

# **Artificial Environments Nos. 1 to 5**

for amplified ensemble and tape

(version for flute, clarinet, piano, violin/viola and cello)

commissioned by Césaré (centre national de creation musicale) and L'instant Donné

Joanna Bailie

## Performance notes

### instrument list

flute in C/alto flute

bass clarinet/clarinet in Bb

piano (movements 2 and 3 with e-bow)

violin/viola (one player)

cello

tape (to be synchronized with a clicktrack given to the players or conductor)


### glissandi

glissandi start at the beginning of and finish at the end of the notes joined by the line.





### accidentals


 — an eighth-tone sharp

 — a quarter-tone sharp

 — three eighth-tones sharp


 — five eighth-tones sharp

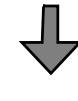
 — three quarter-tones sharp

 — a quarter-tone flat


 — an eighth-tone flat

## other signs and abbreviations

 — normal bow

 — heavier bow pressure, producing a sound between a normal bow and a distorted "scraping sound"

— comma for phrasing or breath. cut the preceding note short.

 — indicates a transition from one state to another, usually bowing position.

■ — a square notehead indicates a sound that is half breath/half tone

× — a cross notehead indicates a sound that is all air.

p.o. — normal bowing position

p.s.p.— poco sul ponticello

s.p. — sul ponticello

m.s.p.— molto sul ponticello

pont — bow on the bridge

p.s.t.— poco sul tasto

s.t. — sul tasto

p.v. — poco vibrato

m.v. — molto vibrato

n.v. — non vibrato

# Artificial Environment No.1

(for flute, clarinet, piano, violin/viola and cello)

1  $\frac{4}{4}$   $\text{♩} = 60$   
0.04  
click starts

flute in C  
Joanna Bailie

flute

clarinet in B-flat

bass clarinet/clarinet

piano

violin/viola

violoncello

violin  
p.o.

*pp* *p* *mp* *p*

5:4

6

fl. n.v. → m.v. → n.v.

cl.

pno.

6

vln./vla.

vcl.

5:4 pp 3:2 ppp 3:2 mp 3:2 < p mp p 3:2 p p > pp 3:2 < mp >

pp 3:2 pp 3:2 >

s.t. 5:4 p > 3:2 p >

11

fl.

cl.

pno.

11

vln./  
vla.

vlc.

20

fl.

Musical notation for the flute part, starting with a treble clef. It features a melodic line with a dynamic marking of *mp* (mezzo-piano) and two triplet markings labeled "3:2".

cl.

Musical notation for the clarinet part, starting with a treble clef. It features a melodic line with a dynamic marking of *p* (piano) and a slur over the notes.

pno.

Piano grand staff consisting of two staves (treble and bass clefs). The piano part is mostly silent, indicated by rests on the staves.

20

vln./  
vla.

Musical notation for the violin/viola part, starting with a treble clef. It features a melodic line with dynamic markings of *ppp* (pianissimo) and *p.o.* (pizzicato), and triplet markings labeled "3:2".

vlc.

Musical notation for the cello part, starting with a bass clef. It features a melodic line with dynamic markings of *p* (piano) and *pp* (pianissimo), and various rhythmic markings including "p.s.t.", "5:4", and "3:2".

25

fl.

5:4

*p*

5:4

*pp*

5:4

*p*

m.v.

5:4

*p*

m.v.

cl.

5:4

*p*

pno.

25

s.p.

p.o.

5:4

*p*

5:4

*p*

p.o.

m.v.

5:4

*p*

p.o.

m.v.

5:4

*p*

s.p.

vln./vla.

vlc.

5:4

*p*

5:4

*p*

30 2.04

fl. n.v.

cl.

pno.

vln./vla. p.o.  
n.v. pp mp p long glissandi  
always as smooth  
as possible

vcl. p.o.  
n.v. mp p



36

fl.

*mp*

*p*

3:2

5:4

3:2

cl.

pno.

*mp*

36

vln./  
vla.

*mp*

*p*

5:4

3:2

vcl.

*mp*

5:4

*mp*

41

fl.

cl.

pno.

