

Jocelyn Campbell

Portfolio of Compositions and Commentary

Thesis presented in partial fulfilment of the requirements for the degree of

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Abstract:

The eight compositions in this portfolio and accompanying commentary explore several intuitive approaches towards a synthesis of – ‘constructivist compositional processes’ and ‘the use of referential musical materials’. At the heart of my work is a dialogue between the central influences of late 20th century modernism and post-modern musics; two areas that until the late 20th century were generally kept separate not only in terms of style but also philosophically. Prominent post-modern works of the mid-to-late-20th century, such as Luciano Berio’s *Sinfonia* and Karlheinz Stockhausen’s *Hymnen*, began exploring this divide, paving the way for more eclectic musical approaches, and are generally regarded as seminal for composers who wish to combine constructivist processes with musical references.

In addition each piece also explores other individual compositional strategies, such as notions of ‘dynamic restraint’, ‘stillness’, the ‘proportions of sections’, as well as notions of ‘development’ and/or ‘stasis’.

For example, in *3rd sonata for piano (for orchestra)* I explore drawing all of the musical materials and formal considerations from a single referential musical source in one unbroken movement. By stark contrast *ePod nano* draws from numerous diverse sources and processes to shape its seventeen individual movements. In *for violin* I used short contrasting blocks of material derived from different constructivist processes to generate the form of the piece. Developmental notions of ‘progression’, ‘recession’ and ‘stasis’, and numerous quotations from the music of Morton Feldman are the focal points of *FLDnormc[h]or(e)[ds]*. In *terminal_SOFT_CORE* I explore the commonalities between ‘soft-aesthetic’ contemporary art-music and aspects of ambient music through a combination of constructivist processes and musical quotations. For the *total:THEFT* series I drew all of each piece’s musical materials from single sources, but with contrasting approaches to audible stylistic associations. Lastly in *[note]WAVE* I looked to numerous orchestral works that have influenced me, both new and old, to provide the foundation for a dynamic orchestral collage.

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Contents of the portfolio:

Scores:

3rd sonata for piano (for orchestra)

for violin

FLDnormc[h]or(e)[ds] – for ensemble

terminal_SOFT_CORE – for ensemble and electronics

total:THEFT – for violin and cello

total:THEFT² – for violin and tenor viol

[note]WAVE – for orchestra

ePod nano – for large ensemble

CD-1:

3rd sonata for piano (for orchestra) (10:19) – Recorded Jan 2016 at The Sage, Gateshead by The Royal Northern Sinfonia, conducted by Lars Vogt.

for violin (7:23) – Recorded Dec 2015 at King's College London by Caroline Balding.

FLDnormc[h]or(e)[ds] (11:37) – Recorded June 2016 at King's College London by The Lontano Ensemble, conducted by Odaline de la Martinez.

terminal_SOFT_CORE (14:50) – Recorded Dec 2016 at St. Mary-at-Hill, London by Ensemble x.y, conducted by Toby Thatcher.

total:THEFT (15:26) – Recorded Dec 2016 at King's College London by William Harvey and Frasier Bowles.

CD-2:

total:THEFT² (23:04) – Recorded March 2018 at 7 Holmes Road, Twickenham by Mayah Kadish and Gavin Kibble.

[note]WAVE (9:31) – Recorded Jan 2018 at The Sage, Gateshead by The Royal Northern Sinfonia, conducted by Lars Vogt.

ePod nano (32:29) – Recorded June 2018 at St. Jude on the Hill, Hampstead by Ensemble Eroica, conducted by Toby Thatcher.

DVD:

ePod nano: a music-on-film project – Directed by Bella Riza.

Commentary on the portfolio of compositions:

Introduction

Any musician who has not experienced [...] the necessity for the dodecaphonic language is USELESS. For his whole work is irrelevant to the needs of his epoch. (Pierre Boulez, 1952)¹

For me [...] the constructivism of the Second Viennese School from time to time was a little bit of a burden, and the inventiveness, ingenuity and spontaneity of Debussy was very necessary sometimes. You cannot really be just constructive all the time; you have to be descriptive also. (Pierre Boulez, 2012)²

While the majority of the works in this portfolio are distinct in sound and form, some even employing greatly differing compositional approaches, they all engage with matters related to compositional construction and musical referencing.

Much of the music I admire from the early Modernist and Post-war avant-garde period has an overt preoccupation with procedural means of musical construction; composers such as Schoenberg, Webern, Boulez, Stockhausen and the later works of Stravinsky all engaged with serialism. These composers' innovations in constructivist thinking have been a vital influence on my music. I have found working with processes and compositional rules that stem from my understanding of this period in modernist music an inspiring way to create musical material and forms.

¹ Pierre Boulez, *'Eventually...'*, Revue Musicale, 1952

² Pierre Boulez, *Pierre Boulez talks about his music*, Universal Edition, 2012

The above two quotes, separated by sixty years, from a young and old Pierre Boulez represent the change in attitudes regarding 'strictly constructivist musical thinking'³ over the course of his life and work. The innovations of Boulez and his contemporaries seem still to underpin and inspire many contemporary compositional approaches, my own included. These techniques and innovations are now often taken and used in multifarious measures and even far from their radical original contexts.

Alongside these abstract processes, I also use quotation, imitation and recontextualization to generate material or as a source of formal devices. I feel it is important to be able to borrow and reference music that has inspired me and meant something to me as a listener. In a way I consider the referential aspects of my work to be a sort of autobiography of my musical influences; often it will point to a particular composer, genre or era of music that has absorbed me as a listener enough to influence my practice. Sometimes I use reference only to provide material or give form to a work, and other times I use borrowings mainly to evoke other pieces or styles of music. I do not intend the appreciation of my work to be dependent on the listener's recognition of any particular reference. Reference is largely intended just as a vague or passing allusion to another composer's work or a discernible style of music, however occasionally quotations are used in a more obviously recognisable manner. In this sense I consider that my work is sometimes akin to collage. My treatment of collage elements generally displays a tendency to subordinate them to a sense of musical continuity, rarely focusing on the individual materials.

Thus the majority of works in this portfolio are intended as explorations of the use of abstract constructional processes related to sound and duration, and the use of materials laden with connotations.

The third movement is a homage to Gustav Mahler, and the skeleton, the base, is the scherzo from the Second Symphony of Mahler, from which many things are proliferated, are

³ This term 'strictly constructivist musical thinking' was used by Wolfgang Schaefler in an interview with Pierre Boulez when asking about *Le Marteau Sans Maître's* place in his oeuvre relating to concepts of systematisation and spontaneity. Pierre Boulez, *Pierre Boulez talks about his music*, Universal Edition, 2012

generated. So you hear Debussy, Strauss, Beethoven [...] and also modern music. (Luciano Berio, 1999)⁴

Berio's *Sinfonia* (1968) has been an influential work to me, both in terms of construction and conception. As a work at once concerned with Berio's relationship with music of the past and that of his present, it set in motion many of the central considerations in my practice. The above quote, taken from a rehearsal filmed for the documentary *Voyage to Cythera*, indicates that an existing work by another composer was used as both form and surface in a new context, thus pointing to the use of quotation or borrowing in the context of the sounds and techniques of contemporary musical language. I see Berio as one of the first composers from within the European Post-war avant-garde to view his generation's work and innovations as something that could be separated from abstract post-tonal experimentation and used within a broader and more inclusive musical approach.

While Berio's *Sinfonia* and his other referential works of the 1960s, *folk songs* (1964) and *Laborintus II* (1965), have been a particular source of influence to me, I have also drawn inspiration from the numerous and diverse approaches to quotation, reference, modelling, borrowing and reinterpreting the music of the past found throughout the 20th and 21st centuries. Part of what interests me about this period in Berio's work specifically is that it marks an aesthetic departure from the values of late-modernism to incorporate kitsch and sometimes ironic approaches to quotation and reference that foreshadow many of the ensuing compositional strategies associated with forms of post-modernism. However, approaches to reinterpreting the past from elsewhere within the traditions of modernism have also influenced my work. In *Remaking the Past* Joseph N. Straus outlines many techniques commonly used by composers of post-tonal music in the early 20th century when looking to music of the common practice for inspiration or material. Despite a generally perceived gulf between the styles of 'progressive' and 'neo-classical' music of the time, Straus notes many techniques common to both styles in the works of Stravinsky, Bartok,

⁴ Luciano Berio in *Voyage to Cythera* (1999), dir. Frank Scheffer, Netherlands: Allegri Films and Arvo

Schoenberg, Webern, and Berg, such as 'Generalisation', 'Compression' and 'Fragmentation' among others, which are methods that I frequently use in my own work.⁵ Later modernist composers have also influenced works in this portfolio. For example, some of Peter Maxwell Davies' varied approaches to reinterpreting Medieval, Renaissance and Baroque music were influential when writing *total:THEFT*², and Thomas Ades' synthesis of jazz and cabaret harmonies and sonorities with late-modernist techniques in many of his early works was a source of inspiration when incorporating jazz elements in *FLDnormc[h]or(e)[ds]* and *ePod nano*. I see the vast array of ways that post-tonal composers have drawn from other works to be itself a rich history that may be drawn from and expanded upon.

Such influences have encouraged me to freely draw connections between numerous musical styles and approaches outside of their original contexts, but also have allowed me to situate these within a considered personal world. My approach to musical reference enables me to take elements from numerous and sometimes seemingly disparate sources and treat these as the musical materials that form a new work. As will become clear when the works that constitute this portfolio are discussed in detail, these materials are not limited to quotations or stylistic 'pastiche'. The more abstract processes of musical construction that form many of my musical materials seem to also come from the field of influence and reference. While it is my understanding that composers such as Webern, Boulez, Stockhausen and Xenakis, among many others, developed these organisational schemes arising from their commitment to late-modernist tropes such as originality, experimentation abstraction and organicism, I subscribe to the view that we can incorporate aspects of these approaches freely without having to align fully with their original aesthetic motivations.

If you look carefully at the way Luciano [Berio] uses the fifteen composers which form this unicum that is the third movement of *sinfonia*, they represent not only his loves but also his

⁵ Joseph N. Straus, *Remaking the Past*, (Cambridge MA, and London: Harvard University Press, 1990) p.17.

own formation as a composer. Mahler was the central figure in this composition as it was in Berio's life one of the major points of reference. But Berg, Debussy...⁶

Here Riccardo Chailly expresses in relation to Berio the essence of what I aim to communicate in my own work. My practice is a synthesis of the music that I love and have studied, the techniques and processes I have learned and the instrumental resources that will sound the pieces I write.

Morton Feldman's music has had an enormous influence on my work, particularly its quietness, its temporally static nature and his intuitive, chromatic harmonic language, as have the sonic pallets of Salvatore Sciarrino and Helmut Lachenmann, and the shifting and evasive extended tonal harmonic language of Jonathan Bepler. The influence of these composers is felt in a broad manner across all of the pieces that comprise this portfolio and at times more specific allusions and references are made to these composers through techniques such as quotation and imitation. These influences, particularly Feldman and Lachenmann, are common amongst a number of composers of a later generation: The work of Bryn Harrison and Jürg Frey, both active composers and teachers in the field, have clear links to the restrained sound-world of Feldman and the extended instrumental sonic pallets of Lachenmann.

A major aspect of my music that has developed during the writing of this portfolio is my approach to working with musical associations. With the early pieces composed during this research project I was imagining dialogues between abstract qualities of musical sound and stylistically referential qualities. However, the more that I composed, using different compositional approaches for different groups of instruments, the more that I felt these sounds that I had originally thought of as abstract or stylistically neutral in fact suggested the style of late modernism and its associated techniques. This realisation quickly began to factor into my music. Rather than looking to constructivist compositional processes to provide a purely abstract musical language, I instead began to think of these approaches as a way of evoking the sounds and forms of late modernist music; working with their associations, rather than ignoring or denying them. For me, the same is true of

⁶ Riccardo Chailly in *Voyage to Cythera* (1999), dir. Frank Scheffer, Netherlands: Allegri Films and Arvo.

instrumental sounds evoking connotations of specific periods in classical music history. In some of the portfolio's later pieces I began to explore the styles of music that certain instrumental timbres suggested to me: such as the associations with the music of the Renaissance and Baroque periods with the timbre of the viola da gamba in *total:THEFT*², or the allusions to various styles of orchestral music in *[note]WAVE*.

