
https://theses.gla.ac.uk/41184/

Accompanying commentary.

Copyright and moral rights for this work are retained by the author

A copy can be downloaded for personal non-commercial research or study, without prior permission or charge

This work cannot be reproduced or quoted extensively from without first obtaining permission in writing from the author

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the author

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given

Enlighten: Theses
https://theses.gla.ac.uk/
research-enlighten@glasgow.ac.uk
Scott Twynholm

Portfolio of Compositions

Submitted in fulfilment of the requirements for the Degree of Master of Music in Composition, by Research College of Arts, University of Glasgow, August 2018
Portfolio Contents

This portfolio comprises the following elements:

Scores:

- Nina Kogan’s Geometrical Heaven for string quartet
- The Vorkapich Carrel for orchestra
- In the Ink Dark string parts of recorded studio score for contemporary dance performance

Flash Drive:

- Alasdair Gray, A Life in Progress 60min documentary (Hopscotch films)
- Alasdair Gray, A Life in Progress soundtrack album (De-Fence Records)
- In the Ink Dark master studio recording for contemporary dance performance. additional contextualising text, images and video clips.
Abstract

This commentary is concerned with a portfolio of compositional practice. With a background in contemporary electronic music, and with a current career in writing music for film, theatre and dance I commenced study with the primary aim to develop, through practice, a fluency in orchestrating musical ideas and to develop and hone a composition process. With a desire to work towards writing for orchestra and communicate effectively with musicians, I wished to investigate the application of timbral and textural experiments of my electronic practice in the acoustic domain (for example applying filters or side-chain compression in an orchestral setting) and embed more experimental practices into collaborative work. I also wished to expand my musical knowledge and gain a strong understanding of contemporary classical music and its historical and current contexts. The pieces which comprise this portfolio feed into this. They vary in scale and style yet, with an emphasis on notational detail and timbre, demonstrate a strong development in my compositional approach. In the commentary below I will further engage with what I have learned from this experience.
Contents

Acknowledgements iv
1 Introduction 1

2 Discussion of works
   2.1 Nina Kogan's Geometrical Heaven 2
   2.2 Alasdair Gray, A Life in Progress 11
   2.3 In the Ink Dark 20
   2.4 The Vorkapich Carrel 27

3 Conclusions 31

Bibliography 32
Appendix A - Clive James' poetry 33
Appendix B - Scores
   Nina Kogan's Geometrical Heaven 38
   In the Ink Dark 52
   The Vorkapich Carrel 73
Acknowledgements

I would sincerely like to thank my supervisors Professor Bill Sweeney and Professor Nick Fells for their support, patience and guidance over the past few years. I would also like to extend thanks to those who kindly permitted me access to their lectures, in particular Dr Drew Hammond, Dr Louise Harris, Dr Christopher Bailey and Dr David Code. Also, many thanks to violinist Feargus Hetherington for his generosity of time in workshopping sections of my string quartet. Finally I wish to thank The Educational and Marshall Trust and The Scottish International Education Trust for their financial support without which this period of study would not have been possible.
1 Introduction

This portfolio contains four works inspired by literature, poetry, moving image and dance. Two of the pieces, Alasdair Gray, A Life in Progress and In the Ink Dark were commissions and demonstrate effectively the way my study of taught modules, Orchestration and Sound Shaping and Design, influenced the writing. The other two pieces, Nina Kogan’s Geometrical Heaven and The Vorkapich Carrel for string quartet and orchestra respectively were written exclusively for this portfolio and are more personal explorations of newly acquired knowledge with a focus on creatively expanding musical ideas. For these I focused on detailed scoring with an emphasis on extended techniques, aleatoric writing, gesture and timbre.

Nina Kogan’s Geometrical Heaven comprises three short pieces for string quartet which took its inspiration from Clive James’ latest volume of poetry. For this piece I experiment with various methods of composition: serialism, hex chords and algorithm. I set up these compositional goals in order to freely experiment with new skills and techniques. The piece is unperformed at the time of writing.

Alasdair Gray, A Life in Progress was a commission to score Kevin Cameron’s feature documentary on the life of Scottish author and artist Alasdair Gray. Here I investigate texture and sampling as a driving force for the score. The film was broadcast on BBC Two and toured film festivals across the UK.

In the Ink Dark was a commission from artist and choreographer Luke Pell to score a piece of contemporary dance for eight performers. The project, multidisciplinary in nature, centred around his study of loss and landscape, through dance, design and poetry. The score was a response to the words of a poem created by Luke and poet JL Williams. Here I experiment with string quartet combined with a textural electronic element. The piece premiered at the Old Leith Theatre, Edinburgh as part of LeithLate 2017.

The Vorkapich Carrel is a short score for fifty-four-piece orchestra. As I approached the end of the course my desire was to consolidate the skills and knowledge acquired as part of my study and apply them to large scale orchestra. I chose as my starting point the idea of a soundtrack to an imaginary film of Graeme Macrae Burnet's 2016 novel His Bloody Project. I experiment with reduced tone rows and a structure inspired by film montage and editing. The piece is unperformed at the time of writing.
2 Discussion of works

2.1 Nina Kogan’s Geometrical Heaven
for String Quartet  

Summary

In these three short pieces my primary aim was to experiment with compositional techniques I had recently acquired as part of formal study. I wished to experiment with serial tone rows, algorithm, and aleatoric writing. I deemed each method a suitable starting point to represent the words, themes and ideas contained in the poetry.

In 2015 I heard Clive James, the Australian author and poet recite *Japanese Maple*. It was one of many new poems in the volume *Sentenced to Life*. I was attracted to his words and the rhythm of his speech. Several other pieces in the collection also suggested musical ideas.

I was attracted to the intimate format of the string quartet and my process started with a period of research, listening and score reading. I developed a routine of thinking and writing about the compositions followed by time at the piano. Once the raw material was generated I stayed away from the piano as much as possible, returning occasionally to check harmony.

During the compositional process I wanted to keep the following thoughts in the forefront of my mind from recent reading:

“Stravinsky had little time for musical theory, he could not explain the chord, just that his ears accepted it with joy.” (Stravinsky, 1969).

“To be as firm and resolute in my actions as I can and adhere strongly to the most dubious opinion once I had resolved upon it.” (Descartes, 1960).

All poems are printed in appendix A.
Compositional Process

I. Japanese Maple

As a starting point I focused on the text and its imagery, as well as the pentameter of the words. It is a beautiful poem concerned with celebration, sorrow and acceptance. On reading the poem aloud, I began to form a musical landscape, something sparse and delicate with no tonal centre - falling towards tonality but never settling, with the odd flurry of life and a shimmering end. I had recently studied Webern and was struck by his use of gesture, space and cohesion of sonority. I felt serialist approach would be an interesting starting point and effectively represent the written material.

I wanted the piece to have a uniform sound world. My starting point melodically and harmonically was a tone row. After a period of experimentation I settled on figure 1. I felt the major 7th, minor 3rd and chromatic descent from A to G in the middle would provide the colours required. I then created a matrix from which to work.

![Figure 1. Japanese Maple tone row.](image)

My initial plan was to write music to accompany the words, music that would support the text, leaving space for it to breathe. I found it useful to settle on a rough tempo at this stage. I let the pentameter of the text dictate note duration and worked through the first verse using notes and chords as accent or punctuation. I continued in a similar fashion through the second verse. On the third verse however I moved away from pentameter and let the composition follow its own course. I decided then to let the poem loosely dictate register, timbre, density and tempo, to write a piece inspired by the words rather than for them.

I plundered the matrix for groups of notes that matched my growing image, and created a reduced score focusing on how best to represent the music on the page. I started by writing relative timings with no time signature but felt in the end the piece would benefit from barring and subtle tempo instructions. I finally arranged it in four staves.

II. My Latest Fever

The pre-compositional process again started with reading aloud to obtain a deeper understanding and to enjoy the rhythm of the words. This time I decided not to work with the pentameter as a starting point but rather the meaning.
I split the poem into four parts: a calm introduction, period of disorientation; a chaotic mid section, and a sudden calm as the fever drops.