*p* *pp* *ppp*

Detailed description: This block contains the first three staves of the musical score. The flute (fl.) and clarinet (cl.) staves are mostly empty, with small black squares indicating rests. The piano (pno.) part consists of two staves. The right-hand staff has a melodic line starting with a sharp sign, followed by eighth notes and a dotted quarter note. Dynamic markings *p*, *pp*, and *ppp* are placed below the notes. The left-hand staff has rests. A long horizontal line with a vertical end cap spans across the piano part from the first measure to the end of the system.

41

vln./  
vla.

vcl.

*mp*

Detailed description: This block contains the last two staves of the musical score. The violin/viola (vln./vla.) staff has a melodic line starting with a sharp sign, followed by a dotted quarter note and a half note. A dynamic marking *mp* is placed below the first note. The staff then contains rests. The cello (vcl.) staff has a melodic line starting with a sharp sign, followed by a dotted quarter note and a half note. A dynamic marking *mp* is placed below the first note. The staff then contains rests. A long horizontal line with a vertical end cap spans across the violin/viola part from the first measure to the end of the system. A long horizontal line with a vertical end cap spans across the cello part from the first measure to the end of the system.

47

fl.



A single staff for the flute instrument, containing six measures of whole rests.

cl.




A single staff for the clarinet instrument, containing six measures of whole rests.

pno.



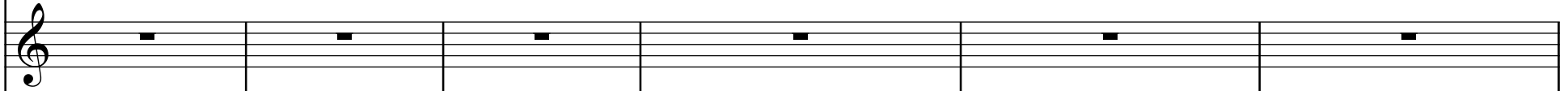
Piano part consisting of two staves (treble and bass clef). The treble staff contains a melodic line starting at measure 4 with a half note G4 (sharp), followed by quarter notes A4, B4, and C5, then a dotted quarter note B4, and finally quarter notes A4 and G4. The bass staff contains whole rests for all six measures. The dynamic marking *mp* is placed above the first note in measure 4.

ped. 

A horizontal line indicating the sustain pedal is held down from the beginning of measure 4 to the end of measure 6.

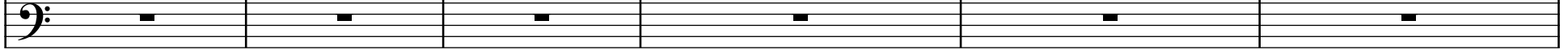
47

vln./  
vla.



A single staff for the violin or viola instrument, containing six measures of whole rests.

vlc.



A single staff for the cello instrument, containing six measures of whole rests.

53

fl.

cl.

pno.



53

as smooth as possible!

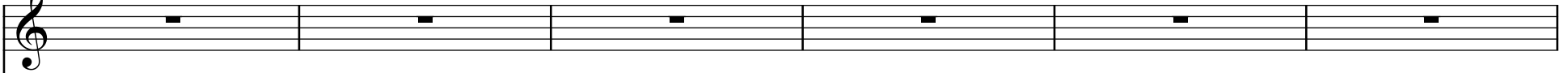
vln./  
vla.

vlc.

59

4.04

fl.




Flute staff with rests in measures 59-64.

cl.



Clarinet staff with rests in measures 59-64.

pno.




Piano staff with notes and dynamics: *mp*, *p*, *pp*. Includes a triplet of eighth notes marked *3:2*.

ped. 

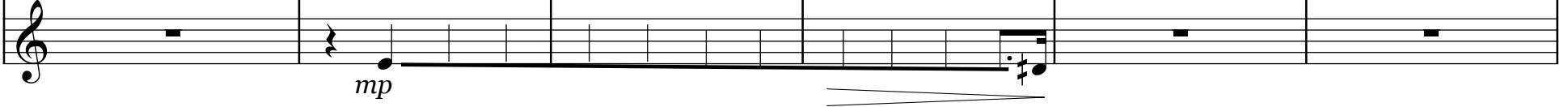
59

vln./vla.



Violin/Viola staff with notes and dynamics: *mp*.

vlc.



Violoncello staff with notes and dynamics: *mp*.

65

fl.

cl.

pno.

65

vln./  
vla.

vlc.

