In the Deep End

For five improvisers

Score (transposed)

Martin Kay

Composed for my Doctor of Musical Arts,
Sydney Conservatorium of Music, University of Sydney

Premiered by Martin Kay (alto saxophone/clarinet), Emily Granger (harp), Steve Barry (piano),
Ben Carey (modular synthesiser) and Jamie Cameron (drums)
Recital Hall West, Sydney Conservatorium of Music, 31 October 2017
**Instrumentation**

- Saxophone/clarinet
- Scordatura harp
- Prepared piano
- Modular synthesiser
- Drumkit/gongs

Duration: circa 55’
Dedicated to Emily Granger (harp), Steve Barry (piano), Ben Carey (modular synthesiser) and Jamie Cameron (drums) for their artistry. Your unique contributions indelibly shaped my work.
Every surfer knows you have to put yourself in harm’s way to catch a wave. The zone of bliss for the surfer is that thin line between a harmless swell and the impact zone of a crashing wave. As you paddle to catch a wave, you never know what’s going to happen. You might catch the wave, make the drop, carve a bottom turn, and set your rail for the ride of your life. Or you might wipe out, crash in a torrent of thundering whitewater, and be left wondering which way is up.

Tim Cooley
Performance notes

Movements

1. Resolve
2. Glare
3. Drift
4. Limber
5. Loom
6. Impact zone
7. Surfacing
8. Barrelling
9. One More

I imaginatively shaped the formal evolution of *In the Deep End* through a surfing metaphor. Each movement creates a vignette of a surfing experience, arcing across the course of a session. For me, the experience of surfing is improvisational. To surf a wave, I must negotiate a chaotic system, a fact persisting from my first wave to the present day, with the only difference being the gradual emergence of a personal style and a growing range of responses. No two waves are the same and a surfer’s trajectory remains a state of constant transformation: there is a feedback loop between the surfer, the consequences of the surfer’s actions, and the wave, causing the surfer to constantly and intuitively modulate their actions. Relating this experience to an improvisational network: the ocean represents the composed elements, the immovable aspects of the ocean, the mass with the greatest resistance, as well as other improvised elements, a shifting and indeterminate body; like sand, or the rips and currents of the ocean, or the crumbling lip of the wave giving way after a swift manoeuvre.

*Resolve* is calm: as the surfer awakes, she gradually becoming more agitated, drinking coffee and imagining possibilities. *Glare* represents the surfer staring into the sun. *Drift* represents the ocean currents moving around the surfer’s feet. *Limber* represents the surfer is warming up, finding her rhythm. *Loom* represents a clean-up set appearing on the horizon. The waves are large, breaking further out, marking the end of a rhythmic cycle. The surfer paddles towards the waves, hoping to
avoid a drubbing, or perhaps to catch one. The movement builds tension as the surfer gradually realises that she really must get a move on. Impact Zone represents the glorious moment the surfer, after having paddled vigorously, is now in a position to catch the wave. Operating above her skill level, she tumbles, now at the mercy of the turbulent, chaotic whitewash. Surfacing: the surfer broaches the surface of the ocean, able to breath. This movement is the most still and calm of the entire work, representing a catharsis. Barrelled is the moment the surfer catches a wave, riding the tube. This is the most flowing groove in the work, a steady, relaxed progression, with contracting and expanding rhythmic patterns and overlapping wavelike melodies. One More: The surfer is exhausted, paddling in, going home as it begins to rain.

**Tibetan gong analysis**

My compositional process for In the Deep End was improvisational from conception to conclusion. I experimented with eliciting a variety of sounds from the gong, striking and scraping it with a variety of materials, with an approach exploratory and spontaneous. The gong was subjected to hammers, hands, cloth, nails and several violin bows. Eventually I settled on several samples to be used as a part of the work. The composed elements for In the Deep End continuously developed during rehearsals, as my appreciation of each performers’ capacities deepened.

Using the sonic analysis program Spear, I analysed a sample I made of the bowed Tibetan gong: the chosen sample generating the sonic space. Working from a sonogram, I translated sine waves into a table recording the closest equal temperament equivalent (with the cents deviation) and the equivalent hertz. Guided by the practicalities of writing for harp, I selected seven-and-a-half octaves of partials, I retained a mixture of the strongest, most stable partials, and a selection of unstable, intermittent and variable partials. I assigned these notes across the entire range, with no repeated tunings across octaves. At the bottom of the harp range, gaps are filled by standard, equally tempered tuning. As the range reaches higher every string conforms to the harp analysis (Figure 1).
Figure 1: Tibetan gong analysis for In the Deep End

Harp scordatura

For simplicity of performance, I made the decision to construct the scordatura so that no pedalling was required to express the full set (Figure 2).
Piano preparations

Piano preparations radiate out from the central organising principle of the gong spectrum. Each note of the analysis governs a piano preparation. The process of preparation is an improvised act of discovery, as the pianist experiments with the placement of materials to gain an interesting array of sounds. For the first performance, the preparations mixed percussive sounds, creating a connection to the drums, as well as split sounds and surprising pitch shifts which hark back to characteristic qualities of the Tibetan gong.

Modular synthesiser

Figure 3 shows sine tones assigned to the modular synthesiser. Sine tones project a clarity contrasting with the more complex timbres occurring throughout the ensemble.

