

James Gardner

# Local Economy

*i. Contact Binaries*

*ii. exit wound*

for 19-division trumpet and percussion

(2004-6)

*Contact Binaries* (2005-6) from *Local Economy*

In astronomy, the term ‘contact binary’ refers to two astronomical bodies so close to each other that they lightly touch each other. In the case of asteroids, a contact binary is caused when two gravitate toward each other, forming an oddly-shaped single body.

In this piece I took the notion of two objects lightly touching and influencing each other as a loose analogy for the way the trumpet and percussion interact, working through various approaches to unanimity and rhythmic subdivisions and coming together at certain pre-defined rhythmic points that function something like an *Avartanam*—a large-scale repeated rhythmic cycle—does in Carnatic music. In contrast to *exit wound* that follows, the percussion has the lion's share of the active material, while the trumpet punctuates and comments like a back-seat driver.

*exit wound* (2004) from *Local Economy*

Unlike some governments I could mention, I had a clear idea of my exit strategy when I started out on this incursion into foreign territory. As a result, *exit wound*—the final module of the larger work-in-progress. *Local Economy* was the first to be completed. I've finished, so I'll start...

Of course the 19-tone trumpet—like humans—is full of tubing and compromises, and just like its more familiar incarnation it aspires to, rather than reliably embodies, its nominal temperament. I don't see this as a problem, as I'm not one to cling to any temperament or tuning system with religious zeal.

In a very early phase of the composition I did in fact make a systematic exploration of some 19-tone pitch resources, but the results struck me as sounding far too much like pedagogical exercises to be of interest. Vestiges of these “warming-up licks” do, however, remain.

A useful way of approaching the piece might be to think of the trumpet as the character, familiar from science fiction movies, who wakes up one morning to find himself in a new body, and who goes through the clichéd ritual of studying the alien contours of his new visage in the mirror with a mixture of horror and fascination.

By the same token the percussionist could, perhaps, be imagined as some sort of sidekick, offering advice, encouragement and occasionally a dissenting voice.

But this is, after all, a piece of music and such crassly reductive quasi-programmatic schemes don't hold for long.

The percussionist's set-up, and the performative energies deployed in the part are modelled on those of an improvising percussionist, inspired in part by the Wellington-based percussionist Anthony Donaldson, who ought not be blamed for any shortcomings in this piece.

Thanks must go to Stephen Altoft and Lee Ferguson of Duo Contour not only for commissioning the piece with funding from Creative New Zealand, but also for their enthusiasm and forbearance in the face of continually missed deadlines.

*Contact Binaries* and *exit wound* may be performed individually

The trumpet parts of *Local Economy* may be played **only** on a 19-division instrument.

Details of this instrument, developed by Stephen Altoft with Johannes Radeke and Siegmars Fischer of Freiburg, may be found at:

<http://www.microtonaltrumpet.com>

## Local Economy

### Percussion instruments

*Contact Binaries* and *Exit Wound*

Pedal bass drum

Hi-hat

Sleigh or similar small bells (must be able to be hung on the hi-hat as well as shaken by hand)

Three small drums (mounted) \*

Highly resonant metal object tuned to Bb \*\*

Snare drum \*\*\*

Trash metal (mounted) \*\*\*\*

Headless tambourine (mounted)

Two mounted cymbals of highly contrasting timbre (e.g. sizzle and china-type)

One (low) wood block (“official” percussion instrument)

One block of wood (just an offcut of 4"x2" or similar, locally obtained, or a short section of branch/log if more locally appropriate)

Brake drums or similar heavy solid metal object

Low-pitched resonant container \*\*\*\*\*

Ratchet (preferably mounted)

\* These must be capable of being highly tuned to obtain maximum stick bounce.

Bongos would probably be ideal, but other similar instruments are perfectly acceptable.

\*\* Ideally an octave and a minor seventh above middle C, but a Bb in any octave is acceptable.

Examples of metal object include: crotale, glockenspiel bar, chime bar, rin, Tibetan singing bowl, aluminium or steel tube...

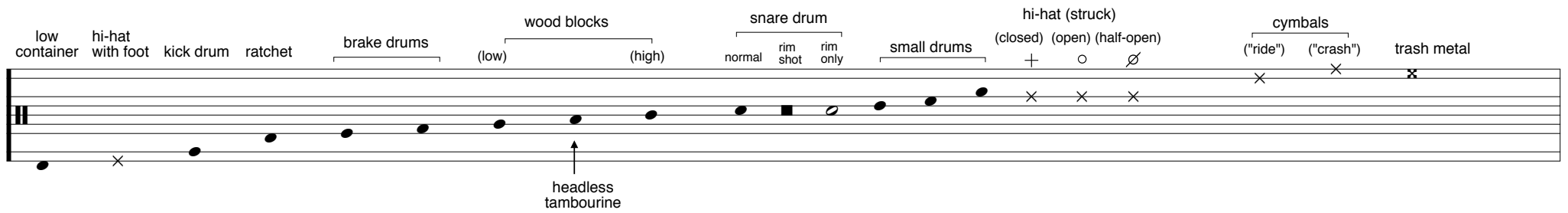
\*\*\* Ideally with a fairly coarse-textured head, e.g. Remo Fiberskyn.