*mp*

*mp*

# Artificial Environment No.2

1  $\text{♩} = 60$   
4 6.00  
4 click starts

fl. *m.v.* *pp*  
*(sempre)*

bass clarinet  
4

pno.  
4

1  $\text{♩} = 60$   
4 click starts  
4

vln./vla. *p.s.t.* *m.v.* *pp*  
*(sempre)*

vcl.  
4

8

fl.

m.v.

pp

cl.

pno.

vln./vla.

p.o.  
n.v.

ppp

vcl.

p.s.p.  
n.v.

0  
(sempre)

ppp



12

fl.

cl.

pno.

with e-bow

ppp

pedal as necessary

vln./  
vla.

12

p.s.t.

vlc.

ppp

16 *p.v.*

fl.

*pp*

*m.v.*

*p*

cl.

pno.

16

vln./  
vla.

*p.o.*  
*n.v.*

*pp*

*p.s.t.*

vlc.

Musical score for page 17, featuring parts for flute (fl.), clarinet (cl.), piano (pno.), violin/viola (vln./vla.), and cello (vlc.). The score includes dynamic markings such as *p*, *p.v.*, *p.o.*, *p.s.t.*, and *m.v.*, along with performance instructions like hairpins and slurs.

The score is divided into five systems. The first system includes parts for flute and clarinet, with a dynamic marking of *p* and a performance instruction *p.v.* above the flute staff. The second system includes parts for piano (treble and bass clefs), with dynamic markings of *p*. The third system includes parts for violin/viola (treble clef) and cello (bass clef), with dynamic markings of *p* and performance instructions *p.o.*, *p.s.t.*, and *m.v.*. The fourth system includes parts for violin/viola and cello, with dynamic markings of *p* and performance instructions *p.o.*. The fifth system includes parts for violin/viola and cello, with dynamic markings of *p* and performance instructions *p.s.t.* and *m.v.*.

24 *m.v.*

fl.

*pp*

cl.

pno.

24 *pp*

vln./vla.

vlc.

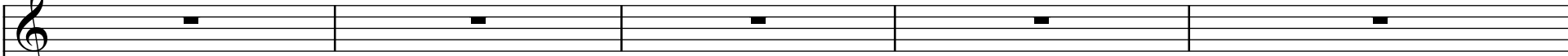
*pp*

Detailed description: This is a page of a musical score for measures 24 through 27. The score is arranged in five systems, each with a different instrument. The first system is for the flute (fl.), the second for the clarinet (cl.), the third for the piano (pno.), the fourth for the violin/viola (vln./vla.), and the fifth for the violoncello (vlc.). Measure 24 is marked with a fermata and a dynamic of *m.v.* (mezzo-vivo). The flute part has a long note with a fermata, while the clarinet, piano, violin, and viola parts have rests. In measure 25, the flute part continues with a long note, and the dynamic changes to *pp* (pianissimo). The clarinet part has a short note, and the piano, violin, and viola parts have rests. In measure 26, the flute part continues with a long note, and the dynamic remains *pp*. The clarinet part has a short note, and the piano, violin, and viola parts have rests. In measure 27, the flute part continues with a long note, and the dynamic remains *pp*. The clarinet part has a short note, and the piano, violin, and viola parts have rests. The piano part consists of two staves (treble and bass clef) with rests in all measures. The violin/viola part consists of two staves (treble and bass clef) with rests in all measures. The violoncello part consists of two staves (treble and bass clef) with rests in all measures.

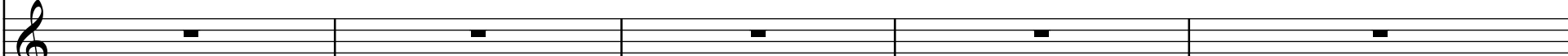
28

8.00

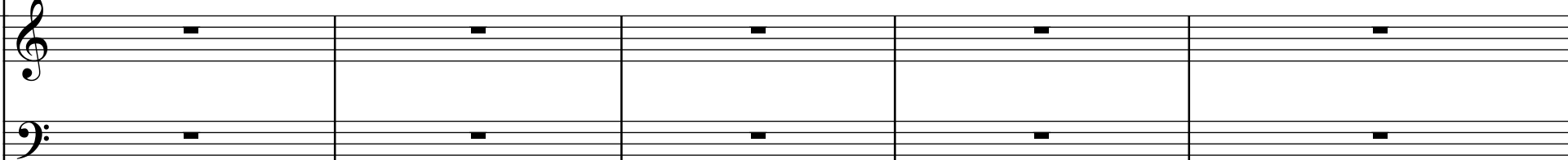
fl.



cl.



pno.