While many aspects of my music have changed over the course of creating this portfolio, my approach to form has remained fairly consistent, except for two prominent examples (*total:THEFT*² and *ePod nano*). Most of the pieces are either bipartite or tripartite single-movements, as I feel that many of my compositional approaches require fairly long stretches of time to explore their materials and processes. Most of the compositions are split into two distinct sections that will either gradually blend from one into the other or change fairly starkly from one to the other. The general reliance on bipartite forms responded to my interest in the possibility of the music changing its overall character and presenting something that contrasts with what preceded it. There are also instances of single-movement, singular forms present in this portfolio, in which my approach has been to present a kind of arch-form where a single musical idea will develop in some way and return to an augmented version of its original form (e.g., in *total:THEFT*). Within this overall formal approach however, I feel there are innumerable diverse possibilities to explore the individual characteristics of the sections themselves.

My approach to rhythm and duration differs from piece to piece but exhibits some overall consistencies throughout the portfolio. One common approach to rhythm that appears abundantly in my music is the use of rhythmic desynchronization between instruments to create a sense of pulselessness. This is an idea that I first became aware of when studying the music of György Ligeti and has enabled me to create long stretches of music with dynamic and overlapping materials that avoids any strong sense of meter. I often combine this sustained, pulseless approach with localised pulsations played by isolated instruments at differing speeds, fleetingly evoking different meters. On a larger scale I frequently explore the longer-term rhythms of phrase lengths in my work; alternating

between phrases of distinct musical materials for differing periods of time. Both of these ideas are explored most clearly in *FLDnormc[h]or(e)[ds]*, in which the first section explores asymmetric dynamic pulsations against long held tones, and the second section explores the cutting back and forth between instances of two distinct types of material at varied and unpredictable rates.

Occasionally my compositional methods have involved working closely with players in the lead up to performances and recording sessions. This method, when possible, has proved immensely helpful when exploring extended performance techniques or non-standard instrumental sounds, since it has allowed for collaborative experimentation and the fine-tuning of these aspects before an eventual performance or recording.

While the underpinning considerations of construction and reference are constant throughout this portfolio of works, the ways in which they manifest from piece to piece differ greatly. This commentary deals with each work (or group of related works) separately, and will detail my compositional approach to writing each piece and describe some of each work's material.

***3rd sonata for piano (for orchestra)* (2016)**

My compositional approach when writing *3rd sonata for piano (for orchestra)* was to draw musical materials from a single referential source and then work with the materials in a constructivist manner. In this piece all of the materials are drawn in some way from Mozart's Third Piano Sonata (K.281). Different elements of K.281 are used to generate the piece's harmony, melody, gestural language and to a lesser extent some of its rhythmic characteristics. I developed the overall form of the piece through approaching these materials in a partly constructivist manner, in which some set rules interact with freer aspects.

The choice to use Mozart was in response to a brief set by the Royal Northern Sinfonia. Mozart has been a central figure in my musical upbringing, education and listening. The issue was finding a suitable work to use as a model for my notions relating to deriving musical form and surface from a single source of reference. I chose K.281 because of its poised and quintessentially Mozartian harmony, melody and figuration for solo piano, thus with no associations of orchestration.

My piece's underlying harmony, which is its strongest and most rigid aspect, is taken from K.281's second movement, *Andante Amoroso* in E-flat major. I took roughly each functional harmonic instance including all auxiliary and passing notes and transcribed them as chords that would give me the building blocks of my harmony. The chart below shows the first twenty chords that came about through this process and the next figure shows their source.⁷ This harmonic process provided me with a kind of harmony that I feel communicates the common-practice diatonicism of the original source while embellishing its dissonant qualities and blurring its cadences and sense of progression.

⁷ Fig.1 only illustrates the beginnings of this process but *3rd sonata for piano (for orchestra)* utilises the entirety of *Andante Amoroso*'s harmony from start to finish.

Figure 1 – (a) 3rd sonata for piano (for orchestra) chord charts

(b) Mozart, K. 281, chord sources

(a)

(b)

Three different rules control how these chords were used when composing each of the three sections of the piece. In the first section (b.1-72) the chords are predominantly given to the strings, with regular punctuation from the wind and brass. The chords retain their original order but each individual chord lasts between seven and sixteen beats,⁸ greatly slowing the harmonic progression of the original. Also further blurring the original source is the fact that each chord overlays with the next and sometimes even the one after, meaning that at times there are three chords from the chart

⁸ This durational rule is only true for the strings; when chords are assigned to the wind and brass they treated freely and sometimes act as a means of punctuating the slow expansive texture with shorter chord pulsations.

sounding simultaneously. Additionally some chords emerge from out of and subside back into noise techniques, such as string dampening, bowing on the bridge or using unstable harmonics. The following example shows chords I-V sounding in the strings, with chords I and II emerging out of the aforementioned string dampening technique. Chord III sounds in the high wind and trumpets in b.4 as can be seen in the full score.

Figure 2 – 3rd sonata for piano (for orchestra) section 1 annotation

The musical score shows a progression of chords I, II, IV, and V across five string staves. The tempo is marked as quarter note = 80. The score includes dynamic markings such as *pp*, *sostenuto*, and *ppp*. Performance techniques like *div. pizz.* and *arco* are also indicated. The score is annotated with Roman numerals I, II, IV, and V, indicating chord progressions. The time signature is 4/4, and the tempo is marked as quarter note = 80.

The second section (b.72-121) preserves the same basic principles but staggers the string entries of each pitch for each chord, further blurring Mozart’s harmony and accentuating the hazy and slowly swelling and subsiding atmosphere. At this point the chord progression derived from K.281’s second movement is in the throes of its development section which, when coupled with the string’s staggered entries, stretches the underlying diatonicism to its breaking-point. The example

below shows the first bar of the second section, its corresponding bar in Mozart's K.281 and the transcription of the chord arranged for the strings.

Figure 3 – (a) 3rd sonata for piano (for orchestra), strings, b.72

(b) Mozart, K. 281, second movement, b.38

(c) chord transcription

(a)

Violin I
Violin II
Viola
Violoncello
Contrabasso

(b)

(c)

The final section (b.121-end) compresses the chord successions into short dynamic swells that are now shared between the entire orchestra and thus no longer dominated by the strings. The pulsating chords are always one crotchet long but with no discernible regularity to their entries. The overall texture of this section is very consistent, short swelling chords pulling focus from a long intertwining melodic duet in the muted trumpets, but with no regularity in its rhythm or truly stable harmonic centre. This gives the piece a sense of building towards something. Throughout sections one and two the time-stretched qualities of the chords were at the core of the texture, making the pace of the music feel glacial and elongated. By contrast the final section compresses the chord successions injecting some sense of pace into the music, but it does so in a way that provides no regularity or absolute climax.

The chords taken from K.281 act a constant foundation for some more animated surface activity. Throughout all three sections a number of smaller melodic and rhythmic quotations from K.281 are distorted and transformed into gestures that protrude from the slow chordal activity. The two most prominent recurring quotations are the opening melody of the first movement of K.281 and a recurring rhythmic figure in the second and third movements. The opening melody of K.281 begins with a distinctive trill and then an ornate triplet figure which winds around the tonic and 3rd degree of B-flat major (the home key of the sonata). The recurring rhythmic figure is abundant across much of Mozart's music in triplet time and is simply the rhythmic figuration of stressing the 2nd beat and shortening the first and third. Both of these distinctive aspects of K.281 became features of the melodic, rhythmic and gestural language. I used various compositional techniques such as rhythmic extension and diminution, rhythmically notated *ritardandi* and *rallentandi* and pitch alterations to distort the characteristics of these quotations. The examples below show these two quotations in their original context and an example of their transformations in 3rd *sonata for piano (for orchestra)*.

Figure 4 – (a) Mozart, K. 281, first movement, b.1

(b) 3rd sonata for piano for orchestra, trumpet, b.8-10

(c) Mozart, K. 281, second movement, b.53-55

(d) 3rd sonata for piano for orchestra, timpani, b.43-45

(a) **Allegro.** *tr* *f*

(b) (harmon mute) *ppp* *mf* *pp*

(c) *p* *f*

(d) *pp* *gliss.* *pppp*

3rd sonata for piano (for orchestra) represents the first instance of a compositional approach that I employ several times across this portfolio; using an existing piece of music as the sole source of both material and form in an original composition. It is also significant in this portfolio as my first attempt at integrating musical reference and constructivism in both form and sound.

***for violin* (2015)**

for violin takes multiple materials but treats them in a manner more akin to abstract sonic resources with little emphasis on stylistic allusions or associations. It represents my first approach to synthesizing and juxtaposing musical materials derived through constructivist procedures and referential means. The piece presents three relatively simple types of material derived from different sources and possessing distinct sonic characteristics which gradually converge and meld into one another. The three material-types are individually centred on the characteristics of their harmony, timbre and rhythm.

The first material-type (M1) is a pitch-level aggregate derived from a portion of the natural harmonic series of G-natural, the violin's lowest string acting as a harmonic foundation throughout the entire piece. The lower fundamental and upper 13th partial are sounded using pizzicato open strings (tuning the violin's E-string down by a quarter-tone). The remaining pitch-levels sound between these two open string chimes in a legato two-part texture. The chart below shows the pitch-level set, with the harmonic partial of each pitch relative to the fundamental of G-natural written above. The majority of the pitches are derived from degrees seven to thirteen of the natural harmonic series; an auditory phenomenon I've long been drawn to is the transition in the natural harmonic series from the whole-tone to the chromatic, or from movement in major 2^{nds} to minor 2^{nds}. To me this part of the natural harmonic series alludes to qualities of the diatonic, the chromatic and the microtonal, which has been a recurring reason to use these rich and multifaceted pitch relationships as the starting point for harmonic materials in my music. The decision to include two pitches not found in this part of the natural harmonic series (E-natural and C-natural) is for reasons of overall harmonic variety and added potential dissonance. Adding rogue pitches to that foundation, I find, complicates the harmonic language to a positive effect. Also note that degrees seven, eleven and thirteen (in the first instance) have their microtonal tunings in brackets next to

them, this is because I omitted the specific microtonal tuning of these pitches in the two-part texture due to fears of over-complication and unnecessary difficulty for the performer.

Figure 5 – for violin, M1 pitch-level aggregate

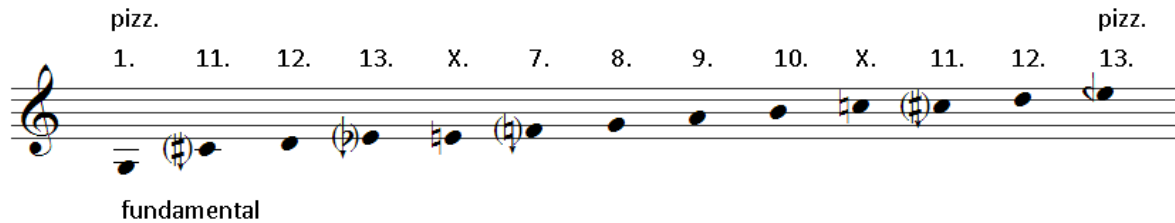
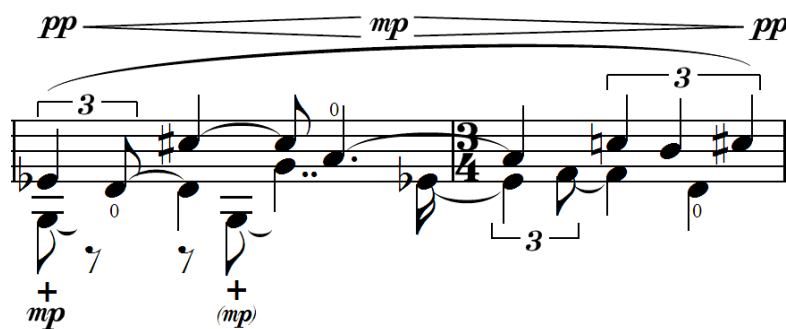