\*\*\*\* RhythmTech “crasher” or two small, thin (ideally cracked or trashed) cymbals mounted directly on top of each other. Trashy, rattly attack and short decay.

\*\*\*\*\* Possibly a bass drum, but ideally an “unofficial” instrument e.g. large plastic cylinder or bowl, large metal container (like a hot water cylinder).

It should *function* like an orchestral bass drum, i.e. very low non-specific pitch and very long decay. Ideally mounted behind the percussionist.

Full gamut for kit



# Exit Wound percussion notation

Full gamut for kit

low container	hi-hat with foot	kick drum	ratchet	brake drums		wood blocks		B $\flat$ object	snare drum			small drums		hi-hat (struck)			sleigh bells	cymbals		trash metal
						(official)	(local)		normal	rim shot	rim only			(closed)	(open)	(half-open)		("ride")	("crash")	
														+	o	∅		x	x	x
●	x	●	●	●	●	●	●	●	●	■	◊	●	●	x	x	x	●			

↑  
headless  
tambourine

# Contact Binaries

James Gardner 2004-6

19-division trumpet

snare drum: snares off

percussion

$\text{♩} = 50$

harmon mute (with stem inserted)

$\text{sfz}$   $p$   $\text{ff}$   $p$   $f$

$\text{ff}$   $\text{sfz}$   $p$   $\text{fff}$

10:8

25:24

5 5

5 3

19:16

$f$   $p$   $\text{ff}$   $f$

4

17:16

$f$   $p$   $\text{mf}$   $\text{sfz}$   $p$   $f$

$\text{sfz}$   $f$   $\text{sfz}$   $\text{mf}$   $\text{sfz}$   $f$   $9:8$   $\text{sfz}$   $f$   $\text{sfz}$

7:6 7:6 7:6

$\text{mp}$   $\text{sfz}$   $f$   $\text{sfz}$   $\text{mf}$   $\text{sfz}$   $f$   $\text{sfz}$

7

$p$   $f$   $p$   $f$   $f$   $p$   $f$

7:6 5:6 7:6 5:6

$\text{sfz}$   $f$   $\text{ff}$   $f$   $\text{mf}$

19:16

9

*sfzp* *f* *mf* *sfzp* *3* *sub* *f* *f* *ff* *mf*

5 3 9:8 20:18 9:6

11

*ff* *sub* *mf* *f* *ff* *ff* *p* *sffzp* *ff*

19:16 11:8 5 5 6 16 3 4

14

*p* *sffz* *ff* *mf* *ff*

13:10 17:16 13:8

[illegible]

19

*f* *mp* *mf* *f* *5* *mf* *4:5*

*f* *mf* *f* *mp* *f* *ff* *f* *ff* *mf*

10:8 10:8 9:8 3 11:8 12:10

4:3

(kick drum only)

This musical score is for the song "The Sound of Silence" by Simon and Garfunkel. It is written for piano and drums. The score is in 3/4 time and consists of 23 measures. The piano part is written in treble clef, and the drum part is written in bass clef. The score includes various musical notations such as notes, rests, and dynamic markings. The piano part starts with a piano (*pp*) dynamic and includes a 17:12 ratio marking. The drum part starts with a fortissimo (*ff*) dynamic and includes a 14:12 ratio marking. The score also includes a "change to brushes" instruction for the drums in the final measure.



Senza misura  
26

Improvise quasi-vocal mumbling and muttering using these pitches (and "bent" variants, half-valved notes) while opening/closing mute ad lib. Enter during first percussion crescendo.

*pp-mp*  
rapid pattering on the indicated instruments ad lib.  
c. 3" c. 5" c. 2" change to sticks  
(sim.)  
*p* *f* *pp* *p* *n* *f* non dim.  
a tempo  
♩ = 50  
percussion cuts off trumpet  
*ff*

28  
*mf* *f* *sfzp* *mf* *f* *mf* *p* *ff* *mf* *p*  
5:3  
6/16  
15:12  
3/4  
*p* *ff* *mf*

30  
♩ = c. 63  
(last two woodblock attacks in m. 29 set new 8th note pulse)  
ideally with hands, but only if pulse is not disturbed  
*p* *mf* *f* *p* *pp* *p* *ff* *sfzp*  
with sticks  
damp crash and ride as quickly as possible  
hold roll as long as possible while still fitting in remaining grace notes before downbeat

33

33

34

35

36

put snare on

*ff*

*mf*

*f*

*mp*

5:3

7:4

6:4

11:6

37

37

38

39

40

41

snare off as discreetly as possible

*p*

*f*

*mf*

*f*

*mp*

*p*

*f*

15:12

3

42

42

43

44

*mf*

*f*

*ff*

*mf*

*f*

8:6

8:6

8:5

10:8

19:16

*mp*

*ff*

*mf*

*fff*

*f*

bell

45

45

46

47

48

*mf*

*f*

*mf*

*f*

*mf*

5:3

17:16

6

9:8

shoulder

48

8:5 7:5 13:14

9:6 12:8 15:12

*f* *mp* *mf* *f* *p* *f*

50

17:14 13:12 8:6 11:8 17:16 9:6

*p* *mp* *mf* *ff* *f*

53

20:16 15:12

*f* *p mf* *f* *mp* *f* *mp*

kick: quasi accel.

