

Niki Zohdi

Memphis Facula
2024

for flutes, cello & piano

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(2024)

for

*flute (+ alto flute & bass flute), cello &
piano (with preparations)*

Duration: c. 10 minutes

The *Memphis Facula* is a so-called 'ghost crater' on the largest of Jupiter's moons, *Ganymede*. Back many years ago, a crater was created on *Ganymede* which was the result of a huge impact. Since then, the crater has filled up and become almost level; however, a relic of the crater is still present and changes depending on various factors. Sometimes, the crater is completely invisible and sometimes it is more visible - there is always a reminder that *something* is there.

In this piece, I explore presence and distortion in several dimensions. Much of the pitch material in the piece is derived from Dominique Phinot's *Lamentations* from 1548. This pitch material goes through numerous manipulations making it very distant from the original and therefore very distorted, sometimes turning into unpitched noise. This piece also explores distortion through volume. Various quieter textures and sounds are obscured by other instruments playing at much louder volume, and this interplay between volume, obscuration and distortion within the instruments is the 'ghost crater' which fashions the formal structure of the piece.

Memphis Facula was completed in July, 2024 for the Marsyas Trio and their concert at the University of Leeds in October, 2024.

Performance directions

General

Arrows signify a gradual change between states

All **grace notes**, **tremolandi** & **trills** are as fast as possible

Grace notes always on the beat, not before

ord. - cancels previous direction

Dotted slurs between noteheads are to be assumed as gradual changes between states

Changes without dotted slurs are to be assumed as sudden changes between states

All other directions are noted on the score

Accidentals are valid only for the note they precede unless that note is immediately repeated

Hollow triangle noteheads signify playing highest note possible

Score is **untransposed** and in C

Cello

bb - behind bridge

m - bow on the bridge

m_{sp} - molto sul pont.

sp - sul pont.

st - sul tastò

m_{st} - molto sul tastò

sfin. - bow as close to fingers as possible

clt. - col legno tratto

1/2 clt - 1/2 col legno tratto

a.ord. - arco ordinario (cancels col legno indications)

 - extreme heavy bow pressure; scratch tone (no pitch)

 - heavy bow pressure (between normal and extreme); 1/2 scratch tone (little pitch)

 - normal bow pressure (cancels previous pressure indication)

◈ - 1/2 harmonic pressure (left hand)

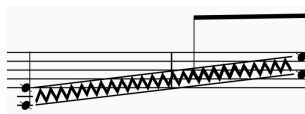
◈ - full harmonic pressure (left hand)



- random circular bowing from ord. to behind the bridge

 - levels of vibrato from big to small

M - multiphonic



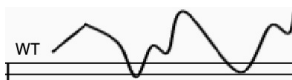
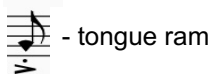
- non-linear glissando. Gliss. with extreme vibrato

A tin foil 'mute' is needed. Make a mute which fits tightly around the bridge of the cello. This needs to be easily applied and removed.

Flutes (flute, alto flute & bass flute)

◊ - 1/2 air; 1/2 pitch (unstable)

◊ - air tone

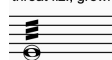


- whistle tone, moving between random unstable pitches



- vocalisation around indicated register. Volume follows the size of the black block

throat flz.; growl



- growl sound using throat flutter

Piano



- palm cluster in indicated register

List of equipment & preparations:

- two large marbles
- vibrating toothbrush
- two e-bows
- thick square piece of metal
- drinking glass (preferably with a thick base)
- two long pieces of yarn

Area numbers inside piano:



To the Marsyas Trio

Memphis Facula

Niki Zohdi

$\text{♩} = 72$

Flute

air —————> pitch

without discernable pitch unless indicated. Aggressive & physical

Violoncello

fff

mf

fff

Piano

ppppp

as quiet as possible. It is acceptable if some pitches fail to sound. Do not attempt to blend with cello & flute - play as if in the distant background.

5:3

7:4

Red.



4

Fl.

pitch —————> air

5:3

mf

p

f

mf

p

mf

f

Vc.

mf

fff

mf

fff

Pno.

6:4

12:9

5:4

Red.

The image shows a musical score for three instruments: Flute (Fl.), Violoncello (Vc.), and Piano (Pno.).

