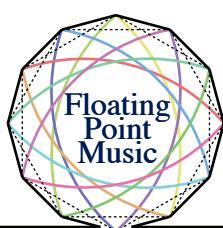
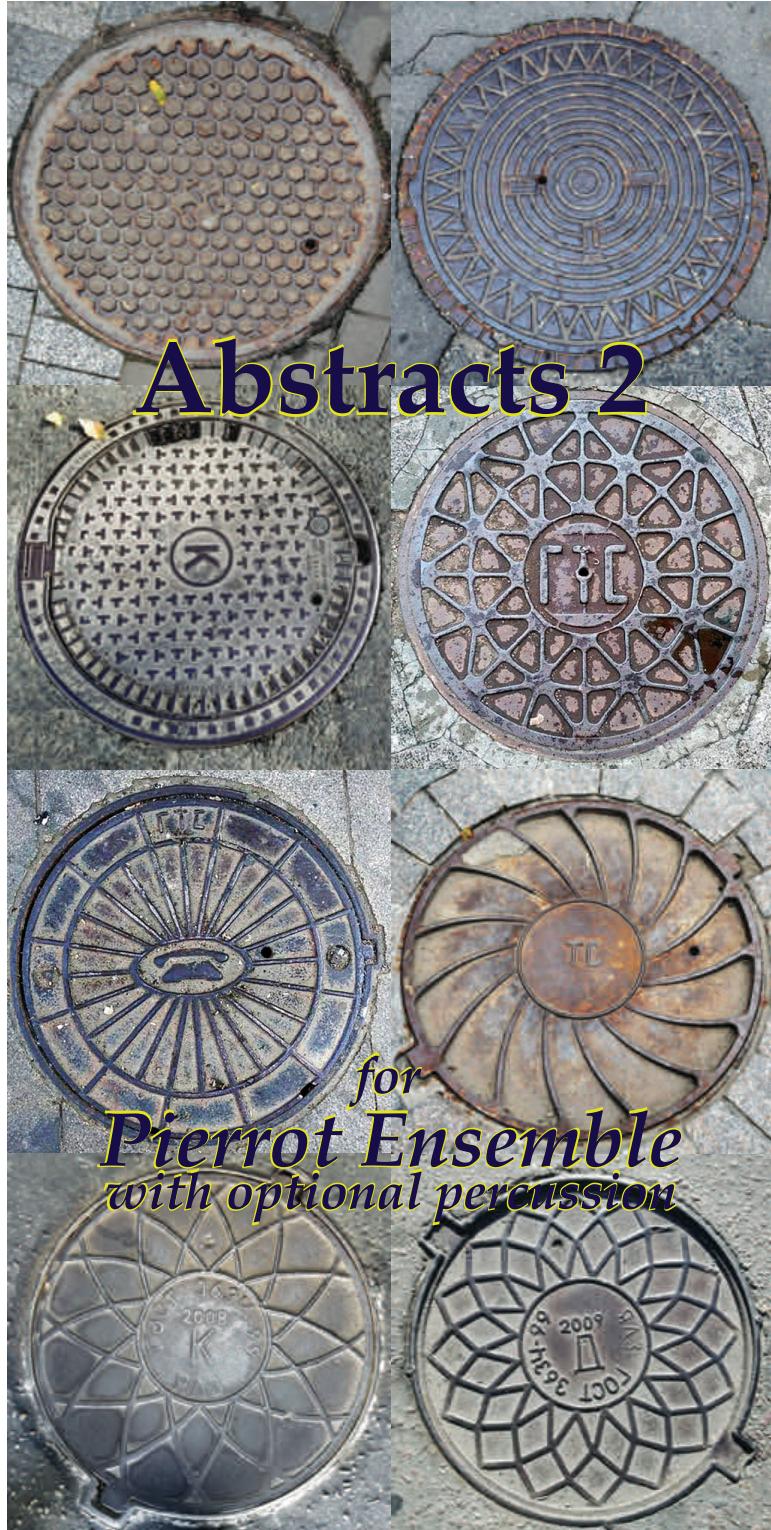
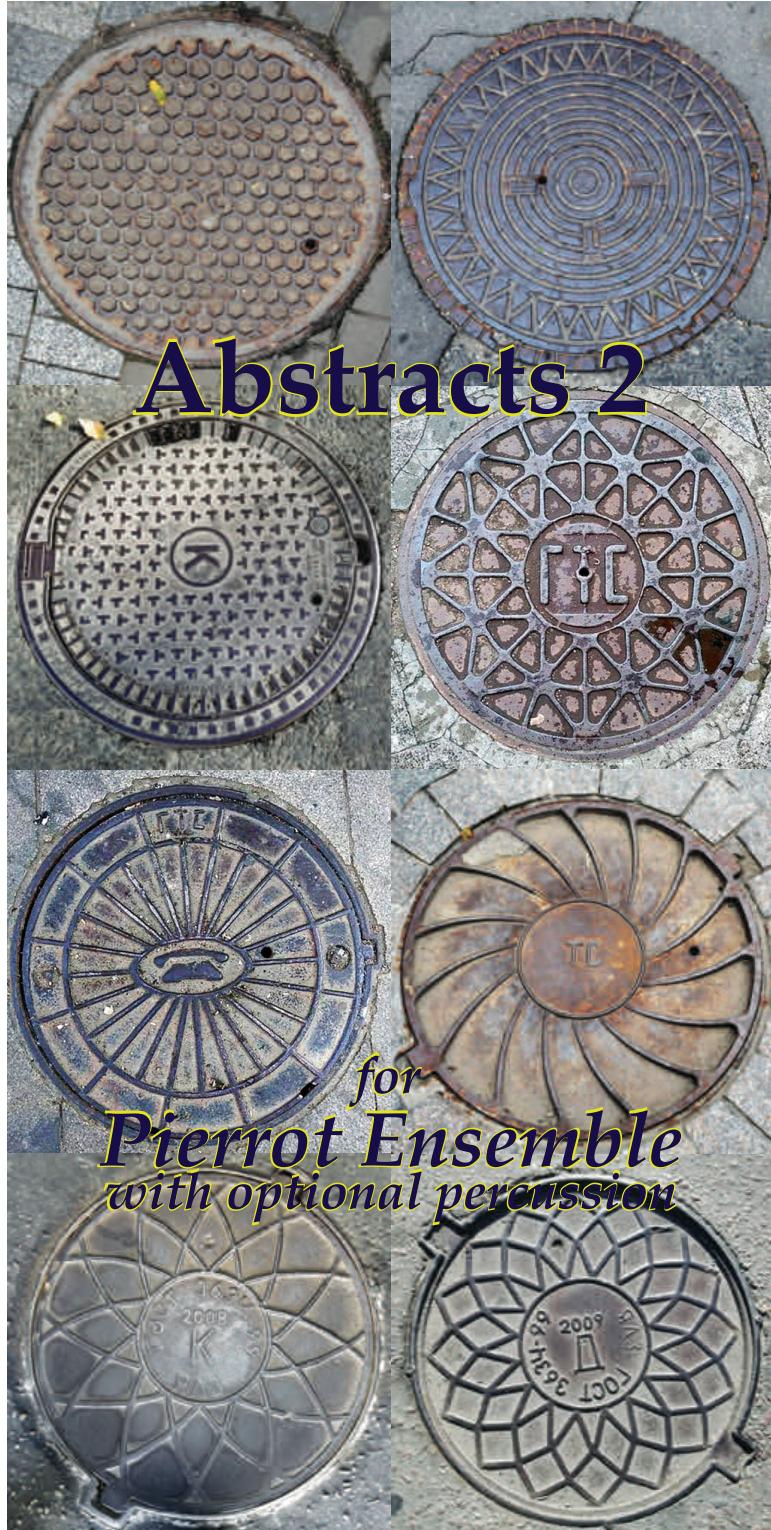