To help form an image of how this would translate into music I drew out a rough structural plan.

![Energy/Density diagram](image)

*Figure 2. My Latest Fever Dynamic plan.*

I made a decision on key musical features of the piece:

- use of extended techniques, harmonics and quarter tones
- a chaotic section of aleatoric music
- independent melodies and gestures sounding simultaneously
- to work with a reduced set of notes (hex chord)

I deemed quarter tones and aleatoric writing would provide interesting aural effects to conjure the fevered images described by the words.

*Figure 3* charts my initial thoughts on how these effects would be used.

<table>
<thead>
<tr>
<th>calm intro</th>
<th>dissorientation</th>
<th>chaotic middle</th>
<th>end</th>
</tr>
</thead>
<tbody>
<tr>
<td>build disorientation</td>
<td>onset</td>
<td>full force</td>
<td>temperature drops</td>
</tr>
<tr>
<td>sul ponticello harmonics</td>
<td>independent melodies</td>
<td>mobile section</td>
<td>harmonics</td>
</tr>
<tr>
<td>1/4 tone gliss vibrato</td>
<td>ostinato gestural controlled</td>
<td>col lengo battuto</td>
<td>pp</td>
</tr>
<tr>
<td><em>pp</em></td>
<td><em>pp to f</em></td>
<td><em>f to fff</em></td>
<td>return to opening</td>
</tr>
</tbody>
</table>

*Figure 3. My Latest Fever compositional plan.*

After a period of experimentation I worked from a reduced set of six notes (figure 4). I felt these would provide both sections of calm and organised chaos.
Figure 4. Reduced set of notes used in My Latest Fever.

I freely manipulated these notes thinking about voice leading then transposed the lines up a major third and an augmented fifth. I decided on these particular transpositions after experimenting with various possibilities at the piano. I felt these transpositions would provide the greatest variation. With this raw material I started constructing the piece.

Figure 5. An example of My Latest Fever voice leading

I wished to create a textured opening on one note and conjure a sense of unease through use of sul ponticello, quarter tone descending slides and harmonics. The note had to be easily payable on all four instruments and I settled on the D above middle C.

During the following section (bar 14) I wanted a sense of building dislocation but with a solid grounding. The hex chord transposed up a major third provided the cello ostinato to serve this purpose. I wrote a repeating pattern of five followed by three quavers and although I liked the effect it sounded too regular. When the eight note pattern however was written in groups of five it took on a different feel with the open G falling on a different beat each time. This had the effect of dislocating the pattern.

Figure 6. My Latest Fever cello ostinato.

The first violin was improvised around this line. Meanwhile the second violin and viola took their own contrasting independent gestures: dry with staccato bursts and lyrical in nature respectively. I wrote these parts initially in 9/8 and 3/4 allocating tempos accordingly to synchronise with the 5/8 lines. On workshopping the piece I was advised this would be impossible and changed the time signature of all parts to 2/4 using tuplets of three, five and six.
The idea in the third section (bar 32) was to represent chaos. For this I utilised mobile composition. I imagined a background of white noise texture being interrupted by bursts of musical activity. I am interested in how the ideas behind digital manipulation of recorded sound can be applied to acoustic instruments and in this case I wanted to investigate the idea of sidechain compression.

Sidechain compression describes the practice of controlling the compressor on one track with the output of another. “Ducking” was one of sidechain compression’s earliest uses. On live radio or TV, the announcer’s voice would trigger a compressor on the music to attenuate the volume while the person spoke. In electronic dance music it is common to create space for the kick drum in a mix by applying a compressor to the bass and sending the kick drum into the sidechain input, thereby reducing the volume of the bass each time the kick sounds. It can also be used in a heavy handed way to create rhythmical pumping effects common to much contemporary electronic dance music.

Here violins represent the source sound with a sidechain of viola. I allocated the violins to the cluster D, Eb, E and F to represent the white noise, fluctuating between sul ponticello and normal. The compression effect is achieved by asking the violins to drop in dynamic level when they hear the viola. The viola in turn is triggered by the descending col lento battuta of the cello before the section builds towards a four note fff chord (bar 43).

A harmonic falling gesture taken from the pre-compositional material commences the final section (bar 51) as the dynamic returns to pp. I intended to find an end harmony from the original hex chord but my decision here was led by the ear.

**III. Nina Kogan's Geometrical Heaven**

My process started with an investigation into the poem’s subject matter: two small paintings by the suprematist artist Nina Kogan (appendix A). True to the suprematist idea, my compositional aim was to represent the feeling of the poem. “All the usual bits and pieces flying through space” and “Splinters and stoppers from an angel’s boudoir” suggested algorithmic composition, the idea of chaotic order and the growth of elements from a single event appealed to me musically. During the first year I attended a lecture by Dr Drew Hammond on the music of Franco Donatoni which sparked an interest in music constructed by mathematical systems. I was struck by the textural possibilities, and expressiveness of the result as well as their generative potential. I saw it as a way of creating powerful sound and image structures from simple material. This acted as a stimulus for further investigate and I saw the poem as the perfect opportunity to experiment freely with such systems.
I created a rough structural plan:

- L-systems to generate musical material
- a calm introduction to represent contemplation of the picture
- an event
- mobile section of unrelated material (pizz)
- an echo of the previous event
- a sense of ordering (arco)
- build towards unison ending

There followed a period of research into algorithmic composition and L-systems.

L-systems were introduced in 1968 by Hungarian botanist Aristid Lindenmayer as a theoretical framework for studying the development of simple multicellular organisms, and subsequently applied to investigate higher plants and plant organs. The central concept of L-systems is that of rewriting. In general, rewriting is a technique for defining complex objects by successively replacing parts of a simple initial object, or axiom, using a set of rewriting rules or productions. A classical example of a graphical object defined in terms of rewriting rules is the snowflake curve (Prusinkiewicz and Lindenmayer, 1990). These were rendered graphically but since their introduction there have been many non-graphical renderings including musical composition. The results of L-Systems are characterised by repeated themes and self-similarity (Hazard and Kimport, 1999).

There are many classes of L-systems and for the following musical experiments I used the simplest form. Starting from an axiom string, the production rules are applied in parallel to each element of the string for several iterations. (Worth and Stepney, 2005). This is best demonstrated by a simple example:

Axiom: A

Production rules:
P1: A -> AB
P2: B -> AA

This axiom and production rules would result in the following successive string iterations:

0: A
1: AB
2: (AB)(AA)
3: (ABAA)(ABAB)
4: (ABAAABAB)(ABAAABAA)
The work of the composer is in the creation of the production rules and in the interpretation of this generated data. For example, in Chris Hazard and Catherine Kimport’s 1999 research project, *Fractal Music*, they applied each symbol directly to notes on the musical staff and to chord progressions (Hazard and Kimport, 1999).

I made the decision initially to experiment by applying the data to rhythmic material. My reason for doing so was none other than I thought it may provide interesting results, and in my research period hadn’t come across a similar application. Some examples:

**Axiom A**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>[A, B]</td>
</tr>
<tr>
<td>B</td>
<td>[A,B,C]</td>
</tr>
<tr>
<td>C</td>
<td>[B,D]</td>
</tr>
<tr>
<td>D</td>
<td>d[A]</td>
</tr>
</tbody>
</table>

where A, B, C and D are absolute note values (semi-quaver, quaver, crotchet, minim) and ‘d’ a dotted note.

**Axiom A**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>[A,B]</td>
</tr>
<tr>
<td>B</td>
<td>[1/2A, C]</td>
</tr>
<tr>
<td>C</td>
<td>[A, rA]</td>
</tr>
</tbody>
</table>

where A, B and C are absolute note values and ‘r’ a rest.

When analysing the generated material however I was unsatisfied with the variation. The resulting rhythmic material was too regular. My compositional plan at this stage changed. I decided instead to investigate the generation of pitch material using L-systems and freely improvise rhythm. Pitches would be determined through a set of rules to create intervals using the unit of semitones: for example, +2 would create a major 2nd by raising the note two semitones, while -7 would create an interval of a perfect 5th by lowering the note 7 semitones.

