

# Fiery Verticals

For flute and electronics

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### Programme Note

The title of the piece – *Fiery Verticals* – is borrowed from Francis Bacon's approach to caging in the dark, despairing and godless figures in his paintings of popes. Bacon places these figures within a transparent cage, constraining and trapping them, rendering their isolation palpable. These noble figures in their resplendent garb are robbed of their inherited dignity by the spindly cubes that hem them in. Just so for the flute: no opulent, gaudy *morceaux-de-concours* floridity or Pan-like idyllic evocations here. Instead, this object and its qualities are laid out in a new frame, ready for interrogation.

For all the discomfiting crisis of Bacon's style, it's the detail in the brush-strokes that fascinates me. How does he get those teeth to appear so hellish? How does he render the torment so pitiful? For this piece, I wanted to step as close to the flute as I invariably do when I'm in front of a Bacon canvas. The close-microphone technique allows us to attend to the tiniest fluctuation of air, whistles, intonation and timbre. Amplify that and stretch it beyond its time (not unlike Bacon's obsession with popes) and there, revealed, is a microscopic world of sound that is so easily lost through the distraction of desiring a linear melody.

In this piece, the flautist is asked to make tiny adjustments to embouchure, position and fingering patterns while the electronics part morphs the live signal randomly (but nearly-predictably) within a closely-constrained cage of possibilities. The flute, so undeniably horizontal, is made vertical through live processing and warping.

### Performance Instructions

The flute should be amplified using, ideally, a very close clip-on mic (such as a DPA 4060) that points towards the mouthpiece aperture. This signal is fed straight into the audio interface of a computer. The signal from the live flautist is used for live processing and can be routed back out to reinforce the live sound. All sounds in the electronics part are processed live - there are no pre-recorded samples.

This performance requires the accompanying MaxMSP patch, which has a very straightforward user interface for controlling input and output routing and levels. There is also the option to apply EQ and reverb processes to the input signal within the patch. The live processing is divided into two categories: 1) the main timestretch; and 2) the bass components. This division allows for control over the levels of each element so that a good balance can be achieved in the venue.

Cues for the patch are given in the score and should be triggered with arrow keys or the space bar by the person operating the computer.

#### Equipment list:

- Computer running MaxMSP
- Audio interface (stereo outputs or greater)
- Clip-on or very close mic (DPA 4060 or similar)
- Stereo speakers (or more for a more detailed stereo spread)

# Fiery Verticals

## Movement I

Always slow, always gradual

From silence; start with flute away from mouth and gradually bring into position with constant airflow

air with some tone

ppp

1 Starts real-time timestretching; sounding pitch is doubled in the timestretch processing throughout. Selects new pitches every 12"; gradual changes

Indicates approximate pitch region in relation to the live part plus the number of additional pitches being added

+2

2

voice (near mouthpiece) → air sound (hardly any pitch)

"sh"

pp

+4 from -8 semitones below

Transition *sim.*

air across mouthpiece → whistle tone (one pitch)

pp

+2 from -3 octaves

lip down

p

3

+2

Transitions as above

gradual change to slow, wide vibrato

pp

p

4

+4

no vibrato

lip bend; slow vibrato

ppp

p

5

+4

+1

+4 from -8 semitones below

+1 from -3 octaves

Continue to next bar straight away

lip down

full tone → whistle tone

p

mp

6

+4

slide

wide vibrato → no vibrato

mp

pp

7

+1

no vibrato

lip bend; slow vibrato

ppp

p

8

+4

+1

+4 from -8 semitones below

+1 from -3 octaves

Trigger early ad lib. to change underlying chord

Wait for all processed sounds to fade to near silence

# Fiery Verticals

## Movement II

Always slow, always gradual

one breath

very little vibrato

one breath

no vibrato → slow, wide vibrato → no vibrato

*mp* ————— *p* ————— (*pp*) ————— *p*

*p*

*pp* ————— *mp*

9 +1  
+1 from -4 below or +4 above (plus sounding pitch throughout)

10 +2  
+2 from -4 below or +4 above

11 +2  
+2 from +12 above  
+2 from -6 below

one breath

one breath

Tone with some air → switch intermittently between harmonics

Wait for all processed sounds to fade to near silence

*mp* ————— *ppp*

*pp*

12 +2  
+2 from +6 above  
+2 from -6 below

13 +1  
+1 from +6 above or -6 below

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# Fiery Verticals

## Movement III

Generally slow, with more movement in places

Moving along a little more

slightly overblown

with some air

no dim.

hardly any tone

slide

air with some tone

repeat ad lib.

one breath

one breath

one breath

breaths as necessary

14

15

16

+3

+4

+1

+3 from -3, -4 and -5 octaves below (plus sounding pitch throughout)

+4 from -4 and -5 octaves below

+1 from -12 semitones below  
+3 from -4 and -5 octaves below

Easing off again

start with flute away from mouth, gradually bring closer

air with a little tone

explosive harmonic; G-key slap

wide, slow vibrato

gradually narrow vibrato to none as sound dies

Wait for all processed sounds to fade to near silence

lip bend

wait for electronics to swell, then play 'into' the electronics part to create counterpoint

one breath

one breath

17

18

+3

+6

+3 from +4 above and -4 below  
+2 from -6 octaves below

+6 from -3, -5 and -6 octaves below

# Fiery Verticals

## Movement IV

### More active

breaths as necessary

one breath

one breath

lip down

lip up

air sound with tone

approximate resulting pitch

x3

repeat ad lib., fading overall

no vib. → normal vib. → no vib.

19

20

21

+ sounding pitch only

+4 from two regions above (and sounding pitch throughout)

+1 from one region above  
+1 from one region below

### More active still

one breath

breaths as necessary

one breath

Bring in lower octave intermittently. Vary intensity of volume and tone throughout in swells

mf

f

bright

repeat ad lib. (for no less than the duration of a normal breath)

no dim.

airy

full tone, molto

dim. to round off last breath

mp

ff hold intensity throughout

22

23

24

+2 from two regions above  
+3 from three regions below

+2 from two regions above  
+5 from five regions below

+3 from three regions above  
+7 from seven regions below

one breath

one breath

breaths as necessary (but continuously if possible)

no vibrato

lip bend; slow vibrato

no vibrato

lip bend; slow vibrato

tone with some air; half sung

hardly any tone

air

whistle tone

Take flute away from mouth, maintain air flow until end of breath; modify mouth shape

Wait for all processed sounds to fade to silence

At silence to end process

Fade processed output to end smoothly

ppp

p

ppp

p

(no gliss.)

(no gliss.)

"-tairt"  
(from the French "sentairt")

"ooh" → "aah"

25

26

27

+4 from -8 semitones below  
+1 from -3 octaves

+1 from -3 octaves  
+1 from -4 octaves

+1

+1