David S. Lefkowitz



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(2019)



Abstracts 2, written for the ensemble TM+, Laurent Cuniot musical director, was inspired by manhole covers in the streets of Russian cities, some abstractly, some more directly pictorially. “Honeycomb” could be thought of as my response to Rimsky-Korsakov’s *Flight of the Bumblebee*, but is actually more focused on pitch symmetry (resulting in the use of quarter-tones in certain sections) and rhythmic/metric symmetry. “Labyrinthe” reminded me of the labyrinth of Chartres Cathedral, and its timeless spirituality. “Tetrominoes” reminded me of the old video game *Tetris*, with the way its pieces fit together, along with the Eastern European melodies. “Neural Net” made me think of a network of multiple linear connections. “Telephone-Rays” brought to mind the image of a telephone’s ringing reverberating into outer space. “Turbine” made me think of the noises and rhythms associated with industrial fans. “Arc Lights/Gothic Arches” is a pair of similar designs, although my responses were quite different: “Arc Lights” brought to mind World War II air-raid sirens, while “Gothic Arches” made me think first of the soaring arches of Notre Dame Cathedral and other French cathedrals, but then of the idea of melodic lines soaring into heaven and falling into the depths.

Abstracts 2 is about 29’ total duration, with the individual movements approximately as shown:

- i. Honeycomb (5’15”)
- ii. Labyrinthe (2’30”)
- iii. Tetrominoes (5’35”)
- iv. Neural Net (2’50”)
- v. Telephone-Rays (3’10”)
- vi. Turbine (3’00”) (*attacca*)
- vii. Arc Lights/Gothic Arches (6’45”)

David S. Lefkowitz
Los Angeles, CA
4 January, 2019

Instrumentation:

Flute, doubling Piccolo & Alto Flute* (*C-flute may be substituted for Alto flute, if necessary)
Clarinet in B♭, doubling Clarinet in E♭ & B♭ Bass Clarinet (with low C extension)

Violin

Cello

Piano (amplification may be considered for movement vi)

Optional Percussion:

Graduated Rulers (see comments, below), Tambourine, Maracas (2 pairs), Rainstick, Bull Roarer

Suspended Cymbals (4), Sizzle Cymbal

Marimba, Vibraphone (with low D extension, if possible), Crotales

The use of the instruments across the seven movements is as follows:

	i	ii	iii	iv	v	vi	vii	
Flute	x	x		x or x**		x*	x	* (optional — may be omitted)
Alto Flute							x**	** (C-flute may substitute for alto, if necessary)
Piccolo	x		x				x	
Bb Clarinet	x		x		x	x	x	
Eb Clarinet							x	
Bass Clarinet	x		x		x			
Violin	x		x		x	x	x	
'Cello	x	x	x		x	x	x	
Piano	x	x				x	x	
Percussion:								
Rulers	x					x	(x)	
Tambourine	x							
Maracas	x					x		
Bull Roarer						x		
Rainstick	x							
Sus. Cymbals	x					x		
Sizzle Cymbal			x					
Marimba					x			
Crotales					x		x	
Vibraphone					x			

Notes on the Percussion:

Across all of the movements, the non-pitched percussion is notated as follows:

One pair of maracas should have a fine fill, and one pair should have a coarse fill.

“Graduated Rulers” should be constructed out of metal rulers attached to a wooden board (see photo, next page), so that each produces a buzzy sound, graduated from low to high—but not pitched (wooden or plastic rulers produce more of a pitched and less of a buzzy sound). Like a lamellophone (such as mbira or kalimba), it is played by plucking the ends of the rulers (pressing the ends of the rulers until the finger slides off). The board should be clamped to a trap table, with the rulers hanging over the edge.

Notes for the performers

Quarter-tones. Throughout, ♯ and ♭ are used to indicate quarter-tone sharp and quarter-tone flat, respectively.

(continued next page)



i. Honeycomb:

In mm.1-48, $\frac{4}{4}$ is solely a meter of convenience. The flute (and piano from m.40) is in $\frac{3}{8}$, the violin (and cello from m.41) is in $\frac{5}{8}$, and the cello (doubled by piano) is in $\frac{3}{4}$. These lines should be played as if notated in those meters, but not so much as to distort the sound or rhythm.

iii. Tetrominoes:

The x-shaped noteheads in the “klezmer” section between Rehearsals E and G should essentially be silent—either because the breath is stopped (for the clarinet) or because the bow is stopped and the fourth finger is placed onto the string to stop its vibration.

v. Telephone-Rays:

In this movement, the intonation of harmonics is less important than that the audience feel that the harmonics are reverberations of the principal tones. For this reason, the intonation of the harmonic series notes are only approximately notated, and the clarinet should focus on using the same or nearly the same fingerings to produce notes a perfect twelfth or two octaves and a major third (etc.) above the lower tones, even if they are not precisely in tune.

vi. Turbine:

Clarinet (and similar Flute techniques):

Reedless blowing. With mouthpiece in but without any reed on mouthpiece, place lip-cushioned teeth half-way down the opening for the reed, so that there are openings in the

mouthpiece both within and outside of the mouth. Blow out (with all fingers down and holes closed).

Key clicks. Choose randomly between the left and right pinky keys, to produce the sounds of the mechanism. Flute key clicks may involve any of the keys.

Slap top of barrel. With mouthpiece (or headjoint) out, slap top of barrel with palm of right hand, while left hand finger-glisses up to G (hold bell of clarinet between knees). Notated pitches and rhythms are only approximate. The bell (or end of the flute) should be held between the knees.

Violin/Cello:

4-finger circular bowing. Very lightly rest all four fingers on G string. Use light-pressure circular bowing (along the string as well as across it) to create white noise.

Lightly touch A \flat spot. Bouncing spiccato bowing. Lightly touch a semitone above the open string, as if playing a natural harmonic. Use bouncing spiccato bowing. Sound produced will be dominated by the open G, but not clearly so.

Piano:

Palm glissando. Lightly place hand flat on strings, palm down. Glissando entire hand up across the strings while keeping hand flat. If the bars in the piano prevent producing sufficient volume over the duration marked, the glissando may be extended up to another higher note, as a flat-fingered finger-tip glissando.

Release sostenuto pedal. While holding the damper (R) pedal, press sostenuto (M) pedal; then release R pedal. Then very slowly release M pedal, so that individual dampers hit the strings at different times. NOTE: if releasing the sostenuto pedal results in all or most of the dampers falling simultaneously, then do not employ this technique; instead, substitute more of the “fingertip on-string playing.”

