

IDENTITY
DECONTEXTUALISATION
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PERSPECTIVE

A critical reflection upon my recent creative practice

A SMITH

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A critical reflection upon my recent creative practice

Aled Smith

Royal Northern College of Music Research Department

A portfolio of original works
and accompanying commentary submitted to the
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Abstract

This commentary illustrates significant developments in my recent creative practice, as demonstrated in the accompanying portfolio of compositions. Over the period of research, spanning three years and resulting in a substantial body of new work, I have developed and explored the configuring of a compositional architecture which addresses and emphasises the creation of restrictive boundaries in the composition process. These restrictions are placed to control development, whereby strict objectives are set but paths of reaching those goals allow for creative freedom.

The interconnections between composer/score/performer/receiver are also examined. This segues into exploring the pragmatic decision-making during the writing process. Paths of enquiry and development within my creative output are outlined and discussed. These relate specifically to: development of a harmonic methodology which abandons conventional chords and progressions in favour of hyper-chromatic harmonic fields; non-teleological structural approaches which explore self-similarity, scaling and intersemiosis; exploration of material identity, morphology and interconnectivity; as well as consideration of instrumentation alternatively through compositing, synthesis, 'opening' and extended techniques.

Each chapter in the following document examines the works in the accompanying portfolio individually, as a set of small case studies. A discourse is established which discusses each work as well as connecting and establishing context between works – as a body. Developments are demonstrated through analysis and comparison between my own works and those of other creatives.

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Introduction

This work represents a personal discovery as much as an outward facing piece of research. Before undertaking this project, I had become aesthetically disillusioned and disinterested in music operating within certain generic rule-systems. Specifically, within my own music composed pre-2014, I found terminally similar and unsatisfying results were being produced with each new work. Largely, this was attributable to the improvisatory nature of my composition process at that time, i.e. little planning was undertaken and works were often spontaneous, disconnected and ill-refined outpourings, lacking a developmental focus whereby an idea could be explored fully across several pieces. Similarly, I had begun to find aesthetic issues with music operating teleologically and unilaterally: featuring overt thematicism and programme; utilising immediacy/accessibility; remaining solely within twelve-note equal temperament and orchestrating conventionally; amongst others. Most importantly, I felt it necessary to distance myself from the music of a number of composers (e.g. Thomas Adés; George Benjamin; Mark-Anthony Turnage and Oliver Knussen) to aid the aesthetic disparity and individuality I was seeking. At the start of this research I had begun to re-orientate my thinking towards conceptualising and envisaging an abstract music – a topological understanding upon nothingness – which would satisfy my creative needs.

The statement above raises different questions, many of which are complex and multifarious. The broadest question asks: How would it be possible to control my artistic development, guiding it towards its desired point of arrival, whilst maintaining compositional individuality/ idiosyncrasy? Specifically, within that question comes a stipulation: rather than bluntly cutting off certain pathways to force a development, how would it be possible to ‘non-artificially’ focus the development whilst (paradoxically) including utilisation of some systems to remove the issue of genericness and similarity? An entirely creative freedom and conversely, a wholly strict logic are therefore unsuitable for my creative needs. Instead, a flexible methodology has been created during this research, spanning rigidity and fluidity, rather than sitting uncomfortably between the two, in a state of conflict or biased to either side.

A few key ideas permeate each work in the accompanying portfolio: dealing with pulse and rhythm fluidly; development of a harmonic language based on hyper-chromatic harmonic fields; a non-linear, non-teleological approach to structure and sonic basis rather than extra-musical textual inclusion; extended identity through unorthodox playing techniques;

compositing and electronic-influenced orchestration; etc. Whilst the objectives remain quite fixed, the methods surrounding them have developed across the accompanying portfolio and indeed, are still developing. There are many ideas and experiments specific to individual works which will be detailed in the following chapters.¹ Two overarching restrictions have been created: I have specifically chosen not to work within two media: music which includes extramusical textual/visual material and acousmatic/electroacoustic music.

Two works were composed during the research which include texts – *Layers of Winter* (2015) and *shadows in the purple sun (sketches after Trakl)* (2016) – these works do not feature in the accompanying portfolio.² Aesthetically, I find issues within text inclusion surrounding the nature of ownership. The approach to be taken is somewhat problematic in terms of dealing with the text itself – where to cut or not, meaning, interpretation, etc., especially when dealing with the work of a ‘dead collaborator’. Intertextuality and intersemiosis also become problematic points when combining and interpreting texts. Similarly, a literary or visual text could serve to (negatively and undesirably) quicken the music. I felt it necessary to concentrate my creative output by adhering to a basic set of axioms where extra-musical contaminants would have detracted considerably from the desired exploratory and developmental nature of this research.

¹ The term ‘hyperchromatic’ is used, in the context of this document, to demonstrate a difference between the harmonic practice I have developed and other microtonal techniques (e.g. spectralism, just intonation, etc. - found in the work of: Grisey; Partch; Haas; Tenney; Johnston; et al.). The distinction lies in the conceptual underpinnings of this practice, which focusses on filling in sonic space, rather than working with individual pitches and harmonies.

² I wrote choral sketches using excerpts from Georg Trakl's *To the One that Died Early* (1914), for a workshop which took place as part of TENSIO Young Composer's Workshop in May 2016. These sketches focus on syllabic deconstruction and redistribution. I am confident that I will explore these techniques further in the future.

4

15

pp

ng

s.

pp *p* *ppp*

(Tönen)den rinnt

pp *p* *ppp*

(Tönen)den rinnt

pp *p* *ppp*

(Tönen)den rinnt

pp *mp* *ppp*

(Tönen)den rinnt

pp *f* *ppp*

Tö(nenden) rinnt

b.

figure I.1. Smith, A., *shadows in the purple sun* (sketches after Trakl), page 4

I enjoy and am influenced by electronic music but felt it appropriate to restrict its use in this project. I hoped this would create (as yet unseen) repercussions forcing creative solutions to have to be found rather than resorting to much simpler DAW fabrication.³ I find a real and

³ 'Digital Audio Workstation', such as Apple's Logic Pro X, for example.

present vibrance in attempting to synthesise and translate some of the techniques used in the production of electronic music with acoustic instruments. Additive synthesis, envelopes, filters, pitch-shifting, time-stretching, stark juxtapositions, modulation effects, for example are all (synthetically) realisable, or at least, translatable within an acoustic medium. Resulting from such a synthesis, unexpected by-products and anomalies enrich the already-available palette of acoustic sounds: “[T]he entire field of sound” is explorable through alternative means of considering the music both physically and in terms of aesthetic interpolation (multiple identities).⁴ Utilising this methodology forces expectation to become fixated upon unique experience rather than performance perfection. Because the sonic palette is limited to acoustical possibility, instruments and ensembles are given alternative consideration, ‘opened’ and significantly removed from their norm. I now use this methodology in all of my work – considering the identity of an instrument/ensemble and how, upon expansion, new modes of expression may be created – without increasing the size of ensemble or damaging the relationships therein, by inserting foreign contaminants. Aspects of electronic music which I find particularly influential to my work, are the occasions where it is not always clear what the sound is, its origin and how it has been/will be manipulated. To some degree this also enhances my methodology, when considering ‘noise’ and silence as well as instrumental compositing.

I admire a lot of different musics and creative practices but I strongly believe that my own work should be the inspiration for my own work. Developing my creative practice independently of what is happening around, me removes concerns of style, in-fashion complacency and a desire to ‘fit in’. I no longer refer to others’ scores, for example, to learn notations. Abandonment of past methodology and process specifically relating to my own work, also becomes a journey of progress and discovery. These ideas engender a certain strength in the underlying identity of the music. Likelihood of discovering new sounds and ideas by actively disengaging in this manner is also an important result from the ideas above. Usefully, notations, methods or techniques created, will carry a degree of innate uniqueness,

⁴ Cage, J. 1937/1958, ‘4: *The Present Methods*’

relating to my own language. Roger Reynolds argues:

The European requires validation or rejection of his conceptual constructs preeminently on historical grounds; it is essential to arrive at a context within which to practice that is consistent with history as it is understood, or, minimally that the rationale for any divergency be clearly drawn against the established patterns of history.⁵

Reynold's argument is doubly relevant to my creative practice and research methodology. 'Validation' stems from my own work, more so than others'. Rather, I react against the patterns established by my earlier self. An example would be my awareness of historically significant microtonal composers' work such as that of Gerard Grisey and Tristan Murail. I have chosen to develop my hyper-chromatic language independently from their work (and others).

Following from this, focussing upon compositional componentry, materiality and functionality, opens an enquiry, questioning what my music did, what it now does, and how I will further develop it. This developmental questioning permeates the entire discussion in the main body of this document and leads to the question of perception of the music itself, notation, aesthetic, interpretation etc. Because of the problematic nature of my earlier improvisatory composition practice, another 'restriction' has been placed which necessitates an awareness of experimentation and making developmental links between works.

Emphasis has been placed on the hugely important interconnections linking composer, score, performer and listener, and on the interfaces between them. Communication is built upon a web-like network of pragmatic thinking and decision making at the compositional level which affects the entire chain. In my creative practice, aesthetic concept is always subsidiary to practical aspects of a work. I write, thinking primarily about the perspective of the performer and how I can best allow for "legibility of complex environments".⁶ Questions such as "how can X result be achieved?" or "how will situation X affect the performer's thought process/approach?", are often asked. I consider this aspect of my composition practice a 'remote collaboration', whereby educated guesses are made as to how to invite or provoke specific reactions from performers. How would one likely play a certain rhythm, for example, especially in a densely polyphonic solo music, or conversely, in an ensemble context? Various alternative methods of notation will be examined and whittled to find the

⁵ Reynolds, R. and Takemitsu, T. 1992, p.31

⁶ Schumacher, P. 2012, *Video Presentation*

most contextually appropriate. The manner in which the performer performs has a narratological significance and affects the way in which the music is heard. I find one of the most powerful things about acoustic music is the anomaly and uncertainty in human entrusted performance. All acoustic works are, to some extent, open ended for this reason. Part of the consideration of communication in my work surrounds this 'margin of error' in the performance. Indeed, I often embrace the fact that a performance within a boundary, holds spontaneity and naturally highlights the material in a way which has an open(ed) interpretation.

The discussion of communication extends pragmatically into instruments, providing through parameter and idiosyncrasy, a means of writing for, rather than against, the strengths and nature of an instrument. I have chosen to use these inherent qualities of instruments as a mechanism, enabling new modes of expressivity. This pertains to utilising extended techniques, whereby the instrument is 'opened', using more parts of itself in different ways to achieve a greater variety of sounds and more numerous articulable variations within. This aspect of the research couples with the inclusion of electronic techniques discussed above.

I find the tactile interface of an instrument to be an important part of the communication process, being the point at which first contact is made between the concept and the physical sound. Mark Andre argues:

[...F]ragmented and deconstructed traces formulate one example of a possible architecture of interiority that links the affect to a concept, thanks to the constant presence of both dialectics and dialogic during the actual act of composition.⁷

I conceptualise these interfaces in terms of playing experience, experimenting with disruption, contrasted with direction and how that balance affects performance. Extremely 'calm' music, for example, with little surface movement, matched with vigorous physicality by the player, would constitute a sensory disruption for a receiver. Visually one sees movement whereas aurally there is comparatively little and vice versa. Indeed, I often visualise how these techniques will physically work/sound. Compositing can also be used disruptively: a 'slap tongued' reed sounds not dissimilar to a string pizzicato. One could conceivably interchange or substitute these. I believe that both notions are aurally noticeable and are more than a

⁷ Andre, M. 2004, p.22

cheap theatrics heightening immediacy. Casey O'Callaghan states:

The vision of an object is most often equated with the object itself, while the other senses are considered secondary sources. An imagined scenario might reveal this privileging vision. If our only experience of a bird is through its song - and we never have the opportunity to touch, smell, or see it, or to know these senses exist - then we would equate the bird *in toto* with its song. The medium of sound through which the animal is transmitted and made knowable to us would disappear and the sound of the bird would serve not as a secondary attribute, but as the bird itself. Despite this, although we experience things through all senses, language equates the object with the visual sense. The sound of the bird is considered a secondary product of the bird, not the bird itself, but the vision of the bird is not treated to a similar distinction.⁸

The boundary set for this aspect of the research is akin to the use of extramusical texts. I aim to expand upon the available sounds of an instrument without resorting to introducing objects or media foreign to the performer/instrument relationship. The rationale for this decision is two fold. Firstly, disassembling instruments, inserting objects etc., raises issues of practicality and arbitrariness. What are the boundaries of identity when an instrument is contaminated by other media?⁹ Is George Crumb's *Black Angels* (1970) justifiably a work for 'string quartet', for example, or for a different type of ensemble?¹⁰ Secondly, there is a novelty in finding a means of circumnavigating limitations or restrictions inherent in the instruments themselves. I relish the challenge of creating new sounds within a restricted framework.

Another important pathway, stemming from the question of intertextuality, is within the design of a musical language whereby morphology and the act of transmutation become the 'argument'. Relationships here are associative rather than symbolic or programmatic. This language also specifically targets and addresses operations surrounding aesthetic predictability or immediacy, teleology and programme, as opposed to sonic material and

⁸ O'Callaghan, C. 2009, p.26

⁹ There is a link here to the overarching boundaries disallowing electronics and extra-musical inclusion for this research. In terms of a wider methodological concept, I often think in many perspectives and adaptations of a singular idea. This is also a compositional tool.

