The Use of Registral Spacing and Rhythmic Density as Musical Trajectories in a Portfolio of Original Compositions

Volume 1 of 2: Portfolio of Original Compositions

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Never-ending Torture

for soprano and harp

Poumpak Charuprakorn (2016)
**Never-ending Torture** was composed in collaboration with the Cardiff-York Universities Coma and Disorders of Consciousness Research Centre for the event 'Coma Notes: music and poetry exploring consciousness and coma' which was a part of the ESRC/Cardiff Festival of Social Science to convey the stories of patients in a coma and their families who are facing this heartbreaking situation.

The composition does not aim to tell the story in a direct, linear narrative, but rather to use music to express the misery of the families and patients involved through the creation of sounds that a patient in a coma might be experiencing, such as partially heard conversations and distorted sonorities, by using fragmentation of the text, barely comprehensible sounds sung by the soprano as well as various sound clusters created by harp.

The piece starts with the thunderous sound of a harp followed by fast gestures and the dramatic long crescendos of a soprano. Not all text is meant to be comprehensible. The soprano alternates wordless, non-lexical singing with fragments of text accompanied by clusters in the harp. What starts as a big wave of clusters later turns into a soft, sparse, pointillistic texture. The middle section features whispers and hums supported by a range of muffled sounds produced by the harp before a short, but intense, outburst of emotions returns. The composition appears to end with a mother’s quiet plea to ‘end’ her son’s ‘suffering’, but it is finally disrupted by another thunderous sound that perpetuates the idea of ‘never-ending’ torture or even depicts a final cry of anger and despair.

The composition was premiered at Cardiff University on 16 November 2016 by Gwenllian Llyr (harp) and Sarah Dacey (soprano).

Duration: ca. 6 minutes
(Messages from anonymous mothers, adapted by Poumpak Charuprakorn)

..... no! Oh, my son! ..... 
My son, my love! 
No! No! My son, help him! 
Please, help him! 
Somebody, please, help.

(You are going to be alright. 
Somebody is going to help you. 
Oh, my son. 
Somebody, please, help him. 
Please, somebody, save him.)

.....

(Mister? Mister? Mister!)

..... you! ..... him! ..... 
He is feeling, he is feeling the pain!

Please end this. 
Please end this suffering.

.....
PERFORMANCE NOTES

**Soprano**

A letter in brackets is the consonant and/or the vowel of the sound

An arrow between two brackets represents a gradual change of the vowel

Texts with crossed noteheads need to be spoken (or whispered)

---

**Harp**

means that the performer is required to play the strings with force to create buzzing sounds

A crossed notehead represents Bartok's pizzicato

A black vertical rectangle needs to be played by hitting the strings

A dashed slur indicates a phrase

represents strumming the strings with fingernails
Never-ending Torture

Poumpak Charuprakorn (2016)

Soprano

Harp

ca. 42

p

pff

ff

q ca. 42

ff

fff

fff

fff

mf

No!

ff

ff

ff

Oh,

ff

no cresc.

ff

mf

ff

mf

my son!

ff

f

mf

f

f

ff

f

ff

mf

f

f

mf
My son, my love!

No! No!

My son, help him!

Please, help him! Some body, please, help.

(whisper, nearly inaudible)

You are going to be alright. Someone is going to help you. Oh, my son.

randomly play one of the pitches in one of the following patterns

randomly strum within this range
Somebody, please, help him. Please, somebody, save him.

(last strum)
(whisper) Mister?  (whisper) Mister?  (speak) Mister!

(pp) (with E3)

B  \( \text{ca. 52-60} \)

(as high as possible)

(f) (D#, A#)
Tea-Time
for soprano and electronics

Poumpak Charuprakorn (2018)
in collaboration with Heather Fuller
*Tea-Time* is a composition for soprano and electronics which aims to express the notion of time inspired by the absurd, but thought-provoking, conversation from the remarkable ‘Mad Tea Party’ in Lewis Carroll’s *Alice’s Adventure in Wonderland* and the fact that we sometimes choose to inefficiently spend the time of our lives which is running out everyday. The soloist is accompanied by an audio track digitally generated from her pre-recorded narration. The music starts with a quotation from the book and later morphs into a vortex of sound, various expressions of the singer, and ends with another quotation that states the worrying situation we are in.

The composition was composed in collaboration with Heather Fuller for Cardiff University’s *Composition Showcase: Project in Collaboration 2018*.

The premiere was performed at Cardiff University on 1 May 2018 by Heather Fuller (soprano).

Duration: ca. 4 minutes

**Performance notes**

Normal notehead = sing

Crossed notehead = speak, unspecified pitch

Triangular notehead = choose the pitch at random or from any audible pitch from the audio track

Please contact the composer for Max patch which includes a recording sub-patch and an audio track generator.
Tea-Time
for soprano and electronics

A

ca. 60

Soprano (low drone)

How do you know I’m mad?

B

[vortex-like sound]

[vortex-like sound]

You must be, or you wouldn’t have come here

[slowly walk to the middle of the stage]

[higher drone]

[layers of high sound]

Ding! Ding! Ding!

[ca. 6 seconds]

I’ve got not much time, but

mf

Let’s just take a break and

mf

Ding! Ding! Whoosh!
Cute! Nay... (layers of high sound)

Whoosh! Whoosh! Ding! Ding! Ding!

(2 high sharp sounds)

Oh, my!