I revisited one of Nina Kogan’s pictures (Appendix A) which contains three main colours: red, yellow, blue. Grey and black are also represented, the black circle appears to warp the fragments of colour in different directions, like a gravitational pull. I thought these colours could be represented by separate L-systems. In the first mobile section they would act independently then be pulled together as the piece progressed.

I wanted each L-system to have its own distinctive sound but for all to descend in pitch over time. I would improvise with the generated musical material and amend certain intervals to match my growing aural image. The decision making was led by desired musical features (figure 7). This was a process of trial and error, for example, L-system II started life as an enquiry into symmetrical systems:
Axiom  -2
P1  -2 = +4, -2
P2  +4 = -11, -2
P3  -11 = -2, +11
P4  +11 = -2, +4

This however didn’t result in the desired variation and organically morphed into the rules listed in figure 7 below.

Once I decided on the systems to use I applied more techniques of digital manipulation: filtering, time stretching and delay effects. I used a band pass filter to narrow the range by removing high and low notes, mimicked the process of time stretching by inserting silence (short rests), and added delay effects after certain interval classes by adding notes (figure 7). These can be thought of in relation to Messiaen’s techniques of added values to manipulate rhythm in which he would add a short values, either a dot, rest or note, to make rhythms that didn’t conform to a classical Western pulse (Van Der Walt, 2007). This provided material for the mobile section in which I wanted a stuttering texture to grow in fluidity and range, each instrument playing as though alone. The rhythmic identity of each part was suggested by voice leading and freely improvised. I wanted a texture to represent the off-white canvas. This is represented by a harmonic sul ponticello note on the cello.

<table>
<thead>
<tr>
<th>L-system</th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>axiom</td>
<td>a = +1</td>
<td>a = -2</td>
<td>a = -3</td>
</tr>
<tr>
<td>rules</td>
<td>+1 =&gt; -5, +1</td>
<td>-2 =&gt; +4, -2</td>
<td>-3 =&gt; +3, -3</td>
</tr>
<tr>
<td></td>
<td>-5 =&gt; -4, +1</td>
<td>+4 =&gt; -11, +7</td>
<td>+3 =&gt; -7</td>
</tr>
<tr>
<td></td>
<td>-4 =&gt; +6, -4</td>
<td>-11 =&gt; -2, -7</td>
<td>-7 =&gt; -3, +5</td>
</tr>
<tr>
<td></td>
<td>+6 =&gt; +1, -5</td>
<td>+7 =&gt; +4, -11</td>
<td>+5 =&gt; -3, +8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-7 =&gt; -2, +4</td>
<td>+8 =&gt; -3</td>
</tr>
<tr>
<td>features</td>
<td>chromatic element falling 3rd and 4th tritone leap</td>
<td>wider leaps including major 7th avoiding semitones</td>
<td>moving towards diatonic harmony repetition minor 3rds</td>
</tr>
<tr>
<td>filters</td>
<td>BPF time stretch</td>
<td>BPF time stretch triplet delay</td>
<td>BPF straight delay</td>
</tr>
</tbody>
</table>

Figure 7. L-system and musical features in Nina Kogan’s Geometrical Heaven.
An example of growth using L-system I:

-5, +1
-4, +1, -5, +1
+6, -4, -5, +1, -4, +1, -5, +1
+1, -5, +6, -4, -4, +1, -5, +6, -4, -5, +1, -4, +1, -5, +1

Figure 8. Notes generated by L-system I in Nina Kogan’s Geometrical Heaven.

This raw material feeds the development of the piece as each system attempts to dominate without success before being pulled together. The fragments slowly merge into one energetic unison line.

The introduction and ‘events’ listed in the compositional structural plan were generated independently to act as punctuation and represent contemplation of the picture. The opening, after a period of time contemplating the poem, was freely improvised and the events were constructed from diatonic note clusters (D,E,F,G,A,B) split into two minor triads Dm and Em. At various moments I wanted this harmonic gesture to overlap the L-system melodic material but after attempting to simply overlap the parts I opted instead to use the original material as an indicator of shape and form and let it be manipulated by the melodic content (bars 111 and 112).
Alasdair Gray, A Life In Progress
Film Soundtrack c. 30’00

Summary

My primary aim was to construct a coherent soundtrack from textural experiments using the film itself as a source of raw material.

I was commissioned to write the soundtrack to a documentary feature on the life and times of Scottish writer and artist Alasdair Gray. The documentary was made by Kevin Cameron for Hopscotch Films and it was screened at several international film festivals. An hour long edit of the original feature length film was broadcast on BBC Two.

Kevin Cameron has been following the artist at key moments in his career over the past twenty years. During this time he made several short films and documented the making of the murals at Òran Mór and Hillhead Underground. The film collates this with BBC archive footage to create a feature length collage of Alasdair and his work. With footage shot over such a prolonged period and on various formats, the role of the soundtrack was to add coherence to the finished film.

After the film was released I spent time manipulating the material out-with its original context and the result was released through DE-FENCE Records. I supported the release by producing a concert in Glasgow venue Òran Mór. For this I rearranged the material once more to work with a small ensemble of six musicians.

For the purposes of the MMus I will focus on the album material and highlight its original use in the hour long television edit. It was primarily an electronic studio project with no accompanying score. When working with the musicians I wrote out guide parts and communicated verbally.

The soundtrack and hour long cut of the film are included on the attached flash drive.

Figure 9 lists track names from the record and, where appropriate, their primary use within the film.
<table>
<thead>
<tr>
<th>track</th>
<th>title</th>
<th>film timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Writing On A Train</td>
<td>00:30 - 03:15</td>
</tr>
<tr>
<td>2</td>
<td>Early Days</td>
<td>17:06 - 18:20</td>
</tr>
<tr>
<td>3</td>
<td>The Art School Dance</td>
<td>36:12 - 37:07</td>
</tr>
<tr>
<td>4</td>
<td>Lanark</td>
<td>11:36 - 12:05</td>
</tr>
<tr>
<td>5</td>
<td>Unthank</td>
<td>55:45 - 57:06</td>
</tr>
<tr>
<td>6</td>
<td>The Old School Clock</td>
<td>39:55 - 41:00</td>
</tr>
<tr>
<td>7</td>
<td>1982 Janine</td>
<td>49:00 - 50:50</td>
</tr>
<tr>
<td>8</td>
<td>Good For You Leo</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>The Glasgow Where I Lived</td>
<td>29:00 - 30:15</td>
</tr>
<tr>
<td>10</td>
<td>Notes From The Underground</td>
<td>58:40 - 59:30</td>
</tr>
<tr>
<td>11</td>
<td>Oran Mor, A Work In Progress</td>
<td>53:00 - 55:35</td>
</tr>
<tr>
<td>12</td>
<td>A Sentimental Song</td>
<td>-</td>
</tr>
<tr>
<td>13</td>
<td>*What Are We? (digital only track)</td>
<td>03:16 - 05:15</td>
</tr>
</tbody>
</table>

*Figure 9. Alasdair Gray, A Life in Progress film timeline.*
Compositional Process

Initially I spent time watching and taking notes on the film: I wrote out a timeline, chapter headings, themes and subjects, taking note of any musical ideas that occurred to me. I then took a step back from the moving image to consider Alasdair’s work; his poetry, stories and art. The richness and complexity of his work demanded this period of research and I felt this would help generate a concept. An effective film score is at least fifty percent conceptual art (Hill, 2017).

I read Lanark after digesting the tailpiece of the book, How Lanark Grew in which Alasdair answers questions he’s often been asked about the novel. Not only does it answer questions about the book, but describes in some detail other aspects of his life from growing up in Riddrie, through art school, his first drawings and interests, films and reading material. It gave me an overview of not just how Lanark grew, but of how Alasdair Gray himself grew. He talks about enjoying works that mix genres: The Wizard of Oz, Hans Christian Anderson’s stories, Ibsen’s Peer Gynt, Goethe’s Faust, classical myths and some books of the Bible. All these mingle everyday doings with supernatural ones. I wanted to apply this aesthetic to the music; to use instrumentation that on one hand would sound real and familiar but to combine and use the instruments in unfamiliar ways to make something more supernatural. This I hoped would represent the collision of real and imagined worlds in his art. I decided on the following sound palette which I would attempt to stick to throughout the project: accordion, autoharp, ebow guitar, balalaika, Roland 101 mono synth, cello, violin, wurlitzer piano, oboe and percussion. As a hybrid score, these acoustic instruments would be subject to digital manipulation, combined and mixed with atmospheres of found sound and diegetic material from the film itself.