- Flute (Fl.):** The staff is in treble clef. It starts with a whole rest, followed by a quarter rest, then a half note G4 with a slur and a fermata. A dynamic marking *p* is below the staff. Above the staff, there is a slur with the word "air" and an arrow pointing to the right, labeled "pitch".
- Violoncello (Vc.):** The staff is in bass clef. It starts with a whole rest, followed by a quarter rest, then a half note G2 with a slur and a fermata. A dynamic marking *mp* is below the staff. Above the staff, there is a slur with the word "msp" and an arrow pointing to the right, labeled "pitch". There are also some markings like "II/III" and "3" above the staff.
- Piano (Pno.):** The staff is in bass clef. It starts with a whole rest, followed by a quarter rest, then a half note G2 with a slur and a fermata. A dynamic marking *f* is below the staff, and a *ppp* marking is further to the right.

13

Fl.

air ----- pitch

p *mp*

ord. III/IV msp

Vc.

fff *mf*

Pno.

ppp *mp*

7:4 5:4

Red.



15 - pitch

Fl.

mf *p* *f*

3

mst

Vc.

ppp

Pno.

ppp

5:4 7:4

p

Red.

16

Fl. *vocalisation*
mp *fff* *mp* *fff*

Vc. *ord. III* *1/2 clt* *mtp* *ord.* *1/2 clt* *mtp*
mf *7:4* *7:4* *ppp* *mf* *7:4* *7:4* *7:4* *ppp*

Pno. *alternations as quick as possible between all pitches in indicated range; barely audible*
ppppp

dampen all indicated strings with palm of hand

And.

18

Fl. *sim.*
mf *fff*

Vc. *ord. IV* *1/2 clt* *mtp* *7:4* *7:4* *ppp* *(1/2 clt)* *p*

Pno. *f* *ppp* *release hands* *almost inaudible; it is fine if pitches do not sound* *ppppp*

♩ = 60

20

Fl.

Vc.

Pno.

f *p* 7:4 7:4

→ cilt → 1/2 cilt
→ msp

> *ppp* *p*

Red.



21

Fl.

Vc.

Pno.

5:4

f *fff* *ppp*

(non vib.),
as quiet and fragile
as possible; falling off
pitch is encouraged

place tin foil 'mute'
around bridge

→ cilt → a.ord.

ppp *fff*

3 7:4 3 7:4

fff

23

Fl.

Vc.

Pno.

5:3

5:4

gliss.

gliss.

f

p

ppppp

3

ppppp

20.



26

Fl.

Vc.

Pno.

8:7

7:5

behind bridge, non vib.

fff

fff

ord. II/III

sp

ppp

29 Take Alto Flute

Fl. $\frac{7}{16}$ $\frac{2}{4}$ $\frac{3}{8}$ $\frac{2}{4}$

f p mf

---> sp ---> ord. ---> sp

Vc. $\frac{7}{16}$ $\frac{2}{4}$ $\frac{3}{8}$ $\frac{2}{4}$

8:7 5:4 5:3

ord. sp ord.

mp ppp mp

Pno. $\frac{7}{16}$ $\frac{2}{4}$ $\frac{3}{8}$ $\frac{2}{4}$

9:7 11:7

place thick piece of metal on strings in area 1, around 4cm from dampers



32

A. Fl. $\frac{2}{4}$ $\frac{2}{4}$ $\frac{2}{4}$ $\frac{2}{4}$

seamless transitions between pitch quality

3 3 5:4

p mf p p

ord. sp

Vc. $\frac{2}{4}$ $\frac{2}{4}$ $\frac{2}{4}$ $\frac{2}{4}$

5:4

sp ord.

ppp mp

Pno. $\frac{2}{4}$ $\frac{2}{4}$ $\frac{2}{4}$ $\frac{2}{4}$

p p

34

pitch -----> 1/2 pitch

A. Fl.

mf *p* *p* **rit.**

Vc.

-> ord.

-> sp -----> ord.

> *ppp* *mp*

Pno.

p *p* *ppp*

p *ppp*



36 → ♩ = 52

A. Fl.

mp *p* WT

Vc.

sp -----> ord.

ppp *mf* *p* *f*

ord. -----> sp

Pno.

f *ppp* sempre, always alternating between hands

f *ppp* sempre, always alternating between hands

38

A. Fl.

WT

Vc.

1/2 clt

a.ord.

1/2 clt

sempre, not in sync with dynamic changes

p

f

p sempre, not in sync with timbral changes

Pno.

(tr)

(tr)



41

A. Fl.

WT

Take Flute

Vc.

a.ord.

msp

I/II

gliss

(msp)

p

Pno.

fff

ppp

fff

ppp

fff

ppp (as per b. 36)

(tr)

(tr)

3

44

Fl.