(3 high sharp sounds)

Who?

Where are you? (tick x8)

(Time)

More... (tick x5)

[Speak with different tones like these words are taken from different conversations]

Can? What? Why? Are you... (tick x3)

More? (No) No...

[ Mimic the hissing sound with long sustained notes, ca. 6 seconds]

Are you murdering time? You?
(free expressions, freely combine singing the written shape and mimicking ticking sound, ca. 6 seconds)

Ah... tic tic tic tic

(Layers of hissing sound)

Ah...

(quickly)

No!

Are you murdering time?

No...

[slowly get off the stage]

But I don’t want to go among mad people

Oh, you can’t help that; we all mad here. I am mad, you are mad.
...with steps we take...
for violin, clarinet in B♭, piano, percussion, soprano, and electronics

Poumpak Charuprakorn (2019)
...with steps we take... is a composition for violin, clarinet in Bb, piano, percussion, soprano, and electronics. It was composed in collaboration with Francis Favis, Amanda Forest, Matthias McIntire, Yolanda Tapia, and Hillary Young during Toronto Creative Music Lab 2019. The composition, involving recorded soundscapes, instrumental sounds, and live electronics, portrays how human’s actions affect this planet through the dialogues between the instrumentalists, soprano, and the synthesis of live-recorded sounds of the ensemble and recording of a stream, birds, and cicadas. Different spectral areas are explored by different instrumental techniques in different sections.

Premiered at 918 Bathurst Centre, Toronto, Canada on 15 June 2019 by Matthias McIntire (violin), Amanda Forest (clarinet), Yolanda Tapia (piano), Francis Favis (percussion), Hillary Young (soprano), and Poumpak Charuprakorn (electronics).

Instrumentation

Violin
Clarinet in Bb
Piano
A metal object (such as a coin) is needed
Percussion
Any instruments or objects that can produce these following sounds:
A high, metallic, scraping sound
4 different registers of sustained/tremolo sounds
3 dry (secco) sounds
Soprano
Electronics
A computer with Max/MSP and two speakers are needed

Duration: circa 6 minutes
Performance Notes

- Playing from a full score is highly recommended.
- All rhythmic notations are proportional and can be decided at performers' discretion within the indicated timeframe.
- Each bar is approximately 5 seconds long.
- Most of the notes are short, except the ones followed by black arrows or ties which must be sustained.

Electronics

- The stopwatch in the patch is only a guide. Aim to interact with the performers and trigger the sections by clicking the buttons.
- In a different performance, with a different microphone or a different setup, all of the volume and input gains have to be adjusted including the number boxes for the values of threshold, amp, and convolution.

Violin

- Hammering gestures (from around 50° onwards) should be played by holding the sustained notes with index and ring finger, then play a short burst of tremolo with middle or little fingers as indicated (with demi-semi-quavers or wiggly lines).
- Square noteheads represent scratchy, non-pitched sounds.
- Triangle noteheads can be any notes in the highest register of the instrument.

Clarinet

- Pianississimo passages are meant to be murmurous without any apparent attacks. Play the given notes in any order, as rapidly as possible.
- Triangle noteheads represent key clicks with air sound (for short, ticking sounds).
- Fingerings of multiphonics are given below:
Piano
- Pianississimo passages are meant to be mumuruous without any apparent attacks. Play the
  given notes in any order, as rapidly as possible.
- Cross noteheads require the player to play inside the piano. It can be only muting the strings
  while playing the key normally (section C) or tapping the strings with a metal object (sections
  E and F).

Percussion
- Instruments are not specified and can vary in different performances. As the sound of the
  ensemble will be electronically processed, finding objects with interesting timbres will surely
  add more variety to the composition.
- Aim to produce these following sounds:
  - A high, metallic, scraping sound [e.g. bowed metal dish or bowed cymbal]
  - 4 different registers of sustained/tremolo sounds (low, mid-low, mid-high, high)
    [e.g. bassdrum with mallets, snare drum with wiretap brush, metal pan with mallet,
    triangle]
  - 3 dry (secco) sounds (low, mid, high) [e.g. wood slat, guiro, shakers]
- The sounds can be created by any forms of playing (with drum sticks, mallets, superballs,
  hands, etc.)

...with steps we take...

Soprano
- Normal notehead = sing or hum
- Cross notehead = speak
- Diamond notehead = whisper

Here, hear; listen, it’s near.
Floods in winter, blizzards in summer;
Hear, (here; listen,) it’s near.

Stars shake
With steps we take.
Eternal lake
Resonates what we make.
...with steps we take...

for violin, clarinet in B♭, piano, percussion, soprano, and electronics

In collaboration with Francis Favis, Amanda Forest, Matthias McIntire, Yolanda Tapia, and Hillary Young

Poumpak Charuprakorn (2019)
molto sul ponticello, arco

(hammering with little finger)

(low)

(mid-low)

(low)

PP

(hammering with middle finger)

(these notes in any order)

(mid-high)

(high)

AE
Here, near; (listen,)
- it's near

Floods in win ter, bliz zards

in sum mer
Hear, it's near.

(scraping sound) (vln.) (low perc.)

(high piano)
Vln.

