

ANDREW LOVETT

UNKNOWN TERRORS

for cello and electroacoustic music

2000

UNKNOWN TERRORS *for cello, keyboard and electronics (2000)*

'I am sailing at last, as if absorbed into the margins of my map, a ship embarking upon its maiden voyage.'

- James Cowan, *The Mapmaker's dream*

'So now we use the country itself as its own map, and I assure you it does nearly as well.'

- Lewis Carroll

'Journey over all the universe in a map, without the expense and fatigue of travellin', without the inconveniences of heat, cold, hunger, and thirst.'

- Miguel de Cervantes, *Don Quixote*

3 performers:

- 1) cello
- 2) keyboard synthesiser
- 3) sound-projection

Sequenced material is tuned to A=440.

Duration: 30 minutes

Commissioned by Sonic Arts Network with funds provided by the Arts Council of England.

First performance: Judith Mitchell , Clive Williamson and the composer at the Electric Spring Festival in Huddersfield, March 2000.


for Judith and Clive

Performance materials are available from the composer (andrew.lovett@ntlworld.com)

Performance instructions

cello Tonal changes should be exaggerated where possible. In some places, these are indicated, but, in general, crescendos and decrescendos should be helped with strong timbral changes. A mute is required.

keyboard-synthesiser The ideal keyboard is a Yamaha SY-99 (or a Yamaha SY-77 with a master keyboard with at least 76 notes). A diskette containing patches (with microtonal-scale) for SY synthesisers is available. If an SY-series synthesiser is not available, programming requirements are outlined in appendices 1 and 2.

electroacoustic music The prerecorded electroacoustic music is played back from a CD. There are 25 sequences, which run continuously during performance, except for one pause between bars 410 and 428, (following programme 19 and before programme 20. This can be controlled by the keyboard player or the sound-projectionist. The remaining programme-numbers are there for rehearsal purposes. There are places where the performers should be aware of specific cues in the electroacoustic music, adjusting their parts as necessary. Where these are important a square pause sign is used before the cue ().

sound-projection The cello should be amplified with the electroacoustic material. The balance need not *always* favour the cello: occasionally, the electroacoustic music should dominate (for instance at bars 321- 339). Two effects processors are recommended to give two different levels of digital reverberation: one programme giving just enough reverberation to blend the instrumental and electronic sounds and a second programme with a long reverberation time, used as a special effect in section four and at the end of the piece.

scales Microtonal inflections are used extensively. In the cello-part, a single-headed arrow (\uparrow or \downarrow) indicates a very narrow deviation (approximately 1/10 tone), a double headed arrow (\updownarrow or $\down\uparrow$) indicates an inflection of approximately 1/5 tone. These are mostly *melodic* inflections, but they coincide with the underlying harmonic scale-structures used in the keyboard and computer parts which are based on equi-pentatonic and 'pure' A major scales (see appendix 1 for further details). These deviations are not indicated in the keyboard part.

Programme note

UNKNOWN TERRORS is a musical journey into the geography of the imagination and the mythology of exploration. It was partly inspired by James Cowan's book, *The Mapmaker's Dream*, which gives poetic voice to the sixteenth century cartographer Fra Mauro. Fra Mauro lived in a monastery on the island of San Lazzaro degli Armeni near Venice, where he listened to the stories of travellers - merchants, seamen, adventurers, explorers - using their descriptions to create his own maps. The most striking surviving example is his beautiful 'Planisphere' of 1549.

I found a modern counterpart to Mauro's Planisphere in some remarkable photographs of the earth taken from space in a book called *Orbit* by Apt, Helfert and Wilkinson. They show lakes, rivers, deltas, mountain ranges, deserts, islands, oceans, land masses and human activity: agriculture, cities, fires, pollution. Like maps, these pictures challenge us to imagine the world anew; a place of extraordinary beauty, strength and fragility.

Both of these sources hint at a deeper mythic structure: a journey undertaken by a hero or heroine to hell - and back. Orpheus, Persephone, the Ancient Mesopotamian Goddess Inanna, Jonah. These stories possess a structure which recurs again and again in stories throughout the world, providing - perhaps - a kind of 'map' for the innermost path of human adventure.

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Andrew Lovett's special interests include the combination of instruments with electronics, digital opera, theatre and video. His music has been performed by The London Sinfonietta, Gemini, Aquarius, Marimolin, The Endymion Ensemble, Metanoia and Vocem. His music has been broadcast on BBC Radio 3, BBC Radio 4, Swedish Radio, BBC 2 and Channel 4. *Unknown Terrors*, for cello, keyboard and electronics was commissioned by Sonic Arts Network for Judith Mitchell and broadcast on Radio 3 in April 2000. He lives in Cambridge, UK.

