

Portfolio of Works: Composing Perceptions of Time in Music

by

Thomas Aaron Allan Powell

A thesis submitted in partial fulfillment of the requirements for the degree of

Master of Music

in

Composition

Department of Music

University of Alberta

Abstract

This portfolio contains three compositions whose primary aims are to manipulate perceptions of time through sonic contrast and similitude. The works also explore composing performer interactions, integrating electronics into an acoustic environment, and using varying levels of indeterminacy to increase performance possibilities. All three pieces were written between 2021 and 2022 in partial fulfilment of a Master's thesis at the University of Alberta.

The first of these works, *w.RivEr.ST & nimbi*, for saxophone quartet, uses interlacing multiphonics to create a static bed of sound with constantly varying inner motion. The second section, *nimbi*, is a single page, indeterminate score that encourages sonic exploration improvisatory techniques. Both sections of the piece are written with proportional notation and require performer interaction and communication to maintain alignment of musical events, consistent pacing, and musical cohesion.

The second work, *Below, the Boarhound and the Boar*, for trumpet, violoncello, percussion, and electronics, deviates from the previous work in that it uses conventional, measured notation to control pitch, dynamics, timbre, and tempo. This piece marks my first significant endeavour into the use of electroacoustic techniques, such as additive synthesis, granular synthesis, and analysis/resynthesis, as compositional tools. Its primary goal is to manipulate temporal perceptions through abrupt contrasts in register, dynamics, and timbre.

The final work, *Grey on Indigo, Faded*, for flute, clarinet, violin, violoncello, and piano, builds on *w.RivEr.ST & nimbi* by expanding on ideas of silence, space, and static flow. This work, however, adds a four-channel field recording, played back at nearly imperceptible levels, in order and further draw attention to the silence and space between sounds.

Acknowledgements

I want to thank first and foremost my composition instructor and supervisor, Mark Hannesson, for showing me how fascinating and meaningful a single note can be, when given enough love and attention.

I would also like to thank my other instructors, Scott Smallwood, Maryam Moshaver, Andriy Talpash, and Mark Segger, for the support they gave me and the energy they put toward my growth as a student and artist. Their breadth of knowledge, compassion, and humanity are the reasons why I leave this university a better person than I was upon entering.

Thank you to my partner, Katie, my parents Arden and Arlana, and my sister Alicia, for your continual support and willingness to listen to my impassioned speeches about the most specific and unimportant topics, the likes of which you've never before heard.

I would like to thank all of my peers, without whom, I would have found myself lost many times in this school and city. I look forward to continuing to grow with you and wish you the best of luck and fortune in your artistic and professional developments to come.

Finally, a special thank you to my dear friend Jason for his lifelong friendship, love, and understanding. Our regular conversations are what keep me grounded and passionate about life and learning.

Table of Contents

Abstract	ii
Acknowledgements	iii
Table of Contents	iv
Introduction	1
Chapter 1 – <i>w.RivEr.ST & nimbi: for saxophone quartet</i>	2
1. Overview of Method	3
2. Program Notes	4
3. Score	5
Chapter 2 – <i>Below, the Boarhound and the Boar: for chamber ensemble and electronics</i>	14
1. Overview of Method	15
2. Program Notes	17
3. Score	19
Chapter 3 – <i>Grey on Indigo, Faded: for Pierrot ensemble and field recording</i>	34
1. Overview of Method	35
2. Program Notes	37
3. Score	38
Appendix A: Supplementary Files	64
Appendix B: Performance Information	65

Introduction

I did not enter my composition program with any overarching plan to ensure cohesion between the results of my upcoming musical exploration. However, two clear preoccupations emerged over the course of my studies that thematically connect the three works I wrote: (1) the listener's perception of time, as affected by sound, and (2) using compositions to create meaningful ensemble interactions. Furthermore, the creation of these works has elucidated a central purpose that drives my compositional practice: to create experiences in which people can practice deep listening, feel a sense of heightened self-awareness, and form extra-personal connections with their surroundings.

Each of the three works found below attempt to induce different temporal effects on the listener, such as stasis (*w.RivEr.ST & nimbi* (2021)), expansion (*Below, the Boarhound and the Boar* (2022)), and timelessness (*Grey on Indigo, Faded* (2022)). The first and last of these pieces also make use of proportional notation, graphic notation, or a combination of both, in order to control how performers interact and listen to one another in realizing the piece. My interest in this performative element of music creation is a result of my experiences in experimental and improvisation-based music where the level of listening and investment of the musicians directly correlates to the quality of the music created.

w.RivEr.ST & nimbi is a work for saxophone quartet that heavily utilizes multiphonics and indeterminacy to emulate the cyclical and dynamic nature of rivers and clouds. *Below, the Boarhound and the Boar*, for trumpet, cello, percussion, and electronics, is inspired by cycles and expectation; the sonic material for this work is derived from the four Thai gongs that the percussionist plays during the piece. Lastly, *Grey on Indigo, Faded*, for flute, clarinet, violin, violoncello, and piano, explores the ability to compose silences to highlight space between sound.