¹⁰ Crumb's score states that amplification is 'of crucial importance' and that 'The following percussion instruments and special equipment will be needed', followed by an extensive list for each of the four players.

compositional interest (for myself). This notion is supported by Philip Ball:

If stories can be told with music alone (which I sincerely doubt), they cannot contain true plots, but at best, plot archetypes: there are no characters, no dialogue, no events. The best you might hope to glean (and this is very optimistic) is some sense of, say, 'a long journey home', without any of the abundance of riches that tells us we are reading the *Odyssey* or *The Wizard of Oz*.¹¹

Ball's reference to literary devices affirms sound's inability to be specific and descriptive in itself. Narrativity, manifested as extramusical description, is often the result of extra-musical stimuli. Sonic materials physically oscillating through the air, simply *exist*. They cannot infer a literal narrative or meaning. Nattiez states:

[T]he notion of musical story-telling or narration [is] just another metaphor to which human language, with its meagre means, has to resort in order to attempt to define the specificity of the unfolding of music in time.¹²

These quotations elucidate one of the foremost challenges for me, whereby I actively take measures to avoid programmatic narrativity both in my process and in the music itself. Many of the solutions to finding alternative means of working around these ideas lie in the methods devised for unifying different compositional elements, so they operate within a hybrid functionality. If I have a harmonic idea and a gestural idea – how would it be possible to merge the two, blurring their definition? This offers possibilities of acting compositionally upon an object/material as a fluid substance rather than a fixed medium. Eco argues: '[T]he reciprocal action of the various elements of the universe does not follow the linear sequence of cause to effect but rather a sort of spiral-like logic of mutually sympathetic elements.'¹³ Additionally, Eco states: '[..E]very sign can be *cited* and in so doing can break with every given context, engendering an infinity of new contexts in a manner which is absolutely illimitable.'¹⁴ The musical 'argument' lies within the interconnectivity of objects and the perceptible metamorphosing of identities as opposed to programme and unilateral plot. The inferred openness and infiniteness of Eco's statements, echo the desired endgame for this research.

¹¹ Ball, P. 2011, p.389

¹² Nattiez, J. 1990, pp.240-257

¹³ Eco, U. 1994, p.19

¹⁴ *Ibid*, p.36

My methodological designs within this research prize unconventionality, alterity and problematised component relationships relating to restrictions which have been placed. Creative friction emanates from the relationship between freely intuitive improvisation and entirely rule-based designs. Similarly, there is an intention to create irrationalities and clashes (whatever they may be in a given context). In some instances this pertains to a literal creation of rules or guidelines which I will creatively use as a means of provoking conflict or directing my intuition into a certain space. Often, these boundaries bring new, interesting and unexpected materials to my creative practice.

The following chapters are chronologically divided into short case studies of each work in the accompanying portfolio.¹⁵ Salient points will be outlined in discussion of individual works. Because of the evolution of my work during the research period, it is also fitting to work chronologically through the portfolio, highlighting developmental milestones. A final chapter will serve to summate and tie together the paths explored in the commentary.

¹⁵ Technical attributes, performance details and other information about each work can be found in Appendix I.

1 – *Beneath Fallen Skies* [2015]

Beneath Fallen Skies (2015) was the first work in my creative output, representing a willingness to abandon my past methods and compositional ideology. It was written largely as a response to the work which directly preceded it: *Suspended Above Shadows* (2015) for clarinet and orchestra. I was dissatisfied with *Suspended Above Shadows*, both harmonically and structurally. I quickly realised that it was a collection of sequential ideas with little substance. Largely, this was because the work was written intuitively with little real planning. Additionally it adhered to many stylistic and aesthetic principles I was no longer compositionally attracted to such as 'extramusical influence', somewhat latent teleological thinking and bland harmonic writing.¹⁶ To a degree, *Beneath Fallen Skies* was written as a test piece to explore new ideas and lay the groundwork for this research, perhaps most significantly, approaching the harmonic language in a drastically different way from before. I had become quite frustrated within the confines of conventional chordal harmony and within the Western equal-tempered system. Often, I found that, even in the most meticulously constructed atonal works, the sense of individual chords and cycling harmonic progressions were too present and narratologically significant.

The solution to finding a new working method for my harmonic language was to think in opposing terms to my previous efforts: chords become masses, scales become fields, movement becomes stasis and transition becomes fluid. Dealing with harmonic fields from which individual aggregates could be brought into relief and counter-relief, forms the basis of *Beneath Fallen Skies*. The harmonic fields were conceived entirely intuitively, hence the strikingly different intervallic content in each. There is a connection to modality, whereby different colours are available, highlighting certain pitch classes in relation to the whole. This is something which has since become a preoccupation in my work. Furthermore, individual pitches hold less significance than before. This approach formally concentrates the sense of colouration through register, linking particular types of touch, articulation and especially pedalling, with harmonic materials. The musical 'interest' or 'argument' in this work is generated by the opening and closing of relatively dense harmonic spaces and in gestural morphosis, i.e. observing processes of proportional shifts in different contexts.

¹⁶ Rashad Alakbarov's shadow sculptures were used as inspiration for this work.

(senza misura) dd.1 2 3

[duration] 10" 5" 3.5" 9"

4 5 6 7

8" 5" 8.5" 3"

8 9 10 11

4" 10" 8" 6"

12 13 14 15

3" 4" 3" 2.5"

(misurato)
[bb.]17-20 (beat 1) 20 (beat 2-4) 21-24

25" 9" 3" 12"

25-26 27 (beats 1-3) 27 (beat 4-) - 33

11" 3" 27"

34-35 36-40 41-42 43-45

8" 20" 8" 12"

46-47 48-53 54-60 61-end

8" 22.5" 18.5" 36"<

n.b. the harmonic fields shown here are compressed into a 'closed chord' format for viewing ease.
Durations are estimated values only.

figure 1.1. Harmonic fields, *Beneath Fallen Skies* (2015)

Another point of experimentation in this work was the desire to link processes, blurring previously defined identities. Principally, an arc of density was formed with harmonic fields, following the overall structural logic as well as the gestural writing. Interfacing different

identities was difficult to explore further within the confines of the keyboard, but has been greatly expanded in subsequent works including piano.¹⁷ At this early stage in the research, I had yet to venture inside the instrument and wanted to focus on idiosyncratic, fluid writing for the keyboard, with hyper-detailed pedalling.

Composing idiosyncratically, for all instruments, i.e. approaching the writing from the perspective of the physicality and tactility of the instrument, has become part of the pragmatic decision-making process that underpins the communication element within my creative practice. My earlier efforts usually regarded the musical idea as primary and its execution as secondary.

Because of the linear approach to the keyboard writing, the gestures manifest as quite conventional figurations, although the focus here is on overall shape and gestural positioning rather than on specifically pitched material. Similarly, the frequency and detailed pedal notation were also vital to thinking about resonance and distorting a more conventionally 'clean' approach. This type of pedalling provides an alternative to 'blocks' in constructing saturated harmonies. Instead, interwoven lines are used to achieve density, assisted by sustaining and bleeding with the pedals. Another challenge was attempting not to use lines melodically or with an intended immediacy. To an extent, this was successful but the very inclusion of a linear element points toward melody, even if realised unconventionally.

Structurally, I experimented with two ideas of breaking with teleological form: the placing of a structural climax early in the work and with the interplay between exometric and endometric means of notation and consequent identities.¹⁸ Lasting approximately fifty seconds, the climax in *Beneath Fallen Skies* is formally a two-part nested structure, beginning (d.6) with a *subito* C₄ octave. This quickly becomes a fading, polyphonic web, which gradually descends (until d.10). At this point, a shallow crescendo ushers in a rapid *fortissimo* figuration in the lowest register, completing the climax (d.12).¹⁹

¹⁷ See the piano writing in *out of reach, but seen by us both* and *Dämmerung*, in particular.

¹⁸ In this instance, the climax is located in the reverse of the conventional golden section ($\phi = c.61\%$ of duration).

¹⁹ 'd.' indicates a division mark, used in the non-metered section of *Beneath Fallen Skies*, as opposed to the conventional 'b.' used later on.

figure 1.2. Climax excerpt, *Beneath Fallen Skies* (2015) division 5-7

I first encountered non-metered methods of notation in my undergraduate studies, whilst researching for an essay contrasting György Ligeti's and Steve Reich's use and adaptation of African polyrhythm in their work. Both have since informed my creative practice in terms of considering performance and perception. Here is a perfect example of utilising different methods of achieving pulse/rhythmic fluidity through different means.

Contrasting the tripartite structure of *Beneath Fallen Skies*, I decided to divide the notational method of work into two portions: the first of which would be exometric and the second, endometric.²⁰ Apart from the structural rationale, I chose to test how the performer perceives and plays music with abrupt shifts in notation, whilst remaining stylistically and dynamically similar. This experiment has led to a lot of the notational choices in later works such as *out of reach, but seen by us both*, but is especially significant for works such as *transmissions*, where the notation constantly mutates between different approaches.

The outcomes of this work are positive in that it achieved the set objectives of exploring harmonic fields as a viable alternative to conventional atonal progressions; working with lines as opposed to blocks, to create density; structurally focussing on relocating the climax point; and using different methods of notation, etc. Opening paths of exploration in this work defined the subsequent building blocks for this research and informed the language for the next work *Immolation (in water)*.

²⁰ This 'ratio' method later becomes an important concept in my work, especially in *unsettled paths*.

2 – *Immolation (in water)* [2015]

Immolation (in water) (2015) was commissioned by the Royal Northern College of Music as part of the 'Seven Gates Festival' (2015), celebrating the music of Krzysztof Penderecki.

Immolation (in water) uses a nearly identical formal model to *Beneath Fallen Skies*. This was a repeat experiment with slight variations in the parameters. The difference between the two approaches is that rather than adhering to a singular trajectory-based dimension, the structure in *Immolation (in water)* utilises a simple, effective dichotomy, transforming material across the work. The gestural language morphs from static and linear to vertical and more gesturally active: see bars (c.) 8-14 and bars (c.) 123-130, for contrast. This is a particularly effective approach because the material is essentially perceivable from different perspectives. Perhaps more significantly in the context of this research, this is the earliest use of scaling in my work, which later becomes a central focus.²¹ The climactic moment of the work falls in bars 50-57. Initially, the sketches focussed on developing one expanding or unfolding idea which was discarded and subsequently revisited in *unsettled paths*.

Structurally, the 'teardrop' model proved to have limited scope, offering only a temporary solution to a larger problem. It still relied on unilateralism and climax built around an approximate golden section which, in the context of this research, was an inherent obsolescence. After this model's discontinuation, my thoughts were to explore structures removed from linear conceptions altogether, rather focusing on material and moment relationships. Sequential, neatly defined and identified blocks of material had been the basis of my language for some time. I often find a necessity to renew my creative practice and by this point I wanted to push towards more complex metamorphosing treatments of materials rather than blocks.

I had not written for a sinfonietta-sized ensemble before this point but found a particular interest in this ensemble's nature. It is small enough to have the intimacy of a chamber group, whilst being large enough to possess some of the raw power of an orchestra. This notion is reflected in the transparency and detail of the approach to scoring. Whilst there are quite full and coloured textures present, the design of the voicing and layering allows for individual

²¹ The terms *scaled* and *scaling* are taken from Chaya Czernowin, who uses them in describing her compositional process and methodology. *NewMusicBox/Czernowin*, C. 2011

instruments to be clearly heard. Furthermore, the orchestration borrows from electronic composition, the manner in which components are combined and 'balanced' against one another. Ironically, this concern with balance and clarity would later become undesirable and would be removed from my work.

Another important facet of the work is the questioning of the notion of instruments adding their 'voices to the sound of the crowd' or being one meta-identity. A specific example of this occurs in the form of interplaying enharmonic fingerings, most notably in the first violin, at rehearsal mark 2. The first violin intones a unison E $\sharp 5$ across three adjacent strings (fig.2.1.). Each string produces a slightly different timbre. String I is resonant and bright when played open. The unison on II, a perfect fifth above open, is still bright but possesses slightly less 'bite'. Additionally, III intones a minor seventh above open, offering a darker sound. In combination with uneven string heights (whilst depressed), an oscillating, yet static gesture is created, where the perspective changes around a central pitch. Compounding this broken identity within the first violin, is the second violin which harmonises a lesser-minor second above, on string II.



figure 2.1. Violins 1 and 2 interplay, *Immolation (in water)* (2015) bars 21-22

This duo is rationalised by scaling identity out of one instrument into another, creating a complex layering. Later, the flute joins the duo, playing triplet quavers and further expanding the idea. Similar identity blurring permeates the entire accompanying portfolio of compositions. Works for solo instruments could be unpacked and evaluated in terms of how identity and interconnectivity operate. The relationship of the *self* to the *Self* opens possibilities for rumination on the narratological significance of events in a solo work, contrasted with those in a group context. In this work, both ideas are unpacked and explored individually and against one another: soloist; soloist within a group; group within ensemble; ensemble as a whole; etc.

Another example could be highlighted in the percussion part (bb.136-137), where multiple gongs are scraped in one long *glissando*-like motion. The gongs (and tam-tams) are all of

varying sizes and timbres and therefore form a scale of sorts. This expansion is spread across five different instruments with very similar identities and constitutes the same approach as with the violin example above.

SOLO
triangle beater +
superball handle scrapes

'gliss.'

p

5

superball scrape

pp ————— *mf*

figure 2.2. Percussion identity, *Immolation (in water)* (2015), bars 136-137

This work was composed in a somewhat improvisatory manner. Unlike later works, such as *pulse*, where proportions are mathematically derived, the pacing here is still very much felt and transcribed. Harmonically the language is contrived similarly to *Beneath Fallen Skies*, and is also entirely intuitive. Significantly, this was the first opportunity during the research where the addition of microtones became possible, blurring twelve-tone equal temperament. The work is successful and met many objectives, but is still situated closely to teleology. The structural approach, does however, offer insight into a 'deconstructive' thinking when dealing with archaisms which one wishes to break with. This, among other groundworks laid here, provides new and challenging methods of dealing with conventional approaches. The most useful discovery here is the experimentation with instrumental identity in varying contexts. This becomes a central instrumentation (and material) approach for all subsequent work in the accompanying portfolio.