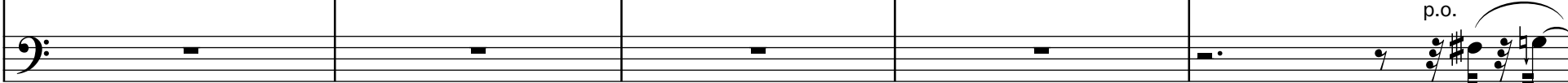


28

vln./  
vla.



vlc.



p.o.

*mp*

33

fl.

cl.

pno.

33

vln./  
vla.

vlc.

35

fl.

cl.

pno.

35

viola  
p.o.

vln./  
vla.

vlc.

37

fl.

p.o.

*pp*

3:2

*p*

7:4

cl.

pno.

37

vln./vla.

7:4

7:4

7:4

3:2

7:4

*mp*

vlc.

7:4

7:4

7:4

3:2

7:4

*mf*



39

fl.

5:4

7:4

7:4

7:4

7:4

7:4

clarinet in Bb

*mp*

*p*

pno.

39

vln./vla.

5:4

7:4

7:4

*mf*

7:4

7:4

7:4

vcl.

5:4

7:4

7:4

*f*

7:4

7:4

7:4

Detailed description of the musical score: The score is for measures 39-42. It features five staves: Flute (fl.), Clarinet in Bb (cl.), Piano (pno.), Violin/Viola (vln./vla.), and Cello (vcl.).  
- Flute: Measures 39-42. Measure 39 has a 5:4 time signature for the first two measures, followed by 7:4 for the rest. Dynamics include *mp* and *p*.  
- Clarinet in Bb: Measures 39-42. Starts with a rest in measure 39. Dynamics include *mp* and *p*.  
- Piano: Measures 39-42. Rests in all measures.  
- Violin/Viola: Measures 39-42. Measure 39 has a 5:4 time signature for the first two measures, followed by 7:4. Dynamics include *mf*.  
- Cello: Measures 39-42. Measure 39 has a 5:4 time signature for the first two measures, followed by 7:4. Dynamics include *f*.  
- Rhythmic patterns: All string and woodwind parts feature complex rhythmic patterns with many beamed notes and rests, often spanning across bar lines.

+ 12 seconds of tape

41

fl.

cl.

pno.

vln./  
vla.

vlc.

6:4

*poco*

6:4

*poco*

6:4

*poco*

6:4

*poco*

Detailed description: This is a page of a musical score for five instruments: flute (fl.), clarinet (cl.), piano (pno.), violin/viola (vln./vla.), and viola (vlc.). The score is in G major and 6/8 time. Measure 41 is marked with a '41' and a fermata. A bracket above the flute and clarinet parts indicates a 6:4 time signature change starting in measure 42. The word 'poco' is written below the flute and clarinet parts in measure 42. The piano part consists of two staves (treble and bass clef) with a few notes in measure 42. The violin/viola and viola parts also have a 6:4 time signature change and 'poco' marking in measure 42. The page number '24' is at the bottom right.

# Artificial Environment No.3

1 **4/4**  $\text{♩} = 60$  10.28  
click starts Blend with each other and the tape

fl. alto flute in G

cl. clarinet in Bb

pno.

vln./vla. violin p.s.t.

vcl. p.s.t.



22

fl.

4

p.v.

pp

n.v.

cl.

4

pp

pno.

4

4

22

vln./  
vla.

4

p.s.p.

pp

p.o.

vcl.

4

p.s.p.

pp

p.o.

Detailed description: This page of a musical score covers measures 22 to 25. It features five staves: Flute (fl.), Clarinet (cl.), Piano (pno.), Violin/Viola (vln./vla.), and Viola (vcl.). The piano part consists of two staves (treble and bass clef). The woodwinds and strings play a melodic line in measure 22, which is then sustained for four measures (measures 23-25). The flute and clarinet parts include dynamic markings of *pp* and *p.v.* (pizzicato). The piano part features a four-measure rest in measures 23-25. The violin and viola parts include dynamic markings of *pp* and *p.s.p.* (pizzicato). The viola part includes a dynamic marking of *p.o.* (pizzicato). The score is written in treble clef for the upper staves and bass clef for the lower staves. The key signature has one sharp (F#).