Appendix 1: scale structure

The basic scale used for the microtonal material in the computer and keyboard parts consists of two interlocking 'equi-pentatonic' scales, based on D and G#. The notes D, G#, B and F are all the same as for the equal-tempered scale. The remaining pitches deviate by either 40 cents or 20 cents from equal-tempered intervals.

The D scale: D - E 1/5th tone sharp - G 1/10th tone flat - A 1/10 tone sharp - C 1/5th tone flat

The G# scale: G# - A# 1/5th tone sharp - C# 1/10th tone flat - D# 1/10th tone flat - F# 1/5th tone flat

Hence, the complete chromatic scale is as follows:

D - D# (1/10th flat) - E (1/5th sharp) - F - F# (1/5th tone flat) - G (1/10th tone flat) - G# - A (1/10th tone sharp)
- A# (1/5th tone sharp) - B - C (1/5th tone flat) - C# (1/10th tone flat).

One other non-equal-temperament scale is used (scale 2): a 'just' intonation scale based on A.

Appendix 2: synthesiser voices

Five patches are required for the keyboard synthesiser. These were originally generated using FM synthesis-technology on a Yamaha SY-99 synthesiser.

- 1) UT-FM Voice 1 (using scale 1) - a non-sustaining delicate electronic 'plucked' keyboard sound, quite touch sensitive
- 2) UT- 2 (slo-pad) (scale 1) - the sustain part of UT-4, somewhat reminiscent of an analogue 'string' sound
- 3) UT-3 'steel-drum' (scale 1) - metallic FM sound - quite close to a steel-drum
- 4) UT-4 e-piano pad (scale 1) - a combined electric piano attack and sustained analogue sound, harsh when played loud, but delicate when played softly
- 5) UT-5 Amajor (same sound as UT-4 but using scale 2 - A just)

Scales and patches are demonstrated on the final tracks of the PERFORMANCE CD.

UNKNOWN TERRORS

ANDREW LOVETT

I : quiet, mysterious

mute on

I (natural harmonic) *floating sound - almost no pitch* **72**
long pause - approx 8 - 10 seconds

Cello

ppp *sf*

Synthesizer

long pause - approx 8 - 10 seconds

U.Terrors 1 (FM tone -1)

p *ppp* *mp*

7:4

3

computer

1

g^{na} *b^{ca}*

I (natural harmonic)

Vlc. *ppp* *fz p*

Synth *pp* *mp* *pp*

cmpr

Vlc. *ppp* *fz p* 5 - 6 seconds *sfz* *pp*

Synth *p* *pp* 5 - 6 seconds *fp*

cmpr

pitch-bend

2

'normal' sound - on attack
floating sound - almost no pitch

Vlc. *fz p* *pp* *sfz p* *p*

Synth *pp* *mf* *mp* *mf* *mf* *mf*

cmpr

Vlc. *f* *pp* *pp* *pp*

Synth *mp* *pp* *ppp* delicate variations of volume and 'expression'

cmpr *deep pizz.* *bow-bounces, filtered pizzicato figuration*

10 - 12 seconds *glossy, breathy sound (on the bridge)*

10 - 12 seconds *almost inaudible - inside computer texture*

U.Terrors 2 (slow-pad)

3

II : energetic, furious

$\text{♩} = 108$

Vlc. 41

Synth

cmpr

Vlc. 49

Synth

cmpr

56

Vlc.

sffz

Synth

ff

ff

p

cmpr

62

Vlc.

Synth

sffz

7

9:8

echo

9:8

cmpr

68

Vlc. *sffzp*

Synth *sffzp* *f* *mp*

cmpr

76

Vlc. *fff* *fff* *nat.* *ff*

Synth *ff*

cmpr 5

sul pont

Vlc. 84

Synth 84

cmpr

Vlc. 92

Synth 92

cmpr

Preview File Only

101

Vlc. *heavy, distorting bow* *heavy, very intense* *fff*

Synth

cmpr

108

Vlc. *sul pont* *nat.* *singing* *p* *sf*

Synth *U.Terrors 4 (e-piano pad 2)* *ppp*

cmpr

112

119

Vlc. *ff* *mf* *pp* 3 3 3 3 3 3

Synth

cmpr

pitch-bend

scratchy 'whirling' sound

128

Vlc. *ff* *sffz* *p* *f* (4)

Synth

cmpr

scratchy 'whirling' sound

Preview File Only

137

Vlc. *p* *mf* *p* *mp*

Synth *p* *mf* *p* *mp*

cmpr

144

Vlc. *fz* *sfz*

Synth

cmpr

→ scratching sound on bridge → grinding → nat.

pitch-bend

152 *cheeky insouciant*

Vlc. *f*

Synth *f*

cmpr (7)

160

Vlc. *fff*

Synth *ff*

cmpr

166

Vlc.