3 – *unsettled paths* [2015]

unsettled paths (2015) was commissioned by NEW Sinfonia. This was the first time I had worked with this ensemble, but knowing the performers were all conservatoire trained, I decided to utilise unconventional approaches in instrumentation, notation and structure. This work develops some unused ideas from *Immolation (in water)*, such as the notion of an unfolding structure and a more expansive use of hyper-chromatic pitch. Largely the structure was influenced by a quotation from Umberto Eco:

Consider a series of things A, B, C, D, E, analyzable [sic.] in terms of component properties a, b, c, d, e, f, g, h, so that each thing can possess some of the properties of the other, but not all of them. It is clear that, even with a short series we find a parenthood between two things that have nothing in common, provided they belong to a universal chain of uninterrupted relationships of similarity. At the end, no common property will unite A with E but one: they belong to the same network of family resemblances.²²

Eco's argument, translated into a musical context, posits the notion of a structure which, through unfolding, activates an object's extinction. A new object is now formed from the rubble of the now-extinct original. As each sectional repetition cycles, it is changed or disrupted until eventually the material becomes something different entirely (see: opening bars, rehearsal marks 8 and 18 for comparison), yet is still connected to the original. This method is better understood over time, mnemonically and as material accrues. The potential of this approach allows for the creation of an inherent self-reflexivity possessing multiple, (even infinite iterations of) identities. Additionally, the structure of *unsettled paths* comprises intermeshing operands in different ratios. The structural sections (11:15) interfaced with harmonic fields (7:15) and tempos (11:15).²³ In terms of content, structural blocks are formed from loosely outlined gestures. Tempos are metrically related, forming a continuous loop. Simply, this method controls the mechanical relationship between different types/functions of materials. The nature of such an interaction suggests a coexistence of these objects rather than their melding.

²² Eco, U. 1994, p.31

²³ Initially the work was commissioned to be approximately fifteen minutes long, therefore all ratios were measured against '15'. The 'tempo ratio' relates to the marker for change, not the crotchet value itself - see A1-3 in figure 3.1.

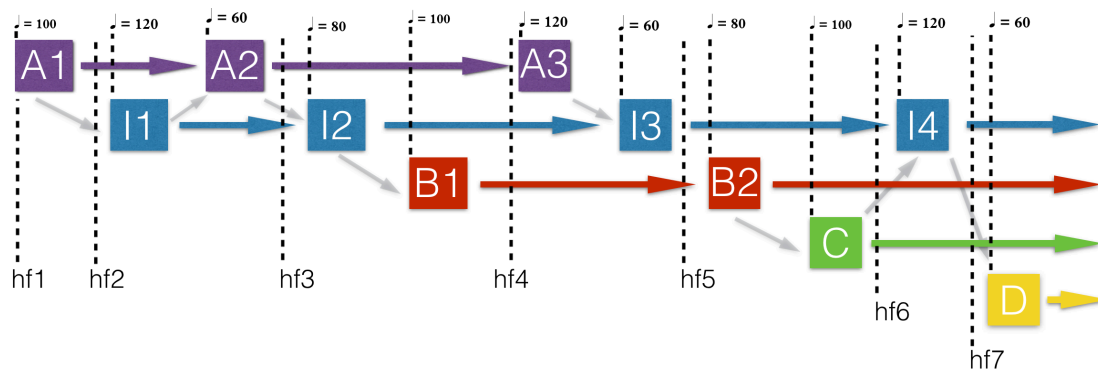


figure 3.1. Structure and pattern interaction between operands, *unsettled paths* ²⁴

Exo- and endo-metric notation are interchanged throughout the work. The 'A' sections and 'D' section are situated exometrically and the remainder is conventionally metered. 'Free time' is scaled, relating to entire sections, some of which are open-ended with the final moments being repeated *ad lib* or pausing with an untimed fermata.

In exometric sections, players are given fragmented material in box notation and a full score (rather than parts) with orientation lines.²⁵ Unlike a freely cyclical system, this notation means that polyphonic relationships will always work freely but within certain tolerances. An expectation of anomaly is embedded into the prescriptive notation which emphasises the desired pulse-less-ness. I also experimented with the notion of clashing trained classical musicians with 'improvisatory' material and the effect of this on communication. Without the guidance of the bar lines, it was interesting to see the friction in performance, especially in such an ensemble, with each instrument so exposed. Box notation was used as a compositional exercise to explore a more object-orientated layering of material.

I had chosen to 'break' the ensemble using extended techniques, despite being fairly new to these types of concepts and methodologies. I had not yet engaged with the music of Helmut Lachenmann, Mark Andre and Pierluigi Billone, among others, who would later become influential to my practice. Extended techniques in this work were intended as another communicative experiment to examine how the players would react in addition to being placed within an uncomfortable notation system. Perhaps the most notably unusual

²⁴ Smith, A. 2016: "hf" indicates the harmonic field. The use of 'I' is from the original nomenclature, meaning 'intermezzo', used in the planning stages of the work.

²⁵ This is not dissimilar to Lutosławski's (1913-1994) 'aleatory' music. See: Bodman Rae, C. 1999, Chapter 4

technique (visually as well as aurally) is the harpist's use of a bow on the low strings at rehearsal mark 47 (p.56).



figure 3.2. Harp bowing, *unsettled paths*, rehearsal mark 47

Another example occurs between the violin and violoncello where various 'toneless' bowing techniques are used (e.g. pp.1, 2, 29, 42, etc.).

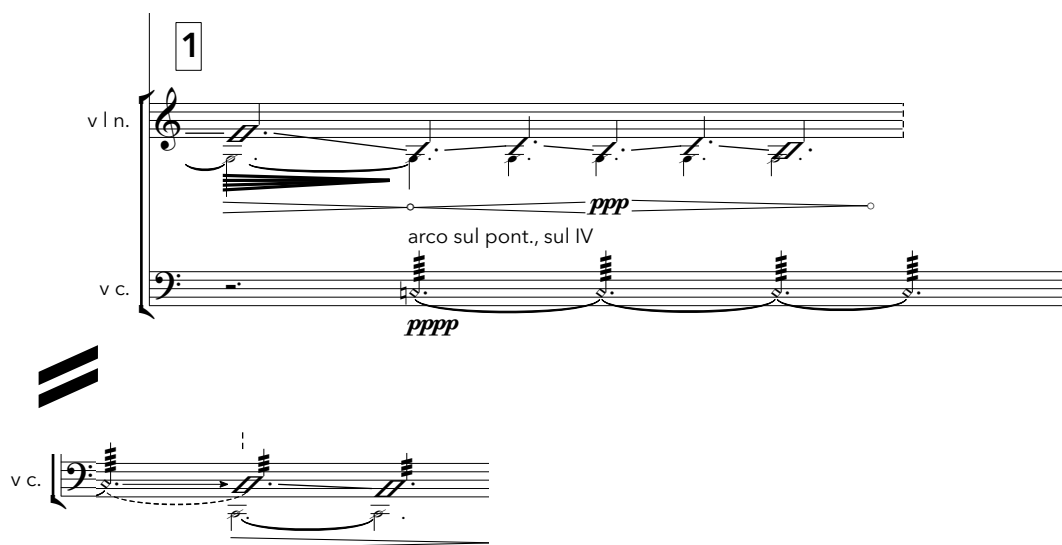


figure 3.3. Violin and violoncello, 'toneless' bowing, *unsettled paths*, rehearsal mark 1

These two examples were specifically important to my development. They exhibit a methodology which is searching for a means of utilising orchestral instruments in quite unconventional ways, in order to greatly expand the available palette of sounds. Specifically, this is in the form of extended techniques. From another perspective I would also argue that this unpacking of the ensemble was an important step in my better understanding the dialogue between composer, score and performer.

The harmonic methods used in the previous two works were intuitively derived. I felt it important to use a method which could be developed across subsequent works, where a loose system could be applied creating a consistency and logic in the harmony. Fields of nine-note 'active' harmonies were used for *unsettled paths*. The selection of these pitches is based in interval substitution which leaves three 'inactive' pitches. The notion of a

progression is circumvented because the harmony remains localised within the harmonic field, i.e. it is almost entirely static. The nature of this language also negates any real sense of transition. Seven harmonic fields in total are traversed.

figure 3.4. Seven harmonic fields, *unsettled paths* ²⁶

Ultimately, the hyper-chromatic approach used in *unsettled paths* is less tentative than in *Immolation (in water)*. Microtones are intuitively added to harmonic fields, often ornamentally blurring a single pitch. At this time there was no structural functionality or systematic governance selecting how these pitches would be used.

In figure 3.5., the harp's pentachord, beginning at the '*rit.*', collapses into a scaled down version of itself in the other four instruments. This moment approximately centres around an E \flat . The flute plays an E \sharp , the clarinet a (sounding) D \flat , the violin an E \natural and the violoncello plays D \flat /E \flat . There is, however, no appearance of an E \flat whatsoever; it is only inferred.

²⁶ Harmonic fields are always represented in a closed format for convenience. Pitches can be placed in any octave. (This is applicable to all of my works except for *eigengrau*, [see chapter 7])

figure 3.5. Microtone introduction, *unsettled paths*, page 4

The violoncello disrupts the temporal perspective, pre-empting the E \sharp 's collapse. The C \sharp belongs to the harp's *mezzo forte*, G \sharp gesture. It acts as synthetic resonance whereas the E \flat is at the leading edge of a ripple, stemming from the D \sharp /E \flat (clarinet and violin, respectively), but now made distant. This perspective approach becomes a much used feature in my creative practice from this point onwards.

The symbols I have chosen to notate hyper-chromatic pitch are representative of conventional sharp, flat and natural signs. I believe that this promotes legibility for the player - a literal extension of their norm. Occasionally, I use inflectional natural signs (fig. 3.6. (b)), where enharmonic spelling and context permits.

figure 3.6. (a) Hyper-chromatic pitch notation (b) alternative notation

Returning to the issue raised in the introduction, there is no governing logic in place here which questions the functionality of such a system. I no longer endorse the method employed in *unsettled paths* to break with equal-temperament. The harmonic fields'

construction itself is solid, although the inclusion of microtones is somewhat arbitrary. Leading on from the research done in this work, a more inclusive system was subsequently created for *out of reach, but seen by us both*.

Although still fairly conservative, the work uses some experimental ideas and methodologies, which were then entirely new to my compositional language. *unsettled paths*, therefore, was a successful work on many levels. It used: an unfolding, self similar structure; a composite approach to orchestration, etc. One of the work's shortcomings was the experimentation with the addition rather than integration of microtones. Overall, the approaches taken in this work were usefully heuristic in nature. All of the structural methodology is entirely adaptable to different situations and may be useful to others interested in pursuing a similar approach in their work. Additionally, this work proves (in this context) that restrictions on some aspects of a work can be used positively to guide the outcome. Similarly, entirely free approaches bring an arbitrariness, which for this work, is undesirable.

4 – *clouds, so to speak...* [2015]

clouds, so to speak... was commissioned by the Royal Northern College of Music for the 2016 Chamber Music Festival: *Songs Without Words*.²⁷

All of my works discussed so far have shared a common objective of distorting the sense of discernible pulse and to a degree, regular rhythm. *clouds, so to speak...* goes further towards solidifying a method of creating a dynamical, rather than a static, pulse and rhythm. I have long held a scepticism about the way pulse is used in music. In a sense, the argumentation here is of a similar nature to my problematising harmonic progression and equal-temperament.

Aesthetically, I find even pulse repetition for long periods of time, bland and square. The same could be said for rhythm, where I prefer something akin to natural conversation rhythms or erratic movements within a body of water. My conception of musical time focusses less on a unilateral perspective with neat, equal divisions and more on the notion of a pulse language ebbing and flowing with absolute fluidity. I find more appeal and compositional interest here, especially in how one could develop the pulse/rhythm language as a communicative vehicle for the players and the receiver. As in the harmonic language, I am aware that composers such as Ligeti have used similar approaches in the past. Again, I am avoiding (where possible) engagement with past models, focussing entirely on creating an approach within my own language. To some extent, this has been explored in different ways, in all of the works discussed so far.

For *clouds, so to speak...* I had hypothesised the notion of creating rhythmic outlines of pulses, alluding to the 'pulse-proper'. In creating the initial sketches, I used a hocket to skew any sense of regularity (fig.4.1.). The sounds achieved with this technique are somewhat antithetical to what one would perhaps expect from a harp quartet. Swarm-like rhythms ripple outwards from phased pulses between the four players. This method nullifies the regularity and location of pulse, without abandoning it entirely.

Communicatively, there are two levels of perception of which I was conscious when composing this work. The first questions how the performer will perceive and perform this

²⁷ A requirement of this commission was that the work had to be, in some way, related to Mendelssohn's *Lieder ohne Worte* (1829-45), which is why the structure falls into a ternary-like form.

type of rhythmic material. Attempting to perform it accurately would be tricky and would invite a preoccupation with rhythmic exactness and interlocking within individual parts and as an ensemble. In reality, the effect would likely be quite sterile and not the desired, fluid outcome. Instead I chose to rewrite the material exometrically, inviting the performer to play within a margin of error: Bar 1 offers a reference point for the approximate crotchet speed. Then metres are removed. The players then repeat their individual phrases, *ad lib*, with each phrase equalling a $\frac{2}{4}$ bar. The cells are designed to operate in such a way that the players drift out of phase. In this instance the result was particularly effective, giving the appearance of ripples similar to when a pebble is dropped into water. This effect is actualised in true non-linear time, in that the after-effects are heard before the central event (approximately crotchet pulses, in this instance). To create larger 'ripples', the pitches in some parts are displaced by an octave to allow movement but not so far as to distort the static harmony. After sketching the opening material initially in metre, I decided to free the players entirely from it in the outer sections (see figs. 4.1. and 4.2.).²⁸

Another byproduct of repeating material in this manner for each player, is that there is always a fluid polyphony. I consider pulse as a practical tool for assisting in performance coordination rather than as a musical effect and in this instance I found a method of utilising it in a much more fluid and unusual way than normal.

figure 4.1. Initial sketches of pulse blurring, *clouds, so to speak...*, (excerpt)

²⁸ The central section of the work uses conventional metre.

fast, murmuring, liquid
♩ = 100

molto accel.

harp 1
p.d.l.t., poco a poco...(*)
pp

harp 2
p.d.l.t., poco a poco...(*)
pp

harp 3
p.d.l.t., poco a poco...(*)
pp

harp 4
p.d.l.t., poco a poco...(*)
pp

figure 4.2. Final version of blurring pulse, *clouds, so to speak...*, page 1 (excerpt)

The second level of communication comes from the way in which pulse and rhythm are disrupted. Particularly within this work (but featuring in some of my other works), the pulse is alluded to but not entirely discarded. The creation of a Xenakis-like cloud consisting of interacting textures without discernible pulse, in a sense, is not creatively challenging.²⁹ Rather than abandoning the pulse entirely, I aimed to change its morphology and the manner in which it is used. As a listening experience, this method aims to hinder, rather than guide, the receiver. The resulting music is not quite clear, having a shadowy, palimpsest-like appearance. A connection could be made here with electronic music, where samples could be stacked and spliced, synthesising out of phase materials.