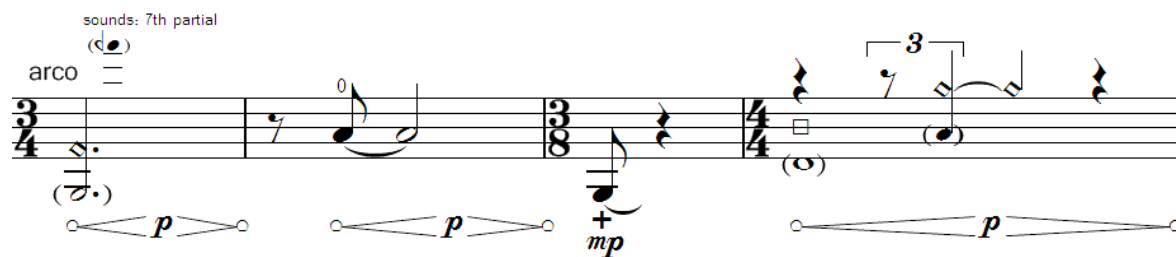
Figure 6 – for violin, b.21-22, two part texture derived from pitch-level aggregate



The second material-type (M2) is a series of sustained swelling sounds that explore the granular and unstable qualities of sound between pitch and noise. M2 ranges from the sound of a pure bowed open string to the sound of a bowed string being dampened in a way such as to stifle its resonances. In between these two states of pitch and noise are various types of harmonic tone: some relatively pure such as the commonly used touch points of the octave, perfect 4th and perfect 5th, some less pure such as the touch point of a minor 7th, and some with a variable quality by using such techniques as harmonic trills and glissandi. Figure 7 below shows a passage almost entirely derived from M2 that demonstrates the approach to interplay between pitch and noise. The square note-head in bar six requires the performer to touch the indicated string as if playing a harmonic but using at least two fingers, thus stifling the resonances of the string and producing a sound closer to white noise than pitch. This material was directly inspired by the aeolian sounds of Salvatore Sciarrino’s string writing in his string trio *Codex Purpureus* (1983) and the innovative solo violin

writing of Jürg Frey in *A Memory of Perfection* (2010). By incorporating aspects of their techniques I intended to expand upon their innovations in a slightly more formally dynamic musical language that juxtaposes and synthesizes these sonic inventions with musical materials of a distinctly different character, although still within a restrained overall dynamic pallet that remains true to my broader aesthetic notions.

Figure 7 – for violin, b.3-6



The third material-type (M3) is characterised by two simple rhythmic figures: staccato semiquavers that are generally played using unstably high harmonics or noise techniques, and a short figure of three quavers that crescendo to an abrupt stop. These rhythmic figures were adapted from two percussive elements in a song entitled *King of the Fall* by the contemporary R&B artist The Weeknd. In their original source the repetitive semiquavers are played by a synthetic hi-hat which imbues sections of the song with a constant sense of momentum. The crescendo of three quavers is originally arranged for a distorted kick-drum that punctuates sections and overwhelms the texture. I decided to incorporate these rhythms because I wanted to preserve some of their functions in a radically different context; I used the quaver figure to interrupt and stifle the material by overwhelming the dynamic level and negating the material that preceded it, and I used the semiquaver figure to establish moments that are characterised by a regular staccato pulse instead of long swells or legato counterpoint. Also worth noting in the quaver figure is the slightly flattened interval of a whole tone between the A-natural and B-slightly-flat and the scratch tone texture that begins appearing as the figure reoccurs, which are designed to separate this figure further from the other material-types in tuning and texture.

Figure 8 – for violin, b.32-35

The form develops from these material-types gradually interacting with one another after having all appeared in isolation during the opening. From b.1-34 short fragments of each material-type are juxtaposed. There are two elements that develop through this section: The first is that there quickly becomes less separation between the three material-types. From b.1-13 there are noticeable rests between phrases, beginning with a dotted crotchet rest in b.2 and shortening to quaver rests in b.12-13. But from b.13 these rests become much shorter and less frequent, making the overall texture of the music much more continuous. The other element that develops in this section is the two-part texture derived from M1; instances of which become longer over the course of this section. This two-part texture initially lasts five beats from the last crotchet of b.7 until the end of b.8 and from there gradually begins to last for longer durations. From b.12-13 it lasts six beats, b.21-22 it lasts seven beats, and from b.30-32 it lasts ten beats. The opening thirty-four bars act as something of an exposition section; it establishes the musical materials in play yet holds back from having any real overlap or synthesis between them.

The next section is characterised by the three material-types beginning to interact and affect one another. At b.35 we can see the first instance of the semiquaver material from M3 interacting with the chiming pizzicato of M1, which gives way to a phrase that is a hybrid of M1 and M2 in b.36. Then in b.37-38 we can see an instance of the two-part texture from M1 being interrupted by an abrupt *ricochet* arpeggio (resembling M3's semiquavers) before leading into a swell of noise that again becomes the semiquaver figure from M3 [Fig.9]. From this point there is a marked gain in the activity and variety of the music. The two-part texture of M1 continues to act as the focal point of

the music, but it is frequently interrupted by other materials. Elements of other materials begin to overlay onto it also: as we can see in b.46 where the swell of a harmonic trill (M2) is superimposed over the beginning of an instance of the two-part texture [Fig.10]. The end of this phrase in b.47 also sees the upper note in the two-part texture morph into a harmonic glissando.

Figure 9 – *for violin*, b.36-39

M1/M2 (hybrid) M1 M3 (variant) M2 M3

poco sul pont.

36

pp fragile

ord.

ricochet

pizz.

arco

f:ppp

voice

pppp

consonant 't' to be produced using little or no air flow and little mouth or lip movement

Figure 10 – *for violin*, b.46-47

poco sul pont.

pp fragile

mp

The piece continues in this manner, entwining and superimposing each material-type until b.72 where the texture of the piece is interrupted never to be resolved. A broken version of the quaver figure from M3 halts the piece and leads into its semiquaver counterpart from M3. This section acts as a long, drawn out coda. There is an attempt by the pizzicato chime of M1 to reinitiate the synthesis of the previous section at b.80, but this is quickly quashed and the final page becomes dominated by the semiquaver figure sliding down into nothingness. *for violin* ends in a manner even starker than it began; having opened with isolated phrases of the three material types that would

eventually begin to interact with one another in increasingly complex ways, it fails to offer any satisfactory climax to the synthesis and instead lingers only on the simplest figure from any of the piece's material-types.

for violin's constructivist and referential elements are used in similar ways and they are not intended to appear to be noticeably distinct in terms of their invention. The imitation of Sciarrino, Frey and the rhythmic quotation of The Weeknd need not to be recognised. Likewise the procedure of forming a two-part texture from a given pitch-level aggregate need not be specifically recognisable. In the context of this piece these methods of generating the musical materials were compositional tools which enabled me to create distinct types of material for the purpose of combination and superimposition that the piece explores as its primary formal principle. The character of the piece is largely abstract and in line with the tradition of late-modernism, communicating tensions across texture, pitch and rhythmic flow.

***FLDnormc[h]or(e)[ds]* (2016)**

for clarinet, trumpet, piano, accordion and double bass

In *FLDnormc[h]or(e)[ds]* I endeavoured to combine referencing and compositional constructivist processes with notions of progression and stasis. This piece consists of two distinct sections, each comprising roughly half of the piece's duration (b.1-62 and b.63-end). The music in the first half is non-progressive. The focus is on the slow pulsation of chords of irregular duration played by the accordion, which is the constant textural element. This contrasts starkly with the second half, in which two distinct types of material cut between one another in abrupt fashion. A central consideration was to engage with ideas and techniques associated with progressive and non-progressive modes in a work that aspires to aesthetic coherence, yet establishes variety and contrast while pursuing an overall sense of direction.

Wallace Berry suggests that structural functions in music generally concern lines of changing intensity found in the notes, rhythms and textures of a piece. He states that on a fundamental level we have three possibilities of progression regarding these lines of changing intensity.

To see structural function in music as it concerns lines of intensity change is to see, in general, three possibilities: that of increasing intensity (to which we apply the term 'progression'), that of subsiding intensity ('recession'), and that of event-succession involving unchanging degrees of intensity ('stasis').⁹

Accordingly *FLDnormc[h]or(e)[ds]*'s form can be fruitfully described in terms of these three structural fundamentals.¹⁰ The first section (b.1-63) is largely one of 'stasis'. While certain elements engage to some extent in development, e.g. we can find changes of harmonic character in the accordion's chords over time, the overwhelming effect is one of stasis; self-similar materials contributing to a generally still atmosphere. The second section (b.63-end) contains two contrasting types of material,

⁹ Wallace Berry, *Structural Functions in Music*, (USA: Dover, 1987) p. 7.

¹⁰ I have indicated when making specific reference to Berry's particular music-analytical definitions of these aforementioned terms with the use of quotation marks.

characterised by distinct instrumental textures, and tonal and rhythmic characteristics, each having opposed senses of progression. The initial material 'progresses' towards a peak of dynamic and harmonically saturated intensity, whereas the counter material 'recesses' towards a cadential coda passage that unassumingly and harmoniously ends the piece.

As previously stated, at the heart of the first section are the accordion's pulsating chords and the ensembles' texturally varied responses to these chords. There are two sets of limitations imposed on these chords that are responsible for the flow and character of the section: one is the construction and deployment of the chords themselves, the other is a rhythmic unfolding that limits the durations and dynamic swells of the chords.

In total there are twenty-six individual chords subdivided into twelve sets, one set of which contains four chords which is used in contrast to the other eleven sets of two [Fig.11]. Sets one-to-six are constructed from diatonic superimpositions and between them contain a varied spectrum of polytonal chords, some of which complement one another relatively harmoniously, whereas others combine to evoke more dissonant relationships.¹¹ Sets seven-to-eleven are chords quoted from a variety of pieces by Morton Feldman,¹² whose music and compositional approaches are of great importance to my own work as mentioned in this text's introduction. Feldman described himself as a wholly intuitive composer concerned mainly with notes;¹³ it was presumably his preoccupation with notes that resulted in his music being full of imaginative and unique pitch relationships which I find are an inspiring resource for quotation. Set twelve is a series of chords quoted from the gospel/jazz composition *Hold on, for We're Going Home*, composed by Cynthia Nunn, which is used to end each of the two main sections on an almost sentimentally harmonious tone. This usage of diatonic gospel/jazz chords provides the piece with a full spectrum of tonal variety between the diatonic and

¹¹ There are two instances of departure from the usual method of superimposing two diatonic chords found in Fig. 1; chord 1 from set 3 and chord 1 from set 6 both subvert this rule for the sake of chordal variety in terms of their relative consonance and dissonance.

¹² Some of the chords in sets 7-11 are constructed from pitch aggregates found in sections of Feldman's music, as well as some which are direct transcriptions of chords.

¹³ This self-evaluation of Feldman's affinity for notes comes from an interview with Feldman describing his compositional approach to the anti-opera *Neither*, a collaboration with Samuel Beckett. Everett C. Frost, 'The note man and the word man', *Samuel Beckett and Music*, (Oxford: Oxford University Press, 1998), p. 47-55.

the chromatic. At points microtonal relationships are introduced in order to extend the harmonic language beyond chromaticism. Microtones are used as added 'colouring' to embellish and distort the textures and harmonies present in the piece and do not possess any formally or harmonically functional role. They are used in a way that I feel is akin to Ligeti's use of microtones in *Clocks and Clouds* and the *Double Concerto*, although on a smaller scale.

The harmony of the first section unfolds in a way that ebbs and flows between sets of chords that have sometimes primarily consonant, sometimes primarily dissonant and often ambiguous relationships between one another. Each chord set repeats at least once after it has initially sounded. This I believe allows a listener to become familiar with the chords that are flowing by in time and also further restrains the pace of the music and any sense of progression. In the first section there is always a sense of back tracking, even when new chords and harmonies appear.

Figure 11 - *FLDnormc[h]o(e)[ds]* chord chart

1. 2. 3. 4. 5. 6.

7. 8. 9. 10. 11. 12.