As a departure from the traditional process of underscoring a locked picture (the moment in the movie making process when the picture won’t change), I approached the composition as a series of tone paintings based on the research period above before tailoring them to the finished film. This I felt would provide a more effective and natural score than focusing on technical issues of cue lengths and visual detail. I thought it would also throw up moments of surprising synchronicity. The documentary format also meant there was little in the way of “hit points”, places where the music and image must combine exactly, and this encouraged me to work freely in this manner. I related to Chion’s idea of free counterpoint which implies an "auditory voice" perceived horizontally in tandem with the visual track, a voice that possesses it’s own form of individuality (Chion, 2001). As a study of a unique artist made by a unique film maker I was also free of intertextual references; that is, allusions to other films of the same genre.

I consider the way someone communicates with the world verbally to say something about their personality and I deemed Alasdair’s distinctive voice an appropriate active starting point, not to highlight what some would call an eccentric way of speaking, but rather to create musical gestures and motifs that would be useful throughout the writing and recording process. Considering Janáček’s link between speech patterns and melodic material and the more modern aesthetic of composers like Bob Ashley I made a study of Alasdair’s dialogue, turning fragments into melodic and rhythmic material before arranging them in free time.
I then orchestrated these vocal gestures for oboe, clarinet, violin, cello, accordion and autoharp. On returning to the film however this quirky piece didn’t sit well and instead I used these short motifs sparingly as texture buried in other cues or simply as a harmonic starting point for composition.

Figure 10. An example of Alasdair Gray’s speech patterns

1. Writing On A Train

The opening track of the album is also the opening of the film. The footage shows Alasdair making his way to London to be interviewed on the Radio 4 programme Start the Week. It depicts him on a train, walking to the BBC in his slippers and sitting in the studio being interviewed by Andrew Marr. I wanted the music to be both empathetic, taking on the rhythm and tone of the scene, and anempathetic (Chion, 1994), to set up the whole documentary by progressing in a steady, ineluctable manner.

I based the rhythmic pentameter on the syllables EN-CY-CLO-PAED-I-A of which Alasdair says, “seemed to sum up these thick brown books which contained explanations of everything there is and had been”. He was referring to the Harmsworth Encyclopaedia. I played with the word to make an irregular repeating pattern.

The harmonic material was generated from Alasdair’s speech experiment above, working with no more than two notes at a time to keep the texture light.

I started by recording Wurlitzer piano for it’s soft tone, repeating the sequence, before adding accordion (I wanted a shimmering sense of movement and after some experimentation, this vibrato effect was created by fast short pulses on button chords fed into delay and reverb). In a desire for textural interest to blend with the diegetic sound I experimented with ebow guitar tones and plucked balalaika. I also wished this opening piece to have a certain body of sound and filled out the bass end of the spectrum with Roland 101 synth which would swell and fall on the change of harmony. Finally I punctuated the piece with autoharp struck with the rubber end of Staedtler pencils, more specifically the metal part in which the rubber sits. I previously experimented with drum sticks, chopsticks, pens, cutlery and screwdrivers but the pencil turned out to be closest to the rich metallic zing I wanted. Also, aside from the sound it created I liked the fact the pencil is one of Alasdair’s main tools. To provide a larger target area for the strike I tuned three strings of the autoharp to the almost the same frequency (I pitched one string five cents sharp and one five cents flat to enhance the richness of sound). This would help set up the desired supernatural element. I still felt something was
missing however so low in the mix, for added texture I doubled the bass notes on the cello and applied
gestures from Alasdair’s vocal phrasing to the oboe which enters near the end and adds lightness and a
sense of mischief.

2. Early Days

The footage of Alasdair’s friend and fellow art student Ian McIlheney shows him seated in front of a Sames
upright piano. I wanted music to work with some old family pictures and decided to use the upright piano with
all its imperfections as the central sound to root it in a sense of time and place. I improvised on a pedal D
note with three note chords, each note a fourth apart. I liked the sound. I created movement and texture with
the accordion, autoharp struck with soft beaters this time (the pencils were too percussive), and the violin’s
extended techniques. All parts were an improvised response to the piano line.

3. The Art School Dance

This started life as the percussion of another track, Notes From The Underground (see below). The idea was
to create a dynamic rhythm track but not make it sound like a conventional drum kit. I used a spiral cymbal,
bits of metal and a bicycle wheel along with a conventional kick. It was overdubbed to tape in a commercial
studio while I conducted the percussionist. I enjoyed the result on its own so I remixed it bringing percussion
and bass to the fore while other sounds used in the original track periodically filter in and out. I added brass
to work with a scene depicting a party at the Glasgow School of Art. This was a serendipitous moment of
placement, the obvious choice would have been to sync a piece of music from the era (1950s) but the tribal
feel of this piece worked well supporting the scene with an interesting disconnect of sound and image.

4. Lanark

"The Russian formalists of the early twentieth century had a wonderful term for this defamiliarization of the
commonplace. They called it ostranenie, or literally, "making strange". (Hill, 2017).

I required a piece of music to underscore the two readings from Lanark. Thinking about The Institute in the
book and its parallels to real life organisations and places, I was drawn to the idea of how artists play with
perception and material. I wanted to play with the aural equivalent, this I felt would help provide a strange yet
familiar backdrop for the text. The basis of this piece is a piano made to sound like a Stratocaster guitar. By
removing the front of the piano and half muting the strings with one hand while playing the keys with the
other, running it through a delay and into a fender amp, the piano took on the characteristics of the electric
guitar. Each step of this process involved a period of trial and error. On top of this percussive riff I layered a
long melodic oboe line in 6/4 punctuated by violin, cello and autoharp.
5. Unthank

"The single most important thing for a film composer to know is that anything he or she writes, even if it is nothing more than a drone or a pulse, will have meaning to an audience. While visual elements provide information, it’s often left to the audio track to provide meaning." (Hill, 2017)

I required a piece of music to cover a scene where Alasdair appears to be lost in his own world. Originally I hoped the experimental track using his speech patterns would cover this but it proved too quirky. Instead I created a texture piece around a synth drone and gestures from the instrumental palette: autoharp (this time brushed with fingers), bowed balalaika, ebow guitar and accordion effects. The idea was that sounds would trigger other sounds in the way thoughts trigger other thoughts before drifting away. The result has an internal feel; a glimpse of something beneath the surface. During the recording process I wasn’t happy with the single drone so doubled it as closely as I could to create tremolo like beats as the two sounds interfered constructively and destructively with each other.

6. The Old School Clock

This track was built around the metronomic ticking of the school clock under a scene about teaching. I wanted to create a feeling of dislocation to best represent the voiceover and after a period of experimentation decided on two balalaika parts which would alternate between eight and nine beats. Bass and electric guitar were added for weight and the faint autoharp for colour in the high frequencies. The subject matter is plaintive and after another period of experimentation wrote a simple rising violin to best represent this.

7. 1982 Janine

When looking for a piece of music to support panoramic shots of the Óran Mór ceiling mural I returned to the opening track Writing On A Train. I wanted to revisit this track in various guises to create a feeling of unity the work required. The scene required something more spacious and ethereal so I experimented by running a sub-mix (accordion, strings and guitar) through external effects (large reverb and plate delay). I liked the textural effect.