Chapter One

w.RivEr.ST & nimbi

for saxophone quartet

Overview of Method

In *w.RivEr.ST* & *nimbi*, my aim was to explore a single idea, extended without development, to try and expand the listener's perception of the passing rate of time. In addition to this, I wanted to compose the performative aspect of this work by forcing ensemble interaction, awareness, and active listening through a combination of graphic and proportional notation. The relatively simple, slow-changing material combined with its presentation encourages the performers to spend most of their time looking at each other to coordinate the beginnings and endings of musical events and maintain pacing without a synchronizing pulse.

The work, inspired by the great rivers that flow from the Rocky Mountains and the cloud formations over the Canadian Prairies, aims to sonically recreate the slow, ever-shifting states of these two natural phenomena. The material chosen in the first section – *w.RivEr.ST* – primarily consists of overlapping multiphonics, which after a period of time, begin to elicit a feeling of temporal stasis despite the regular changes in pitch and the intrinsic instability of the technique.

The second section – *nimbi* – incorporates indeterminacy in a single page score that allows for variation with every performance in order to mimic the changing and irreplicable nature of clouds. The instructions to the performers for this section indicate a general increase in sound density followed by an equally long decrease (creating a mirrored binary form) while not specifying exact pitch lengths, dynamics, or performance techniques. Though specific pitches are notated for performers, they are free to choose which ones they would like to play from their assigned sets, and with what technique. Together, these elements culminate in an unpredictability that mirrors the variability of density in cloud groups, while still providing an overarching, consistent form from performance to performance.

w.RivEr.ST & nimbi
for saxophone quartet

Thomas Powell

w.RivEr.ST & nimbi
for saxophone quartet

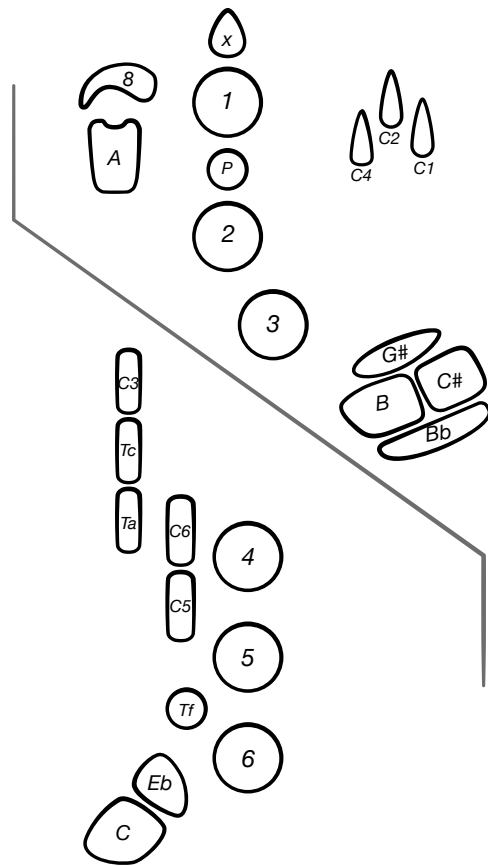
Thomas Powell

© tAAp Music 2021

Instrumentation

Bb Soprano Saxophone
 Eb Alto Saxophone
 Bb Tenor Saxophone
 Eb Baritone Saxophone (+ Eb Alto)

Fingering Diagram



1. w.RivEr.ST

- = pitched note*
- = Multi-phonic*
- ◇ = Air
- ◇_{fi.} = Air + flutter tongue
- = duration markers
- = sound event relations
- = fingering reduction
- ↗ = repeat previous sound
- ≡ = sounding pitch(es)*

Duration: ~ 9:30

2. nimbi

Play one pitch from the measure.*

On repeat, play two pitches.

Next repeat, play three pitches, and so on.

After the sixth repeat (and you have played six pitches from the measure), play one less pitch on each repeat.

The piece is finished when everyone reaches zero pitches.

Pitches must be read left to right.

Accidentals only affect adjacent pitch.