D-min G-min E♭-maj F-maj E♭-maj7 B♭-maj C-maj G-maj G-min E♭-maj Cluster A-maj
A♭-maj C-min D-min F-min /A E-dim D-dim F-min F-maj D♭-aug G-aug

The Viola in My life IV b. 155 String Quartet no. 2 p. 22 Piano and Orchestra b. 135 Coptic Light b.57 & String Quartet and Orchestra b. 343 Piano and String Quartet p. 25 Hold on, for We're Going Home

The rhythms of this section are dominated by a series of possible durations assigned to the pulsating chords which are uniformly left with a single crotchet rest after each chord has sounded. In these rests instruments from the ensemble make varied textural responses to the swelling and subsiding chords. Each bar contains a chord followed by a crotchet rest, with a maximum of seven

beats in total and a minimum of three, as illustrated below [Fig.12]. This limitation is again aimed at the perception of overall consistency, but with an obsessively changing meter which makes individual chord durations impossible to predict based on what has occurred before; thus providing a self-similarity but with erratic internal tendencies.

Figure 12 - *FLDnormc[h]or(e)[ds]*, rhythmic illustration

The figure shows a rhythmic illustration for the piece *FLDnormc[h]or(e)[ds]*. It consists of two staves. The top staff is a treble clef staff with notes and rests. Above this staff, six time signatures are listed: 3/4, 7/8, 4/4, 5/4, 6/4, and 7/4. The bottom staff is a bass clef staff labeled 'Acc.' (Accordion). It contains chords and notes. Brackets and arrows are used to indicate the duration of chords across the different meter changes, showing how a single chord can span multiple measures of different time signatures.

This section is approximately six minutes long, with moments of ebb and flow in texture, dynamics, harmony and the longer-term rates over which the chord durations last. However, I believe that the limitations in place prevent these small scale changes of intensity from detracting from the overall ‘static’ character. The only point in which a substantial change in intensity is struck is the crescendo of chords in set twelve (beginning at b.59) that ends the first section of the piece. This is a short-term ‘progression’ that is intended to be heard as an instigator of change in the music, as the second section immediately follows.

The two materials comprised in the second section, as previously mentioned, are primarily characterised by their distinct senses of ‘progression’ and ‘recession’ which collide as they are abruptly cut between [Fig.13]. The initial-material begins with a lone, high G-natural, at the very top of the accordion’s register. This is joined two octaves below, first by the clarinet and then the trumpet, before the accordion’s left hand plays a root position C-major triad. This establishes the tonal foundation that is gradually saturated towards the material’s climax [Fig.14]. The accordion’s left hand part, playing a constant drone, begins adding more diatonic chords to the C-major triad,

turning it into a chromatically dense cluster in b.87. Over the course of its duration the music swells in dynamic intensity until it reaches its climax at b.123 and is cut off into silence. This gradual escalation of intensity via harmonic saturation and a long-term crescendo, taken by itself, could seem a fairly straightforward and perhaps crude means of 'progression'. However, I believe that when coupled with the counter-material of the second section, it is made far more surprising and ambiguous.

Figure 13 - *FLDnormc[h]or(e)[ds]*, b.78-83

Figure 14 - Accordion material

The counter-material first appears at b.81, interrupting the initial material's crescendo to mf. This material is characterised by the use of the ensemble, without the accordion, playing in ways reminiscent of various forms of jazz music. The clarinet and trumpet play timbral trills, using *bisbigliando* fingerings on the clarinet and rapid wa-wa on the harmon-muted trumpet, leading into quick, soloistic runs that end their phrases. The double bass plays pizzicato and the piano plays arpeggiated versions of the chords in set twelve initially at the top of its tessitura, sometimes with pitch variants that obscure some of the tonal nature of the chords in their original form. As these sections 'recess' towards the coda, the piano's chords move down the instrument's tessitura until these tonal chords are at the centre of the instrumental texture, allowing the harmonious quality of these chords to become the focal point of the material. In the coda the piano continues to play the arpeggiated chords from set twelve, accompanied by the accordion which plays a clashing diatonic cluster and a reprise of the high G-natural. Then in b.136 the accordion plays a cadential sequence (a variant of a plagal cadence) that resolves in G-major – with an added tritone between the G-major chord and the high G-natural acting as a final and persistent obstacle to full resolution – over the fading resonances of the piano's chords (which are left die away on a II⁷ chord in the D-minor/blue note key of set twelve) [Fig.15].

Figure 15 - *FLDnormc[h]or(e)[ds]*, coda, b.133-138

The musical score for the coda (measures 133-138) is presented in two systems. The top system is for the Piano (Pno.) and the bottom system is for the Accordion (Acc.).

- Tempo and Dynamics:** The tempo is marked "c. ♩=40 or slower" and the dynamics are "pppp". A performance instruction "fade slowly to nothing" is placed above the final measures.
- Measure 133:** The Piano part begins with an arpeggiated chord in the right hand and a bass line in the left hand. The Accordion part features a clashing diatonic cluster in the right hand and a bass line in the left hand.
- Measures 134-135:** The Piano part continues with arpeggiated chords. The Accordion part continues with the clashing diatonic cluster.
- Measures 136-137:** The Piano part continues with arpeggiated chords. The Accordion part plays a cadential sequence in the right hand and a bass line in the left hand.
- Measure 138:** The Piano part concludes with an arpeggiated chord. The Accordion part concludes with a cadential sequence in the right hand and a bass line in the left hand.

The abrupt cutting between these two distinct musical styles to some extent masks the simplicity of their 'progression' and 'recession' towards different endpoints. In contrast with the first section, the music of the second half presents the listener with shifts in texture and the first and only elongated swell of dynamic intensity in the piece. This trajectory is complicated by the peculiar presence of interruptive music reminiscent of jazz in both its harmony and instrumental texture. This is perhaps made more disorientating due to the fact that the 'progression' of the initial-material is realised through different musical aspects to the 'recession' of the counter-material; the listener is hearing one style 'progress' primarily through the aspects of harmonic saturation and dynamics, and hearing another 'recess' primarily through tessitura and texture. The result of this section is the coda, when the build towards climactic intensity of the initial material has abruptly ended and the cadential coda passage unassumingly announces itself as the final offering of the piece. Following the jaggedly opposing lines of 'progression' and 'recession', the coda is then revealed to be a variant of the counter-material that obscured the initial-material's 'progression' throughout the piece's second half.

The notions of 'progression', 'recession' and 'stasis' are, I believe, helpful in understanding the formal movements of the piece, which demonstrates an unusual and hopefully compelling relationship between these models of motion and stasis. Despite the gradual departure from musical 'stasis', I feel that the majority of musical materials that comprise the piece are consistent, coherent and sonically complementary enough to imbue the entire piece with a convincing overall character, warranting the sudden departures of the second half.

In terms of constructivism and musical reference *FLDnormc[h]or(e)[ds]* strikes a dialogue between both of these themes controlling certain aspects of the piece. The harmonic aspects were composed using the constructivist process of diatonic superimpositions and chordal quotations, the rhythms of the first section employ a constructivist approach to chord durations and the final section blends a constructivist process of gradual harmonic saturation with music freely imitating a language

more associated with jazz. *FLDnormc[h]or(e)[ds]* embodies a more varied, dynamic and complex approach to the central themes of this portfolio than are found in the first two works.

***terminal_SOFT_CORE* (2016)**

for ensemble and electronics

The compositional approaches that I employed while writing *terminal_SOFT_CORE* present a synthesis between allusions to several composers who have heavily influenced the aesthetic surface of my music and the constructivist approaches that inspire the creation of many of my musical materials. These composers I allude to are Morton Feldman, Jürg Frey, Bryn Harrison, Richard D. James (better known by his pseudonym Aphex Twin) and Brian Eno. As this list of composers might suggest *terminal_SOFT_CORE* is strongly focused on the intersection between soft-aesthetic contemporary art-music and ambient music. In the introduction to this portfolio I already stated the importance of Feldman, Frey and Harrison's musical languages to my own work. However, it has frequently struck me that the dynamic and textural delicacy of much of these composers' work, coupled with a frequent use of sparse, long and expansive forms, establishes a connection with some of the qualities of ambient music and more specifically with some of Brian Eno and Aphex Twin's works, two composers who are widely credited with inventing and pioneering the genre respectively.

Perhaps the most basic point of contact in this work between my interpretations of soft-aesthetic art-music and ambient music is how the ensemble and the electronics are approached. While the ensemble is treated as a conventional modern ensemble, notated according to the standard practices of western art-music, the electronics are handled in a more mobile or 'open-form' manner. I composed four 'ambient' electronic backing tracks, each with durations longer than that of the entire piece. For a performance these are then synchronised in a digital audio workstation and played back throughout the entire piece, becoming audible and inaudible as the tracks are faded in

and out according to the score.¹⁴ While the score calls for these tracks to be faded in and out at specific moments to specific dynamic levels (indicated by conventional rhythmic notation), the tracks themselves are not to be synchronised to the music of the ensemble. It is however the continuous and self-similar nature of the sound of each electronic track that allows for this mobile flexibility of the electronics relative to the ensemble's music. Self-similar musical materials and drawn-out mobile-forms are characteristics that I strongly associate with both Jürg Frey and Brian Eno. Both have composed many works in which strictly limited musical materials are presented for a potentially endless stretch of time in infinitely varied configurations. Due to the nuanced and expressive inconsistencies of tempi when performing live ensemble music with no strict reference, it is impossible to know exactly which part of the electronics will be playing when faded in or out. This was an intentional decision to avoid a strict imposition of tempo on the ensemble and to evoke a sensation of endless self-similar reconfiguration below the surface of the music.

While there is continuous interplay between the ensemble and the electronics, the two-part form of the work results entirely from the ensemble's notated material. The first section presents an interweaving of cyclical pitch processes that unfold at different speeds across different instrumental sub-groups, whereas the second section explores simple repeating cells of musical material derived from pieces of open-form and ambient music which, however, are still thoroughly notated in the manner of the first section. My intent was to create a piece featuring a consistent and delicate sound-world, which presents two subtly distinct approaches to cyclical material.

The first section is based on three cyclical processes that begin in isolation and gradually intertwine as the section progresses. The three material-types (M1, M2 and M3) are initially differentiated by register, speed and instrumentation. M1 is predominantly given to the wind and soprano and consists of extremely long tones overlapping to form slowly shifting dyads and triads. These notes move by intervals of either major or minor 2^{nds} (or compound major or minor 2^{nds}) that

¹⁴ Please note that in the recording of *terminal_SOFT_CORE* that has been included in this portfolio the equipment on hand limited the playback for the electronics to two channels, meaning that tracks three and four were omitted from the final performance.

form a distinctive and slow moving harmonic backbone, which is also variable due to the modular nature of the movement by major or minor, regular or compound 2^{nds}. The first instances of M1 are shown below in Figure 16.

Figure 16 - *terminal_SOFT_CORE*, M1 instances, b.5-71

1. b.5-17 2. b.20-34 3. b.36-48 4. b.56-71

M2 is similarly based on the intervals of a major and minor 2nd but is given predominantly to the strings. Each of the instrument contributing to the M2 texture are given two or three note repeating cells, which generally oscillate between compound major or minor 2^{nds}. These ostinati change notes quicker than in M1 giving the texture an increased sense of pace. Each instrument in the M2 texture moves between the notes in their ostinato at different rates which makes the M2 texture sound more like a static musical object with constant internal movement rather than a gradually unfolding series of drawn out pitches. As is shown below in Figure 17, deviations from string instruments and splitting 2^{nds} across instruments are used at points to diversify the sound of the material.

Figure 17 - *terminal_SOFT_CORE*, M2 instances, b.15-57

1. b.15-21 2. b.29-37 3. b.47-57

The final material-type used in this section (M3) is constructed from fast repeating cycles of closely voiced and highly chromatic pitch-level sequences that are given solely to the high register of the piano and the glockenspiel. Four-to-eight-note cells are superimposed over one another, initially pulsating at the same rate before beginning to break apart from their unison rhythmic character as the section progresses [Fig.18]. This stacking of repeating chromatic pitch-cells provides a glittering but harmonically dissonant texture that cuts through the other two lower and slower material-types. Shown below in Figure 18 is the gradual desynchronization of M3 and in Figure 19 are the pitch cycles for its first three instances.

