

Steve Antosca

elements ~ five transfigurations for cello and computer

flow $\simeq$ water drift $\simeq$ time float $\simeq$ cloud

pulse $\simeq$ air speak $\simeq$ night

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*flow $\simeq$ water drift $\simeq$ time float $\simeq$ cloud
pulse $\simeq$ air speak $\simeq$ night*

Composed for and Dedicated to Tobias Werner

Music technology designed by William Brent

Commissioned by The Fromm Music Foundation at Harvard University

World Premieres - National Gallery of Art West Garden Court November 16, 2014

American University Katzen Museum October 8, 2015

Washington, DC

Program Notes

elements ~ five transfigurations for cello and computer was commissioned by the Fromm Music Foundation at Harvard University. *elements* was composed for and is dedicated to cellist Tobias Werner, who premiered the composition. *elements* explores aspects of extended techniques and performance gestures, timbre, sonic characteristics and computer processing for the cello. William Brent developed the technology for *elements*, in close collaboration with the composer.

The music in *elements* blends these extended performance techniques with real-time computer processing. This interaction between performer and computer generates a sound environment where they become a unified and "essentially equal" instrument. The symbol $\simeq$ in the movement titles represents asymptotic equivalence, meaning that through their blending and transfiguration the sounds approach equivalency. They eventually become essentially equal, but are never the same. The symbol $\simeq$ can be read as "like".

The five movements of *elements* are

- flow* $\simeq$ *water*
- drift* $\simeq$ *time*
- float* $\simeq$ *cloud*
- pulse* $\simeq$ *air*
- speak* $\simeq$ *night*

Movement i. *flow* $\simeq$ *water* introduces multiple extended techniques in *elements*. These include harmonic glissandi, indeterminate pitch boxes, and extended glissando gestures both smooth and irregular. Exploitation of various bowing styles, placement and pressure are played with throughout *flow* $\simeq$ *water*.

Movements ii. *drift* $\simeq$ *time* and iii. *float* $\simeq$ *cloud* are nearly identical but several of the performance gestures are exchanged from one movement to the other, and the degree and style of computer processing differs in each movement.

Movement iv. *pulse* $\simeq$ *air* is a languorous exploration of pizz. notes, including snap or Bartok pizzicati and arpeggiated chords, which are altered through various computer processes.

Movement v. *speak* $\simeq$ *night* returns to some of the extended techniques from *flow* $\simeq$ *water* with a lengthy, mellifluous conclusion to *elements*.

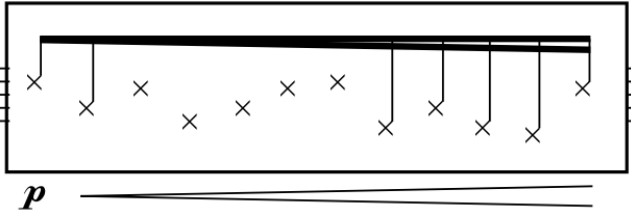
elements ~ five transfigurations for cello and computer was premiered by Tobias Werner and William Brent on Sunday, November 16, 2014 and an acoustic version was presented on Sunday, February 15, 2015 in the West Garden Court in the West Building of the National Gallery of Art in Washington, DC. The first performance of all five movements occurred at the inaugural CONNECTED: MUSIC IN THE MUSEUM concert at the American University Museum at the Katzen Arts Center.

PERFORMANCE NOTES

The performance of *elements* requires tuning the low C[♮] string to B[♭]. The performer's version of the score is notated as if the C string is not re-tuned, resulting in pitches on the C sting sounding a M2 lower.

