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Portfolio of Compositions

by

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in Music Composition

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Declaration

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the text. Any other contributions that are not entirely my own work are clearly indicated.

Matthew Scott Giannotti
2 April, 2018

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Principal Supervisor
Professor Peter Nelson

Secondary Supervisor
Dr Gareth Williams

Former Secondary Supervisor
Dr Michael Edwards

In loving memory of Dorothy Goldstein

“The task... is not to just explain or contextualise practice but is rather to produce movement in the thought itself. It is these 'shocks of thought' that constitute the work of art and, in conjunction with the artworks, it forms the material of creative arts research. Such movement cannot be gained through contemplative knowledge alone, but takes the form of concrete understandings which arise in our dealings with ideas, tools and materials of practice. It is not the job of the artwork to articulate these, no matter how articulate that artwork may be. Rather the exegesis provides a vehicle through which the work of art can find a discursive form.

*This is the argument - 'art as pure art' vs 'writing about art'”
(Bolt, 2007, 33)*

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1. Elements

1.1. Included Materials

- Included are nine (9) printed scores, this printed report, and an accompanying Data USB stick.
- Included recordings are in the '03_Recordings' folder and include '02 Echo1.wav', '02 Echo2.wav', '03_Lost_in_Space.mov', '04 Luminescence.mp3', '05 MarysDream.wav', '07 Sequence-Recording.wav', '08 Windgust1.wav', '08 Windgust2.wav', and in the folder '09 Answered Hymn' there is a program, pictures, and a short video: '1.jpg', '2.png', 'Program.pdf', and 'Video.mp4'
- All files included in the accompanying Data USB:
 - Folder '01_Report' – 'Report.doc', and 'Report.pdf'
 - Folder '02_Pieces' –
 - Folder '01_Lament' – '01_Lament.pdf', '01_Lament.sib'
 - Folder '02_Echo'- '02_Echo.pdf', '02_Echo.sib'
 - Folder '03_Lost_in_Space' – '03_LiS_Documents.pdf',
 - Folder '0_03_LiS_LiveElectronics' –
 - '1Rumble.wav', '2Comet1.wav', '2Comet2.wav',
 - '2Comet3.wav', '3Birds1.wav', '3Birds2.wav', '3Birds3.wav',
 - '3Birds4.wav', '4Stream.wav', '5Chimes.wav', '5Ice.wav',
 - '61.wav', '62.wav', '63.wav', '64.wav', '65.wav', '66.wav',
 - '67.wav', '68.wav', '69.wav', 'Autovol.maxpat',
 - 'buffer2.maxpat', 'ChapIR.wav', 'Compress.vst',
 - 'cpPan~.mxo', 'dbtomult', 'delayit.maxpat',
 - 'DoubleMix.maxpat', 'DoubleMixReverse.maxpat',
 - 'fade.maxpat', 'gauss', 'grain.pulse~.mxo',
 - 'graincloud.maxpat', 'gran.cloud.live~', 'GranPatch.maxpat',
 - 'HStoMult', 'HStoMult.list', 'Lbuf.mxo', 'Lcatch.mxo',
 - 'LRPan.maxpat', 'pan~.maxpat', 'panLRFB.maxpat',
 - 'playbang.maxpat', 'quasi-gauss.50', 'randomRange',
 - 'recordingMod.maxpat', 'RTrigger.maxpat', 'SFPlay.maxpat',
 - 'signalSwitch~', 'Slider2.maxpat', 'Staff4.png',
 - 'Strings1.wav', 'Strings3.wav', 'Strings4.wav',
 - 'Strings5.wav', 'Strings6.wav', 'Strings7.wav',
 - 'Strings8.wav', 'Strings9.wav', 'Strings10.wav',
 - 'Strings11.wav', 'Strings12.wav', 'TBverb.vst',
 - 'train.shift~.mxo', 'xDrone.maxpat', 'xSFX.maxpat',
 - 'xSine.maxpat', 'xSine2.maxpat', 'xStrings.maxpat',
 - 'zMaster.maxpat'
 - zMaster is the main patch, as explained in section 3 and documented in the score. The main sub patches start with 'x'. The main drones are the ones that are '61.wav'-'69.wav'.