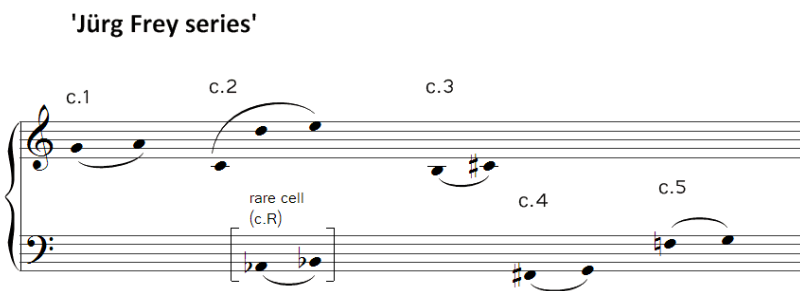
Figure 18 - *terminal_SOFT_CORE*, M3 rhythmic progression, b.46-47, b. 55-56, b.70-71, b.113-114, b.135-136

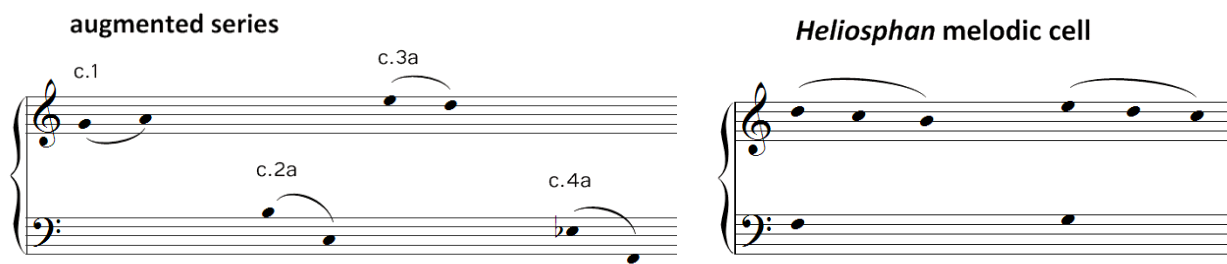
Figure 19 - *terminal_SOFT_CORE*, M3 pitch cycles, b.29-56

These three material-types are initially presented in relative isolation, one after the other and separated in terms of their instrumentation, register and rate of change. Over the course of the first section certain characteristics of M1 and M2 begin to overlap and bleed into one another. M3 however remains constantly separated from M1 and M2 in register, timbre and pace; due to its percussive character, its extreme tessitura and its own gradual process of rhythmic desynchronization I decided to keep M3 clearly distinct from the more continuously sustained characters of M1 and M2. I believe that this makes M3 the focal point of the section, its gradual collapse into a desynchronised rhythmic language and its slowing into stasis becomes the catalyst for the change of section at b.138.

The piece's second section is composed more freely. Here the instruments in the ensemble are used in a more constant and homogenous way than in the first section, mainly resulting from the use of one mobile set of two-and-three-note pitch-class cells, with an additional augmented sub-set to add some variety to the frequency of the pitches that appear most commonly [Fig.20]. I refer to this mobile set as the 'Jürg Frey Series' as many of its component cells and its continuous self-perpetuating character are inspired by Frey's *Circular Music No.2*. In addition to this main mobile set I used a melodic cell that is quoted from Aphex Twin's *Heliosphan* from his album *Selected Ambient Works 85-92*. I also made use of a number of unpitched or partially-pitched techniques for most of the instruments in the ensemble: air sounds and whistle tones on the flute, soft scraping and white noise on the strings, multiphonics on the clarinet and muted strings on the piano all contribute to the constant soft background of sound that is underpinned by the electronics.

Figure 10 - *terminal_SOFT_CORE*, mobile sets, second section





After establishing these mobile sets and melodic cells as the basis for all of the material in the second section I allowed myself to play freely with these cells and deviate from them where I thought effective when notating the final score [Fig.21]. These materials were intended to act and sound akin to a mobile-form resource in the model of Brian Eno's *Discreet Music* or his app based musical project *Bloom*, Jürg Frey's *Circular Music* series or even Feldman's early indeterminate works such as *The O'Hara Songs*. However, my intention was always to notate the final result, not wishing to give up my own preferences for the direction of the material, and also to control the duration of the section so as not to skew the overall proportions of the piece as a whole. The second section does pronounce some of the core characteristics of ambient music in a way that does not, in my view, compromise its effectiveness as a piece of concert music. I feel that in *terminal_SOFT_CORE* I have effectively and evenly balanced my core interests of constructivist compositional process, overt musical reference and a soft-aesthetic surface.

Figure 11 - terminal_SOFT_CORE, p.32 annotated

32 P

B. Fl. ¹⁵⁴ *pp* **c.4** *ppp* *p* *ppp* *pp* **c.1**

B. Cl. *pp* **c.4** *pp* *p* **c.2**

Vib. **c.1** *p* **c.4** *p* **c.3**

Pno. *pp* *pp* *pppp*

Voice *pp* **c.1** *pp* **c.3**
mm eh uh

***total:THEFT* and *total:THEFT*² (2016/17)**

for violin and cello/for violin and tenor viol

In these two closely related pieces, written around one year apart, I focused on deriving all of the material from a single source for each work. *total:THEFT* is a piece for violin and cello in one long movement that derives all of its material from the opening of Jonathan Bepler's *The Executioner's Step* from the soundtrack to Matthew Barney's *Cremaster 2* (1999). *total:THEFT*² on the other hand is a piece for violin and tenor viol in four main movements with two short interludes, in which each movement and interlude is based on a different Monteverdi madrigal. Both pieces share similar instrumentation, a generally quiet dynamic level throughout, a number of recurring extended techniques and a generally very gradual sense of progression. Despite these numerous similarities there are also many differences in how I approached their material and form.

With *total:THEFT* I wanted to strip back the numerous processes and points of reference of my previous two works (*FLDnormc[h]or(e)[ds]* and *terminal_SOFT_CORE*) in order to reflect the sparse, mono-textural instrumentation and to imbue the piece with an uncompromisingly singular focus. While *FLDnormc[h]or(e)[ds]* and *terminal_SOFTCORE* certainly do at times exhibit sparse, monistic and restrained characteristics, there are numerous approaches to process and reference that make the diversity of musical materials found in these works far more dynamic than that of the *total:THEFT* series.

The Executioner's Step by Jonathan Bepler has for a long time been a piece of music that has directly inspired my work. Over the course of its nine minute duration, Bepler ebbs and flows between musical materials that at times seem to evoke nothing other than the abstract sonic qualities of the instruments that he has scored for and music that evokes the sonorities and harmonies of American Country music. This fluid relationship between the sonic abstract and the stylistically referential is one that has strongly inspired my work, especially in the context of a piece which is deeply restrained in its dynamic character and has a propensity to favour hushed and

breath-like timbres. But perhaps more importantly is the influence I have taken specifically from his string writing at the beginning of *The Executioner's Step*; Bepler's use of *flautando* bowing, unmetered *ricochet* bow drops, soft dynamic swells appearing and subsiding into nothing and a sparsity of vibrato, have all influenced my approach to writing for strings. These are the reasons that led me to isolating the opening of this piece and building a new work from its opening one-and-a-half minutes.

The Executioner's Step begins with a slow and fragile dialogue between two string instruments, gradually revealing a set of pitches that I took as the core material for *total:THEFT*. Figure 22 shows the pitches that are used in the original *Executioner's Step* compared below with the opening pitches of *total:THEFT*. I transposed the pitches from the original down by a whole-tone in order for the material to better exploit the open A and G strings on both the violin and cello.

Figure 12 - (a) Transcription of opening pitches from *The Executioner's Step*

(b) Pitch sequence from *total:THEFT*

The image displays two musical staves. Staff (a) is a single treble clef staff showing a sequence of notes: a half note G2, a quarter note A2, a quarter note B2, a quarter note C3, a quarter note D3, a quarter note E3, a quarter note F#3 (labeled 'slightly sharp F#'), a quarter note G3, a quarter note A3, a quarter note B3, a quarter note C4, a quarter note D4, a quarter note E4, a quarter note F#4 (labeled 'slightly sharp F#'), a quarter note G4, and a quarter note A4. Staff (b) is a grand staff (treble and bass clefs) showing a sequence of notes: a half note G2, a quarter note A2, a quarter note B2, a quarter note C3, a quarter note D3, a quarter note E3, a quarter note F3, a quarter note G3, a quarter note A3, a quarter note B3, a quarter note C4, a quarter note D4, a quarter note E4, a quarter note F4, a quarter note G4, and a quarter note A4. A line connects the 'slightly sharp F#' note in staff (a) to the F4 note in staff (b), illustrating the transposition down by a whole tone.

Once I had established the fundamental pitch sequence, I then looked at the distinctive characteristics of the opening of *The Executioner's Step* outside of its pitch content. One of the first things that struck me was the slight sharpness of the F-sharp that appears in the third phrase of *The Executioner's Step*. This subtly raised tuning, which in the original piece foreshadows the style of American country music fiddle playing became, in my piece, an added colouristic effect to distort

and complicate the generally simple and repetitive harmonic language. In the score of *total:THEFT* we can see the violin begin to use microtonal tunings, initially through glissandi, from b.74, after which microtonal tunings occur more frequently throughout the middle of the piece until the final section beginning at b.159.

Another distinctive technique used in *The Executioner's Step* is *ricochet*, or dropping the bow onto the string producing an unmeasured staccato effect. In *total:THEFT* this is used to break up the general legato feel of the music. Most of the music is characterised by long overlapping sustained tones, which the *ricochet* technique serves to perforate. Another rhythmic effect from *The Executioner's Step* that became a device in *total:THEFT* is re-bowing the same note. This is a technique first heard in the lowest string part of *The Executioner's Step* at around thirty-eight seconds into the piece. I used this pulsating bowing largely in the cello part, again to add some movement into what would otherwise be long held notes with no rhythmic definition, but not to disrupt the texture as abruptly as the *ricochet*.

Lastly is the *flautando* technique that *The Executioner's Step* begins with. To me the use of an airier, breathier, more fragile and delicate tone is one of the most emotive and evocative aspects of the piece. I wanted to embellish this use of flautando and make it even more fragile and obstructive to the pitch material. I decided to use artificial harmonic touchpoints of a semitone, which preserve some of the quality of the original fingered pitch but obscure a great deal of the timbre with a kind of granular white noise. This technique, combined with the later additions of *sul ponticello*, natural harmonics and muting resonances of the cello's strings with the left hand, embellish the subtle and breathy texture that opens *The Executioner's Step* and create a dynamic between pitched sounds and noise in *total:THEFT*.

Despite all of the material in *total:THEFT* being drawn from a single source, I do not believe it necessary to be familiar with Jonathan Bepler's original work to appreciate the music. In *total:THEFT* the decision to draw all of the material from *The Executioner's Step* is essentially a compositional

tool and not intended necessarily to be an auditory allusion to another style of music. This however is not the case in *total:THEFT*².

In *total:THEFT*² I intended to reuse some of the approaches that I had used in the first piece (such as: extracting pitch-class sets from sections of other works, resourcing extended techniques and sonic effects and stretching and augmenting rhythmic characteristics, among other techniques) and apply them in shorter movements to different source materials. The decision to draw from Monteverdi's madrigals stemmed from a brief by the piece's commissioners for a Monteverdi themed concert at the 2017 Spitalfields Music Festival. Monteverdi moreover has been a staple of my listening and concert going life since a young age; both of my parents were early musicians. To me this brief felt like a perfect opportunity to delve into the madrigals as a listener and extract a number of short fragments to use and augment in a similar way to the first *total:THEFT*.

The fragments of Monteverdi's that I chose were moments that stood out to me for their sadness and yearning: *Ah dolente partita* and *Cor mio non mori? e mori* from book four, *Dolcissimi legami* from book two, *Ch'io ami la mia vita* from book one, *Là tra'l sangue* and *Poi ch'ella* from book three. I also generally favoured fragments that used fewer than five voices at once, so that the texture could be faithfully rendered by two instruments that can produce generally a maximum of two pitches simultaneously. The instrumentation also is important to the work, the tenor viol would have been used in Monteverdi's time and, while it is not explicitly specified in the score, the violin used for its premiere and subsequent recording is a period violin with gut strings. I believe that the timbres of these instruments create a sound-world appropriate to that of the original source material, which still allows for more modern deviations in extended performance technique, enabling the blending of numerous elements of the baroque with the contemporary.