Fingertip on-string playing. “Play” on the strings with fingertips—as if the strings were the keyboard of the piano—in a quasi-random pattern, slowly moving upward.

Run fingers along string. Run fingers along length of string as far as possible, starting farther from the keyboard and moving toward the dampers, accelerating at the end.

On-the-string glissando. Standard in-the-piano glissando. Left-hand glissando between dampers and first crossbeam, right-hand between first two crossbeams (notated pitches are just approximate).

Slap strings. Lightly slap the strings shown with fingers of hand (alternating left and right hands), near the pins.

Silently depress; grab with sostenuto pedal. Silently depress notes with left hand and with right hand and forearm (try to get as many of the notes from C1 up as possible, but NOT any of the three lowest notes on the piano). Grab with sostenuto pedal.

Scrape fingernails. Scrape fingernails of index and middle fingers along lowest two strings, by pulling entire arm away from piano. While doing that and keeping the fingernails in contact with the strings, “walk” the individual fingers backward, so that the sound alternates somewhat between the two strings. Numbers in parentheses indicate which finger should be advancing more along the strings. In m.31 the rhythm of the alternating fingers is a dotted eighth (until the last beat); in m.33 the rhythm is even eighths.

vii. Arc Lights/Gothic Arches:

In the opening and closing sections (mm.1-32 and 115-end) the chromatic scales notated with small noteheads are intended solely to demonstrate the pacing of the glissandi, and should not be played as scales. This applies to the clarinet “lip” (throat) glissandi, as well.

For TM+, Laurence Cuniot, Artistic Director

Transposed Score

David S. Lefkowitz

(2019)



Abstracts 2

i. Honeycomb

Somewhat Quickly, $\text{♩} \approx 120$

(With a moderate $\frac{3}{8}$ feel)

Flute $\text{♩} \approx 120$

Bass Clarinet

Violin

Cello

Piano

Optional Percussion $\text{♩} \approx 120$

Graduated Rulers

sim. (all notes are l.v., semper)

mf

mp

A musical score page for six instruments: Flute, Bass Clarinet, Violin, Cello, Piano, and Optional Percussion. The score is in common time (indicated by a '4'). The flute part consists of a continuous pattern of eighth-note pairs with various accidentals. The bass clarinet, violin, cello, and piano parts are blank. The optional percussion part features a rhythmic pattern of eighth-note pairs with 'x' marks above them, labeled 'Graduated Rulers'. The dynamic for the flute is marked 'mf' and for the percussion 'mp'.

(take catch breaths, as needed, in place of last of four staccato notes, as shown in previous measure)

Fl 3

Molto sul pont. *v* (With a moderate $\frac{5}{8}$ feel) (etc.) (With a moderate $\frac{3}{4}$ feel) Sul pont. *p*

Vln *mp*

Vc

Pno 3 *pp*

Perc

Fl 6

With a buzzy tone (sim.)

B.Cl *mp poco* *mp poco* *mp*

Vln

Vc *v* *v* (etc.)

Pno 6 (sim.)

Perc *p*

8

Fl

B.Cl

Vln

Vc

8

Pno

Perc

A

10

Fl

p

B.Cl

Vln

Vc

10

Pno

Perc

13

Fl

B.Cl

Vln

Vc

13

Pno

(pp in RH, semper, through m.24)

p

Perc

15

Fl

B.Cl

Vln

Vc

15

Pno

Perc

B

17 Fl: *p*

B.Cl:

Vln: *f*

Vc: *mp*

17 Pno: *mp*

Perc:

20 Fl:

B.Cl:

Vln:

Vc:

20 Pno: *mf* *8vb*

Perc:

23

Fl

B.Cl

Vln

Vc

23

Pno

(8^{vb})

C

ff

f (both hands)

Ped. ad lib. (but not too heavily)

Perc

26

Fl

B.Cl

Vln

Vc

26

Pno

Perc

mf

28

Fl

B.Cl

Vln

Vc

mf

28

Pno

Perc

D

31

Fl

B.Cl

Vln

Vc

pp

mp

31

Pno

ff

Perc

34

Fl - *ppp*

Vln - *mp*

Vc - *v* *□*

(15^{ma}) -

34

Pno

Perc - *x* *x* *γ* *z* *x* *x* *γ* *z* *x* *x* *v* *□*

37

Vln

Vc - *v* *□*

8^{va} -

37

Pno

Perc - *γ* *x* *z* *x* *γ* *x* *z* *x* *x* *pp*

39

Vln

Vc

(8^{va}) -

(With a moderate $\frac{3}{8}$ feel)

39

Pno

E

f

p (With a moderate $\frac{5}{8}$ feel; match tone of violin)

mp

Perc - *γ* *x* *z* *x* *z* *x* *z* *x* *z* *x* *z* *x*

42

Vc

Pno

Perc

45

Vc

mf

Pno

mf

Perc

48

Fl

B.Cl

Vln

Vc

F

Regular tone

Pno

mp

Perc

Quasi-flautando

gliss.

Quasi-flautando

gliss.

51

Fl

B.Cl

Vln

Vc

51

Pno

gliss.

gliss.

gliss.

p

54

Fl

B.Cl

Vln

Vc

Pno

gliss.

gliss.

gliss.

pp

56

Fl

B.Cl

Vln

Vc

Pno

Perc

G

gliss.

gliss.

faster
gliss.

ppp

Damp (with hand on strings, about 2-3 cm away from the tuning pins)

p

mp

58

Fl

B.Cl

Vln

Vc

Pno

Perc

gliss.

faster
gliss.

gliss.

faster
gliss.

End Damping

(8^{vb})

mf

12

Fl
B.Cl
Vln
Vc
Pno

gliss.
faster
gliss.
gliss.
gliss.
faster
gliss.

8va -----
mf

Perc

to Tambourine
f

H

Fl
B.Cl
Vln
Vc
Pno

gliss.
gliss.
gliss.
Ord.
Ord.
f

Tambourine
rub with finger
pp

Perc

f *p*
f *f*
f *f*
8vb -----
sfz to Graduated Rulers

66

Flute: Dynamics f, p, f, p, f, p, f, p
Bassoon: Dynamics p, f, p, f, p, f, p, f
Violin: Dynamics p, f, p, f, p, f, p, f
Cello: Dynamics p, f, p, f, p, f, p, f
Piano: Dynamics p, f, p, f, p, f, p, f

66

Piano: Dynamics p, f, p, f, p, f, p, f

70

Flute: Dynamics f, p, f, p, f, p, f, p, f, p, f, m^f
Bassoon: Dynamics p, f, p, f, p, f, p, f, p, f, m^f
Violin: Dynamics p, f, p, f, p, f, p, f, p, f, m^f
Cello: Dynamics p, f, p, f, p, f, p, f, p, f, m^f
Piano: Dynamics p, f, p, f, p, f, p, f, ff, m^f

I

(lip pitch down, as possible)

Graduated Rulers

Percussion: Dynamics m^f

74

Fl. (p, mf)

B.Clar. (p, mf)

Vln. (p, mf)

Vcl. (mf, p, mf)

Pno. (p, mf)

Perc.

to Piccolo

82

Picc. B.Cl. Vln. Vc.

