*

69

Vln. I

frequently/randomly
bow a harmonic

ffff

n

ffff

n

MSP

pppp

2/4

Vln. II

MSP

pppp

ffff

pppp

ffff

frequently/randomly
bow a harmonic

2/4

Vla.

2/4

Vc.

frequently/randomly
bow a harmonic

ffff

ffff

n

MSP

pppp

ffff

2/4

69

Elec.

2/4

H

Vln. I

MST *ffff* *pppp* *ffff* *pppp* *ffff* *pppp*

Vln. II

MST *ffff* *pppp* *ffff* *pppp* *ffff* *pppp*

Vla.

arco MST *ffff* *pppp* *pppp* *ffff* *pppp* *ffff*

frantically frequently/randomly bow a harmonic

Vc.

MST *ffff* *pppp* *ffff* *pppp* *ffff* *pppp*

frequently/randomly bow a harmonic

Elec.

73 *ffff* *pppp* *ffff* *pppp* *ffff* *pppp*

44

75

Vln. I

MST

as rhythmically precise as possible

fff *pppp* *fff* *p*

rit.

Vln. II

MST

as rhythmically precise as possible

pppp *fff* *ppp*

to MSP → MSP

IV

bow rhythm legato

Vla.

as rhythmically precise as possible

pppp *fff* *p*

Vc.

MST

norm arco

MSP → Ord.

as rhythmically precise as possible

bow rhythm legato

fff *pppp* *mf* *p* *ff*

to MSP → MSP

Elec.

75

4/4

2/4

45

4/4

I

like walking on thin ice ♩ = c. 50

Vln. I

Vln. II

Vla.

Vc.

Elec.

78

46

54

ff

pp

ff

pppp

f

to Ord

Ord.

MSP

3

full bow (bow as needed)

pppp

MSP

MST

MSP

ff

n

mf

n

f

5

mf

ppp

3

pppp

82

MSP
(rhythm is fingered)

full bow (bow as needed)
to MST (*flautando*)

ppp

Vln. I

Vln. II

to MST (*flautando*)

MST (*flautando*)

frantically
frequently/randomly
bow a harmonic

pppp

ffff

n

bow rhythm legato
to MSP

MSP

MST

ff

3

Vla.

Vc.

f

5

ppp

bow rhythm legato
to MSP

MSP

MST

ff

pppp

3

82

Elec.

90

Vln. I

create steady pulse with circular bowing
follow rhythm

p

3

Vln. II

create steady pulse with circular bowing
follow rhythm

p

3

Vla.

increase circular bow speed with dynamic

pppp

fff

pppp

n

MSP

Vc.

increase circular bow speed with dynamic

pppp

fff

pppp

n

MST (flautando)

90

Elec.

96

to CLT

Vln. I

6

7

Vln. II

to CLT

5

Vla.

full bow (bow as needed)

pppp *mf*

Vc.

full bow (bow as needed)

pppp *mf*

96

Elec.

K → CLT → increase circular bow speed with dynamic

Vln. I

6

frantically

pppp

ffff

n

MSP arco

3

Vln. II

CLT

MST

increase circular bow speed with dynamic

pppp

ffff

n

MSP arco

3

Vla.

pppp

ffff

n

MSP

3

Vc.

increase circular bow speed with dynamic

pppp

ffff

n

MSP

3

98

Elec.

48

3/4

49

IV

Moderato (♩ = c. 108)

Violin I

Violin II

Viola

Cello

Electronics

arco MSP

pppp

arco Ord.

clb.

arco

n pizz.

mf

pppp

n pizz.

arco MSP

p

pppp

arco Ord.

clb. MST

arco MSP

pppp

50

60

4

Vln. I

clb. 3 *p* *mf* *pppp* *n* *mf* *pppp* *arco* *MSP* *Ord.* *MSP* *MSP pizz.* *arco* *n pizz.* *arco*

Vln. II

mf *pppp* *p* *pppp* *pppp* *Ord.*

Vla.

p *pppp* *mf* *pppp*

Vc.

clb. *arco* *MST* *MSP* *p* *pppp* *s* *n pizz.* *mf* *pp* *arco* *MSP* *n* *p*

Elec.

4 5 3
4 4 4

8

Vln. I

MST

mf

n

clb.

p

arco

pppp

n pizz.

s

arco MSP

mf

Vln. II

MSP

clb.

arco MSP

mf

p

n pizz.

Ord.

MSP

mf

s

pppp

Vla.

to MSP

MSP

mf

pppp

s

mf

pppp

Vc.

MSP pizz.

mf

arco MSP

pppp

n pizz.

arco MSP

s

clb.

mp

arco MST

MSP

3

pppp

clb.

MSP arco

Elec.

