

Equidistance

An African Hymn of Praise

For amplified B \flat clarinet, live digital effects and tape

Study Score in C

Ian Percy

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Duration: 7' 56"

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2007/13

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Composed upon an accumulating ground-bass of percussive bass resonances and varied repetition, specifically for the opening of the Capstone Theatre at Liverpool Hope University (2010), from the soundworld of a clarinet using audio files recorded in 2007, this relatively short single-movement of continuous sound is based upon an East African hymn of praise the composer transcribed and part recomposed.

The hymn employs equidistant pentatonic scales (the octave split into five equal steps of 2.4 semi-tones). This electroacoustic piece takes a few tentative steps into the unstable realm of equidistant and microtonal harmony.

The Golden Ratio (a , is to b , what b , is to c) influences the internal proportions of the movement (loops, repetition and texture). The concrete audio is founded upon a ground-canvas of continual sound that works towards a central crescendo set within a mirror form, whilst a tri-part form (with proportions shaped with reference to the Golden Ratio) is laid upon this providing three further crescendos. The work was edited, remixed, rescored and part recomposed in 2013.

The concrete audio has been mixed for multiple stereo, summated mono and sub-bass speaker diffusion, but other versions are available upon request. There are also versions with pre-recorded equidistant harmony to accompany the live part.

Thanks go to Nicholas Cox (principal clarinettist with the RLPO) for recording the hymn fragments from which the concrete parts were composed.

Equidistant Harmony: To realise this piece with equidistant harmony, the musician has three options:

1. Select a version of the mix with pre-recorded harmony cue points (this requires strict synchronisation with tape).
2. Use pre-recorded harmonic accompaniment (available from the composer) or pre-record your own using an equidistant pentatonic scale (octave split into five steps of 2.4 semi-tones) and have this audio triggered live via visual cues to the technician (synchronisation is still required, but timing is more flexible).
3. Use a harmonizer triggered via the live sound and pre-programmed for varying layers of equidistant harmony (details below).

Amplification:

The live performer should be set to a fixed volume and spatial placement throughout (always versions of stereo). It is best if the clarinet is amplified through a two, four or six speaker front and centred half circle (either side of the central performer). It is also preferable that the live part has its own dedicated speakers. Once set, the volume (and placement) of the clarinet should remain fixed at all times. Use a high quality, close-proximity stereo condenser microphone and a contact microphone attached to the clarinet for best results. Reverb should be added throughout and multi-tap delay (settings relative to the tempo of crotchet equals 60/120 etc) can be used at times to embellish the live sound and enhance the reverb decay. The musician will require a stage monitor, a music stand and an additional time display on stage would also be helpful.

If the musician has not asked to trigger pre-recorded equidistant harmony or chosen a version of the mix with fixed harmony cue points, then a harmonizer effect should be used. This can be active in real-time during the concert and removes the need for strict synchronisation with pre-recorded tape. The harmonizer should be programmed for an equidistant pentatonic scale where the octave is split into five equal steps of 2.4 semi-tones. Four Harmonizer presets are required:

Harmonizer Setting 1: Low 7.2 semi-tones

Harmonizer Setting 2: Low 4.8 semi-tones and low 12 semi-tones (octave)

Harmonizer Setting 3: Low 12 semi-tones (octave)

Harmonizer Setting 4: Up 4.8 semi-tones, Low 4.8 semi-tones, 9.6 semi-tones and 12 semi-tones (octave)

Custom presets can be used through combinations and variations of the following options (in semi-tones): Up 4.8 (note anything above 4.8 semi-tones will sound too synthetic), Up 2.4, Low 2.4, Low 4.8, Low 7.2, Low 9.6, Low 12 (octave). Some harmonizers allow you to adjust the individual volumes of each layer in order to 'tune' the chord. The harmonizer can also sound effective when paired with subtle digital delay...

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Performance Symbols

BT	Beating Tone [micro-tonal minor 9th/semi-tone]	N	Normal: Cancels all symbols
EF	Elements of Fundamentals	O	Overblow
EM	Elements of Multiphonic	R	Roll [a form of slur]
F	Fundamental	RF	Roll to Fundamentals
FP	Subtle Fluctuation of Pitch	RT	Rolling Tone [octave]
M	Multiphonic	SM	Strong Presence of Multiphonic
MC	Multiphonic Cluster	SO	Slight Overblow
MT	Multiphonic Trill [usually microtonal]	VE	Varying Embouchure

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Traditional - Ian Percy

[Study Score in C]

0" 8" 16" 24" 32" 40" 48" 56" 1'04" 1'12" 1'20" 1'28" 1'36" 1'44"