♭♯♭ = 1/4 and 3/4 tone flat or sharp

↑↓♭♯ = 1/8th tone flat or sharp

Pitches may be produced using any technique (harmonics, non-vib., multi-phonic, sung, etc.).

Dynamics are pp to mp.

Generally drifting.

Duration: 2-3 minutes.

w.RivEr.ST

for saxophone quartet

Composed by Thomas Powell

0:00 0:12 0:24 0:36 0:48

Soprano

Alto

Tenor

Baritone

p

ppp

pp

p

p

p

1:00 1:12 1:24 1:36 1:48

S
A
T
B

pp

p

pp



2:00 2:12 2:24 2:36 2:48

S
A
T
B

ff.

pp

p

pp

3:00 3:12 3:24 3:36 3:48

S

A

T

B



4:00 4:12 4:24 4:36 4:48

S

A

T

B

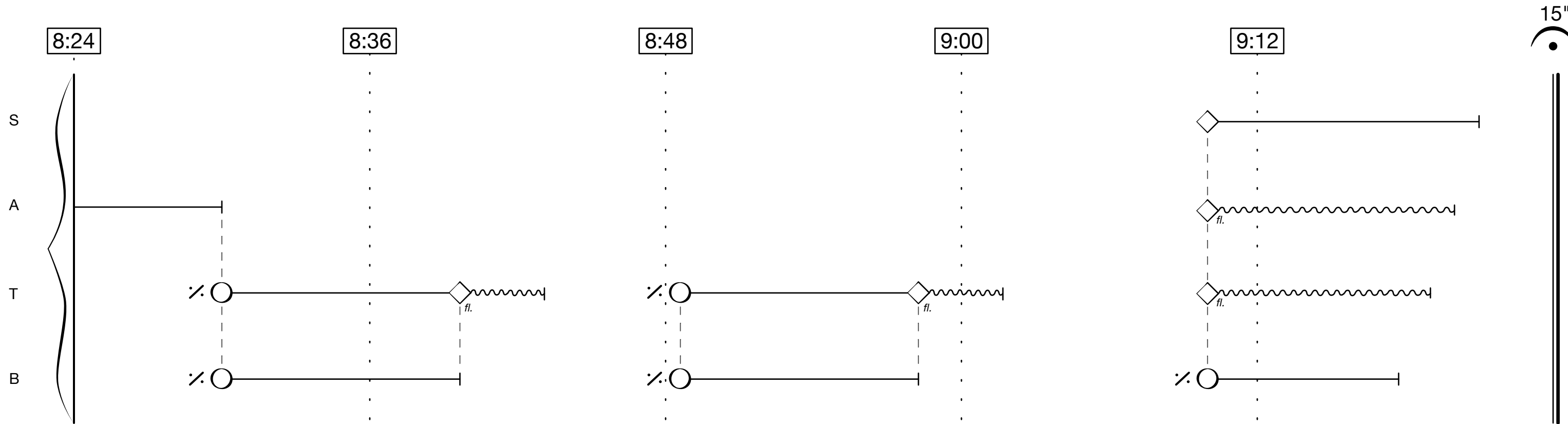
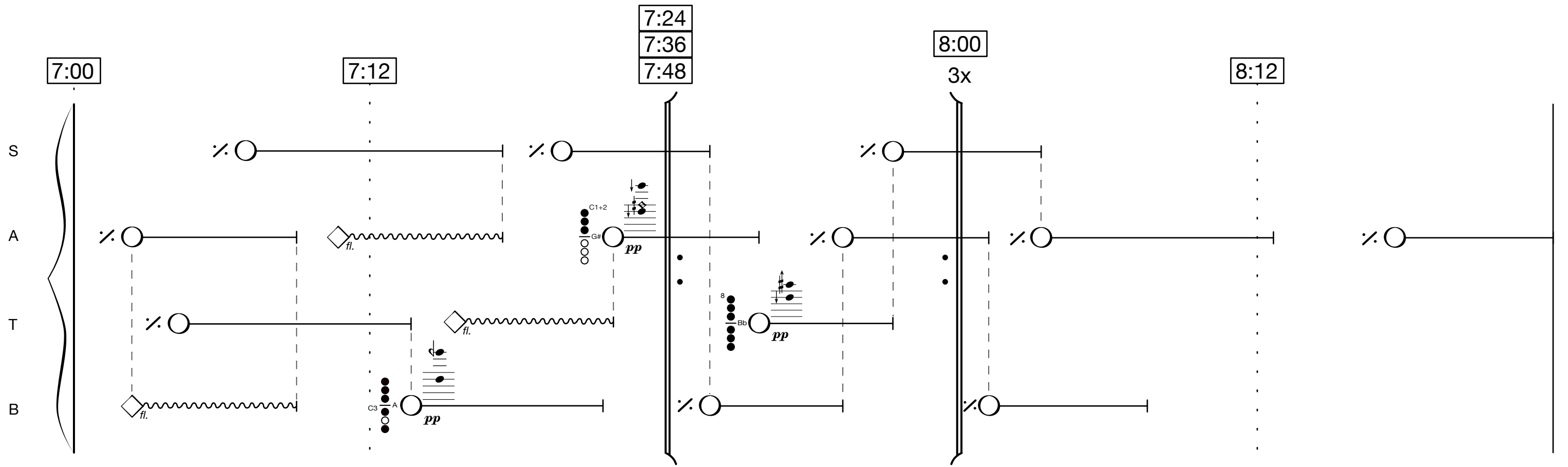
5:00 5:12 5:24 5:36 5:48