(see performance notes)

pp (as possible)

CL.

p

(seccos)

(f from F#6 to D#7, randomly and rapidly)

Pno.

mute the strings

PPP

Sop.

p

Elec.
we take. E-tar-nal take re-so-nates what (we) (make)
col legno battuto, several notes in the highest register

(key clicks with air sound)

inside the piano, tap the highest strings with a metal object

(rhythmic cicada’s sounds)
Natural Currents
for flute, alto saxophone, percussion and piano

Poumpak Charuprakorn (2017)

FULL SCORE IN C
INSTRUMENTATION

Flute

Alto Saxophone

Percussion
(bass drum, snare drum, suspended cymbal, woodblocks w/ wiretap brushes, mallets, drumsticks)

Piano

Duration: ca. 3 minutes
PERFORMANCE NOTES

Barlines and time signatures do not imply any strong beats
A dashed crescendo shows the direction of a phrase; the change of dynamic should be very subtle

FLUTE

flz. = flutter-tonguing
ord. = without flutter-tonguing

An arrow represents gradual change from flz. to ord.

ALTO SAXOPHONE

flz. = flutter-tonguing
+

= slap-tonguing

PERCUSSION

= sweeping with wiretap brushes
All tremolos should be played as fast as possible
Natural Currents
for flute, alto saxophone, percussion, and piano

Poumpak Charuprakorn (2017)

Very slow (\( \approx 40-46 \))

Flute

Alto Saxophone

Percussion

Piano

w/ wiretap brushes

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A

Suddenly faster (\( \text{ca. 52} \))

Tempo primo
(\( \text{ca. 40-46} \))
Suddenly faster (¢ ca. 52)

Tempo primo (¢ ca. 40-46)

Fl.:

Alto Sax.:

Perc.:

Pno.:
Quartet
for string quartet

Poumpak Charuprakorn (2017)
**Quartet** consists of twenty-two distinctive sections that vary in the sense of time, texture, density, range, dynamic, timbre, and harmony. The composer aims to explore the use of non-linear development and non-thematic musical material to create the essence of the composition.

**Performance Notes**

Barlines and time signatures are only for practical use and do not imply any strong beats

All pizzicatos should be let vibrate (l.v.)

All marcatos should be *secco*

All tremelos are unmeasured and should be played as fast as possible

\[
\text{= a short burst of tremelo only at the beginning of that note (\text{\textcopyright})}
\]

\[
\text{= quarter-tone sharp} \quad \text{= half-tone sharp} \quad \text{= three-quarter-tone sharp}
\]

\[
\text{= quarter-tone flat} \quad \text{= half-tone flat} \quad \text{= three-quarter-tone flat}
\]

Roman numerals represent the strings; I and IV represent the highest and lowest strings respectively

Performers could use vibrato normally throughout the piece except the sections indicated *senza vibrato*

\[
\text{means molto vibrato, the range of the vibrato could be up to a quarter-tone higher and lower than the written pitch. At the rehearsal marks 10 and 14, all notes without this sign should be senza vibrato to exaggerate the difference}
\]

**Noteheads**

A diamond notehead in brackets written with a natural harmonic is used to remind the player where to touch to create the sound; occasionally it is indicated by texts in brackets instead

A square notehead represents distorted and scratchy sound with audible pitch

**Terms and Abbreviations**

\[
\text{s.p. = sul ponticello} \quad \text{s.t. = sul tasto} \quad \text{ord. = normal bowing}
\]

\[
\text{crini+legno tratto = bowing with hair and wood}
\]

\[
\text{col legno tratto = bowing with wood only}
\]

**Duration:** ca. 10 minutes
Quartet
for string quartet

Poumpak Charuprakorn (2017)

Very slow (ca. 40)

Violin I

Violin II

Viola

Violoncello

pp sempre

(6th harmonic, 1/6 from the bridge)

(4th harmonic, 1/4)

(9th harmonic, 1/9 from the bridge)

(6th, 1/6)

(4th harmonic, 1/4)

(6th harmonic, 1/6 from the bridge)

(7th harmonic, 1/7 from the top nut)

arco

pizz.

arco

pizz.

arco

pizz.

pizz.

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Fast (\( \approx \text{ca. } 92 \))

\[ \begin{array}{c}
444 \quad \text{II} \quad \text{p} \quad \text{mf} \\
444 \quad \text{(pizz.)} \quad \text{sub} \quad \text{p} \\
444 \quad \text{arco ord.} \quad \text{mf} \\
444 \quad \text{pizz.} \quad \text{ord.} \\
444 \quad \text{p} \quad \text{mf} \\
444 \quad \text{pizz.} \quad \text{cratchy/distorted} \quad \text{f} \\
\end{array} \]

\[ \begin{array}{c}
444 \quad \text{mf} \quad \text{s.t.} \quad \text{senza dim.} \\
344 \quad \text{arco ord.} \quad \text{mf} \\
344 \quad \text{p} \quad \text{p} \\
344 \quad \text{mf} \quad \text{p} \\
344 \quad \text{mf} \quad \text{p} \\
\end{array} \]

\[ \begin{array}{c}
544 \quad \text{p} \quad \text{mf} \\
544 \quad \text{p} \quad \text{mf} \\
544 \quad \text{p} \quad \text{mf} \\
\end{array} \]

\[ \begin{array}{c}
544 \quad \text{p} \quad \text{no cresc.} \\
544 \quad \text{s.p.} \\
544 \quad \text{p} \quad \text{p} \\
544 \quad \text{p} \quad \text{p} \\
\end{array} \]
Slower (± ca. 72-84)
Fast (\(\approx 92\))
9 Slow (c.a. 52-60)