Vc.

Pno.

ord.

behind bridge

randomly bow across all four strings, not uniformly

fff

p

47

Fl.

Vc.

Pno.

mp

p

mp

1/2 clt

a.ord

ppp

fff

ppp

fff

220 _____

♩ = 68 (♩ = 138)

Take Bass Flute

Fl. 56

p *mp*

Vc.

mst
mix clt and 1/2 clt; very light pressure
transition between trem. & non trem.
and vib. & non. vib.

ppp *p* *ppp*

Pno.

5:4



60

B. Fl.

8:7

p

(mst) ———— > sfin. mst ———— > msp ———— > mst

Vc.

p *ppp* *p* *ppp* *p*

9:7

Pno.

place electric toothbrush on its side
in area 3. Ensure it is switched off
until indicated

f

rit. $\text{♩} = 60$

63

B. Fl.

Vc.

Pno.

(mst)-----msp-----mst-----behind bridge

9:8 9:6 3

ppp p ppp p

depress keys without them sounding

switch electric toothbrush on
(until indicated to switch off)

Red.



Take Flute

$\text{♩} = 60 (\text{♩} = 120)$

66

B. Fl.

Vc.

Pno.

7" 7" 7"

remove tin foil 'mute'

switch electric toothbrush off;
thread one string of yarn through A0 and one through A#1

68

FI.

air - - - - - pitch

vocalisation

fff *mp* *fff*

(approximate resultant pitches)

ord.
II [3+8+13+5]

II [4+11+7+3]

Pno.

Detailed description: This musical score block covers measures 68 to 70. The Flute (FI.) part is in 4/4 time. Measure 68 starts with a melodic line in the treble clef, marked with a dashed line for 'air' and a solid line for 'pitch'. The piano part (Pno.) is in 4/4 time, with a bass line in the bass clef. The score includes dynamic markings: *fff* (fortississimo) and *mp* (mezzo-piano). A section labeled 'ord. II [3+8+13+5]' is indicated. Approximate resultant pitches are shown for the flute and piano parts.



71

FI.

mp *fff* *mp*

Vc.

I [6+11+5]

Pno.

Detailed description: This musical score block covers measures 71 to 73. The Flute (FI.) part is in 4/4 time, with a melodic line in the treble clef. The Violoncello (Vc.) part is in 4/4 time, with a melodic line in the bass clef. The Piano (Pno.) part is in 4/4 time, with a bass line in the bass clef. The score includes dynamic markings: *mp* (mezzo-piano) and *fff* (fortississimo). A section labeled 'I [6+11+5]' is indicated.

74

Fl.

Vc.

Pno.

randomly alternate between passing yarn slowly through A0 & A#1 strings. Use light enough pressure so that feint pitches are produced

sempre

II [5+9+13+4]



77

Fl.

Vc.

Pno.

III [3+8+13+5]

80

Fl.

ord. -----> throat flz.; growl

mf ----- *fff*

Vc.

5:4

fff *fff* *fff*

Pno.

only pass yarn through A0 string ----->

increase in pressure ----- maximum pressure; scratch tone



83

Fl.

5" 7" 5"

throat flz.; growl

fff

Vc.

5" 7" 5"

mp ----- *fff*

Pno.

5" 7" 5"

pass yarn through A0 string

simile bb. 80-82



89 ♩ = 60

Fl.

Vc.

Pno.

continue scratch tone (as loud as possible)

92 $\text{♩} = 68$ ($\text{♩} = 136$)

Fl. *percussive aspirations during glissando*

Vc. *simile* *move randomly between mst and msp at different speeds* *7:5* *3*

Pno. *almost inaudible* *ppppp* *almost inaudible* *ppppp* *Red.*

97

Fl.

Vc. *9:7*

Pno. *play as quietly as possible so that the flute and cello overpower the piano* *7:4* *3* *11:8* *ppppp* *Red.*

98

Fl.

fff

sim.

5

Vc.

Pno.

8:5

9:8

Red.



99

Fl.

fff

sim.

5:4

Vc.

9:8

9:6

Pno.

7:4

7:5

6:5

3

5:4

5:3

Red.

101

Fl.

Vc.

Pno.

fff

simile

5:4

3

7:4

7:5

7:4



102

Fl.

Vc.

Pno.

fff

behind bridge

3

3

mp

111

Fl.

Vc.

Pno.

3/16 3/32 2/4

mp *f*

mp 6:7 *fff* *mf* 7:4

(ord.)