Folder '04_Luminescence' – '04_Luminescence.pdf',
'04_Luminescence.sib'

Folder '05_Marys_Dream' – '05_Marys_Dream.pdf',
'05_Marys_Dream.sib'

Folder '06_Smoke_of_Freedom' – '1_06_Smoke_of_Freedom.pdf',
Folder '2_Score_Files' – 'Movement_0.pdf',
'Movement_1.sib', 'Movement_2.sib', 'Movement_3.sib',
'Movement_4.sib', 'Movement_5.sib',
'Movement_6_part_1.pdf', 'Movement_6_part_2.sib',
'Movement_7.sib', 'Movement_8.sib'
Folder '3_MaxPatch' – '0Drone0.wav', '0Drone1a.wav',
'0Drone1b.wav', '0Drone1c.wav', '0Drone2.wav',
'0Drone3a.wav', '0Drone3b.wav', '0Drone4.wav',
'0Drone5.wav', '0Drone6a.wav', '0Drone6b.wav',
'0Drone7.wav', '0Drone8a.wav', '0Drone8b.wav',
'0Drone8c.wav', '0FX1a.wav', '0FX1b.wav', '0FX1c.wav',
'0FX2a.wav', '0FX2b.wav', '0FX6.wav', '0FX7a.wav',
'0FX7b.wav', '1Orion.vst', '1vst1.maxpat', 'autostop.maxpat',
'cpPan~.mxo', 'dbtomult', 'delayit.maxpat',
'DoubleMix.maxpat', 'DoubleMixReverse.maxpat',
'fade.maxpat', 'gauss', 'grain.pulse~.mxo',
'graincloud.maxpat', 'gran.cloud.live~', 'GranPatch.maxpat',
'HStoMult', 'HStoMult.list', 'Lbuf.mxo', 'Lcatch.mxo',
'LRPan.maxpat', 'pan~.maxpat', 'panLRFB.maxpat',
'playbang.maxpat', 'quasi-gauss.50', 'randomRange',
'SFPlay.maxpat', 'signalSwitch~', 'TBverb.vst',
'Timer.maxpat', 'timeselect.maxpat', 'train.shift~.mxo',
'wavtime.maxpat', 'xDrone.maxpat', 'xFX.maxpat',
'zMaster.maxpat'

zMaster is the main patch, as explained in section 3 and documented in the score. The main sub patches start with 'x'. The main drones are the ones that are '0Drone0.wav'-'0Drone8c.wav' and the main effects are '0FX1a.wav' – '0FX7b.wav'

Folder '07_Sequence' – '07_Sequence.pdf', '07_Sequence.sib',
'Sequence-Tape_Part.wav'

Folder '08_Wind_Gust_42058' – '08_Wind_Gust_42058.pdf',
'08_Wind_Gust_42058.pptx', '08_WindGust42058.wav'

Folder '09_Answered_Hymn' – '09_The_Answered_Hymn.pdf',
'09_The_Answered_Hymn.pptx', '09_The_Answered_Hymn.sib'

1.2. List of Collaborators:

(a) Andrew Arceci – provided feedback on *Lament*, and gave the premiere performance.

(b) Selina Chau – created the initial concept of *Smoke of Freedom*. This has changed a lot since we began, including contributions by both of us. My contribution is the current structure of 8 scenes, the ending, and the music. I also commissioned the illustrations.

(c) Thomas Grossi – helped to develop the python code which runs the Markov chain analysis. He took my concept and used it to develop 70% of the existing code. The other 30% and concept are my own.

(d) Barbara Höfling – commissioned one of the works and performed both included choir works. Also, the concept for *Answered Hymn* is shared jointly between us.

(e) Regius Professor of Astronomy, Andy Lawrence – We worked together to develop *Lost in Space*. His contribution is the entirety of the script.