Pno.

Perc.

82

Pno.

Perc.

86

Picc. B.Cl. Vln. Vc.

Pno.

Perc.

(lip pitch down, as possible) to Flute

to Clarinet

K

mfp

p

p

mf ³ ₃ ³

f

p

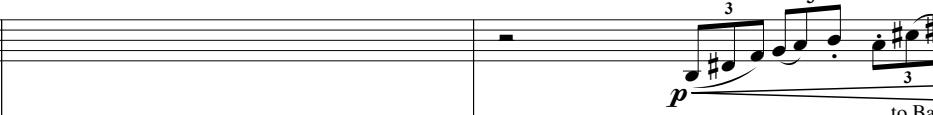
to Suspended Cymbals

86

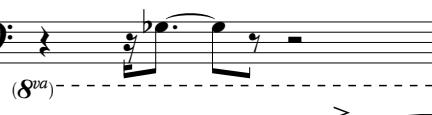
Perc.

100

Fl. 

Cl. 

Vln. 

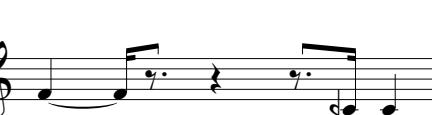
Vc. 

Pno. 

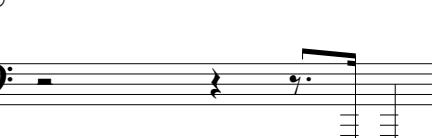
Perc. 

103

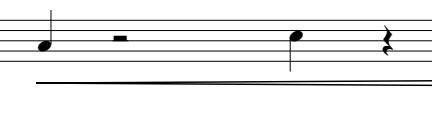
Fl. 

Vln. 

Vc. 

Pno. 

(pick up lower-sounding coarse-filled Maraca)

Perc. 

M

106

Fl

Bass Clarinet

B.Cl

Vln

Vc

Pno

106

Perc

Ped. ad lib.
Sus. Lower coarse-filled
Cym. Maraca (swirled, top down)

Sus. Maraca
Cym. ~~~~~

(put down mallet, pick up 2nd coarse-filled Maraca)

110

Fl

B.Cl

Vln

Vc

Pno

110

Perc

(higher pitched maraca held top up,
lower ~~~~~ pitched maraca held top down)

N

114

Fl B.Cl Vln Vc

Pno

Perc

114

Fl B.Cl Vln Vc

Pno

Perc

118

Fl B.Cl Vln Vc

Pno

Perc

118

Fl B.Cl Vln Vc

Pno

Perc

20

Fl
B.Cl
Vln
Vc
Pno
Perc

O

122

p *mf* *f* *p* *mp* *p* *mf*

mf *p* *mp* *p* *mf*

p *mf* *p* *mp* *mp* *p* *mf*

p *mp* *p* *mf* *p* *mf*

(higher pitched maraca held top down
lower pitched maraca held top up)

p *mp* *mf* *p* *mf* *p* *mf* *p* *mf*

126

Fl
B.Cl
Vln
Vc
Pno
Perc

p *mf* *p* *mf* *p*

p *mf* *p* *mf* *p*

p *mf* *p* *mf* *p*

p *mf* *f* *p* *mf* *p*

(both maracas held top down)

mf *p* *f* *p* *mf* *p*

130

Fl
B.Cl
Vln
Vc
Pno
Perc

131

mfp *p* *mp* *p*

P

134

Fl
B.Cl
Vln
Vc
Pno
Perc

pp *p* *pp* *p* *pp* *p* *pp* *p* *pp* *p*

p

8vb

f

to Graduated Rulers Graduated Rulers

138

Flute (Fl), Bassoon (B.Cl), Violin (Vln), Cello (Vc), Piano (Pno)

139

Q

142

Flute (Fl), Bassoon (B.Cl), Violin (Vln), Cello (Vc), Piano (Pno)

142

145

to Piccolo

Fl. B.Cl. Vln. Vc.

Pno.

Perc.

145

Piccolo

pp p pp p

pp p pp p

pp p pp p

pp p pp p

Hold chord until rainstick ends (or as marked, if performed without percussion)

Picc. B.Cl. Vln. Vc. Pno. Perc.

R ($\text{♪}=\text{♪}$)

149

$\frac{12}{8}$

$\frac{12}{8}$

$\frac{12}{8}$

$\frac{12}{8}$

$\frac{12}{8}$

(lip pitch down, as possible)

$\frac{12}{8}$

$\frac{12}{8}$

$\frac{12}{8}$

$\frac{12}{8}$

fine-filled Maraca

Rainstick

mp (pick up rainstick)

ii. Labyrinthe

(Concentric Circles with Zig-Zags)



Slowly, Mysteriously—Meditatively and Contemplatively, $\text{♩} \approx 52$

Flute *well-sustained sound*
mf

Cello
mf

Piano
mf

Una corda
Ped. ad lib.

Flute
5 put on mute

Violin Cello
muted
(mf)

Piano
5

Musical score for Flute (Fl), Violoncello (Vc), and Piano (Pno). The score consists of two systems of music. The first system starts with a flute melody over a sustained cello note. The second system begins with a piano bass line. Measure numbers 14 and 15 are indicated above the staves.

Flute (Fl) part:

- Measure 14: Flute plays eighth-note pairs. Measure 15: Flute continues eighth-note pairs.

Violoncello (Vc) part:

- Measure 14: Cello plays eighth-note pairs. Measure 15: Cello plays eighth-note pairs.

Piano (Pno) part:

- Measure 14: Piano bass line. Measure 15: Piano bass line.

B

Flute (Fl.) and Violin (Vc.) play eighth-note patterns in measure 19, with the flute's pattern starting on a low note and the violin's on a higher note. The piano (Pno.) plays sustained bass notes. Measure 20 begins with a forte dynamic. The flute and violin continue their eighth-note patterns, while the piano provides harmonic support.

19

Fl.

Vc.

3 *mp* (as an echo)

19

Pno.

mp

III IV

mf

26

24

Fl

Vc

(*D♭ and D♯ simultaneously*)

Pno

put on mute

Una corda

C

29

Fl

Vc

muted (mf)

Pno

(poco più **f**)

iii. Tetrominoes



3

Cl.

Vln.

Vc.

Mar

5

Cl. *mf* *mp* *mf*

Vln. *mp*

Vc. *mp*

Mar. *mp*

5

Cl. *mf*

Vln.

Vc.

Mar.

7

Cl. *f* *p*

Vln. *mf* *f* *p*

Vc. *mf* *f* *p*

7

Mar. *f* *p*

9

Cl. *mf*

Vln. *mp* *mf*

Vc. *mf*

9

Mar. *mf* *mf*

11

Cl. Vln. Vc.

Mar.

11

13

Cl. Vln. Vc.

Mar.