68 s.t. senza vibrato

71 s.t. senza vibrato

74 senza crescendo
Very slow (\textit{\textalpha} ca. 40)

senza vibrato/molto vibrato alternatively, see performance notes

Fast (\textit{\textalpha} ca. 92)
Senza tempo (this whole section lasts circa 40 seconds)
13 Moderately fast (ca. 72)
Fast (c. 92)
senza vibrato/molto vibrato alternatively, see performance notes

Moderately fast (c. 72)
16 Senza tempo (this section lasts circa 10 seconds)
17 Moderately fast (± ca. 72)

18 Senza tempo (circa 10 seconds)
20

Moderately fast (\( \approx \) ca. 72)

21
Senza tempo (circa 40 seconds)

s.t. senza vibrato

(normal vibrato)

s.t. senza vibrato

(normal vibrato)

s.t. senza vibrato

(slow vibrato)

(slow vibrato)

(normal vibrato)
A piece for household items
for six performers

Poumpak Charuprakorn (2019)
A piece for household items requires each performer to choose, up to, two items of their choice that can create short and long sounds; the items can be idiophonic, aerophonic, electrophonic, or even membranophonic and chordophonic. The composition focuses on different combinations of sounds from each performer through the organisation of their entries. Unisons and alternations between sounds in various degrees are explored throughout the piece while repetitive rhythmic patterns periodically feature in juxtaposition. A variety of timbres and their interactions with one another are the features of the composition. Although the order of sonic events is determined, the sonorities vary according to the objects chosen specially for each performance.

The piece was composed in collaboration with The Hooting Cow Collective, an ensemble based in Cardiff. The founding members are Poumpak Charuprakorn, Ana Beatriz Ferreira, Richard McReynolds, Laura Shipsey, Thomas Pitt, and Jerry Yue Zhuo.

The first performance took place at St. Martin’s Church (Caerphilly, Wales) on 5 April 2019. It was performed by the members of The Hooting Cow Collective: Poumpak Charuprakorn (a tuba mouthpiece and a big stapler), Ana Beatriz Ferreira (a thermos), Richard McReynolds (a glass bottle), Magdalena Pasternak (keys and a small stapler), Laura Shipsey (a saucepan lid), and Jerry Yue Zhuo (a box of toothpicks and a shoe brush).
Instrumentation

6 performers with any items that produce short and long sounds

Preparation

- Each performer needs to have one or two objects that can create short and long sounds (it can be 1 object for both sounds)
- The objects can be anything from musical instruments to random household items
- A long sound that an item creates can be either sustained or resonated sounds

Duration: circa 5 minutes
Performance Notes

- Performers should perform from a full score
- The notation is proportional and there should be no fixed pulse; performers can appoint group leaders to be in charge of giving cues when needed
- The top and bottom lines of each part are for short and long sounds respectively
- Noteheads which share a stem should be played simultaneously; their dynamic and articulation are also shared
- Always let long sounds resonate as long as possible (unless indicated otherwise)
- A boxed motif (with an arrow) has to be repeated according to its instruction; each group can play the motif at any speed as long as it is different from other groups
- A boxed motif containing minims should be played in a slow tempo
In collaboration with the Hooting Cow Collective

A piece for household items

for six performers

Poumpak Charuprakorn (2019)
Fanfare
for brass quintet

Poumpak Charuprakorn (2018)

FULL SCORE IN C
INSTRUMENTATION

2 Trumpets in B♭ (with straight mutes)
Horn in F (straight mute optional)
Trombone (with straight mute)
Tuba (straight mute optional)

Duration: ca. 4 minutes
Fanfare
for brass quintet

Pourmpak Charuprakorn (2018)
Monologic Dialogue
for violin and live electronics

Poumpak Charuprakorn (2018)
The composition was composed for Dr Mieko Kanno for Valencia International Performance Academy and Festival 2018.

The first performance took place at Conservatorio Superior de Musica Joaquin Rodrigo Auditorium on 20 July 2018 in Valencia, Spain.

Duration: circa 10 minutes
Instrumentation

Violin

Electronics
- A computer with Max/MSP
- One microphone
- Two speakers
- Midi Controller (Korg NanoKONTROL 2)

Please contact the composer for the patch

Performance Notes

Violin
- An accidental only has an effect on the note it precedes
- Barlines and time signatures do not imply any strong beats
- s.p. = sul ponticello
- s.t. = sul tasto
- A black arrow (violin) = a gradual change from one bowing technique to another
- All notes are with no vibrato
Electronics
- Dashed arrow (electronics) = sustain the level of the dynamic
- Graphics on electronics part at rehearsal marks C, E, and F are approximate and do not accurately represent the sound of the electronics

Shortcuts (keyboard)
- backspace/delete = reset everything
- spacebar = trigger next cue
- 1 = trigger 'effect' (rehearsal mark D)
- 2 = next harmony (HARMONISER, rehearsal mark E)
- 3 = next set of overtones (rehearsal mark F)
- Main audio toggle, knobs, and sliders can be controlled by mouse

Midi Controller (Korg NanoKONTROL 2)
- Position of all sliders is inverse (main output is controlled by the first one on the right)
- Knobs needed at the rehearsal mark C are the fourth and fifth (two in the middle)
- Cycle button = audio on/off
- Left track = reset everything
- Right marker = trigger next cue
- Record button = trigger 'effect' (rehearsal mark D)
- Rewind button = next harmony (HARMONISER, rehearsal mark E)
- Stop button = next set of overtones (rehearsal mark F)
Monologic Dialogue
for violin and live electronics