(f) Robert Motyka – developed visuals for *Lost in Space*

2. Works List

Title	Date of Completion	Instrumentation	Duration
Lament	2015	Solo Viola da Gamba	5'
Echo (Violin Concerto)	2015	String orchestra with Solo violin Minimum: [solo, 3,1,1,1,1] Ideal: [solo, 8/7,6,4,4,2]	15'
Lost in Space	2016	String quartet, electronics/laptop, narrator, and projection artist	45'
Luminescence	2016	Flute, Oboe, Clarinet, string quartet – laptop part optional	7'
Mary's Dream	2016	SSAATB Choir	9'
Smoke of Freedom	2017	Orchestra ([2,2,2,0],[2,2,2,0], 4 perc, hrp, str, synthesizer/laptop) with doublings	120'-150'
Sequence	2017	Cello, Clarinet (Bb and Bass), Celesta, Vibraphone	10'
Wind Gust 42058	2017	Mixed Ensemble (for various combinations of 10-200 players)	Standard: 40' Can be 10'-120'
Answered Hymn	2017	SATB with Solo Soprano and various SAB pod choirs (between 4-15)	8'

3. Abstract

The overall aim of this portfolio was to develop an understanding of how music fits socially, historically, and technically into the landscape of 21st century culture.

The aims of the portfolio were to explore static harmony (resonance), statistically similar melodic sequences, electronic drones, rhythmic development (cycles), melodic development, and non-linear textures. A compositional process turned personal journey became the driving energy for these works, and one can see a clear development, as each piece is built on the findings of previous ones. The musical language became more sophisticated as a result of both these new techniques as well as interactions with other collaborators (including musicians, dancers, scientists, visual artists, and programmers).

Each of the technical aims was developed throughout the creation of the portfolio. These are among the techniques which helped shape late 20th century music, with the goal of joining some of them together in new and aesthetically pleasing ways. Early on, there was a shift in the way they were applied, especially creating resonance, which was first done with acoustic instruments and then electronic drones. The repetition and rhythmic cycles also developed by using transition matrices from a Markov Chain¹ process to create ‘melody rhythms’ (discussed more in *Sequence*). Pieces like *Lost in Space* and *Smoke of Freedom* were written by combining all of these techniques together in a fusion of static harmony, rhythmic cycles, and expressive melodies.

I also had a social motivation when writing these works. For example, *Wind Gust 42058* uses the trend of ‘data is the new gold’ by giving the audience a meaningful way to ‘experience the data’. Also, *Smoke of Freedom* tells the story from the perspective of a man who is oppressed in China, not dissimilar from the four Hong Kong book sellers who were taken away by Chinese authorities for ‘selling restricted books’. When this occurred in 2015, a lot of people were thinking of leaving the city in search of a more open society, and *Smoke of Freedom* follows the story of a man who does exactly that, leaving everything behind in search of a better life.

The Answered Hymn is a unique piece in that it was performed at Westminster Abbey and St. Martin-in-the-Fields for special services celebrating the 500th anniversary of Lutheranism. The performances brought together 12 different choirs from around the world, each singing in their own language, and, in a ‘Post-Brexit’ United Kingdom, aimed to bring together themes of multi-nationalism and peace.

The musical language developed during the course of this portfolio shows how musical technique can fit into and comment on the social, technological, and historical landscape of 21st century culture.

1. This use of Markov Chains stipulates that the random variable is the index of the musical motif that we consider (or the note), and the probability only depends on the previous motif /note, satisfying this equation:

$$P(X_t = j | X_0 = i_0, X_1 = i_1, \dots, X_{t-1} = i_{t-1}) = P(X_t = j | X_{t-1} = i_{t-1}).$$

which basically means, the probability of a note X_t at time t to be j is only dependent on the note at time $(t-1)$.

*Free from desire, you realize the mystery.
Caught in desire, you see only the manifestations.
Yet mystery and manifestations
arise from the same source.
This source is called darkness.
Darkness within darkness.
The gateway to all understanding.*

-Tao te Ching