8

3

4

12

Vln. I

pppp

mf pppp

mf pppp

Vln. II

mf

pppp

p

pppp

mf

n

p

mf

n

Vla.

mf

pppp

mf

n

pppp

p

pppp

mf

pppp

Vc.

mf

pppp

mf

n

pppp

p

pppp

mf

pppp

Elec.

12

63

16

Vln. I

n pizz.

arco MSP

mf

pppp

pppp

mf

mf

p

mf

MSP pizz.

ppp

MST → MSP

mf

Vln. II

MSP pizz.

arco MSP

mf

mf

pppp

5

mf

MSP pizz.

arco

mp

Ord.

5

clb.

pppp

5

mf

MSP pizz.

arco MSP

pppp

to Ord.

3

5

pppp

Vla.

Ord.

5

to MST

MST

MSP

mf

pppp

6

6

Vc.

arco MSP

arco MST

clb. MSP

p

MST → MSP

mf

n pizz.

p

pppp

16

Elec.

4

4

20

Vln. I

arco MST

clb. MSP

MSP pizz.

arco

to MST

MST

ppp

mf

f

Vln. II

MSP

clb.

arco MSP

MSP pizz.

3

arco Ord.

clb.

arco MSP

pp

p

mf

n

mf

pppp

p

f

Vla.

to MSP

MSP

n pizz.

arco MST

to Ord.

Ord.

p

pppp

f

Vc.

arco MSP

arco MST

Ord.

MSP

clb.

MSP

Ord.

MSP

mf

pppp

mf

pppp

pppp

3

n

p

f

Elec.

20

4/4

3/4

23

Vln. I

MSP pizz.

mf

pppp

pppp

mf

pppp

pizz. MSP

3

+

Ord.

p

pppp

clb.

6

n pizz.

to MST

MST

n pizz.

arco MSP

Vln. II

clb.

pppp

arco

n pizz.

mf

3

n

p

MSP pizz.

pppp

arco MSP

3

Ord.

MST

mp

pppp

mf

Vla.

MSP

pppp

5

to MST

MST

arco MSP

3

pppp

Vc.

clb. MST

arco MSP

pppp

p

mf

pppp

MSP

Ord.

MSP

arco MSP

3

n

p

pppp

mf

n pizz.

pppp

clb.

Elec.

23

4

4

27

Vln. I

to Ord. → Ord.

mf

arco MSP

MSP pizz.

arco MSP

pp

to Ord. → Ord.

fff

Vln. II

arco MSP

n pizz.

pppp

f

pppp

mf

pppp

arco

MSP pizz.

arco MSP

pp

to Ord. → Ord.

fff

Vla.

MST

mp

pppp

mf

pppp

arco MSP

to MST → MST

mf

to Ord. → Ord.

fff

Vc.

MSP arco

clb.

f

MSP pizz.

mf

arco Ord.

sfz

clb.

pp

MSP pizz.

mf

MST → Ord. → MSP

pppp

fff

Elec.

27

5/4

4/4

A $\text{♩} = 88$
MSP pizz.

Vln. I

sfz *n* *mf* *pppp* *ffff*

full bow (bow as needed)
as steady as possible
arco
MST → MSP

accel. to Ord. → Ord.

Vln. II

sfz *p* *pppp* *ffff*

MSP pizz.

full bow (bow as needed)
as steady as possible
arco
MST → Ord. → Ord.

Vla.

pppp *ffff*

full bow (bow as needed)
as steady as possible
MSP

Vc.

sfz *ffff*

full bow (bow as needed)
as steady as possible
MST → Ord.

Elec.

30 **51** $\frac{5}{4}$ $\frac{4}{4}$

B

Moderato (♩ = c. 108)

Score for Vln. I, Vln. II, Vla., Vc., and Elec. (Electric Bass).

Vln. I: Starts with *pppp*, followed by *mf*. Includes markings for *MSP pizz.*, *clb.*, *p*, *f*, *pppp*, *mf*, *mf*, *pppp*, *mf*, and *pppp*. A 6-measure phrase is indicated.

Vln. II: Starts with *pppp* and *arco MSP*. Includes markings for *mf* and a 5-measure phrase.

Vla.: Starts with *ffff* and *n pizz.*. Includes markings for *clb.*, *mf*, *ppp*, *mf*, *pppp*, *mf*, *mf*, *MSP pizz.*, *arco MST*, *p*, *f*, *MSP*, *MSP pizz.*, and *arco*. A transition *MST → MSP* is noted.

Vc.: Starts with *ffff* and *pppp*. Includes markings for *p*, *pppp*, *mf*, *mf*, *pppp*, *mf*, *pppp*, *mf*, *pppp*, and *p*. A 5-measure phrase is indicated.