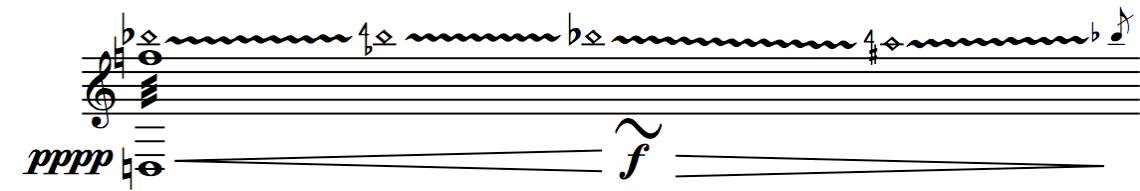
 indicates that the cellist should apply added pressure with the bow.

moving toward aggressive  *pizz.*

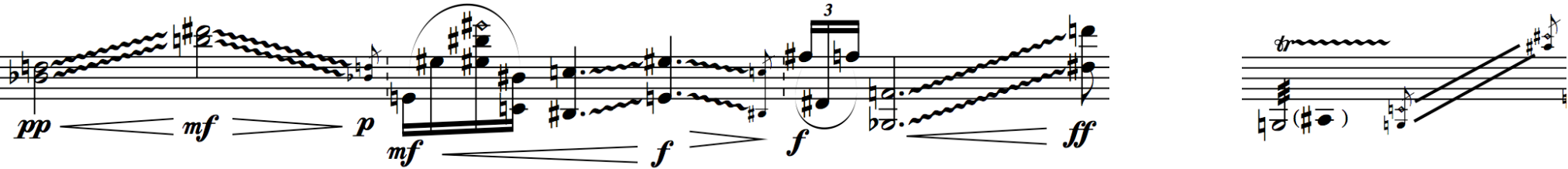


Boxed gestures allow the performer to play a non-specific set and number of notes, moving in the direction of the performance instructions for that box.

The tilde dynamic marking  directs the performer to vary the dynamic shape while moving toward the general dynamic direction indicated by the traditional dynamic marking.



There are glissandi of two types: rough where the slide is irregular in bowing and finger pressure, indicated by a wavy line, and smooth, as even as possible, indicated as a straight line.



Steve Antosca



elements ~ five transfigurations for cello and computer

The C string is tuned to B $\flat$
The score is at pitch

Composed for and Dedicated to Tobias Werner
Computer technology designed by William Brent
Commissioned by The Fromm Music Foundation at Harvard University

elements
flow $\approx$ water
always changing ~ always the same

Steve Antosca
2009-2010

Violoncello

Computer

30 seconds

shimmering and translucent
sul pont. alter the harmonic by quartertones +/_

Tune C string to B $\flat$

pppp

f

▲ COMPUTER #1 - ON

lo B $\flat$ drone with upper partials prominent;
slow evolving texture, shifting among the multichannel monitors

legatissimo, rapidly, very fast
ord.

II

8va- sul pont.

pp

3

3

5

III

f

mf

pp

ff

sustained by computer

f

6

5

f

mf

f

p

5

f

arco

sul pont.

pizz. p

sus.

▲ COMPUTER #2 - ON

▲ COMPUTER #3 - ON

▲ COMPUTER #4 - ON

COMPUTER #5 - ON ▲

6 seconds

4 seconds

3 seconds

2 seconds

5 seconds

ord.

6

poco rit.

sul pont.

1/4

ord.

a tempo

sul pont.

1/4

ord.

3

sul pont.

deliberate
sul pont.

5

5

5

non-trem.

5

3

ff

pp

f

p

ff

p

ff

ppp

▲ COMPUTER #7 transform 1

▲ COMPUTER #6 - ON

▲ COMPUTER #7 transform 2

▲ COMPUTER #7 transform 3

▲ COMPUTER #7 transform 4

7 seconds

27 seconds

ord.

arco

pp

mf

p

mf

f

f

ff

sffp

f

p

sus.

▲ COMPUTER #7 transform 5

▲ COMPUTER #8 - ON

Vc. *sul tasto* $\uparrow \downarrow$ *continuously variable*
 ord. *sul pont.* *8va-*
 ord. *sul D* *1/4*
rapidly, flowing, smoothly
 Cmpt. $\blacktriangle$ COMPUTER #9 – ON $\blacktriangle$ COMPUTER #9 – OFF $\blacktriangle$

Vc. *sul pont.* $\bullet = 60$
 wait for audio to end
 ord. *sul pont.*
 Cmpt. $\blacktriangle$ COMPUTER #10 – ON

Vc. *sul pont.* ord. *poco rit.*
 Cmpt.