The first movement *Ah dolente partita* takes the two part opening texture of the *Fourth Book* and subjects it to two main processes. First is the process of time stretching of the opening dissonance of a semitone. To me this opening gesture of a bare semitone sounding between the two highest voices before revealing the despairing descending minor gesture is a moment of aching

importance in Monteverdi's original work. In the opening movement of *total:THEFT*² I stretch this dissonance over minutes of nearly static material before allowing the progression to finally reveal itself. This extension and time stretching can be seen when comparing the opening bars of each piece against one another [Fig.23]. The second main process is using techniques such as glissandi, tremolando between strings and natural harmonics to distort the original source and create an uncanny blend of baroque harmony with some of the textures and sounds of contemporary music.

Figure 13 - (a) *total:THEFT*², b.1-6

(b) Claudio Monteverdi, Madrigals Book 4, *Ah dolente partita* b.1-6

(a) Musical score for *total:THEFT*², measures 1-6. The score is for Violin (Vln.) and Trombone/Trumpet (T. Viol.). It begins with a 'long 10'' marking and a tempo of 4/8 with a quarter note equal to 63. The Vln. part has dynamics *p*, *mp*, and *pp*, with markings for 'poco vib.' and 'senza vib.'. The T. Viol. part starts with *pp*. The score includes first and second endings.

(b) Musical score for Claudio Monteverdi's *Ah dolente partita*, measures 1-6. The score is for Canto and Quinto. It is marked '(Lento, ma in due)'. The lyrics are: Ah do - len - te par - ti - ta Ah.

The second movement *Dolcissimi legami* explores the gradual appearance of Monteverdi's music out of noise, and its subsequent disintegration back into noise. In this movement I use similar noise techniques to the first *total:THEFT* such as artificial harmonic touchpoints of a semitone and muting the strings of the instrument with the left hand to stifle their resonances. To bridge the gap between these noise techniques and the pure instrumental tones of the middle of the piece, I used a number of natural harmonics which blend the extremities of the piece with its sonorous middle section [Fig.24].

Figure 14 - total:THEFT², *Dolcissimi legami*, b.55-71

The image displays three systems of musical notation for two instruments: Violin (Vln.) and Trombone/Viola (T. Viol.).

- System 1 (Measures 55-60):** The Vln. part features a melodic line with six measures of music, each containing a pair of notes with a dynamic marking of *p* (piano). The T. Viol. part consists of six measures, with the first two measures containing triplets of notes and the remaining four measures containing pairs of notes, all marked *p*. A 3/8 time signature is indicated at the end of the system.
- System 2 (Measures 60-66):** The Vln. part has six measures, with the first measure marked *p*. The T. Viol. part has six measures, with the first two measures containing triplets and the rest containing pairs of notes, all marked *p*. A 4/8 time signature is indicated at the beginning of the system.
- System 3 (Measures 66-71):** The Vln. part has six measures, with the first measure marked *p*. The T. Viol. part has six measures, with the first measure marked *p* and the rest containing pairs of notes, all marked *p*.

The two interludes are based on very simple principles; a short section of a Monteverdi madrigal is repeated with many of the pitches being obstructed by the *ricochet* technique that was also used in to a similar effect in the first *total:THEFT*.

The third movement is the most varied and dynamic; it uses two distinct sections from the same madrigal from *Book Three, Là tra'l sangue*. Firstly, the opening of the movement is transcribed with large stretches erased, leaving only snippets of the music to emerge and subside back into silence. This idea came directly from John Cage and Lukas Foss who both explored different approaches to subtractive compositional principles applied to early music sources in Cage's *44 harmonies from Apartment House 1776* (1976/2005) and Foss' *Baroque Variations* (1967). In Figure 25 we can see an example of which elements in a section of Monteverdi's madrigal were transcribed and which elements were erased. Then at b.25 the subtractive process ends to reveal a four part,

descending contrapuntal texture. This section I transcribed in full, as faithfully as possible for the two instruments, but marked a long *rallentando* over the whole section which gradually grinds the polyphony to a standstill on its final chord which, by its end, has also transitioned to *molto sul ponticello* in order to alienate this eventuating sound further from its baroque polyphony [Fig.26]. After this second section ends the movement finishes by returning to the subtractive principle of the first section, transcribing fragments of the remainder of the madrigal and leaving large chunks of silence in between.

Figure 15 - *Là tra'l sangue* comparison

The image displays a musical score for the madrigal "Là tra'l sangue". The top section features five vocal parts: Canto, Quinto, Alto, Tenore, and Basso. The tempo is marked "(Allegro)". The lyrics are: "Là tra'l san - gu'e le mor - ti e -". The vocal parts are arranged in a descending contrapuntal texture. The bottom section shows the instrumental accompaniment for Violin (Vln.) and T. Viol. (T. Viol.). The tempo is marked "4 ♩ = 100". The instrumental parts are marked with dynamics: *f* (forte) and *mf* (mezzo-forte). The instrumental parts are marked with "poco sul pont." (poco sul ponticello). The score is divided into three measures, with the first measure starting with a first ending bracket (1) and a second ending bracket (8). The instrumental parts are marked with dynamics: *f* and *mf*. The score is divided into three measures, with the first measure starting with a first ending bracket (1) and a second ending bracket (8). The instrumental parts are marked with dynamics: *f* and *mf*. The score is divided into three measures, with the first measure starting with a first ending bracket (1) and a second ending bracket (8). The instrumental parts are marked with dynamics: *f* and *mf*.

Figure 16 - total:THEFT², *Là tra'l sangue*, b.26-46

rall.

26
Vln.
T. Viol. (mp)

33
Vln.
T. Viol. p

40
Vln.
T. Viol. sul pont. molto sul pont. poco sul pont. p

A tempo
72
poco sul pont. p

The final movement *Poi ch'ella* outlines again a simple single process applied to a section of Monteverdi's work. The pitches that form the original madrigal are turned into long, drawn-out, drone-like pitches that overlap and form an almost organ-like sonority. This movement continues in the same way until its final twenty-five bars when the tenor viol drops to its lowest register and underscores the texture with some of the pulsating rhythms that are adapted from the start of the movement. This again disintegrates into noise through the use of *molto sul ponticello*, and eventually both instruments muting all of their strings' resonances and fading out producing only white noise.

The *total:THEFT* series encapsulates focusing on single sources of reference and the near infinite variety of augmentation that these sources can be subjected to through techniques and processes. It also makes me reflect on the distinction between using a source of reference as purely

a compositional tool and using another composer's work as an overt allusion, which evokes music of the past.

[note]WAVE (2017/18)

for orchestra

By stark contrast to the calm, restrained and singular approach to referential material in the *total:THEFT* series, *[note]WAVE* explores a number of contrasting influences from the orchestral repertoire. While planning this composition I listened to orchestral music from numerous periods and styles for inspiration. Initially I had thought that I might approach the piece in a similar way to *3rd sonata for piano (for orchestra)* or *total:THEFT*, instead I found myself wanting to incorporate the sounds of orchestral music from Beethoven, through Mahler and into the present day, taking influence from composers such as Helmut Lachenmann, Salvatore Sciarrino and Georg Friedrich Haas. In addition to these composers of the Romantic and contemporary canon I was also drawn to a piece of 'Golden Age' Hollywood film music by Anthony Mawer titled *Sun Pretty*. The more I listened to and revisited these pieces the more I imagined ways to combine and intertwine aspects of their sonic and stylistic characteristics. My aim became to create a work in which the first half would present snippets and fragments quoted or inspired by these aforementioned influences that would draw attention to their contrasting characteristics. Forming a section in which it would be surprising and stylistically dissonant to hear a jolt of Beethoven's Ninth Symphony directly next to the expanded sounds of the 21st century orchestra inspired by the works of Sciarrino and Lachenmann, which could then give way to a surge of kitsch cinematic music evoking film soundtracks of the 1940s and 50s. Eventually in the piece's second half however, these dissonances in style would homogenise and become a fluid sonority, still peppered with quotations from different works and eras, but flowing continuously into one another and exploiting their similarities rather than their point of contrast.

[note]WAVE stands out in this portfolio as a work in which constructivist compositional processes play a lesser role. Rather than use a referential source to generate the piece's materials to then work with in a constructivist manner, as was my approach in *3rd sonata for piano (for*

orchestra), *FLDnormc[h]or(e)[ds]*, and parts of *terminal_SOFTCORE*, *total:THEFT* and *total:THEFT*², I instead used a set of orchestral quotations as the core set of materials with the intention to present fragments of these quotations set into a more texturally focused orchestral sound-world. These quotations and techniques represent my orchestral influences; these are all pieces that have at one point or another developed my understanding of orchestral music and the countless sounds it can achieve and feelings it can evoke. Behind this approach is my fondness for Berio's *Sinfonia*. Although Berio's music is not directly quoted I, like Berio, use Mahler's music for the most overt and formally important quotations that the work is based around; the opening of his Fifth Symphony (1901/1902) in the middle of the piece for its most bombastic crescendo, and his orchestra lieder *Ich Bin in der Welt Abhanden Gekommen* (1905) as the main quotation in the piece's more subdued second section.

He [Berio] had long admired and studied Mahler's music, finding in its vivid ironic eclecticism a congenial example for his own work; and his choice accordingly fell on the scherzo from Mahler's second Symphony. But its diatonic language posed a complex and technical problem. For if Berio had sought to generate layers of commentary from the Mahler text itself he would have had to subject it to extensive transformation. If instead he had relied entirely upon his own harmonic vocabulary the gap between text and commentary would have been too great. So he opted for materials that establish a wide harmonic range – many of them quotations from other composers' work.¹⁵

In this quote from his analysis of *Sinfonia*'s third movement David Osmond-Smith touches on an issue similar to my preoccupations in *[note]WAVE*. In a way comparable to Mahler's vivid and ironic eclecticism being a source of inspiration to Berio, I consider Berio's vivid and ironic eclecticism as major influence in my work. *Sinfonia*'s third movement introduced me to the idea of interplay between the sounds and formal tendencies of late modernism and the avant-garde with the many styles of the past that have informed aspects of my current practice.

¹⁵ David Osmond-Smith, *Playing on Words: a Guide to Luciano Berio's 'Sinfonia'*, (London: Royal Musical Association, 1985) p.39.

While Berio's compositional leap from Mahler's material to *Sinfonia* was more radical for its time than anything I could achieve today through collage or stylistic interplay, the piece has provided a model for later composers to build on in their own pieces; borrowing from its principles and importing onto them one's own influences. In *Modern Music and After* Paul Griffiths describes *Sinfonia*'s third movement as a form of meta-music, stating that its complex irony of composing using localised quotations within a giant formal quotation ensures that *Sinfonia* is not only made from other music but is palpably 'about' music.¹⁶ *[note]WAVE* forgoes building a meta-form or meta-process from another work. Instead I focused on the moment to moment interplay between various quoted sources and the experience that the audience might have hearing these clearly distinct and often identifiable fragments in a piece that is almost entirely derived from existing musical sources, deriving potentially new and interesting musical situations from a collection of quotations of significance to me.

[note]WAVE opens with a flurry of high harmonic tremolo strings and forceful, breathy flutes which abruptly and percussively stops, giving way to the piece's first directly quoted motif. Out of the residue of this opening gesture emerges the second horn swelling to a crescendo on a G-natural below middle-C, immediately followed by the first horn repeating the same crescendo but on the A-flat one semi-tone above. This then reveals the D-natural above middle-C being held by the first trumpet that is then joined first by the second trumpet with a fleeting wa-wa crescendo and diminuendo on the same pitch and then the first horn with a crescendo in the manner of the G-natural from seconds earlier. This dark but fanfaric gesture in the brass is an augmentation of the opening of Sciarrino's *Macbeth* (2002), a gesture which he gives to the trombone and which develops throughout the opera. Shown in Figure 27 is a comparison of this gesture at the opening of Sciarrino's *Macbeth* and at the beginning of *[note]WAVE*. I incorporated this particular gesture to act as both a refrain when repeated, creating a motivic anchor to deviate from and return to, and as an interruptive gesture to dynamically overpower other types of material and allow for sharp

¹⁶ Paul Griffiths, *Modern Music and After: 3rd edition*, (New York: Oxford University Press, 2010) p.185.

transitions. As can be seen in the comparison, the speed of the crescendo is more rapid in Sciarrino's and he also scores a diminuendo after the note's apex, whereas my interpretation ends on an accented demi-semi-quaver. Also shown is the fact that pitches used in the first of these gestures in [note]WAVE uses the pitches from the second of Sciarrino's gestures from b.15-16 of *Macbeth*.