Elec.: Starts with *35* and *4/4*. The measure number **52** is highlighted.

38

Vln. I

arco MSP

n pizz.

arco MSP

clb.

arco MSP

arco → clb.

arco Ord.

to MSP

mf

pppp

mf

pppp

Vln. II

pppp

mf

pppp

mf

pppp

mf

pppp

Vla.

Ord.

MSP → Ord.

arco MSP

n pizz.

arco MST

p

mf

p

mf

pppp

Vc.

n pizz.

clb.

arco → clb.

arco Ord.

MSP → Ord.

pppp

mf

pppp

mf

pppp

38

Elec.

41

Vln. I

MSP

clb.

arco MST

MSP

n pizz.

arco MSP

pppp

mf

pppp

mf

mf

ff

Vln. II

mf

pppp

mf

pppp

mf

pppp

ffff

to Ord.

Ord.

Vla.

MSP

p

mf

n

pppp

ffff

arco MSP

Vc.

arco MSP

clb. MST

arco MSP

clb.

arco Ord.

MSP

mf

pppp

mf

pppp

mf

pppp

ffff

Elec.

41

3/4

4/4

44

Vln. I

MSP pizz.

pppp

5

MSP

pppp

3

3

mf

MSP pizz.

sfz

n pizz.

pppp

5

mf

arco

Vln. II

MSP

pppp

6

5

6

mf

Vla.

pppp

3

n pizz.

clb.

clb.

arco MSP

pppp

3

3

mf

clb.

6

Vc.

pppp

5

n pizz.

arco MSP

sfz

Ord.

mf

clb.

MSP pizz.

44

Elec.

47

Ord. → MSP

Vln. I

n *mf* *p* *f* *pppp* *f* *pppp*

Vln. II

pppp *mf* *pppp* *mf* *pppp* *f* *pp* *f* *pppp* *fff*

Vla.

pppp *f* *pppp* *f* *pppp*

Vc.

arco
MSP

to Ord. → Ord. MSP

pppp *mf* *pppp* *mf* *pppp* *f* *pppp* *ff*

Elec.

47

3/4

57

to Ord. → Ord.

♩ = 88
as steady as possible
MST

MSP
full bow
(bow as needed BUT accent each bow change)

let pitch waver

Vln. I

pppp

ffff

n

pppp

mp

pppp

Vln. II

to Ord. → Ord.

espress.
MST

let pitch waver

pppp

n

pp

n

p

n

Vla.

to Ord. → Ord.

espress.
MST

MSP
espress.

clb.

pppp

ffff

n

pp

n

p

n

pppp

Vc.

full bow
(bow as needed BUT accent each bow change)
let pitch waver
MST

pppp

n

pppp

n

ppp

IV

Elec.

57

5/4

4/4

55

64

Vln. I

2/4 4/4 3/4

to MST → MST

n *n* *pp* *n* *sfz*

arco MSP pizz.

Vln. II

clb. arco clb. arco clb. arco MSP

pppp 5

Vla.

arco clb. arco n pizz. arco MSP clb. III MSP- IV

3 3 *n*

Vc.

Ord. to MST → MST

n *pppp* *n*

Elec.

64 2/4 4/4 3/4

D **Moderato** (♩ = c. 108)

arco Ord. → MSP

n pizz.

arco MST

MSP pizz.

arco MSP

arco MST

Vln. I

mf

sfz

mf

pppp

mf

mf

mf

Vln. II

Ord. → MSP

mf

n

arco

n pizz.

arco MSP

mf

sfz

pppp

to MST ...

Vla.

Ord. → MSP

p

arco MSP

clb.

mf

arco MST

pppp

mf

clb.

n pizz.

sfz

Vc.

Ord. → MSP

n

mf

arco MSP

MST

MSP pizz.

pppp

mf

sfz

Elec.

71

3/4

56

2/4

57

4/4

75

Vln. I

arco MSP

mp

mf *pppp*

n *mf*

mf *sfz*

E Ord. *s* *pppp*

Vln. II

MST

mf

clb. *sfz*

MSP pizz.

arco MSP

Ord. *n* *mf* *sfz*

pppp

Vla.

arco MSP

mf

clb. *p* *f*

MSP pizz.

mf *ffff* *n*

clb. MSP arco

Vc.

MST

to MSP

MSP

Ord.

pppp *ffff* *s* *pppp*

Elec.

75

3 *4*

58

4 *4*

78

Vln. I

to MSP

MSP

f

Vln. II

arco
Ord.

II

to MSP

MSP

Ord.

clb.

f

pppp

Vla.

clb.

pppp

arco
I Ord.

to MSP

MSP

f

Vc.

to MSP

MSP

p

n

clb.

p

Elec.