Vc. *jete*
 Cmpt. $\blacktriangle$ COMPUTER #11 – ON

Vc.

6 3 5 7

ff *fff* *sfp* *pp* *mf* *p* *pp* *p* *pp*

slower, espressivo
sul pont. vary rate and pitch

secco ord. 3 secco

Cmpt. COMPUTER #14 – OFF ▲ ▲ COMPUTER #15 – ON

Vc.

port. *p* *p* *mf* *f*

sul D

sus.

Cmpt. ▲ COMPUTER #16 – ON

Vc.

5 7 6 6 6 6 6 6 3 3 7

p *f* *p* *f* *ff*

sus.

Cmpt. ▲ COMPUTER #17 – ON COMPUTER #17 – OFF ▲

Vc.

increase intensity *articulate jete* *articulate* *sul pont.* *ord.* *pp* *ff*

3 7 7 7 7 5 5 5 5 5

Cmpt. ▲ COMPUTER #18 – ON

Vc. *sfp* *ord.* *3* *ord.* *3* *pizz.* *f* *I* *arco* *sul pont.* *lighter, mellifluous* *ord.* *6* *6* *6* *6* *6* *subp* *p* *p* *p*

Cmpt. **▲ COMPUTER #19 – ON** **COMPUTER #19 – OFF ▲** **▲ COMPUTER #20– ON**

Vc. *p* *6* *6* *f* *6* *6* *6* *6* *I* *II* *6* *port.* *ff* *sul pont.* *sul tasto* *slower and open, espressivo* *3* *pizz.* *p*

Cmpt.

Vc. *arco* *sul pont.* *ord.* *3* *sul pont.* *pizz.* *sul tasto* *slower and open, espressivo* *3* *arco* *3* *mf* *f* *quickly* *3* *5* *5* *5* *5* *5* *3* *port.* *f*

Cmpt. **▲ COMPUTER #21 – ON** **▲ COMPUTER #22 – ON**

Vc. *mf* *3* *7* *7* *ff* *strum* *7* *mf* *arco* *3* *3* *IV* *III* *IV* *f* *7* *3* *ff* *sus.* *ff* *sul pont.*

Cmpt. **COMPUTER #22 – OFF ▲** **▲ COMPUTER #23– ON** **▲ COMPUTER #24– ON** **COMPUTER #24 – OFF ▲**

The C string is tuned to B $\flat$.
The score is at pitch.

elements

drift $\approx$ time

Steve Antosca
2011

20 seconds

muttering, barely audible at first, very fast

Violoncello

$\text{♩} = 60$ ord. *sul pont.*

ff *l. v.* *sub pp* *ff* *p* *f* *ff* *pp* *ff* *p* *n*

2 *l. v.* *sul pont.* *ord* *rapidly arco* *p* *f* *pizz.* *moving toward aggressive* *ff*

3 *a tempo pizz.* *mf* *ff* *mf* *3* *5* *f* *p* *f* *p* *f* *pizz.* *5* *6* *mf* *mf*

4 *l. v.* *freely as long a gliss. as possible sim.* *pp* *mf* *p* *accel. short bursts sim.* *mf* *ff* *arco* *pp* *ff* *pizz.* *arco* *sim.* *p* *ff*

5 *rough gliss.* *pp* *ff* *3* *5* *sul pont.* *p* *pp* *n*

30 seconds

6 sul pont. *f* *pp* *f* *mf* *f* *ff* *sub p* *smoothly* *f* *pp* *mf* *ff*

7 sul pont. *mf* *f* *sfp* *a breath, a sigh* *pp* *pp* *use either clef* *arco, ord.* *sul pont.* *p* *ff*

8 *arco, ord.* *p* *mf* *sfp* *arco* *mf* *f* *sfp* *ord.* *sul pont.* *ff* *p* *sul tasto* *pizz.* *pp* *f*

9 *a breath, a sigh* *pizz.* *f* *sfp* *f* *sfp* *very freely, espressivo* *secco* *softly* *rough gliss.* *slowly* *pp* *pp* *pp* *p* *pp* *sul pont.*