A connection has been made in this work between rhythmic and harmonic materials. Because of the discrete repetition in individual parts, clashing with the overall interaction of the four players, harmonic relationships change. An ascending interval on the first cycle, may be transformed into a descending interval on the second, for example. Therefore, the eight-note

²⁹ Many of Xenakis' works use this approach. I am however, referencing *Pithoprakta* (1956) specifically for its use of statistically derived material formed into dense, slowly moving textural clouds. A similar result could now be quickly created with a program such as IRCAM's *Open Music*.

harmonic field always remains the same but localised harmonies are given perspective space. In turn, the static nature of the singular harmonic field draws attention to the more active and dynamical rhythmic writing.

I treated the relationship between the players much like a solo instrument with many identities. Because of the extreme limitation of timbral variety, yet excellent blending of this ensemble, a meta-instrumental approach is quite natural and effective. Both the harmonic and rhythmic languages (which interlock) help contribute to this.

This work clarifies methods of a complex rhythmic language which is employed in an unrestricted manner. I also set out to explore the way in which pulse and rhythm are communicated in the score. Here, exometric notation frees up the players and adds to the overall effect. There is a link to electronic music again here, where samples can be freely distributed into any point within the digital space. Sketches, are integral to my process (see fig. 4.1.).³⁰ I prefer to write lots of material quickly, i.e. physically getting material onto the page and then refining it gradually. Sketching is a practice which, up until composing this work had been seldom undertaken (as mentioned in Chapter 1).

This work is a case in point for using an abstract idea which has been experimentally executed in various ways and then filtered through rigorous examination, to find the most effective notation. I would like to re-use this rhythmic idea in the future, both in a solo work and in an entirely electronic work, in order to experiment and see the differing outcomes.

³⁰ This approach differs considerably from a conventional Western Classical notation, whereby parts are locatable by metre, bar lines and pulse upon a background canvas (the staves).

5 – *out of reach but seen by us both* [2016]

out of reach, but seen by us both was commissioned by the Alba Music Festival in early 2016.

This work continues the exploration of integrated hyper-chromatic pitch, which was a methodological shortcoming in my previous works. For *out of reach, but seen by us both*, I chose to solidify and extend the type of harmonic system used in *unsettled paths*. This updated (and extended) harmonic design uses intervallic outlines to create harmonic fields—a major sixth interval, for example, would form a field containing all pitches (including hyper-chromatic) between C# and A#. There are seven harmonic fields throughout the work, ranging from minor seconds up to major sevenths. Each field has a central pitch which is characteristically different from a 'key centre', but shares a broadly similar purpose. These central pitch guides are transposed by varying intervals to somewhat randomise the harmonic content.³¹ Unlike *unsettled paths*, the harmony here is more vibrant and cohesive because the arbitrariness of pure intuition has been removed, whilst the freedom to improvise within the 'boundaries' has been retained.

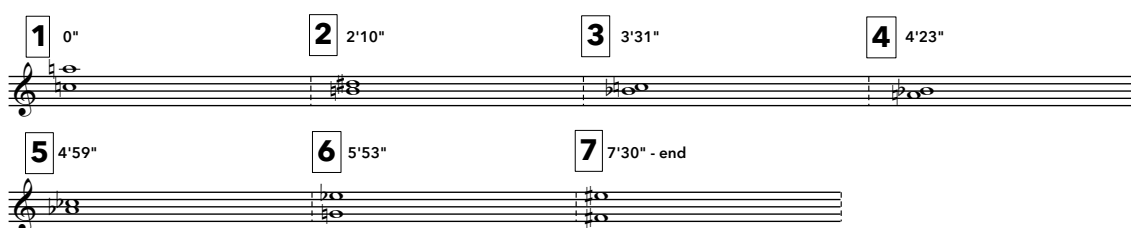


figure 5.1. Seven harmonic field outlines, *out of reach, but seen by us both*

During the initial stages of composition, I attempted to systematise the pitch content, purely as an experiment (fig. 5.2.), within my overall system of harmonic fields. Each of the three instruments would occupy a certain portion of the harmonic field and a specific register. These positions were interchangeable through mechanical permutation fed by the proportional timings of the work. This was an unsuccessful experiment because of the overly constrictive nature of this type of systematisation. I have not employed anything similar since when dealing with pitch.

³¹ These are the lower pitches of each interval in figure 5.1.

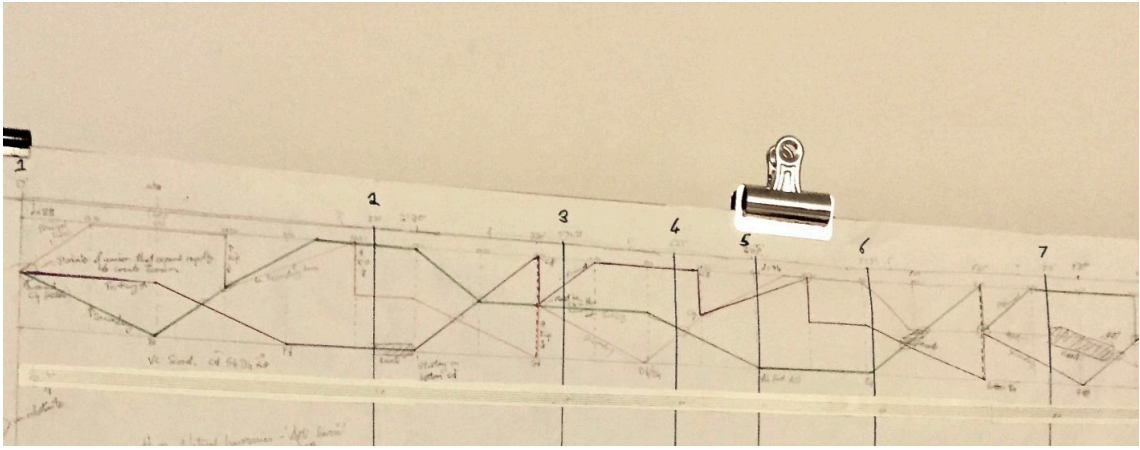


figure 5.2. Pitch systematisation plans, *out of reach, but seen by us both*

The harmonic material in this work is considered an interface between intention – gesture/ timbre – player – and the eventual receiver. In bar 88, for example (fig.5.3.), the harmonic content becomes entirely subservient to the gestural morphology.³² The violoncello’s gesture in the centre of the system is not intended to sound exactly as notated. Similarly, the piano writing is intentionally, harmonically vague, although rhythmically precise. The desired effect for the receiver, in both instances, is to hear the outline of altogether blurry gestures rather than anything more defined. Here, I am effectively delegating improvisatory freedom to the performers. Within strictly set boundaries they will create idiosyncrasy and colouration, unique to the individual and therefore, to each performance.

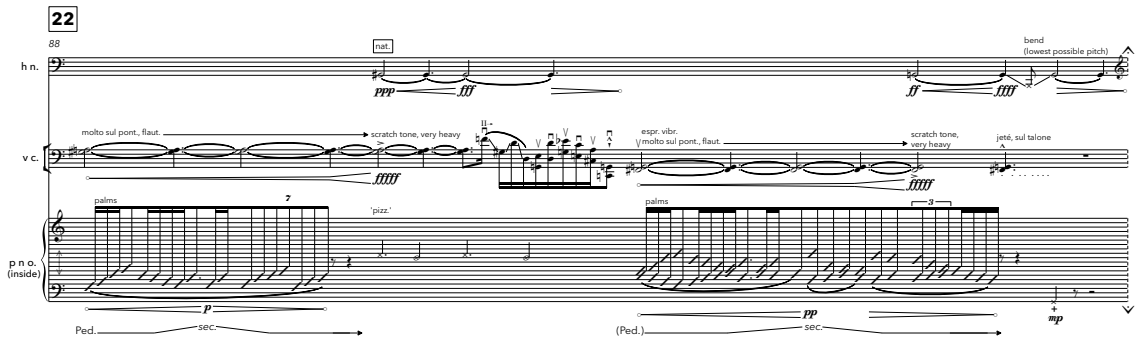


figure 5.3. Harmony as ‘interface’, *out of reach, but seen by us both*, bar 88

This work focusses particularly on an exploration of the individual instruments, although specifically within a meta-instrumental context. Each member of the trio subsumes the others blending into one. This meta-instrument is designed around a sort of additive synthesis

³² This is common throughout the work, but is especially prominent after bar 52.

whereby the addition of one sonic object to another creates a new higher-level hybridised object.³³ Ford states:

Timbres can be constructed by adding specific pitches at specific dynamic levels and at specific moments to a fundamental tone. This process is called “additive synthesis,” and was first explicitly used in the field of electronic music. Most composers of spectral music synthesize timbres with an orchestra or ensemble; however, their goal is not to recreate the exact timbre of the synthesized tone, which is impossible because every instrument produces its own harmonic spectrum. Instead, they aim to create a hybrid sonority, in which the listener can perceive the various individual instrumental timbres as well as the collectively synthesized timbre. Additive synthesis allows composers to blur the line between timbre and harmony to a point of nonexistence.³⁴

One particularly notable example of this ‘compositing’ occurs between bars 25 and 30. It should also be noted that the temporality here is entirely fluid and that the rippling, rhythmic effects used in *clouds, so to speak...* are present throughout the passage. In effect, the piano’s entire phrase is built from short exometric gestures which have an ascending trajectory. Ascension is mirrored in both the horn and violoncello. In these instruments the temporal effect is displaced by elongating the gestural shapes. To distort the sense of linearity in the horn and violoncello, the piano is at a higher, more stable dynamic level. Because the swells in the horn and violoncello are offset against the relative stability of the piano, the relationship between fore- and back-grounds (i.e. perspective), frequently changes.

To improve balance between layers, the voicing has been carefully planned, although the timbral space is filled in where possible. Here, the violoncello begins, entirely obscured by the piano and gradually emerges towards the end of the phrase. On the other hand, the horn almost enters with the piano, unobscured.

The horn and violoncello both hyper-realistically elongate the piano’s relatively short attacks, even when the sustain pedal is used. So, in this instance, the piano assumes the role of actuator, whereas the horn and violoncello become a synthetic means of resonance.

³³ Compositing is utilised innumerable times across the body of work in the accompanying portfolio. It is a main feature of my orchestral ‘style’. This is merely one example.

³⁴ Ford, M. 2015, p.11

This method, as stated by Ford, aims to add an extended dimensionality to the listening. By juxtaposing, there is an exploration of identity (as in *Immolation (in water)*) which questions the nature of the relationships within soloists and between members of an ensemble.

figure 5.4. Composite phrase, *out of reach, but seen by us both*, bars 25-30

The colouristic possibilities of composing in this manner are vast and plentiful. This conception is based around a loose, imaginary ‘Attack, Decay, Sustain, Release’ envelope (fig. 5.5.). Within this technique there is an opportunity to explore ordering and juxtaposition of the components of a particular sound or gesture.

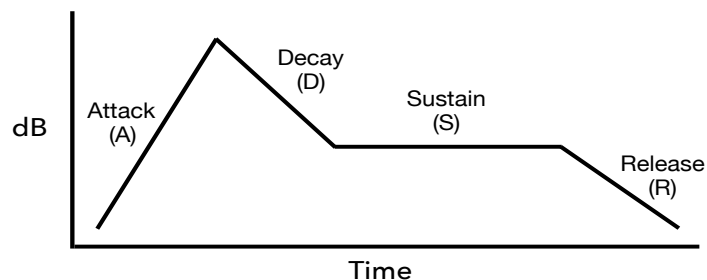


figure 5.5. ‘ADSR’ (Attack, Decay, Sustain, Release) envelope diagram

What is particularly important in this composing methodology is the notion of acoustical impossibilities or ‘hyperrealisms’, which can be synthesised by using this four-component envelope.³⁵ Composited synthesis may be used to achieve ‘impossible’ or ‘altered’ outcomes (fig. 5.6.). One could create a resonance before an attack has taken place, for example, through re-ordering ‘ADSR’ and interchanging the four elements.

³⁵ Hyperrealism, in this context, is defined as: ‘over-real’ or the state of a construct after adding artificial materials to those which are real.