8. Good For You Leo

Removing the piano from track 2, Early Days left a bed of texture on which a reading from Leonardo Da Vinci could sit. The equalisation and slightly distorted vocal effect was applied purely for the record as I felt it complemented the words and the sound world. I strive to make underscore and voiceover act as one entity, the voiceover acting like a lead instrument. This scene was cut from the hour long edit.
9. The Glasgow Where I Lived

I had to underscore archive footage of children playing on Glasgow streets as Alasdair described Riddrie, the place he lived as a boy. I wanted something simple, nostalgic and richly textured. My starting point was to create a bed of sound using a combination of struck and brushed autoharp on which a simple folk melody would sit. I recorded a simple melody on the piano before overdubbing banjo (I tried balalaika but thought it too heavy). Finally I added ebow guitar and a cello counter melody. The resulting track ended up too busy and detracted from the words. However, on removing the piano it complemented the scene.

10. Notes From The Underground

In the documentary, while sitting in the Maryhill art studio Alasdair shows us some of his designs for the Hillhead Underground mural. The characters which bookend the street scene: poor devils, kind friends, vile plotters, sweet singers, bold adventurers etc. I thought this would make a good 'list' song; a song about a journey encountering different characters. I commenced work on this with no particular scene in mind, only a desire to experiment with extra musical ideas. I recorded Alasdair’s voice from the film and constructed a sample library. I recorded a journey on the Glasgow underground starting and finishing at Hillhead as a process of field recording and detailed listening: the slow crescendos, the high pitched white noise, the airiness when the doors open, the tannoy announcements, the commuters. I studied the mural itself. I wanted to create a texture piece based on this cyclical journey, a piece where the end would mimic the start to create the feeling of a journey that continues forever. Alasdair would comment on the characters throughout. At one station the train sat for a while so there would be a period of calm. In the opening piece I planned to set the scene for the film; in this track I wanted a conclusion, not a conclusion with a full stop, but something to represent a life in progress.

I structured the song around an edited version of the field recording (it takes 28 minutes for one full cycle). I chose simple harmony to get started which again related to the speech material. I made the pulse regular and let texture lead, the addition of each instrument generally suggesting something new. I eventually layered all the instrumentation from my original sound palette: autoharp played with soft beaters to drive the track along, struck with pencils to create a melodic top line, repeating cello, wurlitzer and balalaika parts to provide backbone, ebow guitar and 101 synth to add colour while Alasdair’s voice acts as punctuation.

With the percussion track I took a few wrong turns, initially recording conventional drum kit which unfortunately removed the track too much from the special sound world I was trying to create. I stripped it back and started again, the new idea being to create a dynamic percussive track with pieces of metal (refer to track 3, The Art School Dance).
Set within the mural are the following words:

Do not let daily to-ing and fro-ing
To earn what we need to keep going
Prevent what you once felt when wee
Hopeful and free.

I liked the sentiment and decided to place them in the middle of the piece during the moment of calm.

This piece was used for the end credits which featured an animated version of the mural.

11. Óran Mór, A Work In Progress

refer to track 7. 1982 Janine.

12. A Sentimental Song

I needed some music to cover a scene of talking heads and labourers working in Óran Mór. This time it was poetry that provided the inspiration. I had been struck by Alasdair’s high tenor voice; in one scene he sings Rosin the Beau while working, and during the film we find out he met his first wife while performing cabaret turns at the Edinburgh Festival. I’m not sure what he sang but I imagined him theatrically delivering 19th century parlour songs. With this in mind I wrote a melody and accompaniment to his poem A Sentimental Song. For the scene in question I arranged it for a folk quartet which worked well in the given context but when reviewing the material I felt it didn’t sit comfortably with the rest of the score. The scene in question was cut from the T.V. edit. With the record in mind I reworked it for piano, autoharp and organ and asked Alasdair to sing. He initially agreed, but at the time of recording he was too busy with other projects. Instead I asked my sometime collaborator, Icelandic artist Biggi Hilmars to record a vocal based on a guide recording I had made.

13. What Are We?

The creation of the mural in Óran Mór, which many consider to be Gray’s masterpiece is documented in the film. In one scene while standing on scaffolding in the venue Alastair theatrically delivers the text he has painted onto the beams of the former church:

Q: What are we? A: Animals who want more than we need.
Q: Where are we from? A: Life is rooted in death’s republic.
Q: Where are we going? A: Our seed returns to death’s republic.

He finishes with the line, ‘These cheery sentiments should inspire’, before continuing his work.
I was inspired both by the words and his theatrical delivery. My belief was that these words could form the basis of a call and response song. Again, I had no particular scene in mind but thought it would be an interesting experiment to create a piece of music from the diegetic material of one scene and use it in another. I sampled the dialogue from the scene complete with brush strokes and noise from the environment and based the musical backbone of the piece around a two note piano riff using the percussive Stratocaster piano sound described in track 4, *Lanark*. The bass line, accordion and melodic guitar parts followed on quickly.

It ended up working for the opening credits - as the documentary is a collage of footage, I liked the idea that the credit music be a collage of the film. I also wanted something fun and in stark contrast to the opening ambient music.
In the Ink Dark
Contemporary dance score c. 35'00

Summary

This is the result of a collaborative project which is located online at https://www.intheinkdark.com
A publication of the project can also be found at https://www.intheinkdark.com/copy-of-collection

In the Ink Dark is a project by choreographer and curator Luke Pell. Multidisciplinary in nature it involves conversational encounters, a live dance performance, a publication and an accompanying series of podcasts as part of an online artwork. The project explores people from Edinburgh’s experiences of loss and landscape through dance, design and poetry. I was commissioned to write the score for the live dance element. The performance involved eight dancers, a live artist and a poetry reading. The piece premiered at The Old Leith Theatre in June 2017 and toured various spaces throughout the city over the coming weeks. Due to the touring nature of the work and budgetary constraints, it was decided the score would be pre-recorded. Luke’s original summary of the project can be found as additional text in the supporting materials.

I developed the music for In The Ink Dark through conversation and memory. Normally I would spend many more hours in the rehearsal room but the nature of the music and movement both being informed by the same words and ideas meant they could develop independently. Luke supplied words throughout the writing process, fleeting images to spark the imagination: 'particles of dust in light' 'a snow drift at dawn' 'a library in spring light' 'wind on water' 'sea, storm, ocean, a desert scorched'. All these words helped create aural images, imaginary soundscapes rooted in reality which led the composition. Again, I’ve included, as part of the supporting materials, a copy of the text and images I received from Luke to help set the tone for the music.

I considered my personal memories, memories of youth, first songs, elusive half forgotten things. The sound world would be raw, broken, or at least on the verge of breaking. This led me back to a twenty year old dictaphone and tapes which contained fragments of forgotten songs. Texture would be key to holding it together and I would make use of this degraded tape quality. The music also had to be emotionally resonant and welcoming.

Before commencing the composition I visited Leith Theatre, the recently re-opened space which would host the premiere. Ultimately I wanted the music to sound like this grand old building - crumbling, flaking and worn yet hopeful, determined and inviting. The music would have layers of sound like layers of paint, submerged fragments sometimes swelling to become audible before disappearing back from whence they came. An in-between space of time and place. Images from rehearsals in the theatre can be viewed in the supporting materials.
As the work progressed I would attend rehearsals with sketches and receive feedback from both Luke and the dancers. Later, when most of the orchestration was in place, but before the final string recording session, an open rehearsal with invited audience provided vital feedback within the safety of the dance studio and this informed the final duration of each movement. Video clips from this day can be viewed in the supporting materials.
Compositional Process

The piece is ordered in four movements which flow seamlessly into one another. Titles and approximate lengths were provided. From conversations with the creative collaborators I noted words or features from the movement that would lead the composition process. These are condensed in figure 11. The whole project is deliberately rooted in diatonic harmony and was an exercise in textural writing and layering.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>words</td>
<td>light, wandering, pleasantly lost.</td>
<td>an ache, a pain, a love.</td>
<td>spiral, dive, twist, soar.</td>
<td>beach, dune, wind on water, swell.</td>
</tr>
<tr>
<td>musical features</td>
<td>harmonically neutral, welcoming, no dynamic contrast, minimal development.</td>
<td>flitting between major and minor, soft with three to four crescendos which almost resolve. a broadening out of the sound.</td>
<td>building in dynamic and momentum throughout.</td>
<td>shimmering, rising melody, harmonically neutral.</td>
</tr>
<tr>
<td>movement</td>
<td>walking pace, relaxed.</td>
<td>each dancer works towards something they never quite reach.</td>
<td>each dancer moves through a series of actions with increased energy resulting in fast, fluid movement.</td>
<td>dancers slow down, come to rest and move to the ground.</td>
</tr>
</tbody>
</table>

Figure 11. In the Ink Dark compositional structure

I based the instrumentation on the ability to provide sustained, slowly shifting textures: shruti box, organ drones, electric guitar tones, synth, and strings. I used piano to function as a harmonic and rhythmic backbone. Electric guitar and wind chimes provided distinct layers of sound tonally at odds with the musical material. Throughout the process I recorded onto micro-cassette and, by varying the playback speed created yet more grainy textural layers of sound that could sit under, and occasionally clash or compliment, the music. After my experience writing Nina Kogan's Geometrical Heaven I wished to work with a string quartet and wrote parts to be performed by an ensemble.