20 seconds

10 *a punta d'arco shimmering and delicate, fast and irregular* *sul G* *pppp* *f* *sliding artificial harmonic gliss.; poco accel and rit.* *pp* *n*

The C string is tuned to B $\flat$.
The score is at pitch.

elements
float = cloud

Steve Antosca
2012

30 seconds

aggressive, very fast, becoming slower and inaudible

arco = 60

arco

ord.

sul pont.

ff

mf

pp

ff

p

f

ff

ff

pp

p

n

Computer

▲ COMPUTER #1 - ON

▲ COMPUTER #2

30 seconds

pizz.

moving toward aggressive

2

I. v.

ord.

sul pont.

rapidly

arco

p

f

p

ff

Cmpt.

▲ COMPUTER #3

▲ COMPUTER #4

3

a tempo

pizz.

mf

ff

mf

3

5

f

p

f

p

f

p

p

mf

mf

Vc.

Cmpt.

▲ COMPUTER #5

4

I. v.

freely

as long a gliss. as possible

arco

sim.

f

pp

mf

p

mf

ff

pp

ff

arco

sim.

quickly

p

ff

Cmpt.

▲ COMPUTER #6

5

rough gliss.

pp

ff

3

5

p

pp

n

Vc.

Cmpt.

▲ COMPUTER #7

6 sul pont. *f* *p* *ff* *mf* *f* *ff* *ord.* *smoothly slowly* *sub p* *f* *smooth, floating* *pp* *mf* *ff*

Cmpt. ▲ COMPUTER #8

7 *mf* *f* *sfp* *a breath, a sigh* *p* *pp* *pp* *arco, ord.* *sul pont.* *p* *ff*

Cmpt. ▲ COMPUTER #9

8 *p* *mf* *sfp* *mf* *f* *sfp* *ord.* *sul pont.* *ff* *p* *sul tasto* *pizz.* *l. v.* *f*

Cmpt. ▲ COMPUTER #10 ▲ COMPUTER #11

9 *arco* *f* *sfp* *f* *sfp* *ff* *secco* *softly* *rough gliss.*

Cmpt. ▲ COMPUTER #12

10 *slowly, airy, floating in & out* *pp* *pp* *pp* *p* *pp* *ff* *pppp* *a punta d'arco shimmering and delicate, fast and light* *10 seconds* *fff*

Cmpt. ▲ COMPUTER #13 ▲ COMPUTER #14 – FADE OUT

The C string is tuned to B $\flat$.
The score is at pitch.

elements
pulse $\approx$ air

Steve Antosca
2014

24 seconds

ord. shimmering and translucent alter harmonic by quartertone +/_

sul pont.

sul pont., with the tip of the bow shimmering and translucent alter harmonic by quartertone +/_

pizz.

15

1

Cello

pp

ppp

f

ppp

ff

p

p

ff

p

ff

Computer

▲ COMPUTER #1

▲ COMPUTER #2

▲ COMPUTER #3

▲ COMPUTER #4

2

accumulation pizz.

3

sul pont., with the tip of the bow arco

pizz.

pizz.

pizz.

pizz.

roll r. h. fingers

sim.

fff

l.v.

mf

p

n

pp

p

mf

f

Cmpt.

▲ COMPUTER #5

▲ COMPUTER #6.1 transform1

▲ COMPUTER #6.2 transform2

▲ COMPUTER #6.3 transform3

▲ COMPUTER #6.4 transform4

3

pizz.

sim.

slowly

arco

very fast pizz.

decay pizz.

15

24

ff

pp

f

p

ff

Cmpt.

▲ COMPUTER #6.5 transform5

▲ COMPUTER #6.6 transform6

▲ COMPUTER #7

4

pizz.

slowly

pizz.

3

pizz.

jeté

6

slowly pizz.

arco

rit.

arco, sul pont.

pizz.

fff

l.v.

p

f

subp

f

p

pp

p

f

Cmpt.

▲ COMPUTER #8

▲ COMPUTER #9.1 transform1

▲ COMPUTER #9.2 transform2

▲ COMPUTER #9.3 transform3

60 seconds

5

Vc.

p *f* *mf* *f* *pp* *mf* *f* *ppp* *ff* *n*

sul D

1/4

pizz.

sul C arco/jeté

6 6 6 6 6 6

Cmpt.