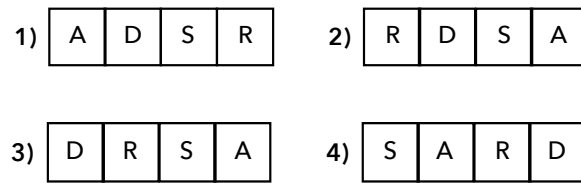


figure 5.6. Some examples of possible re-orderings of 'ADSR'

In terms of amplifying or exaggerating timbres, volumes or articulations, a gesture itself may be simply augmented to a state of hyperreality. A particularly notable example of self-similar compositing occurs in the third movement of Alban Berg's *Fünf Orchesterlieder, nach Ansichtkarten-Texten von Peter Altenberg* (1911-12). Bar 16 sees the mezzo-soprano's material modulate into being 'unpitched', marked 'tonlos' at *pianissimo*—a whisper. The text reads "plötzlich ist alles aus...", with the emphasis being placed on the consonant 's' at the end of "aus". Here, Berg neatly blends the tam-tam, played with soft mallets (*Schwammschlägel*), with the hissing, whispered "s" of the mezzo-soprano. Importantly, the tam-tam has a complex overtone spectrum, like a bell. I read this as a self-similar reference to the clustered harmony which begins the movement and subsequently returns in the second system of figure 5.7. It is an effective conduit, achieved through compositing, between voice and orchestra.

16

15 *noch zurückhalten* Mäßiges Tempo (♩)

Le - ben und Traum vom Le - ben plötz-lich ist al - les aus . . .

20 *noch zurückhalten* Mäßiges Tempo (♩)

Ü - ber die Gren - zen des All blickst du noch sin - . . . nend hin - aus!

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figure 5.7. Berg, *Fünf Orchesterlieder*, nach Ansichtskarten-Texten von Peter Altenberg, page 16 ³⁶

At the time of composition, I was unaware of who the horn player would be for this project, therefore I chose to write quite conservatively, but within a specific framework: Although the approach to the horn writing was somewhat preordained by my lack of knowledge about the player, I could rely upon certain playing techniques. Horn harmonics, for example (fig. 5.8.),

³⁶ Berg, A. 1953 p.16 [Alban Berg „5 Orchester-Lieder[nach Ansichtskartentexten von Peter Altenberg]für mittlere Stimme und Orchester[op.4“ © Copyright 1953, 1997 by Universal Edition A.G., Wien/UE 34123]

are an effective method of creating microtonal content. The link between the score and performer is important here: knowing the player would have knowledge of harmonics because of their fundamental importance in horn playing, meant that I could 'safely' include them in the score whilst still creating the desired effect. Despite introspective thought being important in my process, this is a notable example of where the practical dimensions have informed the writing and consequently (positively) affected the aesthetic results.

The violoncello and piano parts, on the other hand are slightly more complex and adventurous, owing to my awareness of those performers' abilities. The piano writing is also particularly notable as it represents a developmental leap forward from *Beneath Fallen Skies*, which was conventionally scored. I wanted to explore the identity of the piano, crossing over from the keyboard to the inside. This technique also mirrors the structural methodology in *Immolation (in water)*, where two ideas are crossed and their perspectives contrasted.

out of reach, but seen by us both extends and expands upon rhythmic and pulse approaches from earlier works. Exometric notation is used throughout, albeit differently than in *Beneath Fallen Skies, clouds, so to speak...* and *unsettled paths*. The latter was somewhat problematic for the performers because of the use of discrete boxes, so for *out of reach, but seen by us both*, I used dashed coordination-lines. This proved to be an effective solution. To further assist with the interpretation, performance scores have been provided rather than individual parts.³⁷ Approaching rhythm as an entirely fluid matter was key to the composition of this work. Whilst there are (mainly) crotchet pulses throughout, this is an underpinning only and not the central focus for a receiver. At a few points, strongly audible crotchets are used to cleanse and locate the otherwise fluid and polyphonic language. Furthermore, interest is generated by the fermatas which bookend the phrase (fig. 5.8.).

The image shows a musical score for three instruments: horn (h.n.), violoncello (v.c.), and piano (p.n.o.). The score is marked with a tempo of quarter note = 88. The horn part features three instances of 'horn in D1' and 'horn in E1' with dynamic markings of pppp, ppp, and ff. The cello part has a ppp marking. The piano part includes a ppp marking and a 'Ped.' instruction with a 'sost. Ped.' marking. The score is divided into measures by vertical dashed lines, and there are fermatas at the beginning and end of the phrase.

figure 5.8. Crotchet pulse example, *out of reach, but seen by us both*, page 4

³⁷ Again, there is a link, but not a direct copy, of Lutoslawski's aleatoric techniques.

Pulse and temporal division, as in all of my music, is a highly important construction tool here. This emphasis is not intended to be observed upon the surface: instead it is often discrete (*Nebenstimme*), being brought to the fore only occasionally (*Hauptstimme*).

This work provides a strong guide for working with unknown variables and being able to tailor the situation to favour the aesthetic outcome. The exometric approach taken here is entirely different to earlier uses in my work and is in some ways a strong development. Harmonically, the methodology is much cleaner than before and has further possibilities for application in many different contexts. Particularly within my own research this work provides a neat juncture point between works composed early in the research and works composed later. The approaches taken in this work, whilst clearly a development and continuation of earlier practices, are more adventurous and musically interesting.

6 – *tied to silence* [2016]

tied to silence was written for a workshop with London Sinfonietta in early 2016. Here, I attempted to define silence formally for the first time.³⁸ The work is built from silent layers which separate fragmented gestural sections.

A creatively subtle approach was taken in considering the silence as sonically devoid or containing some very soft sound. In fact, there are no true silences in the work. Either, an instrument plays extremely softly, so much so, that one barely hears it, or, in the case of the piano, resonance is bled into silences when the pedal is held. In purely pragmatic terms, silences also function here as useful markers and points of orientation for performers. Structural or formal silences, such as these, form a metaphorical “boundary” between two separate objects or changing states.³⁹ Proportion and structure are disrupted by removing continuously flowing sound. Additionally, the material could be rearranged, functioning in any order. This structural methodology has no linear functionality and therefore, that type of thinking is irrelevant in interpreting this music. Arnold Whittall muses upon this notion:

[W]hen we listen to music, we understand it from moment to moment, and this moment-to-moment understanding is largely if not completely sufficient for the aesthetic appreciation of music. Except in a vanishingly small number of cases [...] listeners do not conceptualize [sic.] music in the architectonic manner the more old-fashioned type of criticism might suggest.⁴⁰

Furthermore, Michael Beil states:

[...lf] the *meanings* of a musical material are placed in the foreground, the aim of a composition is no longer the creation of a musical *structure*. This means that the strategies in dealing with these *meanings* constitute the real work of the composer.⁴¹

³⁸ Before this work, I had used silence mostly as a simple break in the sound, rather than as a structural tool.

³⁹ Margulis, E. 2007, p.252

⁴⁰ Whittall, A. 2000, p.8

⁴¹ Beil, M. 2012, p.9

The violent manipulation of the material in this work, punctuated by 'silence', is much more significant than receiving a conventional structure. Variations of this approach are returned to in *eigengrau*, *pulse* and *Dämmerung*. Silent interfaces as structural devices, feature in almost every work in the accompanying portfolio. Some time after completing this work, I discovered a marked similarity in structural approach, with Rebecca Saunders' *Vermillion* (2004). I have since come to admire Saunders' work and unique compositional approaches. Specifically, what now interests me about Saunders' music is the clearly intensive work on instrumental voicing and creation of sonic composites.⁴²

Because of the nature of this workshop opportunity with London Sinfonietta, I had no input into the ensemble, the only flexibility being that doubling instruments may be used. Wishing to explore this sinfonietta-type ensemble in a different way than I had previously (*Immolation (in water)*), I chose to use the optional doubling instruments in the woodwinds throughout: alto flute; cor anglais; bass clarinet; contrabassoon.

For balance in the approach and more contrast to my previous work, I also elected to have the entire string section detune hyper-chromatically (fig. 6.1.). This works on a practical level, assisting with hyper-chromatic pitch material for the players, and on an aesthetic level. Similarly, this approach allows for dense harmony in an easy and practical way.

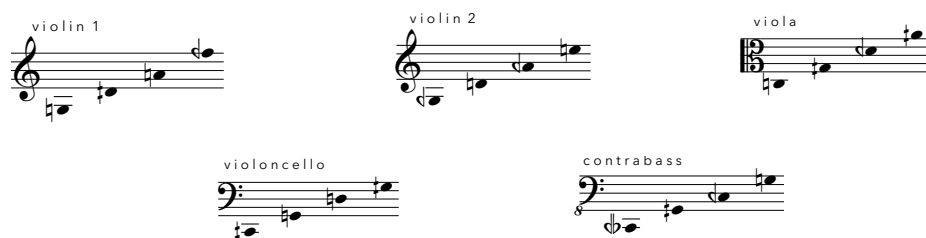


figure 6.1. String detuning, *tied to silence*

I explored the possibilities within the available forces by splitting individual instrumental identities into two or three separate states. The aim was to create an alter- (or shadow) ensemble within the main ensemble. In other words, I created different playing methods on instruments: air instead of pitch in woodwind, bowing on different parts of the instrument for strings, etc. This expanded palette of sounds is further extended with a *Klangfarbenmelodie*-like treatment. Often, single lines are split between several instruments (fig.6.2.). This

⁴² An example of unconventional voicing is in bar 14 of *Fury II* (2009), where a gradual build-up is broken suddenly by a quite unusually realised stabbing gesture. The voicing here is unique.

intermeshing is a continuation from the instrumental layering in *Immolation (in water)* and the rhythmical approach in *clouds, so to speak...*

The image shows two staves of musical notation. The top staff is labeled 'c. a.' and the bottom staff is labeled 'b. c. l.'. Both staves contain complex rhythmic patterns with various dynamics such as *pp*, *mp*, and *p*. There are also markings for 'ord.' and '3' above the notes, indicating specific performance techniques or articulation.

figure 6.2. Example of 'Klangfarbenmelodie' approach, tied to silence, bars 72-76

As a punctuation device, noise is a highly useful dimension of both structure and instrumental timbre. Both are utilised in this work. Schafer infers: 'In the ultimate lo-fi soundscape the signal to noise ratio is 1 to 1 and it is no longer possible to know what, if anything, is to be listened to.'⁴³ Furthermore, 'noise' is also used here in the form of silence, i.e. a structural noise (disruption). If noise is an interruption of a signal, then surely silence classifies as a type of noise. After all, silence interrupts a transmission (music, in this instance) in a myriad of ways.⁴⁴ An example occurs in the very first bar of (but continues throughout) *tied to silence*. The contrabass is instructed to perform a nearly toneless $C\flat_1$, lasting ten seconds.⁴⁵

The image shows a single staff of musical notation for the contrabass. The staff is labeled 'contrabass' on the left. Above the staff, the instruction 'sul pont., slow bowstrokes' is written. Below the staff, there is a dynamic marking of *ppppp* and a long, horizontal line indicating a sustained note.

figure 6.3. Contrabass opening, tied to silence, bar 1

Such a boundary is useful communicatively because the listener will see bow movement and expect sound to be produced. This 'prepared' silence between the beginning of the work and the fairly loud, stabbing interjection heard in the subsequent bar, communicates a heightened tension which would not exist had the work started directly on bar 2. It is notable that the performance aspect of physical gestures, such as the pianist silently depressing the keys during silences, adds to the overall theatrical effect. The term 'prepared' is used here in

⁴³ Schafer, R.M. 2009, p.33

⁴⁴ See Margulis, E. 2007, pp. 245-276, for definition of various different types of silence.

⁴⁵ Note the additional noise element of the minor second harmonic above the open string.

the conventional manner. In this instance, the silence (object) is prepared by the addition of extra information which changes its nature in some way.⁴⁶

This work was partially designed as a testbed for the subsequent work: *eigengrau*, for which it provided 'data'. Significantly, the methodologies developed around silence and 'noise' in both the structure and instrumentation, have since become prominent in my work (especially in *eigengrau* and *pulse*) and have expanded my conceptual understanding of identity and its morphology. This approach to silence has potential to be expanded in further research and could be used in a number of different ways, both in analysis and interpretation, as well as in compositional investigation.

⁴⁶ It is arguable that because of the addition of sound, this is no longer a silence. I would, however, argue that there is no true silence anywhere that human beings are able to go. Even in an anechoic chamber, sounds created by the body can be heard. In this instance, I am considering silence as an imaginary, idealised state.

7 – *eigenrau* [2017]

eigenrau is the first of two large orchestral works in the accompanying portfolio. Despite the significant increase in ensemble size and duration, many links can be made to my earlier works. The harmonic language, for example, is a development on a massive scale from *out of reach, but seen by us both*. Formally, the work borrows from both the unfolding of *unsettled paths* and from the punctuating silences in *tied to silence*. The composite nature of the instrumentation stems from *Immolation (in water)* and my other works. The rhythmic language expands upon the work done in *clouds, so to speak...* It also represents a point of departure which is more focussed on the particular effects of colouristic relationships and scaling than before. The main compositional objectives were to create absolute saturation of the aural space, leaving little in the way of interstices and also to explore both scaling and composing on a massive scale. Because of the large forces available to me for this project, I was able to explore ideas much more fully.

eigenrau's harmonic language is perhaps the best representation of the aforementioned saturation and large scale. Harmonic aggregates are derived from one large field covering a substantial portion of the orchestra's available range. The lowest pitch in the harmony, D[♭]1, falls close to the open IVth string of the contrabasses. The top note, C[♯]5, was selected to enable a large cross-section of the orchestra to play it comfortably within their ranges.

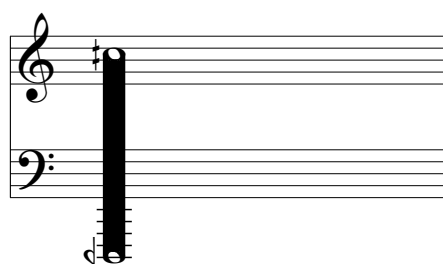


figure 7.1. Harmonic mass (compressed format) planning, *eigenrau*

The earliest drafts of *eigenrau* were printouts of the harmonic mass (fig.7.1.), blocked out with highlighters. These purely pitch-based experiments excluded instrumentation, instead focussing on form and harmonic structure. In terms of compositional process, this type of visual technique has been used throughout the research because it helps to understand the material from an alternative (non-sonic) perspective which is useful for sketching and conceptualising. Partially, this approach was a conscious effort to avoid making a pastiche of Ligeti's large scale polyphonic sound-mass works, e.g. *Requiem* (1963-65). This work is a

labyrinth of micropolyphonic canons and relies heavily upon linearity rather than harmonic block forms.