13

B

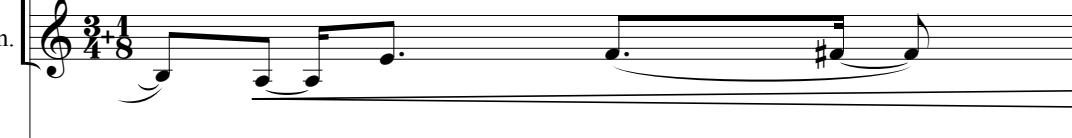
15

Cl. Vln.

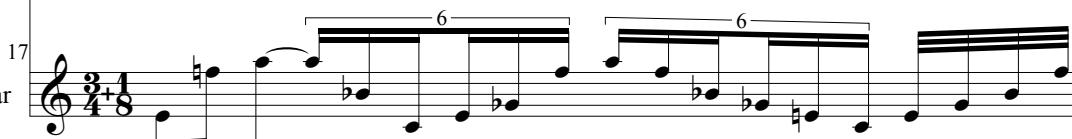
Mar.

15

17

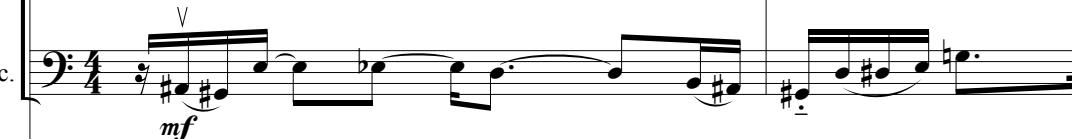
Cl. 3/8 |  6 |  6 |  f |  3 | 

Vln.

Mar 3/8 |  6 |  6 |  f | 

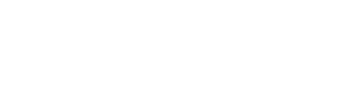
19

Cl. 4 |  mp | 

Vc. 4 |  mf | 

Mar 4 |  mp | 

21

Cl. 3 |  6 |  f |  f |  f |  f |  f |  f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | f | <

23

Cl.

Vln. *mp f*

Vc.

Mar.

6 3+8
6 3+8
6 3+8

25

Cl. *mf*

Vln. >*p f*

Vc. *mf*

Mar.

3+8 3+8
3+8 3+8
3+8 3+8

D

27

Cl.

Vln.

Vc.

27

Mar.

With an Eastern-European or Klezmer style
mournfulness. Rhythmically somewhat free.

30

Cl.

Vln.

Vc.

30

Mar.

32

(breath accents)

Cl.

Vln.

Vc.

32

Mar.

(more clearly articulated)

E

(Slower, ≈ 63)

con vibrato rhythmically free (a choked breath—as if sobbing)

Cl. 34 

Vln. 34 

Vc. 34 

Mar 34 

Rall. Poco A Tempo

silent attacks

With an Eastern-European or Klezmer style mournfulness. Rhythmically somewhat free. $\boxed{1}$ gl.

Cl. 38 

Vln. 38 

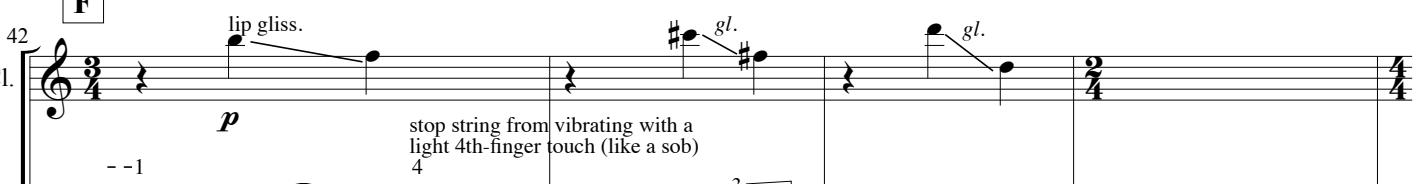
Vc. 38 

F

lip gliss.

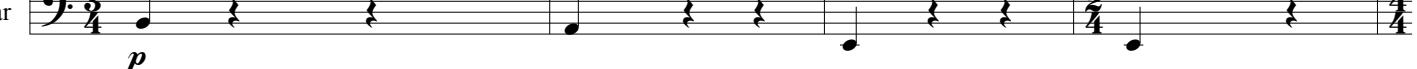
stop string from vibrating with a light 4th-finger touch (like a sob)

gently; unsure whether or not to impinge on violin's grief

Cl. 42 

Vln. 42 

Vc. 42 

Mar 42 

G

46

Cl. *gl.*
mp *mf*

Vln. *f* (completely blatant in performance of gliss.) (con vib.) *gl.* (rhythmically precise) *p*

Vc. *mp* *mf*

With an Eastern-European or Klezmer style mournfulness. Rhythmically somewhat free

46

Mar. *p*

50

Vln. *mp* *p* *mp*

Vc. *p* *mp*

Mar. *p* *mf* *mf*

53

Cl. *mf*

Vln. *mf*

Vc. *p*

Mar. *mf*

rhythmically free

H

55

Cl.

Vln.

Vc. *mf*

2+3+4 7+8+4

(rhythmically precise)

57

Cl. *mp*

Vln. *mp*

Vc. *poco f*

rhythmically free

2:3

59

to Bass Clarinet

Cl.

Vln.

Vc.

mp

pp

62

Bass Clarinet

B.Cl. *mp*

Vln.

Vc. (rhythmically precise) *mp*

I (Tempo Primo, ≈ 84)

64 B.Cl. Vc.

66 B.Cl. Vc.

68 B.Cl. Vln. Vc.

70 B.Cl. Vln. Vc. Mar.

J

72

B.Cl.
Vln.
Vc.
Mar

75

B.Cl.
Vln.
Vc.
Mar

77

B.Cl.
Vln.
Vc.
Mar

to Clarinet
mp

Clarinet
mf

f

80

Cl.

Vln.

Vc.

Mar

mf

poco f

83

K

Cl.

Vln.

Vc.

Mar

f

poco f

poco f

mp

85

Cl.

Vln.

Vc.

f

3 6 3

5 3

87

Cl. *ff*

Vln. *ff*

Vc. *ff*

Mar. *f*

90 L

Cl.

Vln. *mf*

Vc.

Mar. *f* *p*

92

Cl.

Vln. *mp*

Vc.

Mar.

94

Cl. $\frac{3+4}{8}$ p

Vln. $\frac{3+4}{8}$ p

Vc. $\frac{3+4}{8}$ mf

Mar. $\frac{3+4}{8}$ p

94

96

Cl. $\frac{3+4}{8}$ mf

Vln. $\frac{3+4}{8}$ mf

Vc. $\frac{3+4}{8}$ mf

Mar. $\frac{3+4}{8}$

to Bass Clarinet

96

M

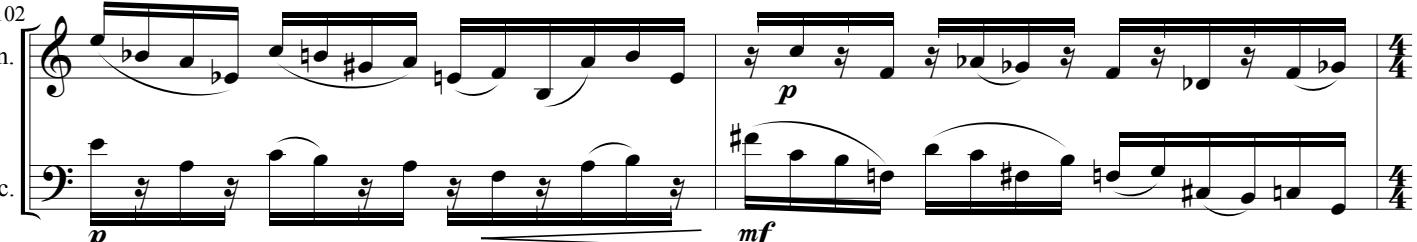
98

Vln. $\frac{7}{8}$ mp

100

Vln. mf

102

Vln. 