Synth

cmpr

ffz

ffz

pizzicato figuration

174

Vlc.

Synth

cmpr

mp

5

3

3

180

Vlc. *ff*

Synth *ff*

cmpr

185

Vlc. *sfz*

Synth

cmpr

192

Vlc. *ff*

Synth *ff*

cmpr

faster - accelerating -----
 gritty, determined, with an edge of panic

198

Vlc. *ff*

Synth

cmpr

203

Vlc.

Synth

cmpr

208

Vlc.

Synth

cmpr

fff

fff

8

214

Vlc.

Synth

cmpr

fff

fff

mysterious \downarrow 56

220

Vlc.

Synth

cmpr

U.Terrors 1 (FM tone -1)

[pre-echo of keyboard part]

pp

225

Vlc.

Synth

cmpr

p

♩ = 120

229

ff

rushing headlong, breathless

3 3 3 3 3 3 3 3 3 3

Vlc.

Synth

cmpr

mysterious

♩ = 66

♩=56 accelerating rapidly

Vlc. ²⁵⁰

Synth ²⁵⁰ *p* *f* *ppp* U.Terrors 5 Amajor

cmpr

11

III : running fast

Vlc. ²⁶⁰ ♩=90

(microtonal scale changes to A harmonic)

Synth ²⁶⁰ *ff* *fffz* *fffz* *fffz* *fffz* *fffz*

cmpr

266

Vlc.

266

Synth

cmpr

271

Vlc.

271

Synth

cmpr

Preview File Only

279

Vlc.

Synth

cmpr

287

Vlc.

Synth

cmpr

9

ff

mf

ff

mf

ff

mf

12

294

Vlc.

Synth

cmpr

303

Vlc.

Synth

cmpr

tough and gritty

13

311

Vlc.

Synth

cmpr

Preview File Only

316

Vlc.

Synth

cmpr

Preview File Only

323

Vlc. *sfz* *sfz* *sfz* *sfz* *sfz* *sfz*

Synth *fff*

cmpr

$\text{♩} = 44$ with a sense of extreme frustration

331 *pitchbend end of notes (up to a semitone)* *fff* *sul pont* *fff*

Vlc.

Synth *fff* *8va*

cmpr (14)

339 *'normal' sound*

Vlc. *sffz* *p* *f* *p*

Synth (8va) U.Terrors 4 (e-piano pad 2)

cmprtr 15 16

IV : dark, cold, fearful

♩ = 54

347

Vlc. *fff* heavy, distorting bow *sffz* *fff* (4)

Synth *fff* 3 5

cmprtr

→ heavy, distorting bow → glassy, breathy sound (on the bridge)

352 *ff* *p* *pp*

let the sound float away (asthmatic)

II III

352 *p* *pp*

17 'steel drum' sound

III IV

361

Vlc. Synth cmpr

Musical score for Vlc., Synth, and cmpr. The score is divided into two systems. The first system covers measures 352-360, and the second system covers measures 361-370. The Vlc. part features various bowing techniques and dynamics. The Synth part includes arpeggiated patterns and sustained notes. The cmpr part has a rhythmic pattern labeled 'steel drum' sound.

372

Vlc.

mp *p* *ppp*

let the sound float away

Synth

pp

modulate filter, pitchbend and volume

pitch-bend

cmpr

18

(metal scrape'sound)

381

Vlc.

381

Synth

pp

19

cmpr

392

Vlc.

Synth

cmpr

ppp

scraped metallic tamtam sound

(Orpheus singing...)

404

Vlc.

Synth

cmpr

p

ppp

pause CD then forward to next cue

412

Vlc.

5

5

7

p

Synth

419

Vlc.

fff

ppp

pp

3

3

3

3

Synth

sf

ff

pp

(microtonal scale changes to A harmonic)

Vlc. 427

pppp mp sf mp

3

Detailed description: Violin part for measures 427-434. The music starts in 2/4 time, changes to 4/4, and then to 3/4. It features a microtonal scale that changes to an A harmonic. Dynamics range from pppp to mp. A triplet of eighth notes is marked with a '3'.