S
A
T
B



6:00 6:12 6:24 6:36 6:48

S
A
T
B



Composed by Thomas Powell

nimbi

for saxophone quartet

11 - 15"

Musical score for saxophone quartet, featuring four staves: Soprano, Alto, Alto, and Tenor. The score includes notes, rests, and dynamic markings. A bracket on the left groups the four staves. The Soprano staff has a dynamic marking of *ppp* and a note with a flat and a sharp sign. The Tenor staff has a dynamic marking of *mp* and a note with a flat and a sharp sign. The score concludes with a double bar line and repeat dots.

ppp - mp

Program Notes

From a distance, rivers and clouds appear as static, unchanging masses, complete and unified. Up close however, they are revealed to be perpetually shifting and in a constant state of becoming. The saxophones' multiphonics in *w.RivEr.ST & nimbi* are a reflection of these dual-states: at times they feel unstable, shifting their internal structures while at others, they combine into unified, static entities, inside which time slows.

Chapter Two

Below, the Boarhound and the Boar

for chamber ensemble and electronics

Overview of Method

Below, the Boarhound and the Boar, for trumpet, cello, percussion, and electronics, is an exploration of contrasts, specifically in pacing, materials, and dynamics, and their effects on the listener's perception of time.¹ In this way, it opposes the homogeneity of my previous work, *w.RivEr.ST & nimbi*, but continues my exploration of time as a primary concern for composition.

The percussion is central both to the composition and performance of this work, often taking a soloistic role and being the originating point of activity and density. Compositionally, much of the pitch material and timbral considerations are derived from the four Thai gongs used as part of the percussionist's gamut. Furthermore, the electronic samples are either made from recordings of the gongs, or synthesised based on analysis of their frequency content.

The role of the cello shifts between adding complementary percussive elements (*col legno battuto* at mm. 30, 32, 34, etc.), noise elements in conjunction with the trumpet (such as bowing on the bridge or tailpiece at mm. 23, 27-9, 56-7 etc.), and providing clear pitch material on its own or with the trumpet (mm. 71-90). The trumpet occupies a similarly fluid space using percussive and phonetic breath techniques to create noise and pseudo-electronic effects (mm. 4-16), metallic objects such as the Harmon mute or a metal sheet to connect to the metallic timbres of the gongs (mm. 19-22, 31-49), and extended techniques such as singing while playing or pressurized multiphonic squeals to distort and expand the timbral potential of the instrument.

The form of the piece is in three main sections: A (mm. 1-115), B (116-117), and C (mm. 118-181). The A section lasts approximately seven-minutes and creates tension through the rise and fall of sonic activity and the use of extended techniques that destabilize the traditional positions

¹ The title for this work, along with the epigraph found in the score, are lines from T.S. Eliot's poem, "Burnt Norton" (1935), the first poem in his collection *Four Quartets*. They are the legal property of Faber and Faber Ltd. and are used with permission.

of the trumpet and cello. The B section, lasting 2'10", is the focal point of the piece and contains only a low frequency drone in the electronics. During this section, the instrumentalists do not play, with the exception of the percussionist who has a one-minute-long drum roll that crescendos into the final section. The goal of this section is to provide a sudden contrast to the motion of the A section through the use of an extended period of stasis. Finally, in the C section, the cello and trumpet take up traditional melodic roles with the sound of the gongs resonating behind them – heard clearly in this way for first time in the piece. This adds further relief to the tension created in the A section and unwinds the feeling of stasis to a quiet end.