104

Vln. 

104

Mar. 

106

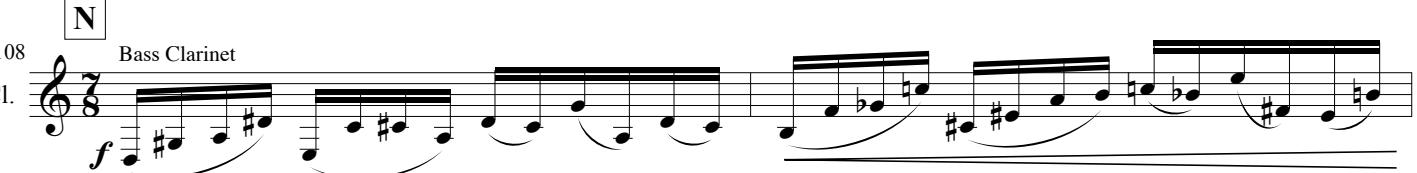
Vln. 

106

Mar. 

N

108 Bass Clarinet

B.Cl. 

110

B.Cl. *più f*

Vln. *p*

mp

mp

112

B.Cl. *p*

to Clarinet

Vln. *mp*

Vc. *mf*

Mar. *mp*

114

Cl.

Vln.

Vc.

Mar.

O Clarinet

f

mf

mp

mf

f

f

f

f

mp

116

Cl. Vln. Vc.

mp f

Mar.

116

Cl. Vln. Vc.

più f f

Mar.

118

Cl. Vln. Vc.

cres-... cendo ...

Vcl.

120

Cl. Vln. Vc.

cres-... cendo ...

Mar.

120

Cl. Vln. Vc.

cres-... cendo ...

Mar.

121

Cl. Vln. Vc. Mar.

...poco ... 6 6 6

5 6

...poco ... 6

121

...poco ...

122

Cl. Vln. Vc. Mar.

...à ... 9 ...poco ... 10 10

...à ... 7 ...poco ... 9 9

6 ...à ... 7 ...poco ...

122

...àpoco ... fff

fff

fff

fff

iv. Neural Net
(flute solo)*

(* preferably alto flute if speed and high notes are possible; otherwise c-flute. Either version should play pitches *as notated*.)



Andante Moderato; quickly flowing, but allowing enough time for the grace notes ($\bullet \approx 60-65$)

(* all grace notes before the beat)

Flute

through time for the grace notes (1-6-6-6)

(before the beat)

5

9

13

16

18

21

A Introspective, slower ($\text{♩} \approx 48-52$)
($\text{♩} + \text{♪} = \text{♩}$)

poco f

Pushing forward just a bit

B Tempo Primo ($\text{♩} \approx 60-65$)
($\text{♩} = \text{♩} + \text{♪}$)

Faster ($\text{♩} \approx 75-81.25$)
 $(\text{♩} = \text{♩} + \text{♪})$

Faster ($\text{♩} \approx 90-97.5$)
 $(\text{♩} = \frac{5}{6} \text{♪})$

C Tempo Primo ($\text{♩} \approx 60-65$)
 $(\text{♩.} = \text{♩})$

D Introspective, slower ($\text{♩} \approx 48-52$)
 $(\text{♩} + \text{♪} = \text{♩})$

Tempo Primo ($\text{♩} \approx 60-65$)
 $(\text{♩} = \text{♩} + \text{♪})$

54

58

v. Telephone-Rays



Bell-Like, Quickly, $\text{♩} \approx 104\text{-}108$

Clarinet Flutter- - -, tongue*
sfp
 * Only if performed without percussion

Violin mp

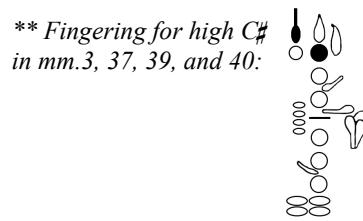
Cello p
mf (mf)
 (*) approximate intonation

Optional Crotales, brass mallets
 & Vibes *poco f*

** See note at bottom of page

Cl. Flutter- - -, tongue*
sfp
 Vln mp
 Vc mf
 Cro *poco f*
 pick up hard acrylic mallets

II - - -



48

Cl. *mf*

Vln *mf* 3 3

Vcl (* approximate intonation) 3 3

Cro

mp

p

f

mf

f

A Hard acrylic mallets

13

Cl.

Vln

Vc

Cro.

(* as if seventh partial of E♭ overtone series)

Musical score for orchestra, measures 16 and B.

Measure 16: Clarinet (Cl.) in G major, 6/8 time. Dynamics: *(sva)*, *ff*. Articulations: slurs, grace notes, accents. Measure ends with a fermata.

Measure B: Violin (Vln) in G major, 4/4 time. Dynamics: *ff*. Articulations: slurs, grace notes, accents, triplets (indicated by '3').

Measure 17: Cello (Vc) in G major, 6/8 time. Dynamics: *f*. Articulations: slurs, grace notes, accents, triplets (indicated by '3').

Measure 18: Bassoon (Cro.) in G major, 4/4 time. Dynamics: *ff*. Articulations: slurs, grace notes, accents, triplets (indicated by '3').

18

Cl.
Vln
Vc
Cro

21

C

Cl.
Vln
Vc
Cro

26

Cl.
Vln
Vc

(overtone series, quasi-glissando)

(sim.)

poco

mp

(overtone series, quasi-glissando)

(sim.)

III -

f

mp

mf

mf

mp

<mf

Musical score for measures 29-30:

- Cl.**: Treble clef. Measure 29: Notes with dynamics $\#$, $\#$, $\#$. Measure 30: Notes with dynamics $\#$, $\#$, $\#$.
- Vln**: Treble clef. Measure 29: Sixteenth-note patterns with dynamics $\#$, $\#$, $\#$. Measure 30: Sixteenth-note patterns with dynamics $\#$, $\#$, $\#$.
- Vc**: Bass clef. Measure 29: Notes with dynamics $\#$, $\#$, $\#$. Measure 30: Notes with dynamics $\#$, $\#$, $\#$.

Measure 29 ends with a vertical bar line. Measure 30 begins with a vertical bar line and continues from measure 29's ending. Measure 30 ends with a vertical bar line.

D

Musical score for orchestra, page 32, measures 32-37. The score includes parts for Clarinet (Cl.), Violin (Vln), Cello (Vc), and Bassoon (Cro.). The measures show a sequence of rhythmic patterns and dynamics, including *mp*, *mf*, and *poco f*. Measure 32 starts with a melodic line in Cl. Measure 33 shows Vln and Vc playing eighth-note patterns. Measure 34 features Vc with sixteenth-note patterns. Measure 35 begins with a bassoon line. Measure 36 continues the bassoon line. Measure 37 concludes the section.