![Modular synthesiser set (subset of gong analysis)](image)

The modular synthesiser represents each temporal stage in the composition, from deconstructions of samples of the original gong sound, to playing melodies based on a pitch aggregate based from the gong analysis, to the improvised evolution of these structures in the perceptual present. For the first performance, I supplied recorded improvisations I made of my Tibetan gong. These samples were used in compositional tasks as well as being manipulated throughout the work, by being reversed, placed out of phase with each other, subjected to frequency and amplitude modulation, distortion, pitch shifting, looping, and any other mode of decomposition the performer
wished to engage. For future performances of the work, the performer should record samples from a gong being used in the work.

**Saxophone/clarinet**

The saxophone/clarinet plays an intuitive role, experimenting with timbre and microtonal tunings to find a territory complementary to the altered pitch space.

**Drumkit**

![Drumkit notation]

**Shared pitch material**

The modular synthesiser, saxophone/clarinet, piano, and harp share an equal tempered set.

![Shared pitch material notation]
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Score (transposed)

Martin Kay
Glare

A

Clari.

D. S.

Clari.

Synth.

B

Synth.

D. S.

B

For tuning peg to improvise microtonally around this pitch.

For tuning peg to improvise microtonally around this pitch.

Gradually transform to noise.

Gradually transform to noise.

Create chord complexes around a B pedal tone using the provided pitch set.

Create rhythmic beating through amplitude modulations.

Create rhythmically within this range.

Create sparse chord clusters.

Build up ambience with rhythmic grog energy from texture then attaca into the next movement.

ATTACA
Drift

All repeats are open. Move in in a smooth manner, finishing each gesture, maintaining the flow.

A. Sx. (r.h let ring repeat ad lib)

Dynamics vary between bright and mellow analogous to the crests and troughs of waves.

C. Improvisate becoming part of the texture

Each repeat open until sax cues each change

Open

Improvise floating melodies

Begin to vary rhythm after a few repeats

Random accents

Play on preset pads

Continue

(synth)

Begin to vary rhythm after a few repeats

Play on preset pads

Continue

(synth)

Begin to vary rhythm after a few repeats

Play on preset pads

Continue

(synth)

Begin to vary rhythm after a few repeats

Play on preset pads

Continue

(synth)
Drift

A. Sx.

Hp.

Pno.

synth

Drums

Esustain each tone until the next cue

Add frequency modulation for a vibrato effect

G

H

A. Sx.

Hp.

Pno.

synth

Drums

Improvise waves of sound

Frequency modulation becomes wilder

Wilder still
move to a steady tempo
harp and piano eventually
play in rhythmic unison. adjust as necessary

move towards stability

rall.

harmonise freely
Drums

A.S.

Hp.

synth

Drums

D

A.S.

synth

Drums

E

A.S.

Hp.

Pno.

synth

Drums

sax and harp play to end solo

sax/synth cues

wind solo down

take samples out

elaborate the groove

4 times repeat

4 times repeat

4 times repeat

4 times repeat
A.Sx:
- extreme rall. (independent of other instruments)

Hp.:
- use tuning peg to gradually lower this pitch as far as you can
- extreme rall. (independent of other instruments)

Pno.:
- enter quite quickly and legato

synth:
- extreme rall. (independent of other instruments)

Drums:
- extreme rall. (independent of other instruments)

The gong crossfades into the next movement which harp begins (when ready)
Loom

(move on after other instruments finish their crossfade)
Drums

A. Sx.

Pno.

Synth

strings gradually towards piano;
react sparsely to piano, continue simile
improvise basslines
holding pattern

Syncopated endorsing

\(5:4, 6:5\)

improvise

continue sérillée
Drums

Pno.

Synth

Drums

improvise through this section

harmonise freely around these notes

play sparse reactions to
synth improvisation

create and transform rapid ascending figures

play sparse reactions to
synth improvisation

play sparse reactions to
synth improvisation

play sparse reactions to
synth improvisation

play sparse reactions to
synth improvisation

play sparse reactions to
synth improvisation

improvise through this section

harmonise freely around these notes

play on keyboard

play on keyboard

play on keyboard

play on keyboard

play on keyboard

play on keyboard

holding pattern

holding pattern

play on keyboard

play on keyboard

play on keyboard

play on keyboard
crescendo to the end. Become more intense. Move towards chaos...........
orchestrate freely
improvise in top two octaves, interpolate wild upward sweeps across your whole range

improvise ascending figures

get loose

get freer and more interactive
Impact Zone

Improvise drawing on previous movements

Move from flux towards calmness and predictability

From no repetition of material to repetition

From no interaction to interaction
Surfacing

Drum Set
Harp
Piano

Una corda/pedal (no sustain)

Una corda/pedal (no sustain)

Una corda/pedal (no sustain)

from atas from 2'–3' circa
Use silence in between each note

A piano and harp intermesh in a unified sound always rhythmically independent

B create melodies on gongs
create a phasing pattern using a gong sample

C

Surfacing

A. Sx.
Hp.
Pno.
Drums
Synth
Surfacing

A. Sax

Harp

Piano

Synth

Synth 1

Piano

Surfacing Synth

19
Barreled
Drums
A. Sx.
Hp.
Pno.
Drums

A. Sx.

harmonise freely with L.H
20° circa

A. Sx.  

Pno.  

Drums  

Hp.  

sudden group improvisation (counterpoint)

(change to clarinet)

sudden group improvisation (counterpoint)

sudden group improvisation (counterpoint)

sudden group improvisation (counterpoint)

Attaca
**One More**