Program Notes

Sometimes there is a single moment, however brief, that can bring quiet to the constant cycling of our days. It brings us out of ourselves to notice what we are doing, where we are, and with whom we are. Look for these moments and the stillness they offer, then, continue your pattern, as before, below, like the boarhound and the boar.²

² This line is a reference to T.S. Eliot's poem, "Burnt Norton," (1935) from his *Four Quartets*, and is used with permission by Faber and Faber Ltd. in the context of this Thesis. Do not reproduce without permission.

Chapter Three

Grey on Indigo, Faded

for Pierrot ensemble and field recording

Overview of Method

Grey on Indigo, Faded is a piece composed for meditation and stillness. It is written for flute, clarinet, violin, violoncello, and piano with accompanying field recording. Both its form and materials are influenced by the breath cycle and more generally, the interdependence of something (presence) and nothing (absence).

Due to the wide variability of performance spaces (room size, shape, material, humidity, noise floor, etc.) and this work's reliance on long silences between notes, I chose to compose these *spaces-between* to ensure a certain consistency between performances. My solution was to create and play back a field recording of a quiet landscape (in four-channels) around the audience and musicians at a low volume, just above the noise floor of the venue. This recording was made in Elk Island National Park, near Edmonton, Alberta, in October of 2022.

The form of the piece is divided into two main sections (herein known as A and B), separated by a minute-and-a-half instrumental break. The A section, lasting approximately eleven minutes, represents the inhale, gradually filling the space with instrumental sounds that increasingly overlap as time progresses. Following the section break, the B section, representing the exhale, slowly unravels and expands on earlier materials until the field recording, once again, becomes the dominant feature. The B section also features, for the first time in the piece, harmonic passages on the piano. These chords present the listener with all of the melodic content of the piece and represent the saturation of the lungs with air at the peak of the breath.

Nearly all melodic and harmonic material is extracted from Forte set class 5-Z18 (01457), in its original form and inversion. The material develops minimally in order to avoid creating a predictable trajectory and to keep focus on momentary instances of sound. This is also achieved

through irregular pacing and minimal repetition of materials. When something is repeated, it is to amplify the effect of the sound's absence in the moments that follow.

Like *w.RivEr.ST & nimbi*, this piece uses proportional notation in order to encourage performer communication and to allow flexibility in pacing. The primary differences are that there are no time markers beyond the second page of the score and a stopwatch is not to be used. This is to remove a musician's need to focus and strictly adhere to any exact timing cues and instead, allowing them to move at a pace that feels appropriate to them at the time of performance.

Program Notes

Space and stillness are present in everything, corollary to the constant of activity and motion. Between sounds, and even within them, there is anticipation and the potential for more to come into being, to continue being, or to not. This relationship between potential and realization is central to *Grey on Indigo, Faded*, where stillness is on equal footing to motion; silences emerge from sound just as much as sounds emerge from silence.

Appendix A: Supplementary Files

Recordings of Compositions (Folder)

Below, the Boarhound and the Boar – Thomas Powell (2022).wav

Grey on Indigo, Faded – Thomas Powell (2022).wav

w.RivEr.ST & nimbi – Thomas Powell (2021).wav

Electronic Performance Audio Files (Folder)

Boarhound – Fader_1.wav

Boarhound – Fader_2.wav

Boarhound – Fader_3.wav

Boarhound – Fader_4.wav

Boarhound – Trigger_1.wav

Boarhound – Trigger_2.wav

Boarhound – Trigger_4.wav

Boarhound – Trigger_6.wav

Boarhound – Trigger_7.wav

Boarhound – Trigger_8.wav

Grey on Indigo, Faded – Field Recording Stereo Mix.wav

Appendix B: Performance Information

w.RivEr.ST & nimbi

Performed on December 14th, 2021 at Convocation Hall, Old Arts Building, University of Alberta.

Performed by Alison Balcetis on soprano saxophone; Kendra Heslip on alto saxophone; Charles Stolte on tenor saxophone; Ben Whittier on baritone saxophone.

Below, the Boarhound and the Boar

Performed on April 14th, 2022 at Convocation Hall, Old Arts Building, University of Alberta.

Performed by Russell Whitehead on trumpet; Conrad Sobieraj on violoncello; Mark Segger on percussion; Thomas Powell on electronics. Conducted by Andriy Talpash.

Grey on Indigo, Faded

Performed on December 14th, 2022 at Convocation Hall, Old Arts Building, University of Alberta.

Performed by Shelley Younge on flute; Don Ross on clarinet; James Cockell on violin; Conrad Sobieraj on violoncello; Maria Protodyakonova on piano; Thomas Powell on electronics. Conducted by Andriy Talpash.

All concerts recorded and mixed by Russell Baker and Patrick Strain.