(see m.3 fingering)

35

Cl.

Vln

Vc

Cro

(approximate intonation)*

mp

poco

mf

poco

pick up bow

38

(see m.3 fingering)

Cl. *mp* *mf* *mp* *mf* *>mp*

Vln *8va*

Vc

41 E

Cl. *mf* *mp* *mf* *mp* *mf*

Vln *8va* 5 5 6 5

Vc

Cro. *Bowed Crotale* *mf* *(sim.)*

44

to Bass Clarinet

Cl. *p* *mf*

Vln *IV* *III* *II* *8va* 3 3 3

Vc

Cro.

52

F

B.Cl Vln Vc Cro

G

B.Cl Vln Vc Cro

H

B.Cl Vln Vc Vib

64

B.Cl *p mf*

Vc *p* *mf*

Vib *p* *mf* *mp* *p* *mf*

... poco ... à ... poco ...

I

71

B.Cl *p* *mf* *mp*

Vln

Vc *p* *mf*

Vib

IV - - - -
poco

75

B.Cl *p*

Vln III II - - - -
8va *mf*

Vc

Vib *poco f*

J

III - - - -
mf *mp* *mf*

p *mf*

(8va to end, if low D is not available)

79

B.Cl
Vln
Vc
Vib

p
mp
p
pp
mf
mp
pp
p
poco p
pp
mf
pp

vi. Turbine



Slowly, without great rhythmic precision ($\text{♩} \approx 48$)

(Flute part may be omitted)

Flute

Clarinet in B \flat

Violin

Cello

Piano

(NB: the piano may be amplified for this movement only)

Percussion

Clarinet in B \flat , with no reed on mouthpiece

Reedless blowing

4-finger circular bowing

4-finger circular bowing

Jet whistle

Fine-filled Maracas (hold two maracas upside down in one hand and swirl around; hold two mallets in the other hand, positioned on either side of cymbal)

Sizzle Cymbal, with soft mallets

Sheet music for six instruments: Flute, Clarinet in B \flat , Violin, Cello, Piano, and Percussion. The score is in common time. The Flute part is optional. The Clarinet in B \flat uses reedless blowing and 4-finger circular bowing. The Violin and Cello also use 4-finger circular bowing. The Piano part is indicated with '(NB: the piano may be amplified for this movement only)'. The Percussion part includes instructions for Fine-filled Maracas and Sizzle Cymbal with soft mallets. Dynamic markings include p , pp , mp , and mfp . Articulation marks like n and \diamond are also present.

56

A

Fl
B♭ Cl.
Vln
Vc
Pno
Perc

Col legno tratto
Col legno tratto
Palm glissando
Ped.
(RH)
(LH)

mf
n
ppp
mp
pp
p
mp
mf
n

14

Key clicks (random pitches)
(mp)

Key clicks
(mp)

(end col legno)

(end col legno)

p

Press sostenuto (M) pedal;
Then release damper (R) pedal.
Then very slowly release M pedal.

Sos. ped.

Fl
B♭ Cl.
Vln
Vc
Pno

B

17 Remove headjoint
Fl.

Remove mouthpiece
Cl.

17 Fingertip on-string playing
(*mp*)
Pno

Ped.
Sos. ped.

(Slight fermata)
Run fingers along string.
(Highest copper-wound strings
reachable — approximately C2-E2)

p
p
(Lowest strings on piano)

22 Lightly touch A♭ spot.
Bouncing spiccato bowing.
Vln
mp

Lightly touch A♭ spot.
Bouncing spiccato bowing.
Vc
mp

22 On-the-strings glissando.
Pno
p
p

Fl
B♭ Cl.
Vln
Vc
Pno
Perc

Slap top of barrel
(mp)
Slap top of barrel
(mp)

C (Replace headjoint)
to Alto Flute

Col legno battuto
Col legno battuto 6
mf

Slap strings
p

Silently depress; grab with sostenuto pedal (NOT including lowest three notes on piano)
sos. ped.

Bull Roarer

B♭ Cl.
Vln
Vc
Pno
Perc

(Replace mouthpiece)
to Clarinet in E♭

6
mp
mp (1) (2) (1) (2) (1) (2)

(catch bull roarer and then place on table) Graduated Rulers
8vb
p f n

Pno
Perc

mf (1) (2) (1) (2) (1) (2) **p** Slap strings **f**
8vb Ped. (to end) (keep ped. down until Rehearsal A in next movement)
mp **f**

Attacca



vii. Arc Lights/ Gothic Arches

Quickly; Stridently, like an Air-Raid Siren ($\text{♩} \approx 120$)

Alto Flute

Flute

Clarinet in E♭ (strident)

E♭ & B♭ Clarinet

poco sul pont.

Violin

poco sul pont.

Cello

Piano

lip gliss.

ff

lip gliss.

gliss.

gliss.

gliss. (sul D)

ff

ff

ff

ff

Highest Graduated Ruler to Crotales

Crotales

ff

A musical score page for orchestra and piano. The score includes parts for Alto Flute, Flute, Clarinet in E♭ (strident), E♭ & B♭ Clarinet, Violin, Cello, Piano, and Crotales. The music is in 4/4 time. The vocal line consists of sustained notes with dynamic markings: 'Alto Flute' (measures 1-2), 'Clarinet in E♭ (strident)' (measures 3-4), 'E♭ & B♭ Clarinet' (measures 5-6), 'Violin' (measures 7-8), 'Cello' (measures 9-10), 'Piano' (measures 11-12), and 'Crotales' (measures 13-14). The vocal line features various performance techniques: 'poco sul pont.' (measures 3-4), 'lip gliss.' (measures 5-6), 'gliss.' (measures 7-8), 'gliss. (sul D)' (measures 9-10), and 'Highest Graduated Ruler to Crotales' (measures 11-12). Dynamics include 'ff' (measures 4, 6, 8, 10, 12) and 'ff' (measures 5, 7, 9, 11). Measure 13 is a rest, and measure 14 concludes with 'ff'.

60

Alto Flute (ossia for C-flute in
flute part and at end of score)

A

Musical score page 60. The score consists of five staves. The first three staves (Alto Flute, Eb Clarinet, Violin) play eighth-note patterns with grace notes, marked *mp*. The Cello and Piano staves are silent. A vertical bar line separates measures 6 and 7. Measures 7 and 8 begin with dynamic *f*. The piano part ends with a forte dynamic *f* followed by a fermata.

Musical score page 9. The score consists of five staves. The first three staves (Alto Flute, Eb Clarinet, Violin) play eighth-note patterns with grace notes. The Cello and Piano staves are silent. A vertical bar line separates measures 9 and 10. Measures 10 and 11 begin with dynamic *f*. The piano part ends with a forte dynamic *f* followed by a fermata.