Synth 427

mf mp

Detailed description: Synthesizer part for measures 427-434. The part consists of sustained chords in the right hand and moving lines in the left hand. Dynamics are marked as mf and mp.

cmpr

20 filtered A harmonic sounds

Detailed description: Computer part for measures 427-434. It features a circled number '20' and the text 'filtered A harmonic sounds'.

Vlc. 435

3

Detailed description: Violin part for measures 435-442. The music continues with the microtonal scale and A harmonic. A triplet of eighth notes is marked with a '3'.

Synth 435

Detailed description: Synthesizer part for measures 435-442. The part continues with sustained chords and moving lines.

cmpr

Detailed description: Computer part for measures 435-442. It is currently empty.

Preview File Only

444

Vlc. *pp*

Synth *pp*

cmpr

V : soaring high

♩ 92

451

Vlc. *ppp* completely still

Synth *to nothing*

cmpr 'clockwork' metal sounds just audible

464

Vlc.

cmpr

473

Vlc.

to nothing

'steel drum' sound

cmpr

computer solo - tinkling semi-quaver figuration

483

Vlc.

26

509

Vlc.

cmpr

515

Vlc.

cmpr

(change of key)

522

Vlc.

light, airy

p

Synth

jaunty, carefree

mp sf sf sf sf sfz sf sf sf

cmpr

f

531

Vlc.

Synth

cmpr

sf sf sf sf sf

540

Vlc.

Synth

cmpr

sf sf sf sf

Preview File Only

549

Vlc.

Synth

cmpr

sf

22

Musical score for measures 549-557. The Violin (Vlc.) part features long, sustained notes with slurs. The Synth part has a melodic line with a forte (*sf*) dynamic. The Computer (cmpr) part provides a rhythmic accompaniment. A circled '22' is present in the computer part.

558

Vlc.

Synth

cmpr

bright, f

bright, f floating, legato

Musical score for measures 558-566. The Violin (Vlc.) part has a melodic line with a bright, forte (*bright, f*) dynamic. The Synth part has a rhythmic accompaniment with a bright, forte (*bright, f floating, legato*) dynamic. The Computer (cmpr) part has a rhythmic accompaniment.

Preview File Only

565

Vlc.

Synth

cmpr

572

Vlc.

Synth

cmpr

579

Vlc. *pp* *p*

Synth *mp*

cmpr

Detailed description: This system covers measures 579 to 587. The Violin (Vlc.) part begins with a long note in measure 579, followed by a rest in measure 580, and then a series of chords in measures 581-587. The Synth part features a rhythmic melody with eighth and sixteenth notes throughout. The Computer (cmpr) part provides a consistent bass line with eighth notes.

588

Vlc.

Synth

cmpr

Detailed description: This system covers measures 588 to 596. The Violin (Vlc.) part plays a series of chords. The Synth part continues with its rhythmic melody. The Computer (cmpr) part maintains the steady bass line.

Preview File Only

597

Vlc.

Synth

cmpr

605

Vlc.

Synth

cmpr

Preview File Only

614

Vlc. *joyous*

f

Synth *joyous*

f

cmpr

623

Vlc.

Synth

cmpr

632

Vlc.

Synth

cmpr

ff

ff

U.Terrors 1 (FM tone -1)

639

Vlc.

Synth

cmpr

fff

23

gradually increase reverberation level

644

Vlc.

Synth

644

f

cmpr

651

Vlc.

Synth

651

5:6

cmpr

657

Vlc.

Synth

cmptr

f

5:6 4

664

Vlc.

Synth

cmptr

mf

5:6 5:6 7:6

671

Synth

3

cmpr

674

Vlc.

pp

Synth

U.Terrors 3 ('steel-drum')

fff

p

24

(Very strong percussive octave E)

683

Vlc.

Synth

cmpr

692

Vlc.

Synth

cmpr

Preview File Only

701

Vlc.

pp

Synth

U.Terrors 4 (e-piano pad 2)

pp

8va

cmpr

Allegro

710

Vlc.

Synth

8va

710

cmpr

719

Vlc.

Synth

cmpr

(25) *gradually increase reverberation level and fade out all sounds to end of piece*

crescendo

728

Vlc.

Synth

cmpr

(8^{va})

737

Vlc.

ppp

8va

Synth

737

ppp

fade to nothing

cmpr

747

Vlc.

8va

Synth

747

pppp

cmpr

756

Vlc. *pppp* *pppp*

Synth *8va*

cmpr

766

Vlc. *into silence*

Synth *(8va)* *766* *into silence*

cmpr

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