▲ COMPUTER #10

▲ COMPUTER #11

60 seconds

6

Vc.

p *f* *p* *f* *p* *mf* *pp* *ff*

lyrical

3

IV III IV

sul pont.

6

Cmpt.

▲ COMPUTER #12

7

accumulation

pizz.

6

arco, sul pont.

6 seconds

10

3

arco, sul pont.

4 seconds

Vc.

fff *p* *f* *p* *f* *p* *fff* *p* *f* *p* *ff* *p*

l.v.

Cmpt.

▲ COMPUTER #13.1

▲ COMPUTER #13.2

8

pizz.

10

3

arco, sul pont.

4 seconds

10

3

5

arco, sul pont.

3 seconds

Vc.

fff *p* *f* *p* *ff* *p* *fff* *p* *f* *subpp* *f* *p* *ff* *p*

l.v.

Cmpt.

▲ COMPUTER #13.3

▲ COMPUTER #13.4

9

Vc. *pizz.* *l.v.* *p* *fff* *f* *subpp* *ff* *p* *ff* *subp* *p* *f* *jeté*

arco, sul pont. 2 seconds

Cmpt. ▲ COMPUTER #13.5 ▲ COMPUTER #14

10

Vc. *pizz.* *p* *poco a poco cresc.* *f* *f* *jeté* *3* *3* *7* *fff*

6 *6* *6* *6* *6* *6*

Cmpt. ▲ COMPUTER #15

11

Vc. *very fast pizz.* *p* *f* *ff* *l.v.* *arco, sul pont.* *pp* *l.v.* *ff* *l.v.* *p* *sfp* *a breath* *16* *f*

Cmpt. ▲ COMPUTER #16.1 ▲ COMPUTER #16.2 ▲ COMPUTER #16.3 ▲ COMPUTER #16.4

12

arco *pizz.* *l.v.* *p* *pp* *l.v.* *ff* *very, very fast pizz.* *12* *pizz.* *27* *fff*

sul tasto pizz.

Cmpt. ▲ COMPUTER #16.5 ▲ COMPUTER #16.6 ▲ COMPUTER #17 COMPUTER #17 — OFF ▲

The C string is tuned to B $\flat$
The score is at pitch.

elements

Speak ~ Night
A song within a song

Steve Antosca
2012-2014

Intense, yet free, insectoid
sul pont.
jeté

Violoncello

Computer

▲ COMPUTER #1 - ON

sul pont.
8va

Vc.

Cmptr.

ord.

6

ff

loco

p

ord.

p

f

ff

sul pont.

20 seconds

Vc.

Cmptr.

computer solo 1,
approximately as long as previous cello segment

▲ COMPUTER #2

Slowly, expressivo

p

p

sfp

f

gliss.

ff

quickly, with force
sul G
jeté

8

10 seconds

Vc.

Cmptr.

computer solo 2, approximately
as long as previous cello segment

▲ COMPUTER #3

$\text{♩} = 86$
sul G

ord.

8

II

III

IV

p

ff

f

p

sul pont.

f

ff

3

transition as smoothly as possible from finger rolls to bow

30 - 40 seconds slowly, smooth and intense 10 seconds faster, more intense 20 seconds more intense...

Vc. [11] *pizz.* *r. h. finger roll to create tremelo* *arco* *ord.* *sul pont.* *ff*

Cmptr. computer solo 6, approximately as long as previous cello segment ▲ COMPUTER #9 *n*

use a resonant area of the cello body

Vc. [12] *pizz.* *l. v.* *slowly pizz.* *l. v.* *percussive with thumb* *with thumb and finger* *percussive with thumb* *unbowed double gliss.* *8va* *10 seconds*