Figure 17 - (a) [note]WAVE, brass, b.1-9

(b) Salvatore Sciarrino, *Macbeth*, Trombone, b.1-2 & 15-16

(a)

Hn.

Tpt.

1. practice mute

ppp mf

ppp mf

ppp

Hn.

Tpt.

1.

ppp f

2. harmon mute

ppp p ppp

(b)

3

f

3

f

3

f

Corno in Fa

Tromba in Do

Trombone

suono scuro

mp

3

f

3

f

3

f

This quotation from *Macbeth* is then immediately followed by a very brief and fractured quote from Anthony Mawyer's *Sun Pretty*. This quotation is initially obscured by its brevity, however as the piece continues instances of this quotation become fuller and less fragmented, which allows its style and character to impact the music more clearly. Shown below is part of my transcription of *Sun Pretty* and three different instances of its quotation in [note]WAVE [Fig.28].

Figure 18 - (a) Anthony Mawer, *Sun Pretty*, transcription

(b) note[WAVE], b.5-9, b.22-23, b.131-134

(a)

(b¹)

(b²)

Musical score for measures b². The score includes four staves: Vln. 1, Vln. 2, Vla., and Vc. The dynamics range from *pp* to *mf*. The Vln. 1 and Vln. 2 parts are marked *pp* and *mf* with a *unis.* instruction. The Vla. part is marked *pp* and *mf* with a *unis. arco* instruction. The Vc. part is marked *pp*, *mp*, and *pp* with a *unis. arco* instruction.

(b³)

Musical score for measures b³. The score includes five staves: Vln. 1, Vln. 2, Vla., Vc., and Db. The dynamics range from *p dolce* to *mp*. The Vln. 1 part features a *div.* instruction and a *p dolce* instruction. The Vln. 2 part features a *p dolce* instruction. The Vla. part features a *p dolce* instruction. The Vc. part features a *p dolce* instruction. The Db. part features a *p dolce* instruction. The score includes various articulations such as *1-4*, *5-8*, and *8*.

Following these three terse gestures are a number of variations derived from the same places. Immediately following this first quotation of *Sun Pretty* in b.8-9 a surge of material appears in b.10 similar to the piece's opening, comprised of trilling aeolian flute sounds and high tremolo harmonics on the strings. Then in b.10-12 comes the second instance of the fanfaric brass gesture from *Macbeth*. The first section continues discovering numerous new materials (such as the rain-like harmonic pizzicato material found at b.18-21) and augmenting the gestures established in its

opening, broadening its sonic and stylistic pallet. At b.98 however the piece begins to change. The fanfaric gesture morphs into the opening crescendo from Mahler's fifth Symphony in a triumphant surge of late Romanticism. This however is subtly tainted in b.99-100 as the winds underscore this fortissimo with a tumbling figure adapted from the opening of Georg Friedrich Haas' *In Vain* (2000). However, Mahler's fifth Symphony continues unperturbed, led by the trumpet for another two bars.

Here begins the start of *[note]WAVE's* second section; at b.103 Mahler's music is abruptly interrupted by dense fog of multiphonics, rolling timpani playing constant glissandi and trilling string harmonics. This texture begins loud and storm-like, but gradually begins to calm. During this tumult of groaning instrumental timbres a chorale in the brass appears, sounding almost lost in an unfamiliar environment. The chorale itself is taken from *Abide with Me* (1861) by William Henry Monk, which I chose for its sombre and sentimental nature to contrast the more stylistically contemporary use of extended performance techniques. This chorale is the catalyst for the piece's descent into a far more continuous and sombre character.

From b.124 until the end the fragmented and sometimes hysterical nature of the piece's first half is abandoned. The music is still built out of quotations but their dynamic range is restricted to a quieter pallet, the durations of each quotation are longer and their character is more sombre and tragic. Gone is Mahler's soaring symphonic language that ended the first section; instead appears his more melancholic side with a series of quotations from his orchestra lieder *Ich Bin in der Welt Abhanden Gekommen*. This is combined with a longer excerpt from *Sun Pretty* which, in this more subdued context, takes on a sadder character, contrasting its more kitsch seeming appearances earlier in the piece. Connecting these more drawn out quotations is a drone of high harmonics played on the second violins and low sustained tones on the bass clarinet, bassoon, contrabassoon and double bass.

note[WAVE] marks a departure from the core theme of constructivism in this portfolio. While in a number of pieces, such as *for violin, FLDnormc[h]or(e)[ds]* and *total:THEFT*, I focused on how to use referential material in a constructivist context without explicitly exploiting the potential

stylistic associations of the material, in *note[WAVE]* I eschewed any constructivist model in order to focus purely on the shifting stylistic associations that arise from juxtaposing and homogenising referential material.

***ePod nano* (2017)**

for large ensemble

ePod nano is the longest and most diverse work in the portfolio. It is comprised of seventeen individual movements, fifteen of which are miniatures often lasting less than one minute and two of which are longer-forms lasting around five and ten minutes respectively. Each miniature movement is based either on a particular compositional process, a referential musical source, a freely composed musical texture or a combination of these approaches. The work began as an exercise in composing using shorter forms, creating material not intended to linger and gradually develop over a long period of time, as has been generally been my approach, but to conceive of material that will only exist for a short stretch, either developing in a straightforward manner or simply being presented in a non-developmental way for a short duration. This temporal restriction, I believe, led me to some creative responses that I could not have considered unless challenged in this way. When I had composed several of the short movement using different principles for each, I then began to reflect on what the overall form of the piece would be like. This prompted me to consider how stale a constant slew of disparate miniatures might become and I began to consider ways in which this pattern could be broken to enhance the overall form of the piece and allow some ideas from the miniatures to return in more sustained context. The title of each movement provides a kind of cryptic allusion to the process or principle I used to compose it.

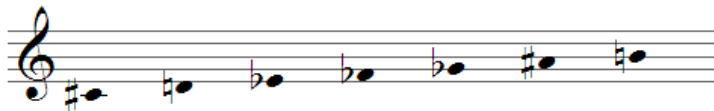
The first and fourth movements (*anti-music 1* and *anti-music 2*) are related through subtractive compositional approaches. Throughout *anti-music 1* the harp plays a solo on a seven-note pitch-class set [Fig.29 (a)] that remains constant. The remaining instruments in the ensemble, except for the percussion, play chords that swell out of and into nothing. The harp's material is limited to this seven-note pitch-class set and transitions from its low register to its high register over the course of the movement but, other than these restrictions, is composed freely. The subtractive process happens in the chords, which begin as a twelve-note, fully chromatic chord, and end as a

four-note chord that compliments the harp's pitch-class set. After the initial twelve-note chord has been struck, one pitch from each subsequent chord moves to double another pitch that is contained within the final chord [Fig.29 (b)]. I used this process as it provided a systematic transition from dissonant to consonant. I wanted the harmony of the movement to begin harsh and abrasive but then to gradually become something more consonant and in character with the harp's soloistic material.

Figure 19 - *ePod nano*, Movement 1 (a) Harp pitch-class set

(b) Ensemble chord progression

(a)



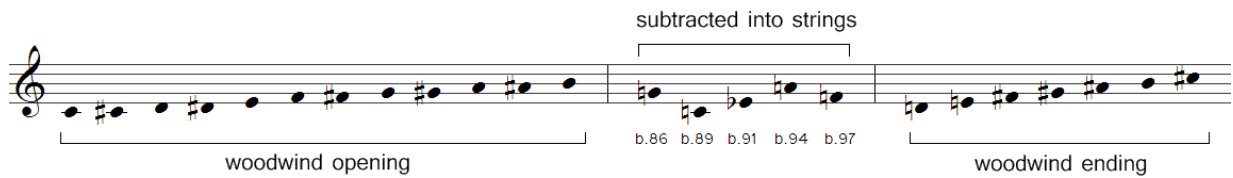
(b)



The fourth movement (*anti-music 2*) is based on a similar subtractive principle, except that in this case the process is applied to the woodwinds, which are given rapid flurries of notes. These flurries begin by using all twelve notes of the chromatic scale, but as the movement progresses pitches are taken away, one by one, to reveal a seven-note scale [Fig.30]. This provides a similar trajectory from harmonic dissonance to consonance as found in *anti-music 1*, but with a drastically differing instrumental texture and character. A secondary process is also present in this movement; in between each rapid woodwind gesture the strings play long, sustained artificial harmonics far above the range of the woodwinds. The notes that are given to these string harmonics are the ones that are subtracted from the woodwind texture. This, to some extent, preserves the chromaticism of

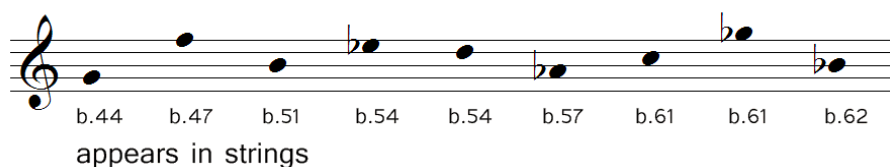
the movement's beginning but displaces it both in terms of texture and tessitura, drawing attention to the eventual consonance of the woodwinds flurries.

Figure 20 - *ePod nano*, Movement 2, pitch-sets



Movements three, ten and sixteen work on a similar principle to movements one and four, but in reverse; these three movements present additive compositional approaches. In movement three (*pro-music 1*) the harp plays cycles of fragments of a nine-note pitch-class set that the harmony of the whole movement is based around [Fig.31]. The strings accompany these cycles in the harp initially with just the first note of the pitch-class set; then one by one the remaining notes appear, gradually building up the harmonic variety in the movement. The movement progresses in this way until b.64 when the character of the music becomes more subdued before entering into its coda at b.71. In this coda the harp and vibraphone play ascending gestures based on the original pitch-class set and the strings play bell-like pizzicato using microtonal tunings. The use of additional microtones at this point, to me, represents going beyond the pitch-class set that had been built up harmonically in the earlier stages of the movement.

Figure 21 - *ePod nano*, Movement 3, pitch-class set



In the tenth movement (*pro-music 2*) I used a process of overlaying and building up a number of descending cycles. Each of the six cycles is between four-to-six bars in length, and is designed to act like a repeating layer within a long-term polyrhythm [Fig.32]. These cycles are given to the five string instruments and the bass clarinet; beginning with the viola and cello playing two simultaneous layers and building up to six simultaneous layers towards the end of the movement. All of the cycles are limited to a fairly modest tessitura, allowing all of the instruments to switch between several of the cycles used in the movement. While the additive process of building up these cyclic layers is key to the character of the music, the constant pathetic, descending gestures and the hushed dynamics prevent the building texture from exhibiting a dramatic sense of escalation; the music becomes more dense and layered but the material stays firmly within the same gloomy character.