Eventually the harmonic mass of this size was discarded because of its impracticality. As a space becomes ever more saturated, the effects of adding more pitch material become nullified. Even with triple winds and a substantial complement of strings (divided solo), this mass would have been difficult to utilise effectively and musically.

In its final form *eigengrau* uses resultant harmonies, i.e. overlapping divisions of a 'meta-harmonic field'. These resultant harmonies are built from smaller, modular aggregates, therefore an added degree of complexity exists in the harmonic structure. Throughout the work, these overlapping aggregates outline (conceptually) a huge harmonic mass. In reality, the most dense moments in the work only contain around forty pitches.⁴⁷

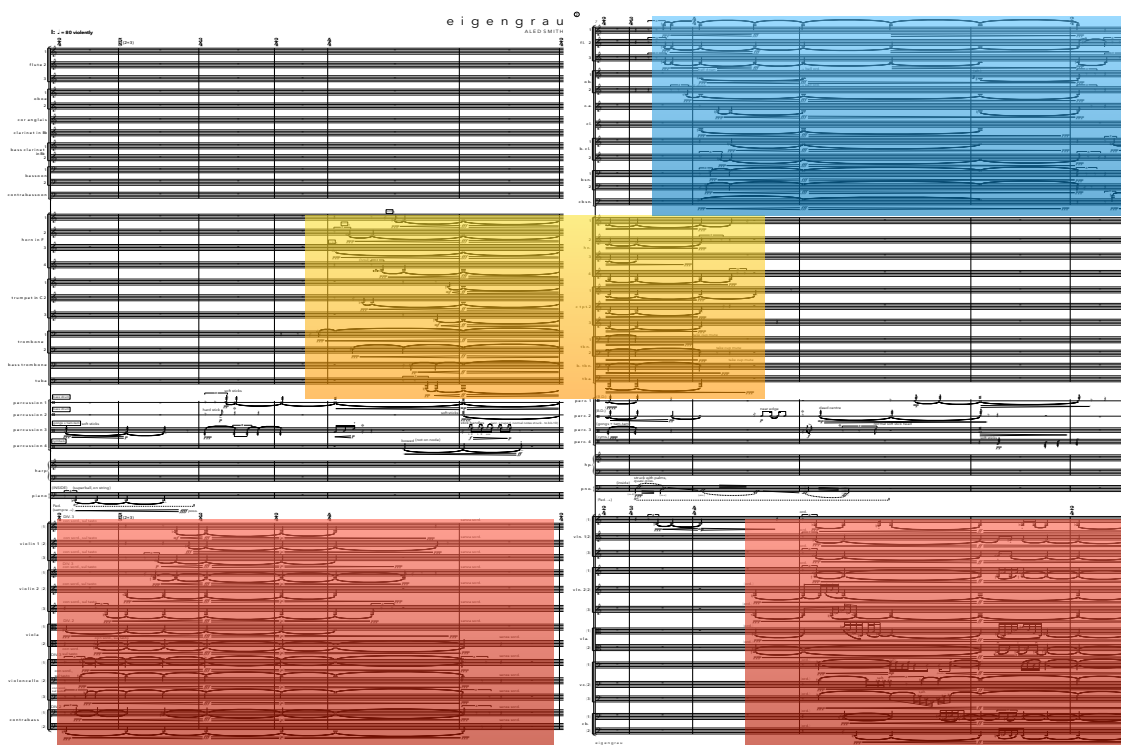


figure 7.2. Outline of aggregate harmonic blocks, *eigengrau*, pages 1 and 2

Rendered, there is so much pitch material that the overtone series of the sounding harmonic mass is completely saturated, negating individual pitch data. This intrinsic saturation limits audible pitch movement. Unlike in earlier works, the harmonic language here emphasises bold blocks rather than smaller, more precise pitch sets. Gestural flair and morphology take

⁴⁷ Bars 34-45 and 126-132 exhibit similarly dense harmonic gestures.

precedence over pitch relationships. The original intention of working with such a technique was to create imperfections in such a way that there would be a sense of development within a static framework, contrary to a harmonic progression. Another byproduct of this method was that the saturation of pitch became timbral rather than harmonic. Each of the eight sections has its own harmonic field language, although this could be considered a scaled range of 'accents' within a meta-harmonic language. This *carte blanche*, through saturation, pushes the harmony toward the background of the soundscape, prioritising other elements. In this context saturation is being used as a distortion or noise filter, to disrupt the intended/original signal.

Although removed from *eigengrau*, a notable example of 'harmonic noise' sacrificed for gestural prominence, occurs in bar 35 of Georg Friedrich Haas' *String Quartet No.1* (1997). The violins and viola leap upwards violently. The trio plays the same descending patterns as before but the pitches are of such a high tessitura and close proximity that they become decontextualised and indistinguishable. This forms a texture where the overall timbral effect is more audible and gesturally important than the individual pitches.

figure 7.3. Haas *String Quartet No. 1* (1997), bars 33-39 ⁴⁸

I wanted to explore methods of morphologically deriving structure and scaling of gestural material. This conceptual space is built from multiple orbiting and interlinked nested

⁴⁸ Haas, G.F. 1997, p.3 [Georg Friedrich Haas "1. Streichquartett[für Streichquartett]" © Copyright 1997 by Universal Edition A.G., Wien/UE 31138]

structures. Small fragments of material are scaled to produce outlines for large sections and vice versa. Scaling and gestural morphology is a strong solution for creating a-teleological structures, provided that there exists some kind of traceable behaviour or property interconnection embedded in the construct.

eigengrau's 'kaleidoscopic structure' uses material emanating from a single 'germ' (bb.1-5). Each section has an individual character and material whilst still maintaining a strong self-similarity and autosemiosis. The work centres around a single sound-mass-object which is explored in depth and from many perspectives. The 'prime form' of the object is $\left\langle f \right\rangle$ and is disarmingly simple. The work was conceived around this idea, which was visualised internally during the composition process. Even without pitch or instrumental content, there is a clear shape which is easily pliable and adaptable to most situations. Articulable, autosemiotic and scalar processes in *eigengrau* are too numerous to list. One such example is between bars 104 and 105. The initial crescendo has been dropped entirely from the gesture. It begins on a louder dynamic and gradually diminuendos to a softer one. In this instance *mezzo piano* to *pianississimo* (highlighted green fig.7.4.).

The extreme staggering of entries is a self-similar gesture which imagines many layered 'prime form' swells, at slightly different times. Again, this idea appears frequently throughout the work, in many guises (highlighted orange fig.7.4.).

figure 7.4. 'Kaleidoscopic autosemiosis', *eigengrau*, bars 104-105

Additionally, this structural design hypothesises a notion of being able to play the work on a loop and enter or exit at any point, without contextual loss. The filling in of vertical space similarly negates any real sense of markers for orientation.

eigengrau uses silence as a boundary layer, defining individual sections and creating articulation. Section III, for example, is broken into a repeating phrase which gradually expands, permeated by silences. Between sections III and IV there is a 'prepared silence' which functions as a switch from 'circular-' to 'linear-time'.⁴⁹ This structurally informed, rhythmical approach to gesture is based on a central 'column' with a durational range, separating two 'wings'. The wings are formed from staggered, usually locally-micropolyphonic, entries and exits. Essentially, this method derives from *clouds, so to speak...* where ripples create localised packets of rhythm. *eigengrau* almost exclusively uses this approach. Entries are cracked, creating a blurred, phased effect in overlaying voices. This aims to disrupt any real sense of epicentral concreteness in the pulse language but also serves rhythmically. A five-voice example of this gesture can be seen in figure 7.5. The D \flat in the central staff represents the 'column' and the outer staves show the staggered entry 'wings' (green and red).

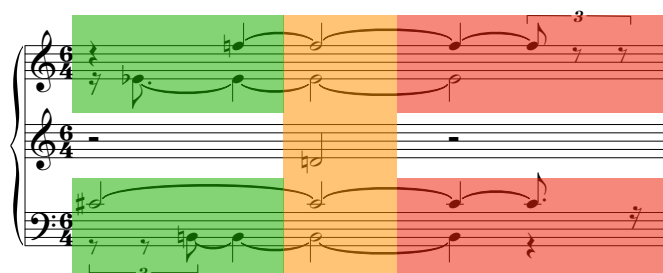


figure 7.5. 'Column' gesture example (generic)

eigengrau, culminates many aspects of the research up to this point, acting as a sort of 'proof'. This work's scale provided a clarity of intent for future work, where an emphasis has been placed on precision and more micro detail in the instrumentation, rather than large sonic 'brushstrokes'. Most importantly, vast and dense material was successfully created and executed within my restrictions. I cannot envisage using such block-heavy material in future works. The next work in the portfolio, *transmissions*, continues and develops some of the ideas in *eigengrau*, in different ways.

⁴⁹ *pulse* also uses silence in this manner and will be discussed further in Chapter 9.

8 – *transmissions* [2017]

transmissions was composed for a workshop opportunity with the Royal Northern College of Music Brass Band. Initially, I had little interest in this medium, largely because of its repertoire's conservative nature and because the music itself also has a particular colour which I do not aesthetically favour. Reynolds suggests:

Familiar things are often meaningless when encountered in unfamiliar circumstance-in a foreign context, from a foreign perspective. The effect that an object or fact produces when acted upon by an unexpected force or context (a shadowed scene, for example) can become larger, even more "articulate" than the thing itself.⁵⁰

The objective for this composition was to alter the sound of the ensemble as much as possible, pushing it away from these undesirable conventions. The aim was to focus the methodology on using applied electronic techniques such as cross fades, delay, pitch-bending and additive synthesis. The ensemble was treated like pliable, 'sampled' material in a palimpsest relationship, rather than as an 'acoustic ensemble'. I could have simply added electronics to the work but, owing to the boundary set up as a main restriction for this research, I elected to focus entirely on decontextualisation and synthesis within the available instrumentation. Furthermore, this work is strongly based around the concept of noise (or interference), tangentially continuing from what was learned in *eigengrau* and *tied to silence*.

The ensemble is divided into three sample-like groups, facilitating cross-fades between them. Each group is given distinctly different material, intended to be heard (chaotically) simultaneously, in the same space. Particularly, these divisions disturb the hierarchy of a conventional brass band setup. The solo cornet, for example, in this instance is equal to a second cornet, etc. There is a clear relationship here with electronic music, where potentially any number of 'samples' could be layered and combined. Had the available duration of the work been more extended, I would have broken down the three larger groups further into smaller, localised groupings. Cowell states: 'As musical sound grows louder, the noise in it is accentuated and the tone element reduced. Thus a loud sound is literally noisier than a soft one.'⁵¹ *transmissions* uses a similar logic to Cowell's, albeit based in material juxtaposition and

⁵⁰ Reynolds, R. and Takemitsu, T. 1992, p. 28

⁵¹ Cowell, H. 2009, p.23

saturation rather than volume. The controlled juxtaposition aims to enhance sonic perception and creates a meandering or wandering effect (i.e. absolute a-teleology), with layered complexity.

The groups are divided as follows:

Group 2 is at the core of the work and has a simple repeating gesture which was envisaged as fading and delay-like (rather than as a purely repeating rhythm). This gesture exponentially increases in length across the work. Gradually, this material begins to drift slowly out of phase, further disrupting the initial idea and continuing the 'delay' metaphor.

Group 1 is essentially a scaled version of Group 2, but is extremely time-stretched and reversed. I also included extended techniques here whereby the hand is used as a mute and the instruments are blown tonelessly. Indirectly, this references the common use of mutes, although in an entirely unconventional physical manner.

Group 3 is given another scaled version of material, this time a derivative of Group 1. The pitch is considerably lower but features the same close voicing. Rather than 'correctly' spacing this bass group, the intention was to alter the overall resonance of the ensemble. By collapsing the 'harmonic series' approach to voicing, the effect is similar to a 'scooped mids mix', which is quite unlike a desired, conventional voicing.⁵²

Embedded into all three groups is the use of hyper-chromatic pitch material. Once again, interest in an overall harmonic functionality has been replaced with the use of hyper-chromatic pitch effectively acting as another method of upsetting the conventional blended resonance and richness of the ensemble. In terms of notation I also chose to combine both exo- and endo-metric notation, emphasising the differences between the groups, both on paper and in performance.

Instrumental tactility was also an important focus in the writing process. The long out-breaths in Groups 1 and 3, for example, were intentionally utilised to give the sound a slightly uncomfortable quality. Additionally, the sustained nature of this material borrows heavily from electronic drone music. The voicing is somewhat contrary to the norm of a brass band and

⁵² The convention being described here would favour larger intervals, especially perfect fifths and octaves in the bass, with much closer intervals further up in register.

the positioning of instruments is just outside their comfort zones and gives a particular sonic colour. The first tenor horn, for example, in Group 2 is fairly high in its register, although not to a point of impossibility or unreliability.

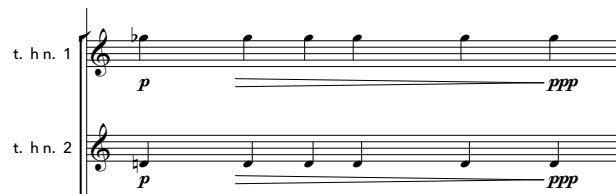


figure 8.1. Group 2, comparison of tenor horns voicing, *transmissions*, bar 30

Similarly, the use of hand muting in the cornets (Group 1 only) and the non-metrical approach to some of the notation, contributes to an uncertainty in the final sound.



figure 8.2. Cornets 1 - 3 using hand muting, *transmissions*, bars 78-81

The final influence upon the composition of this work was a photograph from the New York Times: *Construction workers in Manhattan this month*.⁵³ Workers and machinery can be seen but decontextualisation is in effect. The safety net acts as a filter, blurring out some details and highlighting others. The skin tone of each individual worker is indistinguishable but the colours of the fluorescent jackets are distinct. In a constant transformative state, boundaries of definition become meaningless. It is this decontextualisation, by addition, that is embedded into *transmissions*.