31

fl.

pp

cl.

pno.

pp

vln./  
vla.

pp

vlc.

pp

37 12.28

fl. *pp*  $\text{3:2}$  *p*  $\text{5:4}$  *p* p.v.

cl. *pp*  $\text{3:2}$  *p*  $\text{5:4}$  *p*

pno. *pp*  $\text{3:2}$   $\text{5:4}$  *p*

vln./vla. *pp*  $\text{3:2}$  *p*  $\text{5:4}$  *p* p.s.p. p.o.

vlc. *pp*  $\text{3:2}$  *p*  $\text{5:4}$  *p* p.s.p. p.o.

43

fl.

p.v.

5:4

*mp*

*p*

4

cl.

p.v.

*p*

4

pno.

5:4

*mp*

4

4

43

vln./vla.

p.o.

p.v.

5:4

*mp*

*p*

4

vcl.

p.o.

p.v.

5:4

*mp*

4

Detailed description of the musical score: The score consists of five staves. The top staff is for Flute (fl.), the second for Clarinet (cl.), the third and fourth for Piano (pno.), and the bottom two for Violin/Viola (vln./vla.) and Violoncello (vcl.). Measure 43 is marked with a 5:4 ratio and a *mp* dynamic. The flute and clarinet parts feature a melodic line with a slur and a fermata, marked with *p.v.* and *p*. The piano part has a similar melodic line with a slur and a fermata, marked with *mp*. The violin/viola and cello parts have a similar melodic line with a slur and a fermata, marked with *p.o.*, *p.v.*, and *mp*. Measure 44 is marked with a 5:4 ratio and a *p* dynamic. The flute and clarinet parts feature a melodic line with a slur and a fermata, marked with *p.v.* and *p*. The piano part has a similar melodic line with a slur and a fermata, marked with *mp*. The violin/viola and cello parts have a similar melodic line with a slur and a fermata, marked with *p.o.*, *p.v.*, and *mp*. Measure 45 is marked with a 5:4 ratio and a *p* dynamic. The flute and clarinet parts feature a melodic line with a slur and a fermata, marked with *p.v.* and *p*. The piano part has a similar melodic line with a slur and a fermata, marked with *mp*. The violin/viola and cello parts have a similar melodic line with a slur and a fermata, marked with *p.o.*, *p.v.*, and *mp*. Measure 46 is marked with a 5:4 ratio and a *p* dynamic. The flute and clarinet parts feature a melodic line with a slur and a fermata, marked with *p.v.* and *p*. The piano part has a similar melodic line with a slur and a fermata, marked with *mp*. The violin/viola and cello parts have a similar melodic line with a slur and a fermata, marked with *p.o.*, *p.v.*, and *mp*.



52

fl. n.v. 3:2 *p*

cl. n.v. 3:2 *p*

pno. 3:2 *p*

52

vln./vla. p.s.t. n.v. 3:2 *p* p.o. 3:2 *p*

vcl. p.s.t. n.v. 3:2 *p*

Detailed description of the musical score: The score is for measures 52-55. It features five staves: Flute (fl.), Clarinet (cl.), Piano (pno.), Violin/Viola (vln./vla.), and Cello (vcl.).  
- Flute: Measure 52 has a 3:2 ratio and a piano (*p*) dynamic. Measures 53-55 feature a melodic line with a 3:2 ratio and piano (*p*) dynamic, including a *p.o.* instruction in measure 53.  
- Clarinet: Similar to the flute, with a 3:2 ratio and piano (*p*) dynamic.  
- Piano: The right hand has a 3:2 ratio and piano (*p*) dynamic. The left hand has a 3:2 ratio and piano (*p*) dynamic.  
- Violin/Viola: Measure 52 has a 3:2 ratio and piano (*p*) dynamic. Measure 53 has a 3:2 ratio and piano (*p*) dynamic, with a *p.o.* instruction. Measure 54 has a 3:2 ratio and piano (*p*) dynamic.  
- Cello: Measure 52 has a 3:2 ratio and piano (*p*) dynamic. Measure 53 has a 3:2 ratio and piano (*p*) dynamic.  
- Performance instructions: *n.v.* (no vibrato) is indicated for the flute, clarinet, and cello in measures 52 and 53. *p.s.t.* (pizzicato staccato) is indicated for the violin/viola in measures 52 and 53. *p.o.* (pizzicato) is indicated for the violin/viola in measure 53. *p* (piano) is indicated for all parts in measures 52 and 53. *3:2* ratios are indicated for the flute, clarinet, piano, violin/viola, and cello in measures 52 and 53.