In many of my works I start with an action, something to trigger the discipline of doing and enter into the new work: it could be going to a specific space, obtaining and investigating a new instrument, creating a sample library of field recordings etc. Just before starting this composition I stumbled upon a wind chime - it was made from bamboo with metal rods and a glass marble. The combination of minor and major intervals was neutral and pleasing. It had a soft resonant sound rich in overtones. I obtained one of these Koshi wind chimes with the intention of using it at as a starting point of the work. I made a study of the intervals: a combination of two perfect fourths, two minor thirds, two major seconds and a major third. I recorded
improvisations to generate random notes and texture before assigning these intervals to other instruments -
strings, shruti box and organ to build up a body of sound. This unfortunately turned into a failed experiment,
the result being too random and lacking in any harmonic or rhythmic structure. I decided to use the chime
instead for subtle atonal texture and focus on rhythmic and harmonic ideas on which the texture could sit.

The four movements are outlined below.

I. Wandering and Waiting

The opening piece was written to accompany the entry of the audience as dancers inhabit the space. The
musical starting point came from a period of time investigating open neutral harmony. I eventually settled on
the following group of notes based on the E lydian scale which I arranged into a repeating four bar phrase. I
assigned this to the Wurlitzer piano as the harmonic and rhythmic backbone.

As part of the taught Sound Shaping and Design module I took as part of this MMus I created a piece from
the digital manipulation of field recordings. One of the techniques I used was that of creative sidechaining
and I applied it here to create natural shifting textures. In this instance I recorded samples of Leith Water (the
river which cuts through Northern Edinburgh) and applied it as a sidechain to a drawbar organ playing notes
containing the above harmony. Subtly moving the drawbars provided extra fluctuation to the density of
sound. I wrote a repeating pattern on the strings which simply start and stop with no development. All parts
were recorded to micro cassette and fed back into the mix to create the desired texture.

II. Some Rememberings

For this movement I was looking for something simple, circular yet asymmetrical. Something that could
easily modulate to different keys and build to a controlled crescendo before returning to the same starting
point. I felt this would represent the desired effect of a memory trying to be brought into focus only to recede.
I decided on three crescendos, the gaps between each increasing with time. After a period of
experimentation akin to my process as a songwriter I settled on the pattern in figure 13.
Figure 13. Some Rememberings chord sequence.

From this I wrote a harmonic variation and build for the desired crescendos. If you consider the above as section A with section B the variation, then the piece is structured ABAABAAAB with each repetition of section A modulating to related keys. The piece should have the feeling as if it could continue ad infinitum. I also wrote a C section for further variation but it sounded cluttered so this was removed.

Thinking spectrally I wanted to broaden the sound from the first movement. To achieve this using my chosen instrumentation I used the 16’ organ stop to fill out bass frequencies and layered synth and electric guitar for melodic texture in the high frequencies. I took care to leave room for the string quartet. The falling intervals of a major sixth and octave played by the violins and viola create the desired plaintive feeling and the full string section is utilised to provide the swell of the crescendos. I wrote the string parts in 4/4 to create a disconnect with the piano which moves in beats of five and three. Sections of the first movement recorded to micro cassette appear as textural elements.

III. Fluid Bodies

Here I used lines from the poem as my starting point to obtain a melodic fragment I could then expand and develop into an extended composition. I imagined it as a folk song played on the cello. After I obtained a melody from the words through improvisation I put the words to the side.

Figure 14. Fluid bodies melodic fragment.

The piece had to build steadily throughout to match the energy of the movement so I was aware I had to build to something rhythmic with a significant weight of sound. Using the 6/8 feel suggested by the words I experimented with various rhythmic patterns to complement this melodic shape. I finally settled on a straight semi-quaver pattern which would drive the piece towards its climax. This pattern then developed organically into the harmonic sequence shown in figure 15. The piece was developed as an experiment in combining these elements within the principles of steady growth and building momentum.

I used the same instrumentation as the previous movement to fill out the harmonic spectrum and added autoharp for colour and percussion hits to lend weight at the end. Again, micro cassette recordings of the
previous movement were used as an extra layer of texture. Due to the body of sound I wanted in the final section I wrote an overdub for the quartet, melodic lyrical lines to play over the rhythmic harmonic material (refer to attached score).

![Figure 15. Fluid Bodies rhythmic and harmonic progression.](image)

**IV. Coming to the Surface**

During this movement the dancers slow down and move to the ground. It is a still and intimate moment. Here I was looking to complement this and write a piece led equally by harmony and timbre. I wasn't interested in creating a large spectral body of sound and deliberately dropped out the organ bass to be replaced by a more natural sounding cello pizzicato. A period of experimentation at the piano provided the structural backbone (figure 16).

![Figure 16. Coming to the Surface harmonic and melodic idea.](image)

High sul ponticello tremolo strings, bellows shake shruti box, and subtle sustained guitar tones combine to form a textural motif, this is timbre playing a part in structural development (figure 17). The piano was recorded in part with the practice pedal felt in place for a non intrusive celeste like tone.
Figure 17. Coming to the surface violin texture.
The Vorkapich Carrel
Orchestral score c. 8'00

Summary

“Stravinsky famously couldn’t write if he knew people were listening” (Oliver, 1995).

One of my primary aims in commencing post graduate study was to gain confidence in writing for orchestra. After the thrill of workshopping a short piece with the RSNO I deemed a large scale orchestral movement to be the most suitable way to round off this portfolio. My aim was to write an orchestral movement and continue experimenting and developing recent themes and interests.

For some time I’ve been interested in the idea of noise bleed, of disparate sounds coming together to form something new. This idea has been a fascination and theme of mine in recent years: as part of the Sound Shaping and Design module I followed a mechanical drone to its source in an experimental piece called Proximity Effect. And in the composition On/Under I experimented with field recordings from various city locations. With the Oliveros mantra at the forefront of my mind “Listen to everything all the time and remind yourself when you are not listening” (Service, 2012) I wished to embrace sound. In My Latest Fever, the second movement in the string quartet above, I touched on these ideas by combining music generated from separate L-systems.

A flat is often an impractical place to play a musical instrument and as such I have used the carrels at The Mitchell library for many years. I’m constantly fascinated by the sounds I can hear from the other rooms - piano scales, a jazz duo, an operatic voice, pop guitarists. They are far from soundproof, everyone can hear what others are playing. As I write I wonder about this music infiltrating my own work and my music impacting others.

For this piece I wished to continue investigating the above ideas and as a starting point imagined the following scenario: a composer is writing in a carrel, he or she is working on sketches for a film soundtrack, two other musicians work away separately in adjacent carrels, their music begins to influence the composer’s material.

As a starting point I required an imaginary film project and, after some consideration, chose Graeme Macrae Burnet’s 2016 novel His Bloody Project, a book I had recently read and enjoyed. I used it as a way of generating musical material focussing on several scenes honing in on landscape, foreground, background and atmosphere. I thought of it as a montage of several scenes involving cinematic editing techniques.