12

Alto Fl.
Eb Cl.
Vln
Vc
Pno

Pno

This section contains two staves of musical notation. The top staff includes parts for Alto Flute, Eb Clarinet, Violin, and Cello. The bottom staff is for the Piano. Measure 12 begins with sustained notes from the woodwind and strings, followed by sixteenth-note patterns. Measure 13 continues with similar patterns, with dynamic markings like f and p .

15

B
to Piccolo

Alto Fl.
Eb Cl.
Vln
Vc
Pno

Pno

This section contains two staves of musical notation. The top staff includes parts for Alto Flute, Eb Clarinet, Violin, and Cello. The bottom staff is for the Piano. Measure 15 features sustained notes and sixteenth-note patterns. Measure 16 begins with sustained notes from the woodwind and strings, followed by sixteenth-note patterns. Dynamic markings include mf , f , and *poco f*.

18

E_b Cl

Vln

Vc

18

Pno

22

(non-gliss.)

E_b Cl

Vln

Vc

22

Pno

C

to Clarinet in B_b

flautando

gliss. (sul C)

mp

pp

pp

pp

mp

mf

mp

27

B♭ Cl. Clarinet in B♭ lip gliss. lip gliss.

Vln 3 3 3

Vc 3 gliss. 3 3 gliss. (sul C)

Pno 27 3 p 3

D

$\text{d} \text{---} \text{d}$ = d Stately, Grand, $\text{d} \approx 72$
 $(\text{d} \text{---} \text{d}) = \text{d}$

30

B♭ Cl. 3 - 5 4

Vln 3 - 5 4

Vc 3 gliss. 3 5 4

Pno mp 3 pp ff Ped. ad lib.

Slightly Slower, $\text{d} \approx 66$

E

A Tempo ($\text{d} \approx 72$)

poco f mp ff

36

Pno 36 3 4 4 4 4 4

(Sos. ped. - - - - -)

64

Slightly Slower, $\text{♩} \approx 66$

43

F1 Piccolo $\text{♩} \approx 66$
mp

Pno $\text{♩} \approx 66$
mf *mp* *ff*

Cro. (l.v., sempre) $\text{♩} \approx 66$
mp

F A Tempo ($\text{♩} \approx 72$)
 to Flute

50

Flute Slightly Slower, $\text{♩} \approx 66$
mp *mf* *p* *mf*

B♭ Cl. Ord. *mp* *mf* *p* *mf*

Vln Ord. *mp* *mf* *p* *mf*

Vc Ord. *mp* *mf* *p* *mf*

Pno $\text{♩} \approx 66$
mp *ff* *ff*

Cro. (l.v., sempre) $\text{♩} \approx 66$
mp

G A Tempo ($\text{♩} \approx 72$)

56

Fl. B♭ Cl. Vln.

Pno.

56

mf, dolce

ff

f

5

*Exaggerate dynamics: loudest
in very highest and very lowest
registers, quieter in mid-range.*

61

Fl. B♭ Cl. Vln. Vc.

Pno.

H

61

mp

p

f

8^{vb}

65

Fl. 3 5 3 5 f mp f

B♭ Cl. 6 f mf p

Vln. 3 5 mf mp

Vc. 3 5 f mf

65

Pno. 3 (8vb) f

Cro.

69

Fl. descrescendo poco à poco p

B♭ Cl. 3 3 f mp mf

Vln. 8va f 3 3

Vc. f mf mp

69

Pno. f

Cro.

I

73

Fl. *mf* *p*

B♭ Cl. *f* *mf* *poco* *p*

Vln.

Vc. *f*

Pno. *p*

76

B♭ Cl.

Vln.

Vc. *6*

Pno.

78

B♭ Cl.

Vln

f

Vc

6 6 6

78

Pno

J

B♭ Cl.

Vln

Vc

80

Pno

ff

Cro.

f

K

pp

p

(damp)

87

Fl B♭ Cl Vln Vc Pno

to Clarinet in E♭

p < *mf*

Clarinet in E♭

pp

mp

mf

mf

p < *mp*

mf

mf

mf

mf

p

92

Fl E♭ Cl Vln

mf

mf

mf

f

mf

f

p

L

97

Fl. *mp*

E♭ Cl. *mf*

Vln. *mp*

Vc. *mf*

97

Pno. *mf* *poco f* *f*

8vb (fairly dry)

Cro. *mf*

M

101

Fl. *pp*

E♭ Cl. *mp* *f*

Vln.

Vc. *pp* *p*

101

Pno. *ff*

Cro.

Musical score for orchestra and piano, page 104. The score includes parts for Flute (Fl), Eb Clarinet (Eb Cl), Bassoon (Vc), and Piano (Pno). The piano part features a dynamic marking of *f* (fortissimo) at the end of the measure.

109

Fl

E_b Cl

Vln

Vc

(8^{va})

109

Pno

Cro.

N

p

f

p

p

mf

mf

111

Fl

E_b Cl

Vln

Vc

111

Pno

f

mf

mf

f

p

mf

f

mf

f

mf

f

113

Fl. Eb Cl. Vln. Vc.

113

Pno. Cro.

(if note out of range, omit)

mf

115

Fl. Eb Cl. Vln. Vc.

115

Pno. Cro.

mp

gliss.

f

8va-

8vb

116

Fl
Eb Cl
Vln
Vc
Pno
Cro.

gliss.
12
8va -
3
3

O $\text{O} = \text{o} \text{---} \text{o}$ Tempo Primo ($\text{d} \approx 120$), strident again
($\text{d}. = \text{o} \text{---} \text{o}$)

117

Fl
Eb Cl
Vln
Vc
Pno
Cro.

f
lip gliss.
6 6
5 7
5 6 7
5 6
8vb - 7
5 6
ff
to Alto Flute
ff
lip gliss.
3 3 3
gliss.
3 3 3
ff
ff
(Damp all notes)
ff

120

Fl. (sim.)

E♭ Cl. (sim.)

Vln. (sim.)

Vc. (sim.)

Alto Flute

lip gliss.

gliss. 3 3 3

gliss. 3 3 3 3

gliss. 3 3 3 3

Pno. f

Cro. ff f

124

Alto Fl.

E♭ Cl.

Vln.

Vc.

Pno.

Cro. mf mp

76

P

127

Alto Fl.

E♭ Cl. *mf*

Vln. *mf*

Vc. *mf*

127

Pno.

Cro. *p* *pp*

130

Alto Fl.

E♭ Cl. *mp*

Vln. *mp*

Vc. *mp*

130

Pno. *f* *3* *3* *3*

Cro. *f*

Q

133

Alto Fl.

E♭ Cl.

Vln

Vc

133

Pno

Cro.

(damp)

mp

137

Alto Fl.

E♭ Cl.

Vln

Vc

137

Pno

Cro.

pp

pp

pp

gliss.

p

142

Vc

This musical score consists of two staves. The top staff is for the Violin (Vc), indicated by a bass clef and a bass staff. It features a continuous eighth-note pattern with various slurs and grace notes. The bottom staff is for the Piano (Pno), indicated by a bass clef and a treble staff. The piano part also consists of an eighth-note pattern with slurs. A dynamic marking "ppp" is placed below the piano staff, indicating a very soft volume. The score is divided into measures by vertical bar lines. In the final measure, there are fermatas over several notes and a "n" symbol above the violin's last note.