Pourpako Charuprakorn (2018)
(amplification with effects)

(gain for reverberation)

(volume for 'freeze' and reverberation)
(harmoniser with reverberation)

HARMONISER numbers 2-7

HARMONISER numbers 8-21

HARMONISER numbers 22-27

HARMONISER numbers 28-33

(Play very softly to generate artificial overtones in electronics)

Maintain ca. 30% gain for amplification, LEFT volume for artificial overtones, (RIGHT gain)

NO gain for reverberation)
Quintet II
for woodwind quintet

Poumpak Charuprakorn (2017)

FULL SCORE IN C
Instrumentation

Alto flute
Oboe (doubling cor anglais)
Clarinet in Bb
Horn in F
Bassoon

Duration: circa 7 minutes
Performance Notes

Time signatures and barlines do not imply any strong beats

All tremolos should be played as fast as possible

Multiphonics fingering chart

Alto flute (transposed)  Oboe

Clarinet (transposed)  Bassoon
(play whistle sounds freely with the written fingering)
A.
B.
C.
D.

\[ \sum \]

(see performance note)
Inching Phase

for flute, viola, and harp

Poumpak Charuprakorn (2018)
Instrumentation

Flute
Viola
Harp

Duration: ca. 6 minutes
Performance Notes

Barlines and time signatures do not imply strong beats

Tremolo should be played as fast as possible

Tempos

\[ \text{♩ ca. 44} \quad \text{♩ ca. 66} \quad \text{♩ ca. 108} \]

Pulses in some sections will be out of phase (only for a short period of time)
The pulses will be in sync again when stated '♩ ca. ... (all)'
Time signatures in the section will be different as well
(measures 12-15, 21-23, 41-43, 46, 49, 51, 54, 56, 58)

Bar numbers

Due to multiple tempos and time signatures, extra measures are added as follows:
46a (between 46 and 47) on flute and viola
54a and 56a on viola and harp
58a on flute and harp
Flute

pizz. = pizzicato sound (percussive sound with pitch)
flz. = flutter tonguing
brth. = breathy sound (half tone, half air)

(slashed numbers mean partially closed)

Viola

s.p. = sul ponticello
s.t. = sul tasto

Harp

crossed notehead = Bartok's pizzicato
xylo. = xylophonic sound
p.d.l.t = pres de la table (only the notes it is attached to)
\[ \text{ca. 108 (fl.)} \]
\[ \text{ca. 66 (vla.)} \]
\[ \text{ca. 44 (harp.)} \]

\[ \text{ca. 44 (all)} \]
Pivots
for horn, violin, violoncello, and piano

Poumpak Charuprakorn (2019)
Performance Notes

- Barlines and time signatures do not imply any strong beats.
- Horn player has to sit or stand in front of the piano pointing the bell towards the inside of the piano (especially at rehearsal marks A and B).

Tempos
- Horn's tempo in measures 27 and 29 is faster than the rest of the ensemble; the time signature will be different from other instruments as well.

Horn
- A mute is needed (at rehearsal mark D).

Violin and Violoncello
- s.t. = sul tasto
- s.p. = sul ponticello
- Tremolos should be played as fast as possible.
- Harmonics at rehearsal mark C are 8th-12th natural harmonics near the bridge (Roman numerals for strings are given above the note).
- Mutes are needed (at rehearsal mark D).

Piano
- S.P. = sostenuto pedal
- Diamond noteheads = silently press the keys for resonance

Duration: circa 5 minutes

Notes: The recording accompanying this score is of an initial version. The only difference is in measures 27 and 29 on violin and cello.
Altered Exponents

for 37-key melodica and electronics

Poumpak Charuprakorn (2018)

Full Score
*Altered Exponents* is a composition for melodica and electronics that combines pre-recorded materials and live performance. The player is required to record sections II, III, and V before a performance in order to generate an accompanying tape track. The piece features five small distinctive segments that vary in length and also explores various sonorities, ranges, speeds, gestures, and characters of a melodica.

The first performance took place at Reardon Smith Theatre, Cardiff National Museum in Cardiff, Wales on 22 April 2018. The performer was Poumpak Charuprakorn, who also controlled the electronics.

The electronics part (including the recording patch) operates on Max/MSP. Please contact the composer for the patch.

Duration: 10 minutes

**Performance Notes**

- One system equals 1 minute
- The music is rhythmically free but should be proportional to its position in a system
- The beginning of each section has to be exact (at 0’ 00”, 1’ 00”, 2’ 15”, 4’ 00”, and 6’ 30”)
- Grace notes should be played as fast as possible
- All notes except grace notes should be sustained in proportion to other notes in the system
- When tremolo is indicated, hold the higher note and rapidly press/depress the other one below
- Bisbigliando = play the given note and rapidly press/depress other keys in 1-2 octaves above the main note
- Accidental only affects the note to which it is attached
Altered Exponents

Poumpak Charuprakorn (2018)
Stretches

for 2 Gametrak controllers with MAX/MSP

Poumpak Charuprakorn (2019)
'Stretches' is specially composed in collaboration with Swansea Laptop Orchestra (Jenn Kirby and Simon Kilshaw) in Ty Cerdd’s CoDI ELECTRONIC as part of Bangor Music Festival 2019. The composition aims to explore a delicate soundworld of white noise with multiple band-pass filters controlled by Gametrak controllers and Max/MSP. Two performers gradually layer individual filtered noise on top of each other to form sounds with various spectral spaces which later evolve into more distinct timbres. Sound masses later travel all over the performance space and fully embrace the audience with rich electroacoustic sonorities that eventually fade into a single sustained band of white noise.