The name is a reference to the famous motion picture montage specialist Slavko Vorkapich who described his sequences as symphonies of visual movement.
Compositional Process

My final choice of instrumentation was based on what I would use were I commissioned to write a score of the film, combined with the chance to learn more about instruments of which I have little experience. The harp was one such instrument and I use this piece to learn about some of its creative possibilities and notational concerns.

With a darker tone in mind I dropped the upper strings. This would help avoid modern day film cliches and focus my attention on other instruments (I had spent considerable time researching string writing while composing the short pieces for quartet). I also didn't hear a place for the tuned percussion of marimba, glockenspiel and vibraphone.

The book is set in the Scottish Highlands and I wished to include a traditional element and so decided on the accordion. For a contemporary electronic element and textural interest I also included electric guitar. My intention was to use it sparingly to blend with the orchestra.

The compositional process was a steep learning curve which took on various forms as the ideas above were gradually simplified. I read and re-read scenes from the book. I sketched quickly creating material from separate sources, sources I would then attempt to interweave. These included reduced tone rows based on harmony I felt would complement the imaginary scenes as well as harmonic and melodic material generated from modal composition.

On completing a short score however I was aware that although I had orchestrated the ideas fully they weren't properly integrated. This was confirmed in an invaluable meeting with Bill Sweeney. I had fallen into the trap of orchestrating like a songwriter and, in an effort to try out as much as possible, was jumping rapidly between ideas. In short, the piece lacked structure. On Bill's recommendation I mounted the short score on a wall and started reworking with a structural focus.

I colour coded sections according to source material and I became aware that my original concept had to change. I could still work with ideas of noise bleed and filmic editing but with material that was related. I reconsidered structure focussing on one scene and started re-writing and editing using limited material from the original sketches. The harmonic and tonal basis would arise from the two chords in figure 18. The rest was discarded.
For added colour and to represent a darker atmosphere in the scene I generated a 49-note matrix based on the following seven note row, a combination of notes from the above harmony.

I considered variation, contrast and transformation within and between sections and spent time re-writing to allow the above ideas to breathe and develop.

I created the plan in figure 20 to help focus structure and guide the composition. I worked to rough timings.

<table>
<thead>
<tr>
<th>Section</th>
<th>Timeline</th>
<th>Bar</th>
<th>Visual Description</th>
<th>Orchestration Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0:00 - 2:30</td>
<td>0-52</td>
<td>wide shot of bay. distant figures working on the shore. the sea.</td>
<td>open with woodwinds. harmony from chords 1 and 2. repetitive movement in strings. melodic material from tone row.</td>
</tr>
<tr>
<td>2</td>
<td>2:30 - 3:30</td>
<td>53-69</td>
<td>cut to surrounding countryside followed by rapid singular events and focus back to the sea.</td>
<td>string section - change in harmony to tone row. fleeting gestures. shimmering full orchestral texture.</td>
</tr>
<tr>
<td>3</td>
<td>3:30 - 4:40</td>
<td>70-104</td>
<td>a menacing figure approaches. combination of close and mid shot. argument ensues. build in tension.</td>
<td>row material. harp, viola and guitar harmonic grounding. brass melody. two elements begin to move out of sync.</td>
</tr>
<tr>
<td>4</td>
<td>4:40 - 5:30</td>
<td>105-131</td>
<td>dissipation of tension as menacing figure walks away. Protagonists return to work.</td>
<td>texture led - light tam tam, string harmonics, filigree piano, gliss harp, accordion swell.</td>
</tr>
<tr>
<td>5</td>
<td>5:30 - 6:30</td>
<td>132-155</td>
<td>original characters pick up momentum in their work. A sense of fun.</td>
<td>6/8. build from a base of woodwind and brass to orchestral tutti inc. harp extended techniques.</td>
</tr>
<tr>
<td>6</td>
<td>6:30 - 8:00</td>
<td>156-192</td>
<td>characters stop, return to croft, camera pans back out over village and bay.</td>
<td>a return to opening phrase, rich dark texture. muted brass dominant.</td>
</tr>
</tbody>
</table>

Figure 18. The Vorkapich Carrel harmony and examples of initial sketch material.

Figure 19. The Vorkapich Carrel seven note tone row.

Figure 20. The Vorkapich Carrel compositional plan.
The composition is led by texture, harmony and rhythm. Melody takes a subordinate role. Throughout I endeavoured to pay close attention to harmonic spectrum. This body of sound is something I focused on during Sound Shaping and Design but now apply to all music, be it acoustic or electronic. The texture on page 6 is light yet covers a large frequency range: from the tremolo double bass to piccolo flute swell, with delayed electric guitar notes, enharmonic trills on the harp and accordion bellows shake filling out the spectrum in-between these outer limits.

Since starting the course I’ve been encouraged to think about rhythm, meter and ways of disrupting the regular patters. The 6/8 section on pages 18 and 19 is interrupted by bars of two and three quavers while a straight melodic gesture in 4/4 works independently of the suggested rhythm.

It goes without saying that I would greatly benefit from workshopping the piece and I would like at some point to revisit the discarded material. These are things for the future.
3 Conclusion

My experience at the University of Glasgow has been wide and varied. As a result of this study over the last few years my musical world has broadened and I have advanced as a composer. I have learned a great deal and have put these skills into practice in professional commissions. I have gained confidence in writing for orchestra and, as part of the Orchestration module, workshopped a short piece with the RSNO which was a thrilling experience. I have attended many concerts and experienced much new music first hand: the experimental electronic and audiovisual GLEAM festival, instrumental masterclasses, visiting ensembles, performance workshops featuring the music of composers like Oliveros and Tenney, and lectures in music for moving image and Foley sound. The Sound Shaping and Design module also opened up the world of sonic arts and I gained a grounding in its historical contexts and current practices as well as knowledge of MAX/MSP software. My composition *On/Under*, written for this module was recently presented at experimental music night INTER in Glasgow. I have also made the most of the library resources and, aside from the taught material have enjoyed researching the music of composers like Schnittke, Feldman, Ligeti, Antheil, and countless others. Most importantly I have enjoyed many stimulating discussions with professors in the Department of Music and fellow students.

I hope the future will involve the application of new skills to my collaborative practice alongside continued academic study.
Bibliography


Appendix A - Clive James’ poetry

Japanese Maple

Your Death, near now, is of an easy sort.  
So slow a fading out brings no real pain.  
Breath growing short  
Is just uncomfortable. You feel the drain  
Of energy, but thought and sight remain:

Enhanced, in fact. When did you ever see  
So much sweet beauty as when fine rain falls  
On that small tree  
And saturates your brick back garden walls,  
So many Amber Rooms and mirror halls?

Ever more lavish as the dusk descends  
This glistening illuminates the air.  
It never ends.  
Whenever the rain comes it will be there,  
Beyond my time, but now I take my share.

My daughter’s choice, the maple tree is new.  
Come autumn and its leaves will turn to flame.  
What I must do  
Is live to see that. That will end the game  
For me, thought life continues all the same:

Filling the double doors to bathe my eyes,  
A final flood of colours will live on  
As my mind dies,  
Burned by my vision of a world that shone  
So brightly at the last, and then was gone.
My Latest Fever

My latest fever clad me in cold sweat
And there I was, in hospital again,
Drenched, and expecting an attack of bugs
As devastating as the first few hours
Of Barbarossa, with the Russian air force
Caught on the ground and soldiers by the thousand
Herded away to starve, while Stalin still
Believed it couldn’t happen. But instead
The assault tuned out to be as deadly dull
As a bunch of ancient members of the Garrick
Emerging from their hutch below the stairs
To bore me from all angles as I prayed
For sleep, which only came in fits and starts.
Night after night was like that. Every day
Was like the night before, a hit parade
Of jazzed-up sequences from action movies.
While liquid drugs were pumped into my arm,
My temperature stayed sky high. On the screen
Deep in my head, heroes repaired themselves.
In Rambo: First Blood, Sly Stallone sewed up
His own arm. Then Mark Wahlberg, star of Shooter,
Assisted by Kate Mara, operated
To dig the bullets from his body. Teeth
Were gritted in both cases. No one grits
Like Sly: it looks like a piano sneering.