Cmptr. *ff* *pp* *ff* *pp* *fff* *pp* *fff* ▲ COMPUTER #10 with thumb and finger

whisper like night ♩ = 72 - 76
seductive, sultry and expressive, wirey

Vc. [13] *pizz.* *p* *f* *freely* *pizz.* *3* *f* *freely* *pizz.* *3* *p* *f*

Cmptr. *pizz.* *arco* *ff* *pizz.* *arco, sul pont.* *l.v.* *p* *f* *ff* *pizz.* *sim.* *l.v.* *p* *f* *ff*

▲ COMPUTER #11

Vc. [14] *freely* *pizz.* *3* *p* *f* *freely* *pizz.* *3* *f* *freely* *pizz.* *3* *f* *accel. arco*

Cmptr. *pizz.* *sim.* *l.v.* *p* *f* *ff* *pizz.* *sim.* *l.v.* *f* *p* *f* *ff*

[illegible]

quicker, ♩ = 92

arco, sul pont.

Vc.

ff *p* *f* *p* *f*

Cmpr.

▲ COMPUTER #13

17

Vc.

p *f* *p* *f* *f* *p* *f*

Cmprtr.

Violoncello (Vc.) part: *calmly*, ♩ = 60, *ff*, *pp*, *ff*, *pp*, *f*, *ff*, *pp*. Includes markings: *pizz.*, *arco, sul pont.*, *open strings with gliss.*, *col legno tratto*, *trill on harm. with gliss.*, *l.v.*, *II*, *I*, *III*.

Computer (Cmptr.) part: COMPUTER #14. Includes markings: *l.v.*, *II*, *I*, *III*.

19 *quick, very edgy*
sul pont.
jeté

Vc. *pp* *p* *f* *pp* *f* *pp* *pp* *p*

Cmptr. ▲ COMPUTER #15

20 *ord.* *sul pont.* *8va* *loco* *pizz.* *arco* *l. v.*

Vc. *pp* *f* *ff* *p* *ff* *mf* *f* *p* *f*

Cmptr.

21 *l. v.*

Vc. *p* *f* *ff*

Cmptr.

22 10 seconds *col legno battuto* *sul pont.* *ord.* *col legno tratto* *arco* *gliss.* *poco rit.*

Vc. *ppp* *p* *p* *f* *pp* *p* *ff* *pp* *f* *p*

Cmptr. ▲ COMPUTER #16

23 *percussive with thumb* *with thumb and finger* *♩ = 46, slowly at first but acquiring energy and passion moving toward the end of each phrase*

Vc. *ff* *pp* *fff* *sfz* *f* *p* *ff*

Cmptr. ▲ COMPUTER #17 ▲ COMPUTER #

24

Vc. *sfp* *f* *p* *ff* *f* *ff*

Cmptr.

25

Vc. *ff* *ff* *pp* *fff* *sfp* *f*

Cmptr. ▲ COMPUTER # ▲ COMPUTER #

IV $\diamond$ gliss.
percussive with thumb
with thumb and finger
faster

26

Vc. *mf* *f* *ff*

Cmptr. ▲ COMPUTER # ▲ COMPUTER #

irregular double gliss.
trill against the open strings
♩ = 96, gently, espressivo
♩ = 116, aggressively

27

Vc. *f* *p* *pp* *n*

Cmptr. ▲ COMPUTER #

poco rit.
strum, brittle, sul pont.

28

Vc. *sfp* *ff* *mf* *f*

Cmptr. ▲ COMPUTER #

10 seconds
sul pont.
ord. 5
3

♩ = 126, *abrupt and violently*

29

Vc.

ff

Cmptr.

▲ COMPUTER #

20 seconds

♩ = 56, *slowly, thoughtfully, with reflection, strum lower notes sul tasto, bow upper note molto vibrato*

30

Vc.

pp

pp *pp* *ppp* *p* *f* *p* *ppp*

Cmptr.

▲ COMPUTER #

optional repeat:
freely sing top line while
improvising cello theme

31 *slowly, airy, floating in & out*

Vc.

pp *pp* *p* *pp* *ppp*

Cmptr.

▲ COMPUTER #

1 minute

shimmering and delicate, fast and light

32

Vc.

pp *ff* *fff* *n*

Cmptr.

▲ COMPUTER #

harmonic trill on & off the string

Punta d'arco

sul pont.