The premiere was performed by Jenn Kirby and Simon Kilshaw (Swansea Laptop Orchestra) at Pontio Arts and Innovation Centre, Bangor University in Bangor, Wales on 8 February 2019 in Bangor Music Festival 2019.

Duration: circa 8 minutes
Setup description

- Speakers should be placed according to the plan (in case there is not enough space, speakers 1 and 2 can be positioned in front of the players closer to the audience).
- Each computer sends audio out in 4 channels the mixer.
- The same channel from both computers (for example, channel 1 from both players) can be combined into one output on the mixer and send to the specified speaker.

Equipment

2 Gametrak controllers
2 computers with Max/MSP (the patches were designed on Max 7)
2 4-channel audio interfaces
1 audio mixer
4 speakers
Overview of a Gametrak controller and MAX patches

- **Players 1 and 2 will have different patches** (designed on MAX 7)
- On each player’s screen, there will be a timer, 3 lights (on when receiving data from a Gametrak), cue number, and a reminding message box
- Tap the footswitch pedal (when indicated *top*) to change the cue upward from 0-7 (except between 2-3 that will automatically change in 1 minute after starting CUE 2)
- Changing the cue from 0 to 1 will turn all audio on and start the timer
- To reset, keep tapping the footswitch until it reaches 0
- Make sure a Gametrak is connected to the computer before opening the patch
- Gametrak’s tethers (for left and right hands) send data from their movement and position in 3 axes which from this point will be referred to as follows: **X** (left-right or the player), **Y** (front-back or toward the audience-toward the player), and **Z** (the length of a tether)
- The tethers operate differently in different sections of the piece; refer to the performance notes given below when needed
- **Segment(s)**, mentioned below in the performance notes of cues 5-7, refer(s) to the area of a circle in which the edge of a tether is
Performance notes

General performing concepts
- The score only provides rough instruction of how to perform; players are mainly required to improvise from the given instructions
- While performing, try to focus on the other player’s sounds and interact with them
- Players are allowed to take time between sounds they create (or before responding to the others’ sounds); feel free to hold or wait if needed
- When generating sounds, try to explore the concept of gradual and sudden changes in every aspect of the piece such as spectral space, dynamic, density of texture, spatialisation, timing, etc.

Generating individual sound (cues 1 and 2)
- Left and right tethers operate independently
- To generate a sound, move a tether toward yourself along the Y axis (to activate a trigger) and push the tether until it reaches the centre point right above the Gametrak (to trigger a sound)
- Every sound created during cues 1 and 2 will automatically decay to silence
- It is necessary to pull the tether back to reactivate the trigger before generating a new sound
- The speed of the triggering gesture affects the dynamic of a sound
- Triggering at a different position along the X axis will generate a different sound (low sounds on the left and high on the right)
- The Z axis of a tether determines the decay time of a sound
- At CUE 2, the patches will slowly pan the sounds to opposite directions (sounds from player 1 will come out more from speakers 2 and 3; player 2, 1 and 4)

Creating a group of sounds (cues 3 and 4)
- At CUE 3, all sounds from player 1 will only come out from speakers 2 and 3; player 2, 1 and 4
- Generating individual sounds will no longer be available from this point; similar triggering gesture (with all of the data from X, Y, and Z axes) will create a group of sounds instead
- To create a group of sounds, performing a triggering gesture with both hands: the patch will randomly generate sounds within the range of both hands (players can create groups of different sizes)
- It is still necessary to pull the tethers back to reactivate the triggers before generating a new group
- All groups that are created will be stored and used again later in the piece
- At CUE 3, all sounds will decay
- At CUE 4, sounds from player 1 will sustain while sounds from player 2 will decay

Replaying a previously created group of sounds (CUE 5, for player 1 only)
- To replay the stored sounds, move both hands to the same segment; the sound will also come out from the direction to which the player is pointing (for example, player 1’s left hand is in segment 5, pointing at speaker 3, when the player moves their right hand to segment 5 the patch will replay a stored sound from speaker 3)
- Player 1 is encouraged to experiment with different gestures, for instance, moving hands above your shoulders, moving at shoulder level, etc.
- All sounds will automatically decay (Z value still controls the decay time)
- It is safer to move both hands in different directions after replaying a sound to avoid double-triggering

Spinning a previously created group of sounds (CUE 6)
- To generate a spinning sound, perform a spinning gesture by moving one of the tethers from segment 2 to 6; right-hand tether will generate an anti-clockwise spin, left-hand clockwise
- The speed of the spinning gesture (in either direction) will determine the speed of the spin
- All sounds will sustain; Z values from both tethers will control the volume and can decrease to silence
- Player 2 has the freedom to decide when (and how) to generate new sounds; when a new sound is played the previous one will automatically decay to silence
Performing CUE 7

- While walking toward the Gametrak (to tap the footswitch), players can drop the tether that is not needed (player 1 only needs the left, player 2 the right)
- Z value from the tether controls volume; when a player moves closer to the device, the volume will decrease to zero
- When the Z value becomes zero, the patch will generate a new sound
- The segments, in which players are, controls the panning of speakers as well
- After triggering a sound, players are required to move in different directions (except the last time); the order of directions can be agreed prior to the performance or realised in a performance (this also applies to the number of repetitions)
Stretches
In collaboration with Swansea Laptop Orchestra

Poumpak Charuprakorn (2019)

PLAYER 1

CUE 0
-tap-

CUE 1 (individual L/R)
Generate individual sounds.
Slowly layer individual sounds on top of each other.
React to the sounds generated by the other player.
Generate more sounds as the section progresses to create a thicker texture.