58

fl.

cl.

pno.

5:4 mp

3:2 p

5:4 mp

pp

3:2 p

5:4 mp

pp

3:2 p

58

vln./vla.

vcl.

p.s.p.

p.o.

3:2 p.s.t.

5:4 mp

pp

p

5:4 p.s.p.

p.o.

3:2 p.s.t.

5:4 mp

pp

p



70

fl. *n.v.*

2

*p*

cl.

2

pno.

2

2

70

vln./vla. *p.s.p.* *n.v.*

2

*p*

vcl. *p.s.p.* *n.v.*

2

*p*

77

fl.

cl.

pno.

77

vln./  
vla.

vcl.

3

3

3

3

3

>

# Artificial Environment No.4

1 16.00  $\frac{4}{4}$   $\text{♩} = 60$  17.12 click starts

flute in C

fl. *f* 3:2

bass clarinet

cl. *mf* *f* *f* *mp* 3:2 3:2 3:2

pno.

keep quite a dry sound, maybe best without pedal 3:2

8

$\frac{4}{4}$  click starts

viola

p.o. *mp* *f* *mp* 3:2 3:2

vln./vla.

vlc. p.o. *mp* *mp* *mp* 3:2 3:2 3:2

36

6

fl. *p* *mf* *p* *p*

cl. *f* *mp* *mf* *mp* *p* *p* *f* *p* *p* *p* *mf* *mf*

pno. *mp* *mf* *mf* *f* *mf* *mf*

8

6

vln./vla. *p* *mf* *f* *mf* *mf* *s.p.*

vcl. *p* *f* *mp* *mf* *mp* *p* *p* *mf* *f* *f* *mf* *mf* *mf* *s.p.*

9

fl.

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

cl.

*p* *mp* *p* *p* *p*

pno.

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

vln./vla.

*p* *p.o.* *mf* *p* *mf* *ff*

vlc.

*p.o.* *mf* *mp* *p* *p* *p.o.* *mf* *ff*

3:2 3:2 3:2 3:2 3:2 3:2

s.p.



12

fl. *ff* *p* *pp* *p*

cl. *<mf ff* *f* *mf* *p* *mp*

pno. *ff* *mf* *mf* *ff* *mp* *mf*

12 vln./vla. *ff* *ff* *mp* *pp* *mf* *mp* *mf* *s.p.* *p.o.*

vcl. *mf* *ff* *f* *mf* *ff* *mp* *mf* *mp* *mf* *s.p.* *p.o.*



18

fl.

cl.

pno.

18

vln./vla.

vlc.

21

fl.

*p*

*p*

*pp*

*mf*

cl.

*p*

*f*

*p*

pno.

*mf*

*f*

*mp*

*mf*

21

vln./vla.

*p*

vcl.

*pp*

*mp*

*f*

*mp*

*mp*

24

fl.

3:2 3:2 *f* 3:2

cl.

3:2 3:2 *f* *f* 3:2

pno.

8

3:2 *f* *mf* 3:2 3:2

24

vln./vla.

p.o. 3:2 3:2 *mf* *mf*

3:2 3:2 3:2 3:2 *f* *mf*

vlc.

# Artificial Environment No.5

1  $\frac{4}{4}$   $\text{♩} = 60$   
19.52  
click starts

fl. flute in C

cl. bass clarinet

pno.

8

1  $\frac{4}{4}$  click starts

vln./vln. violin

vla. s.p.  $\text{mf}$

vlc.

5

fl.

m.v.

n.v.

3:2

3:2

p

3:2

cl.

mp

pno.

mf

3:2

pp

8

vln./vla.