⁵³ Construction workers in Manhattan this month featured in: Neil Irwin *Why Is Productivity So Weak? Three Theories* 28/4/2016 NY Times (Copyright © Damon Winter - reproduced and used with kind permission of Damon Winter).



Construction workers in Manhattan this month. Damon Winter/The New York Times

figure 8.3. *Construction workers in Manhattan this month* © Damon Winter (2016)

I am pleased with the results of this work and feel that it achieved my set objectives. The ensemble has been quite far-removed from what one would perhaps expect from a brass band. The use of applied electronic techniques, specifically treating the material like samples in this instance, is also a new development in my creative practice. This work, particularly emphasises the importance of the interconnections between score and performer, especially in this context, where an ensemble is intentionally being pushed out of its comfort zone for effect. Furthermore the musicological/sociological questions raised by this work are a potential ground for further research to be undertaken. This approach may also be useful to those interested in composing using deconstruction and decontextualisation.

9 – pulse [2017]

pulse was written in early 2017 as a collaboration with cellist, Kotryna R. Šiugždinytė. I wanted to place an emphasis on collaboratively shaping the work, in various, specific ways. My initial ideas about approaching the work were based on the tactility and nature of extended techniques and my intention to use the orchestra as an extension of the soloist.

Underlying the collaboration aspect of *pulse*, additional objectives were created, purely targeting compositional strategies, in order to dismantle the definition of the soloist and orchestra as distinct entities. The work seeks to explore the soloist's instrumental identity, from the individual's perspective and from that of the orchestra, which assumes a role of actualised extension or augmentation, rather than of pure accompaniment.

Initially, I became concerned with various methods of conceptualising and stretching the identity of the instrument. As opposed to conventional tuning, I opted to extend the range of the instrument (especially in the lower registers). Kotryna and I discussed, at great length, the practicalities of detuning and how it would affect the overall sound quality, especially in an orchestral context.

Initially I used a detuning system based on a hyper-chromatic permutation. This detuning achieved the desired effect of breaking the violoncello's identity on a physical level. Several properties of such a detuning were undesirable, nonetheless. The strength and projective ability of the sound were not ideal and created balance issues when combined with the orchestra. Liza Lim's *Invisibility* (2009) also uses quite extreme detuning of the solo violoncello, although, it does not share the balance issues of placing a detuned instrument at the front of an orchestra. The bow pressure required for scratch tones and suitable dynamic contrasts with such a low string tension, compromised the integrity of the bridge. Eventually the soloist and I agreed to compromise on the (de)tuning.



figure 9.1. Solo violoncello detuning, *pulse* ⁵⁴

⁵⁴ Unlike Haas' approach in his *String Quartet no. 1* (1997), I have elected not to disclose an exact cent value to the performer. This allows for a slightly more open interpretation of the work. Also, because hyper-chromaticism is not spectral in approach, exact cent values make little difference to the overall sound.

This detuning (fig.9.1.) bends the conventional perfect-fifths tuning, rather than entirely discarding it. Harmonically, *pulse* is based around these detuned open strings: a sort of 'marred' stack of fifths. The orchestral harmonies refer to the violoncello, loosely mirroring it. In the 'G' sections (fig. 9.2.) the orchestra plays hyper-chromatically laced, stacked fifths (e.g. bb.95-100).⁵⁵ In other areas, the harmonic material of the orchestra is based on dense hyper-chromatic clusters. Because this work uses a soloist and orchestra, I wanted to approach the harmonic language with a less singular method than in *out of reach, but seen by us both*, or *eigengrau*, for example.

Particular care and attention were focussed on structuring in this work. *pulse* drifts between layers of oscillating musics and between scalar, circular temporalities. The work begins and ends with the solo violoncello, bookending a larger, bifurcated middle section where the orchestra contaminates the space. The 'outer' sections, each lasting around four minutes, are exclusively occupied by the soloist. The central section is imagined as a time-stretched version of the soloist's material which opens and closes the work, thus there is no tangential exploration or true developmental argument present. In reality the work is morphologically active but structurally static.

In reference to the title, the structural blocks are further subdivided into a governing system of pulsating action and non-action (i.e. pulses). In all, there are twenty-one pulses formed in a multi-dimensional cycle. Each 'pulse' in the cycle is assigned a fixed duration. In figure 9.2. the outer circle denotes the 'action' pulses, whilst the inner circle denotes the 'non-action' pulses (marked 'G'). I consider these cycles to be a helix rather than two distinct rings in parallel.

⁵⁵ 'G' was used as a symbol to represent 'gap' or non-action in the initial sketches of the work.

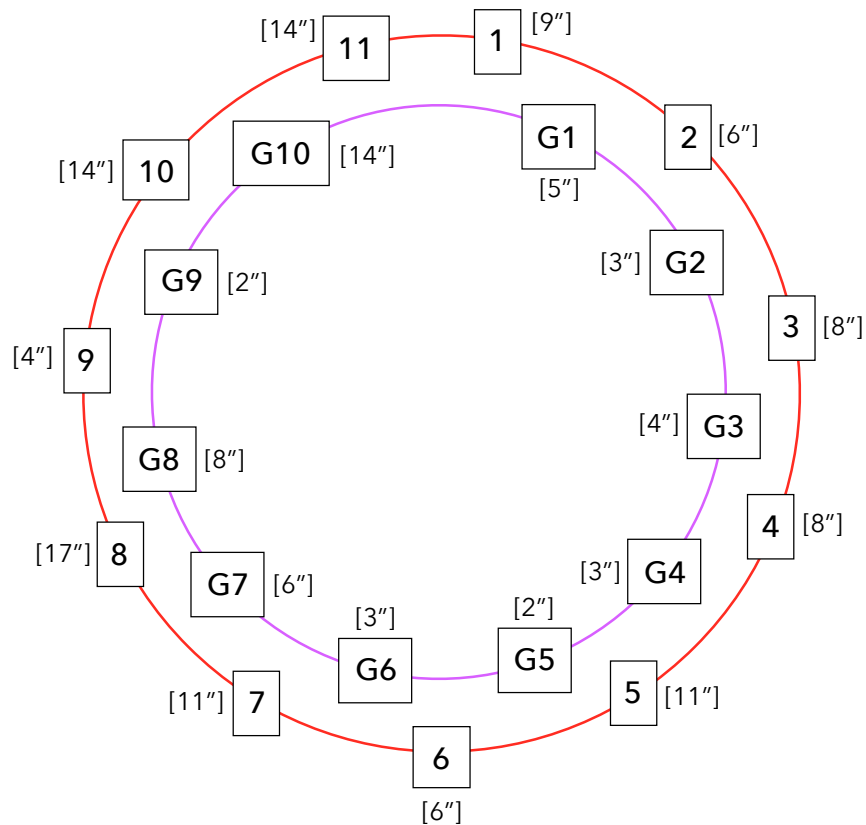


figure 9.2. Cyclical structure of solo violoncello parts, *pulse*, bars 1-76 and (252-) 321-417

'G11' has been omitted from the cycle to create an uneven or broken set of materials to work with. I particularly enjoy the aesthetic qualities of materials which are not perfectly symmetrical or absolutely even. When using processes with mathematical elements, such as this, I enjoy creating imperfections. The durations of the pulses are more like guidelines to aid in the composition process, rather than unbreakable laws.

Conceivably, *pulse* could begin and end at any point in the structure. To emphasise this, the opening section actually begins on 'G8', not on '1', as one would expect. It is important to mention that, much like in *eigengrau*, the structure is not unilaterally conceived or perceived. One arrives at any point in a cycle and leaves in the same manner, having gained no more or less than if the entire work was listened to. A 'spherical' temporality such as this, is augmented by the lack of any real climax points. Divided, the central section is proportionally related to the solo sections on either side. The same cycle of pulses, 1, G1, etc., is used. The durational values have been expanded by some margin, as outlined in figure 9.3.

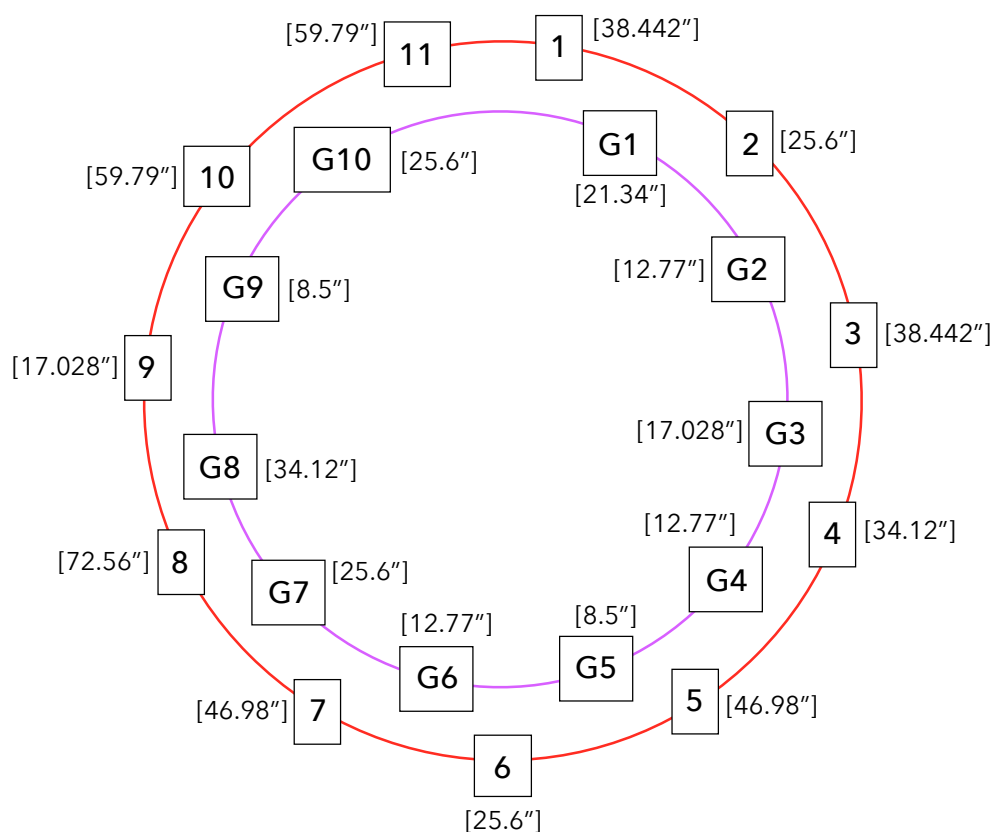


figure 9.3. Cyclical structure of orchestral parts, *pulse*, bars 76-320

'Pulse 11' has been discarded from the middle section (included in the diagram for demonstration). In its place, the soloist's pulses (proportions) are reintroduced, continuing into its last section (b.252 - end). Notably, this reflects the cycle of pulses (figs. 9.2./9.3.) in that a portion of the material has been erased. Similarly, the second part of the section (bb. 252-320) demonstrates 'non-action', whereas the first part (bb.77-252) demonstrates 'action', again reflecting the scaled pulse cycle. Overlapping material in this manner is inspired by the structure of *unsettled paths*, which creates new material from the accrued rubble of other deconstructed parts of the work. A self-perpetuating and self-similar structure has been achieved through scaling and networks of interconnection.

Rather than the soloist simply reiterating material at the same points in the cycle, the material is mixed and strewn across the opening and closing sections of the work. Pulses of action/non-action are underpinned and defined by their temporal qualities and position, rather than by material content. An example of this is between bars 49 and 53 (section 10), in the first solo and bars 361-370 (section 8), in the second. Essentially, the nature of dynamical perspectives on surface and material relationships, considers the 'canvas' as an interface, adding context to what would be an incoherent narrative structure otherwise.

The silences in *pulse* operate in several different ways, depending on context. There are measured boundary silences between all of the main sections: for example, the four minute violoncello solo opening the work begins to fade from around bars 67-76, into silence. From this point, anything is contextually possible because of the lack of reference offered by nothingness. In this instance, the contrabasses enter. The silence lasts for around five seconds. Bars 4, 10, 18 and 21 are 2", 5", 6" and 2" in length, respectively. All are silent. Because of the way they fall in the music, an impression is given of a long rest rather than a structural punctuation.

A measured silence is used between the two main orchestral sections (bar 252). This silence is used as a boundary between the orchestra playing 'normally' and playing pitchless material. This introduces splintering or morphologically distorting identities, further reflecting the approach taken in structure and in the soloist's material.

John Coltrane's saxophone solo from *Acknowledgement*, exemplifies the prominence in switching between identities.⁵⁶ From 3'51" to 4'06", Coltrane plays a small section of distorted material segued between fragmented, yet clearly-pitched, runs.⁵⁷ The noise element in this short fragment functions teleologically, symbolising one kind of material giving way to another. In terms of functionality, this is structurally analogous to the silence at bar 76 of *pulse*. Until the moment this change is heard, there is no indication for the listener that a change will occur. In effect, an abrupt juxtaposition of two quite disparate perspectives, is presented with utmost sensitivity.⁵⁸

The final section of the orchestral material presents another structural silence. This time however, the silence is treated as 'broken'. Occurring in bar 312, it is now contextualised by the mnemonic set up by the earlier occurrences of silence. This work is less physically demanding for the soloist than the score would seem to indicate. The language itself is thought of as centring on and relating to open strings rather than simply to arbitrary pitches playable anywhere on the instrument. This notion is exemplified in bars 49-53 (fig.9.4.), where a simple pattern is reused across different strings. Bar 49 uses strings IV, III and II, all played

⁵⁶ (First track) Coltrane, J. *A Love Supreme* Decca (UMO) 1965 (2005 CD re-release).