(at around 1 minute 30 seconds)
-tap-

CUE 2 (individual L/R)
Create even thicker texture with more attacks than the previous section.
Still react to the other player.
Keep an eye on the countdown on the screen.

(the patch will change to CUE 3 automatically after 1 minute)

PLAYER 2

CUE 0
-tap-

CUE 1 (individual L/R)
Generate individual sounds.
Slowly layer individual sounds on top of each other.
React to the sounds generated by the other player.
Generate more sounds as the section progresses to create a thicker texture.

(at around 1 minute 30 seconds)
-tap-

CUE 2 (individual L/R)
Create even thicker texture with more attacks than the previous section.
Still react to the other player.
Keep an eye on the countdown on the screen.

(the patch will change to CUE 3 automatically after 1 minute)
CUE 3 (groups with both hands)
Create groups of sounds with different sizes at different places within the full range. React to the other player’s groups as well. Create sounds much more frequently later in the section.

(at around 3 minutes 30 seconds)
-tap-

CUE 4 (groups with both hands, sustained)
Create one big group of sounds at the same time with PLAYER 2.

(wait until PLAYER 2 starts playing their CUE 6 at around 4 minutes, both hands have to be down in different segments)
-tap-

CUE 5 (replay, both hands)
Replay previously created groups by pointing both hands in the same direction (same segment).
Generate sounds in various directions and aim to interact with the spinning sound created by PLAYER 2.

(at around 5 minutes 30 seconds, wait until your last sound decays)
-tap-

CUE 6 (spin, both hands)
Replay previously created groups and create spinning sounds by throwing with right or left hands (anti-clockwise, clockwise).

Keep repeating this step with various speeds and directions.
CUE 6 (spin, both hands)
Replay previously created groups and create spinning sounds by throwing with right or left hands (anti-clockwise, clockwise) in the opposite direction of the currently spinning sound. Perform this step only once.

(let both sounds spin for about 15 seconds, walk slowly towards the footswitch)
(at around 6 minutes)
-tap-

CUE 7 (left hand only)
Suddenly after tapping the footswitch, move away from the Gametrak in the opposite direction of PLAYER 2.
At the same time with PLAYER 2, walk toward the device, when the sound becomes silence, move in a different direction away from the device, again, in the opposite direction of PLAYER 2.
After repeating this step for 10-20 times, both players end at the direction facing the audience (segment 2), then slowly walk clockwise toward the other side of the device (segment 6).
After reaching segment 6, walk slowly toward the device, let go of the tether, and end the performance.

(wait for PLAYER 1 to perform a spin)

CUE 7 (right hand only)
Suddenly after tapping the footswitch, move away from the Gametrak in the opposite direction of PLAYER 1.
At the same time with PLAYER 1, walk toward the device, when the sound becomes silence, move in a different direction away from the device, again, in the opposite direction of PLAYER 1.
After repeating this step for 10-20 times, both players end at the direction facing the audience (segment 2), then slowly walk anti-clockwise toward the other side of the device (segment 6).
After reaching segment 6, walk slowly toward the device, let go of the tether, and end the performance.
Stretches II
for Gametrak controller with MAX/MSP

Poumpak Charuprakorn (2019)
Stretches II is the second piece from a series of compositions for Gametrak controller and Max/MSP. The series was first developed in collaboration with Swansea Laptop Orchestra in Ty Cerdd’s CoDI ELECTRONIC project. The composition explores a delicate sound world of white noise with multiple band-pass filters and technological translation of physical movements into sounds. With the gestural device, individual filtered noise is gradually layered on top of one another to form sounds with more distinct timbres. Sound masses are sent to different speakers and present the audience with rich electroacoustic sonorities that eventually fade into a single sustained band of white noise.

The first performance took place at Sull Space in Cardiff, Wales on 2 March 2019 in Cardiff Science Festival 2019. It was performed by Poumpak Charuprakorn.

The second performance was also by Poumpak Charuprakorn at Cardiff University on 9 April 2019 in Cardiff University Composition Showcase 2019.