Better, however, to be proof against
All damage, as in Salt, where Angelina
Jumps from a bridge on to a speeding truck
And then from that truck to another truck.
In North Korea, tortured for years on end,
She comes out with a split lip. All this mayhem
Raged in my brain with not a cliché scamped.
I saw the heroes march in line towards me
In slow-mo, with a wall of flame behind them,
And thought, as I have often thought, “This is
“The pits. How can I make it stop?” It stopped.
On the eleventh day, my temperature
Dived off the bridge like Catherine Zeta-Jones
From the Petronas Towers in Kuala Lumpur.
I had no vision of the final battle.
The drugs, in pill form now, drove back the bugs
Into the holes from which they had attacked.
It might have been a scene from Starship Troopers:
But no, I had returned to the real world.
They sent me home to sleep in a dry bed
Where I felt better than I had for months.
No need to make a drama of my rescue:
Having been saved was like a lease of life,
The thing itself, undimmed by images –
A thrill a minute simply for being so.
Nina Kogan’s Geometrical Heaven

Two of her little pictures grace my walls:
Suprematism in a special sense,
With all the usual bits and pieces flying
Through space, but carrying a pastel-tinged
Delicacy to lighten the strict forms
Of that hard school and blow them all sky-high,
Splinters and stoppers from the bombing of
An angel’s boudoir. When Malevich told
His pupils that their personalities
Should be suppressed, the maestro little knew
The state would soon require exactly that.
But Nina, trying as she might, could not
Rein in her individuality,
And so she made these things that I own now
And gaze at, wondering at her sad fate.
She could have got away, but wished instead
Her gift devoted to Utopia.
She painted trams, designed official posters:
Alive until the siege of Leningrad
And then gone. Given any luck, she starved:
But the purges were still rolling, and I fear
The NKVD had her on a list,
And what she faced, there at the very end,
Was the white cold. Were there an afterlife,
We might meet up, and I could tell her then
Her sumptuous fragments still went flying on
In my last hours, when I, in a warm house,
Lay on my couch to watch them coming close,
Her proofs that any vision of eternity
Is with us in the world, and beautiful
Because a mind has found the way things fit
Purely by touch. That being said, however,
I should record that out of any five
Pictures by Kogan, at least six are fakes.
Scott Twynholm

Nina Kogan's Geometrical Heaven
for string quartet
Notes on performance:

# play one quarter tone sharp
\# play one quarter tone flat

In parts II and III all timings in unsynchronised sections are approximate as are all rhythmical values. Each player should play his part as though alone.
In the opening of part II all accentuation of bow changes should be avoided as much as possible.

Score in C

Duration c. 7 min
I. Japanese Maple

\( \frac{4}{4} \) sparse, delicate

A tempo \( \frac{4}{4} \) arco

\( \frac{4}{4} \) norm.

A tempo \( \frac{4}{4} \)
II. My Latest Fever

\( \text{Vln. I} \)  \( \text{Vln. II} \)  \( \text{Vla.} \)  \( \text{Vc.} \)

\( \text{Vib.} \)  \( \text{Subito} \)  \( \text{Gliss. quickly with finger} \)

\( \text{Scratch tone} \)  \( \text{Marked accents - play with open G string} \)
unsynchronized

All timings in this section are approximate as are all rhythmical values. Each player should play his part as though alone.

When viola plays drop in dynamic level so that it’s heard clearly. Repeat until signal from violoncello then continue playing play up an octave.

When you hear $fff$ chord in violoncello (bar 43) fade to silence over 10 seconds and move immediately to D.
Vla.

\[ \text{\textit{accel.}} \text{ towards as fast as possible} \]

Vc.

\[ \text{\textit{mf}} \]

when violins are silent hold for another 2s then dim to silence.

\[ \text{\textit{expressive}} \]

repeat and diminuendo until violins are silent.
unsynchronised section - each instrument should play as though alone. Timings and rhythmical values are approximinate. Emphasis on texture.

Vln I  \( j=132 \) lightly

\( \text{pizz.} \)

\( \text{p} \)

\( \text{subito} \)

\( \text{subito} \)

\( \text{repeat until signal from vla then break and go to B.} \)
Vln II

repeat until signal from Vla then break and go to B.

Vla

signal when finished then go to B.

105 Vlc play with as little accentuation of bow stroke as possible.

105 pp play until signal from Vla then move to next bar.

III play until signal from Vla then go to B.
expressive

\[ \sum \]

\[ \begin{align*}
107 & \quad \text{mf} \\
112 & \quad \text{p} \\
117 & \quad \text{f}
\end{align*} \]
molto ralf. . . A tempo

\( \text{\( \downarrow \)tempo} \text{ \( \uparrow \)} \)
hold bow in position for at least 5 sec, then finish.
Scott Twynholm

In the Ink Dark
String parts of recorded score
Instrumentation

Wurlitzer Piano
Upright Piano
Autoharp with soft beaters
Roland 101 mono synth
Shruti Box
Micro Cassette
Electric Guitar
Drawbar Organ
String Quartet

Duration: 36 min

*This is a recorded score. String quartet parts attached.
I. Wandering and Waiting

Adagio \( \dot{=} \ 70 \)

\textit{Drono, elecronics and wurlitzer piano intro. Timing from piano.}
II. Some Rememberings

**Largo** $j = 52$

*espressivo*

Timing from piano (piano starts at bar 1). Play to click when piano drops out.

Violin I

Violin II

Viola

Violoncello

---

101

108

lightly

120

*pp*

$mp$

$mp$

$mp$

sim.
III. Fluid Bodies

\[
\begin{align*}
&\text{\textit{Violin I}} \\
&\text{\textit{Violin II}} \\
&\text{\textit{Viola}} \\
&\text{\textit{Violoncello}} \\
\end{align*}
\]

\[J = \frac{44}{\text{click - two in a bar}}\]

\textit{Elevos guitar, synth, piano intro. Timing from piano and click.}

\[mp\] \textit{espress.}

\[p\]

\[pp\]
278

[synth bass and autoharp hits]

C

290

297

293

304

[shruti box swell]

click change - 6 in a bar

mf
III. Fluid Bodies pt2

\( \frac{\text{\(j\) = 50}}{\text{D}} \) (from rehearsal mark D in Fluid Bodies pt1)

\( \text{mp} \)

\( \text{mp espress.} \)

\( \text{mf} \)

\( \text{shruti box swell} \)
Coming to the Surface

Andante $\frac{1}{4} = 70$

light filigree effect, improvise occasional accents
siempre tremolo, timing unimportant

sul pont.

Timing from piano

pizz.

$pp$
Scott Twynholm

The Vorkapich Carrel
for Orchestra
Orchestra

1 Piccolo Flute
2 Flutes
2 Oboes
1 Cor Anglaise
2 Clarinets in Bb
1 Bass Clarinet in Bb
2 Bassoons
1 Contra Bassoon

4 Horns in F
1 Piccolo Trumpet in Bb
2 Trumpets in Bb
1 Flugelhorn in Bb
1 Alto Trombone
2 Trombones
1 Bass Trombone
1 Tuba

Timpani
Bass Drum
Tam Tam
Large Cymbal

1 Electric Guitar*
1 Harp
1 Celeste
1 Accordion
1 Pianoforte

8 Violas
8 Cellos
6 Double Basses

The score is in concert pitch.

* use hard body guitar and amp. Reverb on amp at players and conductors discretion.
The amp should be placed directly behind the player. The sound sound not be mixed in the auditorium.
The level should be adjusted to mix with the rest of the orchestra and not predominate.
Unless stated the delay will be set to triplet 1/8th notes.
The player will set this to the tempo dynamically throughout the performance.

Duration c. 8m
B. Cl.

A. Tbn.

Tbn.

B. Tbn.

Cym.

T.-t.

E. Gtr.

Hp. 1

Pno.

Vla.

let ring

let ring

let ring

delay off

dampen strings

p

som xylo

p

p

p
breathy key roll

whistle effect - flat of hand quickly slides up low strings