78

4/4

81

Vln. I

to Ord. → Ord. → MSP

pppp *f* pppp

clb. → arco Ord. III

F to MSP → MSP → Ord.

mf pppp *f*

Vln. II

to arco → arco Ord.

II to MSP → MSP → Ord. → MSP → Ord. → MSP

mf pppp mp pppp *f* pppp

Vla.

→ Ord.

pppp *f* pppp

to MSP → MSP → Ord.

Vc.

to arco → arco Ord. III ...

f pppp mf pppp

to MSP → MSP → Ord.

f pppp

81

Elec.

59

OUT OF TIME (15 - 20 seconds) -----

G CUE TOGETHER

Improvise as chaotically as possible
with aggressive, quick, and pointalistic gestures.
Use pizzicato, harmonics, quick glissandi and the full range of your instrument.

Vln. I *fff* *pppp* *sffz* *pppp* *fff*

Vln. II *fff* *pppp* *sffz* *pppp* *fff*

Vla. *fff* *pppp* *sffz* *pppp* *fff*

Vc. *fff* *pppp* *sffz* *pppp* *fff*

Elec. 90 4/4 **60** 5/4 **61** 4/4

Moderato (♩ = c. 108)

H MSP → Ord.

I LOOK FOR CUE FROM VIOLIST

Vln. I

Improvise as chaotically as possible with aggressive, quick, and pointalistic gestures. Use pizzicato, harmonics, quick glissandi and the full range of your instrument.

fff

pppp *fff*

LOOK FOR CUE FROM VIOLIST

Vln. II

Improvise as chaotically as possible with aggressive, quick, and pointalistic gestures. Use pizzicato, harmonics, quick glissandi and the full range of your instrument.

fff

pppp *fff*

arco
Ord.

to MSP

MSP

to Ord.

Ord.

Vla.

fff

6

6

CUE ENSEMBLE

pppp *fff*

LOOK FOR CUE FROM VIOLIST

Vc.

Improvise as chaotically as possible with aggressive, quick, and pointalistic gestures. Use pizzicato, harmonics, quick glissandi and the full range of your instrument.

fff

pppp *fff*

95

Elec.

4/4

62

98

MSP → Ord.

Vln. I

subito **pppp** $\triangleleft f \triangleright p \triangleleft ffff$

Improvise as chaotically as possible with aggressive, quick, and pointalistic gestures. Use **ONLY pizzicato**, with and without harmonics. Use the full range of your instrument.

J

ffff **pppp**

MSP → Ord.

Vln. II

subito **pppp** $\triangleleft f \triangleright p \triangleleft ffff$

Improvise as chaotically as possible with aggressive, quick, and pointalistic gestures. Use **ONLY CLB** with gliss, with and without harmonics. Use the full range of your instrument.

ffff **pppp**

MSP → Ord.

Vla.

p **ffff**

ffff **pppp** **p**

MSP → Ord.

Vc.

p **ffff**

Improvise as chaotically as possible with aggressive, quick, and pointalistic gestures. Use pizzicato, harmonics, quick glissandi and the full range of your instrument.

ffff **pppp**

98

Elec.

63 **64**

K

Vln. I



Vln. II



Vla.



Vc.

arco
Ord.



103

Elec.

65

Vln. I L *n pizz.* *MSP pizz.* M *f* *p*

Vln. II *clb. Ord.* *f*

Vla. *MSP* *f*

Vc. *occasional clb.* *pp*

Elec. 107 66 67

occasional clb. ----- clb.

Vln. I *110*

Vln. II *p*

Vla. *5* *5* *6*

Vc. clb. MSP *ppp*

Elec. *110*

113

Vln. I

MSP

pp

ppp

Vln. II

pp

s

ppp

ppp

occasional clb.

Vla.

pp

s

ppp

Vc.

pppp

113

Elec.

The musical score is written for five instruments: Violin I, Violin II, Viola, Violoncello, and Electric guitar. The key signature has one sharp (F#) and the time signature is 2/4. The score begins at measure 113. Violin I has a melodic line with dynamics *pp* and *ppp*, and a marking *MSP*. Violin II has a melodic line with dynamics *pp* and *ppp*, and a marking *ppp*. Viola has a melodic line with dynamics *pp* and *ppp*, and a marking *ppp*. Violoncello has a bass line with dynamics *pppp*. Electric guitar has a single note in the first measure. The score is marked with various dynamics and articulations, including *pp*, *ppp*, *pppp*, *MSP*, and *occasional clb.*

rit. -----

Vln. I 117 *pppp* *Wait for 10 seconds*

Vln. II *pppp* *Wait for 10 seconds*

Vla. *clb.* *arco* *clb.* *arco* *clb.* *pppp* *Wait for 10 seconds*

Vc. *Wait for 10 seconds*

Elec. 117 **68**