5

s.p.

pp

vcl.

s.t.

p.o. pizz.

mp

5:4

pp

10

fl. *mp* > *p.v.* < *p* >

cl. *pp* *mp* >

pno. *p* ped. \_\_\_\_\_

vln./vla. *p* *s.t. pizz.* *arco p.o.* *p* *pp* > *5:4*

vcl. *p* *arco s.p.* *3:2* *p.o.* *5:4* < *mp* >



15

fl. *m.v.* *n.v.*  
*p* *pp*  
 5:4 7:4

cl. *mp*  
*p* *ppp* *pp*  
 3:2 7:4 5:4

pno.  
*pp*  
 7:4

8

15

vln./vla. *s.t.*  
*<mp>* *p* *pp* *ppp*  
 5:4 3:2 p.s.t. p.s.p. s.p.

vlc. *p* *pp* *p.o.* *p.s.t.*  
 6:4 5:4 5:4 *<p>*  
 p.o. p.s.t.

19

fl.

mf

cl.

air

3:2

5:4

3:2

3:2

pp >

< pp >

ppp >

mp

mp >

< pp >

pno.

mp

mp

pp

3:2

p

pp

p

8

ped.

vln./vla.

19

p.o. pizz.

pp

p.s.p.

mf

p.o. p.v.

mp

p.s.p. n.v.

3:2

p

vcl.

p.o. p.v.

mp

n.v.

pp

p.s.p.

< p >

< p >

23

fl. *p.v.* *n.v.* *p* *pp*

cl. *mp* *pp*

pno. *p* *mp* *pp*

ped.

vln./vla. *p.o.* *p.v.* *p.s.p.* *n.v.* *p* *p* *pp*

vcl. *p.o.* *p.v.* *p.s.p.* *n.v.* *p* *p* *pp*

Detailed description of the musical score: The score is for measures 23, 24, and 25. The flute part (fl.) has a melodic line with dynamics *p* and *pp*, and phrasing slurs. The clarinet part (cl.) has a more rhythmic accompaniment with dynamics *mp* and *pp*. The piano part (pno.) features chords and arpeggiated figures with dynamics *p*, *mp*, and *pp*. The violin/viola (vln./vla.) and cello (vcl.) parts have similar melodic lines with dynamics *p* and *pp*. A piano pedal line is indicated by a horizontal line with a vertical bar at the end of measure 23.

27 21.52

fl. *pp* 3:2 7:4 pp 5:4 *p*

cl. 7:4 *pp* p

pno. p ped. mp

vln./vla. p.s.p. n.v. 7:4 *pp* p.o. 5:4 *p*

vcl. p.o. n.v. 3:2 *pp* p.o. 5:4 *p*

32

fl.

cl.

pno.

8

vln./vla.

vcl.

32

5:4

5:4

5:4

5:4

6:4

7:4

5:4

5:4

*p*

*p*

*mp*

*pp*

*p*

*p*

*mp*

*mp*

air

p.s.t.

p.s.t.

37

fl.

cl.

pno.

8

pp

pp

37

vln./  
vla.

p.s.t.

pp

p.s.t.


vlc.

pp


43

+ 30 seconds of tape

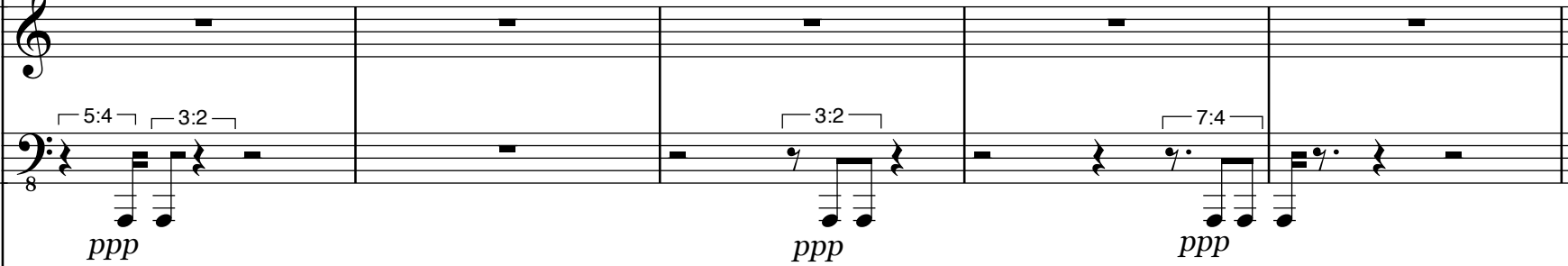
fl.



cl.



pno.




ppp

ppp

ppp

43

vln./  
vla.



vlc.