Equidistant hymn phrase & delays

high pitch bird-type sounds

cresc.

with ghost echoes & delays throughout

Motif 1: F-F-E \flat -D \flat

Motif 3: B \flat -C-B \flat -B \flat

Motif 2: D \flat -E \flat -E \flat -B \flat

thin clicks and percussion

breath-type sounds

ascending trills

CUE

clicking percussion

crescendo of oscillating trills

cresc.

tick-tock ---

repeating bass drone B \flat -A \flat -B \flat

sustained breath

vibrating bass percussion

CUE

D \flat bass tone

thick bass thudding

A 'ground-canvas' of textural sound begins, guiding dynamic contour (and form) throughout, underpinned by a body of percussive sounds in accumulating rhythms shaped into various crescendo by the vibrating bass percussion sound

CUE

Wait for bass tone to fade

$\text{♩} = 60$ A concrete introduction...

B \flat Clarinet

1'48" 1'50" 2'00"

high pitch bird-type sounds

Continuous high pitch B \flat resonance is part of the 'ground-canvas' of sound

Thin clicking percussion

Motif 1: F-F-E \flat -D \flat

Motif 2: D \flat -E \flat -E \flat -B \flat

sustained breath

CUE

vibrating bass percussion and ground-canvas

Vibrating bass in 'ground-canvas' is enforced by a throbbing bass resonance throughout

D \flat bass tone

1'48" 1'50" 2'00"

$\text{♩} = 120$ In praise for the start of a new day...

rit.

$\text{♩} = 92$

2'00" $\text{♩} = 60$

Amplified with reverb throughout. Multi-tap delay can embellish the reverb decay: optional use of a harmonizer is discussed within the score preface.

SO O

[a piercing scream]

CUE

wait for vibration after D \flat bass tone

Cl.

2'44" high pitch bird-type sounds

2'48" trills dim as they ascend

2'52" Motif 2: D \flat -E \flat -E \flat -B \flat

Whale Songs

ascending trills CUE

rotating percussion

bass drone B \flat -A \flat -B \flat

vibrating cresc.

$\text{♩} = 60$ A concrete interlude...

CUE Enter after first half of whale song phrase

34 Cl.

2'56" high pitch bird-type sounds

2'58" Motif 2: D \flat -E \flat -E \flat -B \flat

3'00" Whistling phrase

3'06" 3'08" 3'10" Whale Songs

ascending trills

Whale Songs

bass drone B \flat -A \flat -B \flat

D \flat bass tone

vibrating cresc.

$\text{♩} = 120$ In praise of natural life...

rit. [♩ = 104] accel. ♩ = 120

Harmonizer Setting 3

SO N

SO EM

N

CUE Wait for whistle phrase to fade

37 flz. *rubato*

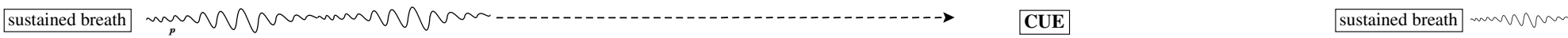
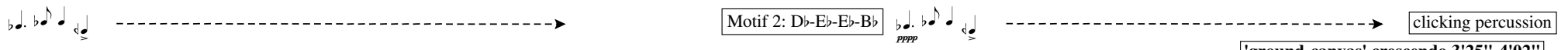
flz.

5 5

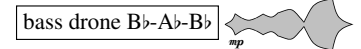
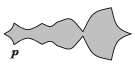
vib. [variable speed, pitch and direction] [end on subtle flutter]

mf

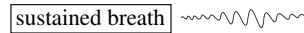
4 3'14" 3'16" 3'26" 3'30"



Whale Songs



vibrating cresc.



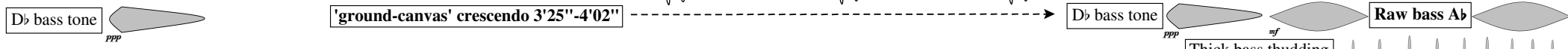
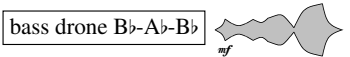
3'14" 3'16" 3'26" 3'30"

♩ = 120 Harmonizer Setting 2 rit. [♩ = 104] rit. ♩ = 60

CUE: Wait for whistle phrase to fade [lip bend] Technician should increase reverb slightly to accentuate the multiphonic crescendo. [primal, organic and visceral] MC Allow reverb to decay, then return levels back to the original setting.