Duration: circa 8 minutes
Setup

Setup description
- Speakers should be placed according to the plan (in case there is not enough space, speakers can be positioned in front of the player closer to the audience)

Equipment
1 Gametrak controller
1 computer with Max/MSP (the patch was designed on Max 7)
1 audio interface
2 speakers
Overview of a Gametrak controller and MAX patches

- The patch for Gametrak controller was designed on Max 7
- It is better to open the patch in presentation mode (200%)
- On the screen, there will be a timer, 3 lights (will be on when receiving any data from a Gametrak), cue number, and a reminding message box
- Tap the footswitch pedal (when indicated - top) to change the cue upward from 0-7 (except between 2-3 that will automatically change in 1 minute after starting CUE 2)
- Changing the cue from 0 to 1 will turn all audio on and start the timer
- To reset, keep tapping the footswitch until it reaches 0
- Make sure a Gametrak is connected to the computer before opening the patch
- Gametrak’s tethers (for left and right hands) send data from their movements and positions in 3 axes to which from this point will be referred as follows: X (left-right or the player), Y (front-back or toward the audience-toward the player), and Z (the length of a tether)
- The tethers operate differently in different sections of the piece; refer to the performance notes given below when needed
- Segment(s), mentioned below in the performance notes of cues 5-7, refer(s) to the area of a circle in which the edge of a tether is
Performance notes

General performing concepts
- The score only provides rough instruction of how to perform; the player is mainly required to improvise from the given instructions
- The player is allowed to take time between sounds they create; feel free to hold or wait if needed
- When generating sounds, try to explore the concept of gradual and sudden changes in every aspect of the piece such as spectral space, dynamic, density of texture, spatialisation, timing, etc.

Generating individual sound (cues 1 and 2)
- Left and right tethers operate independently
- To generate a sound, move a tether toward yourself along the Y axis (to activate a trigger) and push the tether until it reaches the centre point right above the Gametrak (to trigger a sound)
- Every sound created during cues 1 and 2 will automatically decay to silence
- It is necessary to pull the tether back to reactivate the trigger before generating a new sound
- The speed of the triggering gesture affects the dynamic of a sound
- Triggering at different positions along the X axis will generate sounds of different ranges (low sounds on the left and high on the right)
- The Z axis of a tether determines the decay time of a sound
- At CUE 2, the patches will slowly pan the sounds to opposite directions (sounds from left tether will come out from speaker 2; right speaker 1)

Creating a group of sounds (cues 3 and 4)
- At CUE 3, speakers 1 and 2 will only send out high and low frequencies respectively
- Generating individual sounds will no longer be available from this point; similar triggering gesture (with all of the data from X, Y, and Z axes) will create a group of sounds instead
- To create a group of sounds, performing a triggering gesture with both hands; the patch will randomly generate sounds within the range of both hands (player can create groups of different sizes)
- It is still necessary to pull the tethers back to reactivate the triggers before generating a new group
- All groups that are created will be stored and used again later in the piece
- At CUE 3, all sounds will decay
- At CUE 4, sounds from speaker 1 will sustain while sounds from speaker 2 will decay

Spinning a previously created group of sounds (CUE 5 and 6)
- At CUE 5, the left tether can only perform ‘spinning gesture’ while the right tether’s function is similar to CUE 1 and 2
- At CUE 6, both tethers can perform the spinning gesture
- To generate a clockwise spinning sound, perform a spinning gesture by moving one of the tethers clockwise from segment 7 to 4; anti-clockwise spinning, anti-clockwise from segment 5 to 8
- The speed of the spinning gesture (in either direction) will determine the speed of the spin
- All sounds will sustain; Z values from both tethers will control the volume and can decrease to silence

Performing CUE 7
- While walking toward the Gametrak (to tap the footswitch), the player can drop the left tether
- Z value from the right tether controls volume; when the player moves closer to the device, the volume will decrease to zero
- When the Z value becomes zero, the patch will generate a new sound
- The segments, in which player is, controls the panning of speakers as well (segments 4, 3, 2, 1, 8)
Stretches II

Poumpak Charuprakorn (2019)

CUE 0
-tap-

CUE 1 (individual L/R)
Generate individual sounds.
Slowly layer individual sounds on top of each other.
Generate more sounds as the section progresses to create a thicker texture.

(at around 1 minute 30 seconds)
-tap-

CUE 2 (individual L/R + panning)
Create even thicker texture with more attacks than the previous section.
Keep an eye on the countdown on the screen.

(the patch will change to CUE 3 automatically after 1 minute)

CUE 3 (groups with both hands)
Create groups of sounds with different sizes at different places within the full range.
Create sounds much more frequently later in the section.

(at around 3 minutes 30 seconds)
-tap-

CUE 4 (groups with both hands, L: decays; R: sustains)
Create one big group of sounds

(wait until the sounds from speaker 2 decay to silence, at around 4 minutes)
-tap-
CUE 5 (L: spin, R: individual)
Replay previously created groups and create spinning sounds by performing a spinning gesture with the *left hand* clockwise or anti-clockwise
Keep repeating this step with various speeds and directions
Generate individual sounds with the *right hand*

(at around *5 minutes 30 seconds*, wait until the last sound from right tether becomes silence)

-tap-

CUE 6 (spin, both hands)
Replay previously created groups and create spinning sounds by performing a spinning gesture with the *right hand* clockwise or anti-clockwise
Perform this step *only once*.

(let both sounds spin for about *15 seconds*, walk slowly towards the footswitch)
(at around *6 minutes*)

-tap-

CUE 7 (right hand only)
Suddenly after tapping the footswitch, move away from the Gametrak
Stand still facing the device for a few seconds, *walk toward the device*. When the sound becomes silence, move in a different direction away from the device

*Or*
Stand still facing the device for a few seconds, *walk slowly around the device* (within segments 4, 3, 2, 1, and 8 to control the panning) then *walk toward the device*. When the sound becomes silence, move in a different direction away from the device
After repeating one of these steps for 10-20 times, walk slowly toward the device, let go of the tether, and end the performance.