114

Fl. *fff* *sim.* *fff*

Vc. *fff* *mf* *fff* *mf*

Pno.

Switch both e-bows on until indicated otherwise

Red -----> to end

transition between trem. and non trem. -----> sp -----> ord. -----> sp -----> ord.

7:4 7:4 7:4 7:4



116

Fl. *fff* *fff* take bass flute

Vc. *fff* *mf* *fff* *mf*

Pno.

PPPPP

-----> sp -----> ord. -----> sp -----> ord.

7:4 7:4 7:4 7:4

118

B. Fl.

Vc.

Pno.

III/IV

fff



120

B. Fl.

Vc.

Pno.

ppp

122

B. Fl.

Vc.

Pno.

Measure 122: B. Fl. has a melodic line with slurs and triplets. Vc. has a melodic line with a tremolo effect. Pno. has a right-hand part with a single note.

Measure 123: B. Fl. has a melodic line with slurs and triplets. Vc. has a melodic line with a tremolo effect. Pno. has a right-hand part with a single note.



124

B. Fl.

Vc.

Pno.

Measure 124: B. Fl. has a melodic line with slurs. Vc. has a melodic line with a tremolo effect and a dynamic marking 'p'. Pno. has a right-hand part with a single note.

Measure 125: B. Fl. has a melodic line with slurs. Vc. has a melodic line with a tremolo effect and a dynamic marking 'p'. Pno. has a right-hand part with a single note.

Annotations for Vc. in measure 125:

- (a.ord.)
- clt
- a.ord., sempre
- mst
- sempre

126

B. Fl.

Vc.

Pno.

Measure 126: B. Fl. (treble clef, 4/4) has a whole rest. Vc. (bass clef, 4/4) has a whole note G2 with a slur. Pno. (grand staff, 4/4) has a right-pointing arrow.

Measure 127: B. Fl. (treble clef, 4/4) has a whole rest. Vc. (bass clef, 4/4) has a whole note G2 with a slur. Pno. (grand staff, 4/4) has a right-pointing arrow.

Measure 128: B. Fl. (treble clef, 3/4) has a whole rest. Vc. (bass clef, 3/4) has a whole note G2 with a slur. Pno. (grand staff, 3/4) has a right-pointing arrow.



129

B. Fl.

Vc.

Pno.

small note: vocalised in any comfortable register

ppp

mst, flaut. a.ord.

ppp

Measure 129: B. Fl. (treble clef, 4/4) has a whole rest. Vc. (bass clef, 4/4) has a whole rest. Pno. (grand staff, 4/4) has a right-pointing arrow.

Measure 130: B. Fl. (treble clef, 4/4) has a whole note G4 with a slur. Vc. (bass clef, 4/4) has a whole note G2 with a slur. Pno. (grand staff, 4/4) has a right-pointing arrow.

Measure 131: B. Fl. (treble clef, 5/4) has a whole note G4 with a slur. Vc. (bass clef, 5/4) has a whole note G2 with a slur. Pno. (grand staff, 5/4) has a right-pointing arrow.

132

B. Fl.

Vc.

Pno.

sim.

ppp

Measure 132: B. Fl. (treble clef, 5/4 time) has a whole note G4. Vc. (bass clef, 5/4 time) has a whole note G2. Pno. (grand staff) has a sustained chord of G2, B2, D3 in the right hand and a whole note G2 in the left hand. Measure 133: B. Fl. has a whole note A4. Vc. has a whole note A2. Pno. has a sustained chord of A2, C3, E3 in the right hand and a whole note A2 in the left hand. Measure 134: B. Fl. has a whole note B4. Vc. has a whole note B2. Pno. has a sustained chord of B2, D3, F#3 in the right hand and a whole note B2 in the left hand. Measure 135: B. Fl. has a whole note C5. Vc. has a whole note C3. Pno. has a sustained chord of C3, E3, G3 in the right hand and a whole note C3 in the left hand.



136

B. Fl.

Vc.

Pno.

Remove marble from soundboard next to F#4 string.

Measure 136: B. Fl. has a whole rest. Vc. has a whole rest. Pno. has empty staves. Measure 137: B. Fl. has a whole rest. Vc. has a whole rest. Pno. has empty staves.

138

B. Fl. WT, as stable as possible **c.20"** *ppp*

Vc. **c.40"** *ppp*

Pno. Remove marble from soundboard next to F3 string; continue with both e-bows switched on **c.50"**



Vc.

Pno. Switch F#4 e-bow off leaving only the F3 e-bow on. **c.10"** Switch F3 e-bow off.