Cl. 45 flz. mf f fff

3'34" 3'36" 3'44" 3'50"



3'34" 3'36" 3'44" 3'50"

♩ = 120 Harmonizer Setting 4 rit. [audible breath] [SO N] VE [microtonal waver-tone] ♩ = 88 ♩ = 60

Cl. 52 flz. mf f

6 5'12" 5'14" 5'24" 5'28" 5'32"

high pitch bird-type sounds

Motif 1 F-F-Eb-Db

Motif 3: Bb-C-Bb-Bb

sustained breath

breath-type sounds

'ground-canvas' crescendo 5'12"-5'24"

cresc.

cresc.

raw bass Ab

pp

speckled percussion fades

CUE

cresc.

mp

5'12" 5'14" 5'24" 5'28" 5'32"

♩ = 120 rit. ♩ = 92 ♩ = 60

Harmonizer Setting 1

flz.

Technician should increase reverb slightly to accentuate the fluttertongue crescendo.

[shrill and aggressive]

SO

Allow reverb to decay, then return levels back to the original setting.

CUE

Wait for vibration after Ab bass

Cl. 73

f *fff*

5'36" 5'38" 5'48"

high pitch bird-type sounds

Motif 3: Bb-C-Bb-Bb

speckled percussion fades

sustained breath

raw bass Ab

pp

vibrating bass in ground-canvas

thick bass thudding

cresc.

CUE

clicking percussion

5'36" 5'38" 5'48"

♩ = 120 rit. ♩ = 60

Harmonizer Setting 2

[audible flz. breath]

SO EM

[a warm resonance]

Cl. 80

mf *f* *mf* *p*

5'52" 6'00" 6'08" 6'16" 6'24" 6'32" 6'36" 7

high pitch bird-type sounds

Motif 3 *ppp* Motif 3: B \flat -C-B \flat -B \flat *pppp* with lower echoes *mp* one layer fades another begins *mp* [breath swells]

ascending trills **CUE** layers of clicking percussion sustained breath

sustained breath *cresc.* Raw bass A \flat *fff* D \flat bass tone *pp* thick bass thudding *pppp* layers of clicking percussion bass drone B \flat -A \flat -B \flat *ppp* with echoes & doubling until end *f* Tape fades *p* **CUE** thick bass thudding continues with echoes, repetitions and overlaps

86 $\text{♩} = 60$ **A concrete interlude...**

Cl. $\frac{4}{4}$

6'40" 6'42" 6'52" Birds

Motif 3 *ppp* Motif 3: B \flat -C-B \flat -B \flat *ppp* Motif 1 F-F-E \flat -D \flat *ppp* quiet shuffling percussion

layers of ticking percussion (less activity)

breath-type sounds

raw bass A \flat *p* bass drone B \flat -A \flat -B \flat *mp* raw bass A \flat *mp* **CUE**

thick bass thudding fades

6'40" 6'42" 6'52"

$\text{♩} = 120$ **In praise for the end of a working day...** *rit.* $\text{♩} = 92$ $\text{♩} = 60$

No Harmonizer

flz. *rubato* SO O [a piercing scream] **CUE** Wait for 2nd bass A \flat

Cl. *mp* *mf* *ff*

8 **6'56"** **6'58"** **7'12"**

high pitch bird-type sounds

Motif 3: B \flat -C-B \flat -B \flat with fading echoes of low harmony

CUE: Equidistant hymn phrase & delays

Motif 1 F-F-E \flat -D \flat

Motif 2: D \flat -E \flat -E \flat -B \flat *ppp*

layers of thin percussion loops

breath-type sounds

raw bass A \flat

thick bass thudding

bass drone B \flat -A \flat -B \flat *ppp*

raw bass A \flat

6'56" **6'58"** **7'12"**

$\text{♩} = 120$ *rit.* $\text{♩} = 92$ $\text{♩} = 60$

Harmonizer Setting 1

flz.

99

Cl.

mf

Technician should increase reverb slightly to accentuate the fluttertongue crescendo.

[shrill and aggressive]

flz.

CUE Wait for equidistant phrase & delays to fade

Allow reverb to decay, then return levels back to the original setting.

ff

7'16" **7'18"** **7'32"**

high pitch bird-type sounds

Motif 3: B \flat -C-B \flat -B \flat with fading echoes of low harmony

bird-type sounds slowly fade

Motif 1 F-F-E \flat -D \flat

Motif 2: D \flat -E \flat -E \flat -B \flat with echoes *mf*

whistling phrase

breath-type sounds

thick bass thudding

raw bass A \flat

thick bass thudding fades

7'16" **7'18"** **7'32"**

$\text{♩} = 120$ *rit.* $\text{♩} = 60$

Harmonizer Setting 2

[audible flz. breath]

106

Cl.

mp *mf* *mp* *pp*

[a warm resonance]

SO EM

Tape Fades - - - -

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