put snare on

3 = 75

56

*ppp* *p* *mf* *f*

*f* *p* *f* *p* *sim.*

*mf*

58

*mp* *ff*

"groove malfunction"  
snare: always light

61

trumpet enters on a quaver beat of the player's choice  
from the second to the eighth in m.62, then continues  
in tempo until cut off on the downbeat of m.65

*f* *mf* *mp* *mf* *p* *mf* *ff* *mf* *mp* *f*

64

trumpet: cut off on this downbeat regardless of how much of the sequence has been played

accents remain strong throughout *dim.*

67

trumpet enters on a quaver beat of the player's choice from the third in m.70 to the first in m.71, then continues in tempo until cut off by the high woodblock in beat 2 of m.73

70

73

trumpet: cut off by this woodblock hit regardless of how much of the sequence has been played

trumpet enters on a triplet quaver beat of the player's choice  
from the fifth in m.75 to the first in m.76, then continues  
in tempo until cut off by the high brake drum in beat 1 of m.79

75

breaking down...

78

trumpet: cut off by this brake drum hit regardless  
of how much of the sequence has been played

mojo back (sort of)

80

place these notes freely within the bracketed limits

*exit wound*

James Gardner 2004

19-tone trumpet

$\bullet = c.54$

*ppp*

*p*

adjust speed so that  
one revolution of the ratchet  
occurs in each note

percussion

*p*

*mp*

*p*

*f*

*f*

*fff*

long  
(let sound die away)

long  
(let sound die away)

*p*  
even, unaccented

*f*

*p*

*f*

*mf*

(snare off)

*mf*





18

18 19 20

*p* *mf* *f* *mp* *mf*

(snare on)

21

21 22 23

*f* *mf* *mp* *ff* *f* *mf* *p* *ff*

24

24 25 26

*mf* *p* *mf* *p* *mf* *p* *mf* *p*

26

*f* *p*

29

*f* *p* *f* *p* *f* *p* *f* *p* *f* *p* *f* *p* *sub.* *p* *f* *p* *f* *p* *f* *p* *mp* *pp* *mp* *pp* *mp* *pp*

32

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

choke!

35  $\bullet = c. 66$

as before: adjust speed so that one revolution of the ratchet occurs in each note

*pp* *p* *f* *mf* *p* *mf* *p* *mf* *sfz* *p*

(snare off)

37

*mf* *mp* *f* *mp* *f* *mp*

strong accents

11:8

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

(snare off)

40

*p* *mp* *mf* *f* *mf* *f* *mp* *p* *mf* *p*

*p* *f* *p* *mf* *f* *mf* *f* *mf* *mp* *f* *mf* *f* *mp* *f* *pp* *f*

44

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

48

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

51

*mf* *mp* *mf* *p* *pp* *p* *mf* *p*

(quasi 5/8)

55

*mf*

*p* *mp*

*mp*

58

*p* *mp* *mf* *f*

*mf*

61

*p* *pp* *mp*

*pp*

*choke!*

65

*pp* *p* *mp* *mf*

*sim.* *pp* (ride only)

69

*pp* *p* *mp* *mf*

(as before) *mp*

♩ = c.88

73

*pp* *mf*

Freer, with no sense of metre (trumpet only)

*mp*

percussion continues at ♩ = c.88

77

wait for cue from percussionist

(trumpet only)

*pp* *mf* *mf* *sfzp* *ff*

Start shaking sleighbells during the trumpet crescendo. Keep shaking them while placing them on the (open) hi-hat during trumpet's fermata rest

irregular accel/rall with hi-hat pedal, making sleighbells rattle/jingle

take blastick in one hand, brush in the other

start this pattern during trumpet's sustained note

repeat with ad lib. variations

percussion changes pattern during trumpet's fermata rest

*f* *p* *f* *p* *sim.*

*c.4"*

*c.40* (distribute notes ad lib. between right and left hands)

"stir" snare with brush; rapid notes with blastick

80

*mf* *c.96*

*c.5"*

change to this pattern during trumpet fermata

*c.60* swap sticking on each repeat

*c. d.*

*p* *f* *pp*

82

*p* *f*

c.3"

84

$\bullet = c. 66$

*f* *p* *f*

short

$\bullet = c. 54$

*mp* *p*

change pattern just after trumpet re-entry

$\bullet = c. 50$

hit with blastick then stir with brush

tambourine with blastick; hi-hat with brush

repeat with gradual overall diminuendo, while retaining internal dynamic contour

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

87

$\bullet = c. 96$

*f* *ff*

stop pattern during this trumpet phrase

put sticks down and put thimbles on three fingers of one hand

c.6"

2"-3"

89

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

c.5"

$\bullet = c. 48$

91

*mp* *p*

cymbals with thimbles; drums with fingers

sim, varying order of drums/cymbals ad lib. and length of pauses between figures

*p* *mf*