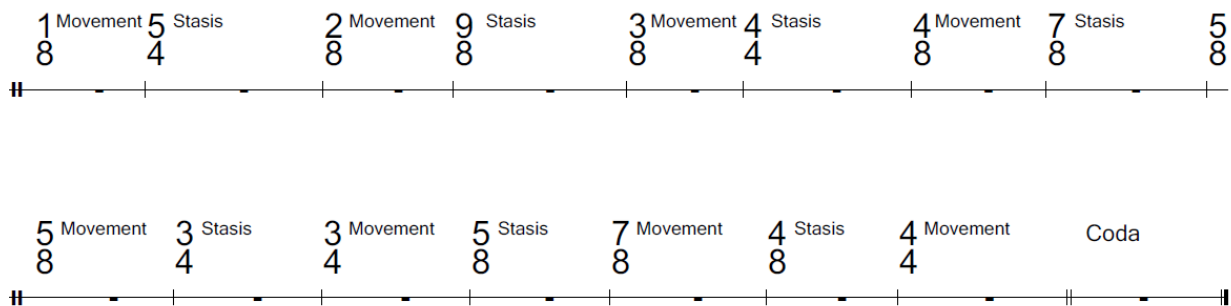
Figure 22 - *ePod nano*, Movement 10, pitch cycles



Movement sixteen (*alloy 3*) combines an additive compositional approach with an homage to Helmut Lachenmann. I took inspiration from numerous works for similar sized ensemble by Lachenmann, such as *Mouvement (- vor der Erstarrung)* (1983-1984) and *Concertini* (2005), when considering the kinds of instrumental sounds and the gestural language that would characterise the music. The music in this movement is separated into two distinct types: twitchy and scuttling gestures comprised of various extended performance techniques and rapid, chromatic flurries of notes, and static chords held in a high tessitura. These distinct material-types represented to me ‘movement’ and ‘stasis’ as musical ideas. The additive process that I used relates to the formal

interplay between the two material-types. The movement opens with a very brief ‘movement’ material gesture that lasts just one quaver before five crotchets of ‘stasis’. The two types of material then continue to alternate, but growing and shrinking respectively by one quaver in each instance [Fig.33]. The ‘movement’ material expands in length with each of its subsequent iterations; this allows the more active musical material to become less fragmented and more central to the movement’s character.

Figure 23 - ePod nano, Movement 16, form chart



Movements two, seven, eight and thirteen are all related through similar approaches. I based these movements on the combination of diatonic harmony with extended performance techniques. In combining these approaches I wanted to evoke associations with the techniques and sounds of certain types of contemporary classical music with the harmonies of earlier classical music and other predominantly diatonic genres, such as popular music and film music. While exploring syntheses between the sounds and techniques of contemporary instrumental music and consonant harmonic languages is not unique in itself, for instance many approaches to the combination of these materials are explored in works by Salvatore Sciarrino, Jürg Frey, Jonathan Bepler and Evan Ziporyn, in this case I was particularly focused on combining an emotive and almost saccharine approach to diatonic chordal harmony with the atmospheric and textural possibilities of extended instrumental techniques.

Movement two (*ET vs. DT 1*) combines a diatonic chord progression, loosely inspired by The Beatles, played by the brass using practice mutes with a constant tremolo of unpitched white noise on the violins and fluttering, breathy trills on the flutes, viola and cello. In movements seven and eight (*ET vs. DT 2* and *ET vs. DT 2a*) I used a chord progression adapted from the original soundtrack of *Mean Creek* (2004) by the Boston composition collective 'tomandandy'. I combined and distorted this chord progression with frequent use of scratch tones on the strings, various microtonal tunings and multiphonics on wind instruments. In movement thirteen (*alloy 2*) I reprised the chord progression from movement two and combined it with another diatonic chord progression adapted from the Swedish alternative music trio Detektivbryån. I then combined this with numerous multiphonics for the wind instruments. In these movements I aimed to combine a sentimental harmonic language with a sonic pallet typically associated with experimental or avant-garde music, thus hopefully creating a distinct and strange combination of musical associations.

I composed the fifth and sixth movements (*alloy 1* and *omaggio 1*) as homages to two Italian composers whose work has been highly influential to my music: Salvatore Sciarrino and Luigi Nono. Both of these movements are based on combinations of quotations from Sciarrino's *Sui poemi concentrici* (1987) and Nono's *Tre voci A* from *Prometeo: tragedia dell'ascolto* (1985). In using and combining quotations from these two sources I intended to recontextualize some of the material from these lengthy and highly atmospheric works in a miniature form, which presents a radically condensed version of music of a similar character.

Movements eleven, twelve, fourteen and fifteen are the final related group of miniatures. These movements were all composed free from the sorts of developmental processes used in the *anti-music* and *pro-music* movements, or any specific musical references used in the homage movements. Instead my approach was to prioritise distinctive instrumental textures and non-developmental musical materials, such as repeating cycles and sequences, to act as short interlude movements. Movement eleven (*inter-static 1*) uses a modular series of descending major or minor 7^{ths} in the harp and percussion with certain pitches being doubled and sustained over longer

durations by the high strings. Movement twelve (*inter-static 2*) presents a series of swelling pitches taken from a static pitch-level set in the wind and brass alongside a series of broken arpeggios played on the harp and a swelling melodic fragment on the trumpet. Finally, movements fourteen and fifteen (*inter-static 3* and *inter-static 3a*) are derived from the same materials; a constant drone chord in the high strings, wind and brass, a series of rapid white-note gestures on the harp, and a repeating pizzicato figure in the cello and double bass.

Movement nine (*fu'k wit' me*) is based on similar principles used to compose the movements that act as homages to certain works or composers, however in this case it is given a far longer duration to explore the material. The material is taken from two English hymns, *Abide with Me* by William Henry Monk and *Glory to Thee My God This Night* by Thomas Tallis. Each hymn is subjected to a different transformative process and designated to different instrumental groups in the ensemble. Both hymns however are kept in their original keys; *Abide with Me* is in E-flat major and *Glory to Thee My God This Night* is in G major, providing a clash of keys when the material adapted from each hymn plays simultaneously.

In this movement the harp provides a solid anchor throughout by playing an arpeggiated adaptation of *Abide with Me*. The arpeggiations of each chord are irregular in their rhythms and repetitions of pitches; also they overlap with one another, making it difficult to tell exactly where one chord begins and another ends [Fig.34]. Another constant presence in this movement is the very long sustained tones of the strings which play a time-stretched and overlapping adaptation of *Abide with Me*. Over these constant elements are two more instrumental textures that emerge from and subside into the harp and strings' textures. The first of these is the vibraphone, which plays quick and rhythmically regular chords adapted from both hymns, and the second is the wind and brass which play choral-like transcriptions of both hymns. The movement begins harmoniously, with all elements congregating on different adaptations of the same hymn. At b.193 the brass departs into *Glory to Thee My God This Night*, followed very closely by the vibraphone in b.195. From this point the relationship between the musical materials becomes less consistently harmonious and more

ambiguous as the keys of each hymn and their transformative processes accentuate their differences and dissonances.

Figure 24 - *Abide with Me* and *ePod nano* Movement 9 comparison

The image displays two musical staves for comparison. The top staff shows a piano accompaniment with a treble and bass clef, featuring block chords and a slow, fluid texture. The bottom staff, labeled 'Hp.' (Harp), shows a more rhythmic and complex texture with triplets and a steady eighth-note pattern. Lines connect the two staves, highlighting specific musical elements that are shared or transformed between the two pieces.

The final movement of *ePod nano* is the longest and most varied and complex in the whole piece. Throughout its ten-minute duration many elements found in the piece's previous sixteen movements are reprised and adapted along with new ideas and approaches. The first section (b.386-416) is based on similar principles to those of the ninth movement (*fu'k wit' me*). Much of the material is drawn from the same two hymns, except in this case Tallis' *Glory to Thee My God This Night* is used as the constantly present anchor, whereas *Abide with Me* is used as a source for chorale-like gestures that swell to the surface of the music. Underpinning this slow and fluid collage of transformed musical quotations is the percussion, which for this section plays a very slow jazz-ballad-style beat with brushes on snare drum and hi-hat. I felt that this percussion texture would add a subtle and puzzling stylistic dissonance when set against the sprawling hymnal foundation and the emerging chorales. This movement begins with the harp and percussion establishing the constant elements of the music in this section; the harp plays a slow arpeggio on the first chord of *Glory to*

Thee and remains on this chord until b.402, where it then begins to move through the harmonies of the piece. At b.389 the two piccolos begin to play the melody of *Glory to Thee* in canon. Then at b.378 is the first instance of *Abide with Me*, fading in from almost nothing in the muted brass playing its opening phrase as a choral and subsiding back into the texture.

At b.417 the music begins to change character; while the first section presented a non-developmental stream of material from a small number of sources, the second section builds to a crescendo near the piece's end and during its development begins to use more diverse materials and processes. The strings exemplify this escalation of activity and complexity in their material. They begin the section by playing static high harmonic tremolo until b.424 where one-by-one the two violins, viola and cello then begin to play *Glory to Thee* in a desynchronised canon, each instrument using different rhythmic denominations [Fig.35]. Then at b.436 each string instrument begins to augment the same material by oscillating at different speeds between adjacent notes in the melody line. Each string instrument has its own bandwidth of rhythmic values to move between, allowing for rhythmic ebb and flow in each individual part and rhythmic desynchronization across all parts [Fig.36]. Finally, at b.454 microtones are introduced into this texture, further warping the material away from its original form. While this development of the material drawn from *Glory to Thee* is happening in the strings, numerous quotations from different composers and styles begin to appear alongside the emerging and subsiding chorales of *Abide with Me* leading to the piece's climactic crescendo.

Figure 25 - *ePod nano*, Movement 17, rhythmic units for the string canon b.424-440

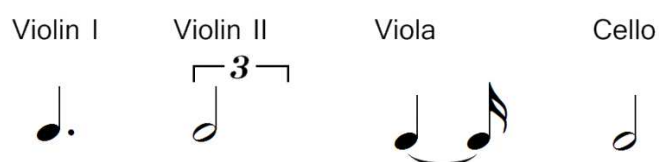
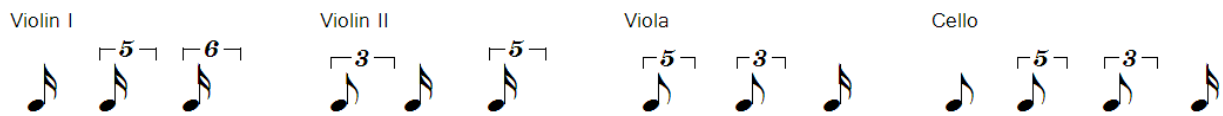


Figure 26 - *ePod nano*, Movement 17, rhythmic bandwidths for string oscillations, b.436-462



The piece's final crescendo at b.463 is heavily influenced spectral-music. It begins with the lower-register instruments in the ensemble playing their lowest G-natural, before the middle-and-high-register instruments begin to play pitches or pitch-sequences derived from the natural harmonic series of G-natural and D-natural. The piece's strong sense of G-major, due to the constant presence of *Glory to Thee*, is at this point transformed into a cacophonous yet resonant 'spectral' interpretation of the key's tonic. This loud and storm-like texture begins to gradually calm, reprising the mild, jazz-like percussion of the movement's opening, thinning in its instrumental texture, falling to a much quieter dynamic and slowing to a halt on a modified plagal cadence in G-major.

This final movement brings together elements of numerous materials and approaches that have been explored in isolation in some of the work's previous movements. In a way this represents a parallel for *ePod nano*'s place in the whole portfolio; many of the earlier pieces in the portfolio explore focused and intentionally limited approaches to constructivist process and referential material, whereas *ePod nano* represents a broadening of distinct material within the context of a single work, bringing together many of the ideas found throughout the portfolio into a new formal context.

Epilogue

This research project has provided me with a framework to explore a multitude of different yet inter-related compositional approaches. The portfolio presents works that I believe contribute towards a burgeoning scene of contemporary art-music concerned with synthesising the techniques and sounds of late-modernism with influences from common practice western art-music and more esoteric or pop-cultural references from outside of the western art-music canon.

I will endeavour in my future work to broaden the application of approaches explored in this portfolio in new and distinct ways. I can envisage ways in which the stylistic collage approach of *[note]WAVE* could be applied to other ensemble types and styles with broad repertoires outside of orchestral music, for example: string quartet music, lieder, and even certain pop-music genres. I can foresee some of the processes and principles explored in the shorter movements of *ePod nano* being expanded into larger scale works, allowing the material to develop in more complex ways over longer periods of time. I also hope to further explore working with associations and references that are suggested by certain types of ensemble or instrument in a similar manner to *total:THEFT²*, for instance: to explore drawing from common practice sources of virtuosic piano repertoire in the context of a modern piano concerto, or to further explore the possibilities of synthesis between period instruments, the composers of the appropriate era and contemporary instrumental techniques.

I believe that this portfolio provides a number of initial explorations of its core concepts that I will no doubt build upon and explore further in the coming years. It may well also be of interest to like-minded composers involved in the areas of constructivist compositional processes and musical referencing. I hope that I have demonstrated a personal approach that allows for a diverse and expressive wealth of materials to be drawn from in a manner relevant in the current landscape of contemporary concert music.

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