⁵⁷ The 'break' where Coltrane moves from 'noise' back into 'normal' playing, is clearly audible at the end of the phrase beginning at 3'48". It is as if there are two different players (identities).

⁵⁸ Also see Brody, R. 2014 (article for the New Yorker: *Coltrane's Free Jazz Wasn't Just a "Lot of Noise"*)

open with II acting as a pedal tone for the passage. By the second beat of bar 50, the acciaturas mimic open strings, an octave higher and supplemented by a major third, adding colour. This idea repeats on string III.

figure 9.4. Solo violoncello pattern transitions, *pulse*, bars 49-53

Rather than resorting to a language for the soloist which is ‘virtuosically dead’, I chose to explore instrumental tessitura through extended techniques (see performance notes in *pulse* score for specific details and for listing of techniques). There is a focus on dexterity and physicality contrasted between different playing techniques. Bars 31-34, for example, in the solo part, exhibit multiple different versions of the same oscillating gesture, achieved through different techniques.

figure 9.5. Solo violoncello gestural decontextualisation, *pulse*, bars 31-34

The notable compactness of the orchestra circumvents some already highlighted balance issues. A colouristic thread also runs through this rationale. I chose to use individual sounds of instruments as a vibrant palette which could be broad enough to offer a multitude of composite options. Sounds are never replicated ‘mimetically’ or literally between instruments. Instead, sonic counterparts are outlined and refracted, allowing for neat, semiotic transitions between the soloist and other instruments. The bass drum, for example, is required to utilise an unorthodox technique where a wooden stick is placed on the drumhead. Tapping ‘excites’ the drumhead and allows the stick to bounce. The resulting sounds are surprisingly close to

the scratch tones often used by the soloist.⁵⁹ This approach decontextualises versions of sounds which contribute to a multilayered construct that is never static.

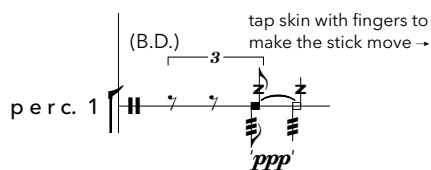


figure 9.6. Bass drum extended technique, *pulse*, bar 83

The final section of the orchestral material sweeps around the strings, beginning with the first violins (b.253), then the seconds (b.267) followed by the violas (b.280). Finally, the orchestral violoncellos play a scaled microstructure of progressively wider *divisi* as follows: *div. 2* (b. 302), *div. 3* (b.305) and *div. 6* (i.e. all solo, b.313). After the silence of bar 312, the soloist enters, followed by the orchestral violoncellos which are gradually drowned and subsumed in a 'cross-fade' by the soloist, leading into the final solo section.

This work has resulted in the development of a language which focusses on the expansion of the soloist's identity through the orchestra. This approach is an alternative to the conventional concerto 'soloist and accompaniment' relationship. A myriad of notational techniques have also been developed and assigned notations which are quite specific to my musical language. I believe that the techniques and approaches used in this work have the potential to be utilised in many different contexts and with variations, for example: how could one expand the identity of smaller groups or instruments within a larger ensemble, in this manner?

⁵⁹ See https://www.youtube.com/watch?v=chhxK_RhZIk (approx. 1'05"-1'35") for example of bass drum technique in isolation. Also see bars 91-99 of *pulse*, for an example of scratch tones.

10 – *Dämmerung* [2017]

Dämmerung was commissioned by the Royal Northern College of Music for the Gold Medal Competition 2017.⁶⁰

With this composition I decided to break with the conventions of the piano trio—a medium I have never had a particular affinity for. Initially, I felt it was important to remove the distinction of individual instruments - entwining them into a meta-instrument.

I also find the piano trio timbrally restrictive because the instruments share a broad cross-over of range. As a result, I kept the voicing distance between violin and violoncello quite wide. Under normal circumstances I prefer to utilise instruments in more uncomfortable parts of their range, opening up possibilities for the timbral palette. In this instance, the violin and violoncello are fairly conventionally placed for practical reasons.⁶¹ The work does feature rarified moments however, where the violin and violoncello inhabit the same pitch range, notably bars 32-36.

On the other hand, the piano is utilised throughout as a 'filler' in the pitch space. There is a connection here to the way in which *out of reach, but seen by us both* is configured. Bars 63-86 also use a narrow pitch range, although this is structurally significant. Because of the dense, polyphonic nature of the work, I chose to create a central section where there would be one single pitch, (E \flat) marred by hyper-chromatic material with little polyphonic activity. Instead, polyphony is suggested by the interchange of similar materials between the violin and violoncello.

The gesturally-bifurcated opening phrase plays with coming into and going out of focus. In the first bar, the violin's stabbing chord, exaggerates the articulation of the violoncello glissando beneath it. It would have been possible to give this entire gesture to the violoncello but the addition of a secondary (violin) layer adds definition. The second part of the phrase sees the relationship of foreground and background switch as the piano enters. A hyperreal 'plastic resonance', mimicking overtones, is added by the violin and violoncello, filling

⁶⁰ I was awarded the 2017 Royal Northern College of Music Gold Medal Prize for Composition for *Dämmerung*.

⁶¹ Had the work been written for a piano quintet, for example, I would have been likely to have pushed the instruments much further away from convention.

interstices in the harmonic spectra, saturating and exaggerating timbres. As a result, identity definition is lost.

There are several other scalar processes in operation across the opening phrase. Effectively, the piano's tremolo is an exometric accelerando/ritardando, coupled with a crescendo/diminuendo. The violin and violoncello reflect these processes in the piano with a timbral change, thereby increasing bow pressure up to bar 5 and then returning to normal by the end of the phrase. Additionally, the use of the piano's sustain pedal gradually speeds up, replicating the phrase morphology with the 'pedal rhythm', matching the 'stave rhythm' from its halfway point.

figure 10.1. Opening phrase, *Dämmerung*, bars 1-8

Gestural morphologies are reused in different contexts. The opening gestural material (see fig. 10.1.), for example, reappears, scaled, in bars 50-59. In this configuration the gesture is perceptively 'larger', encompassing a much wider range of pitch and timbres. The components of the initial gesture have also been decontextualised to a point where they become unrecognisable. The tremolo effect now includes all three instruments, instead of being placed solely in the piano. Rather than playing its tremolo inside, the piano now plays on the keyboard, with specifically notated chords, as opposed to the open-pitch-range notation used at the beginning. Because all three instruments are generally at a loud dynamic and cover a wide hyper-chromatic pitch range, the space has been saturated to the point where the clear gestural material at the beginning has now evolved into a noise-texture. The overall shape is retained from the original. From bar 50 there is a long process of slowing the overall rate of tremolos down to bar 57-58, where dotted crotchet values dominate.

figure 10.2. Scaling and self similarity, between trio, *Dämmerung*, bars 50-53

Bars 14-15 exemplify an occurrence of scaled self-similarity and self reference, among many contributing to the work. Aside from self-contained accelerating and decelerating tremolos and reference to the piano's punctuations in the middle section of the work, a bifurcated gesture and nested structure ... is exhibited here. This takes the form of a 'core' tremolo, punctuated by two pizzicato 'snaps'. I gave the opposing material to each instrument, stretching and remodelling it over a longer time frame. The pizzicatos are approximate reflections of each other, even sharing (displaced) pitch material between the violin and violoncello. In bar 14, the violoncello begins with one crotchet of ordinary bowing, before beginning to tremolo through a violent timbral and dynamic shift. In bar 15, the violin mimics the violoncello, albeit with a more stable dynamic motion and with beats three and four sounding a decelerating tremolo, as opposed to the static crotchets of the previous bar (first beat). Albeit in a sort of skewed retrograde, the tremolo rhythm is preserved between the two instruments. The upward trajectory of the violoncello tremolo is also reflected in the violin part from the C# pizzicato in bar 14 to the D# in bar 15. Likewise, the overall descending shape of the violin pizzicato in bar 14 is reiterated with the violoncello in bar 15.

figure 10.3. Nested, scaled self-similarity, between violin and violoncello, *Dämmerung*, bars 14-15

Bars 63-86 also exhibit a version of the opening phrase, this time presented as a smaller scaling, hybridised with the gesture, discussed below (fig 10.4.). The 'tremolo gesture' initially seen in bars 2-8 is adapted to fit a short space of a few seconds. The player begins slowly, accelerates up to a plateau, holds at the same speed momentarily and then decelerates. This gesture stays fixed throughout the middle section but constantly alternates between the violin and violoncello. Morphological decontextualisation occurs once again in the second part of this material. Each tremolo is followed by a sustained sound which originates from the violin's and violoncello's material in bars 2-8. The piano's muted punctuations (see b.65) are also reimagining from yet another version of the initial gesture occurring between the violin and violoncello in bars 14 and 15 (fig. 10.3.). The pizzicato punctuations in the violin (b.14) and the violoncello (b.15) fall either side of a tremolo (as does the piano in b.65).

figure 10.4. Scaled self-similarity, *Dämmerung*, bars 71-74

To control the vast array of sonic possibilities through extensions and composing, I chose to utilise sounds which could be replicated by the pianist on the keyboard or could mimic sounds available on the violin and violoncello. In practical terms, the techniques needed to be easily blended with the keyboard. Therefore, using the pedals as percussion and other

such available techniques (e.g. those utilised by Lachenmann in *Guero* (1969)), were not employed in *Dämmerung*.⁶²

The harmonic field density control here features two juxtaposed operands, as in earlier works. The lowest pitches from each field (fig. 10.5.) chromatically ascend with every fourth step, whole-tone spaced.⁶³ The first interval, for example, shows a minor second with a lowest pitch of C \flat . This field therefore encompasses the pitches within the interval of a minor second, (i.e. C \flat , C \natural , D \flat).⁶⁴ Changing the interval position or size brings different harmonic fields into play. With two operands juxtaposed, there is an unpredictability in the harmony, yet there is still a governing structure. Harmony, conceptualised in this context, goes beyond the stacking of intervals. It becomes vortex-like rather than linear: a spectral continuum. This method also features an inbuilt fail-safe, enabling the avoidance of repetitive harmonic motion. The harmonic cycle is broken with, however, at two points. The first appears in the centre of the work on an E \flat (fig.10.5.: bb.63-86) and is used for structural purposes. The other appears at the very end of the work with an A \flat octave. This facilitates the piano's harmonics in the lowest register which end the work.

⁶² i.e. depressing the pedals and sharply releasing them to smack against the pedal housing, creating an aggressive thump. See Yu Oda's *My Daughter* (2011), for an example of this technique. In *Guero (for solo piano, 1969)*, Lachenmann calls for the player to draw the fingernails across the keyboard (not depressing the keys, indeed the entire work is pitchless). As the nails cross over the spaces between the keys, sounds akin to a Güiro are produced.

⁶³ Note that reference to pitch here has no bearing on register i.e. C# could refer equally to C#1 or C#7.

⁶⁴ For this research, microtones have been limited (intentionally) to quarter tones, the addition of 'hyper-micro-chromatic' pitch material is a development I would like to explore, in my future work, especially when my creative practice will utilise electronics.

figure 10.5. Intervallically controlled harmonic fields, *Dämmerung*

Dämmerung is the final work submitted as part of the accompanying portfolio. Whilst not introducing anything entirely new to the research, it does culminate and bring together almost all of the ideas experimented with earlier. The harmonic language is refined and purposeful; the structure is free-flowing and combines several approaches; and the instrumentation is also strong and expansive, even for such a small ensemble.

Conclusion

The period of my research has been a time of introspection, reflection and expansive re-development of my creative practice. Several works have been composed for various forces across a three-year span. The state of development during this research represents only a narrow gateway to a richer and more complex language which I hope to continue developing.

Harmonically, there has been a transition from inelegant blocks and arbitrary inclusions, to a fluid, hyper-chromatic substance which fills a portion of the aural space. This fluid substance no longer functions in terms of cycle or sequence. Instead, I perceive it as an interface. Beyond surface process, this vital interface forms a point of evolved adhesion or harmonicity between structure, instrumentation, temporality and performance.

Boundaries have been created to rein in an entirely intuitive method of selecting pitch material. Attempts to control the system too harshly have proven to be too ineffective for the type of outcome I seek. Through 'helpful' constrictions, there are infinite possibilities in approaching and defining the harmonic contour of the material, whilst retaining consistency. Consequently, pitches may be selected for gestural, harmonic, practical or timbral reasons, from the field presented at a particular time. This method allows for a greater freedom: aggregates, clusters, tonal scales, modes, single pitches, intervallic fragments and hyper-chromatic fields, can all be employed, equally. This harmonic 'thought-space' has been created to experiment with different compositional choices and to allow intuition to take its course without being limitlessly free.

Structure has always been an important part of my creative practice, particularly from the planning and sketching of new work. It is often one of the earliest formulations in my composition process. I find that once a structural outline has been established, it is easier to grow material organically. Throughout the course of this research, I have re-designed my structural thinking entirely and abandoned the syllogistic reasoning pertaining to formal unilateralism. I now consider structure as a set of states and therefore the musical experience is localised and does not consist of larger, meta-structures. These structures are no longer simple, 'A-B transit-system' narratives: they are rather, subtle tracings of mood and emotion

outlining sonic space. My music aims to express and amplify from different perspectives, one single moment, rather than many.

The notion of scaled material is particularly important here. My conceptual understanding of musical time has evolved to consider an alternative, sonically immersive experience where all objects are omnipresent, contrasted with purely flat-planed sequential observation. In this context the nature of a time-line, in terms of *fabula* (narrative chronology of events), becomes warped. I have chosen to avoid thinking in terms of a 'non-linear narrative': this inelegant term still suggests a teleological narrative which has been or is being, chronologically disrupted for dramatic effect. Whilst this term possesses a definition fundamentally similar to my conception of time, it does not account for the formulation of self-similar, scaled and circular temporal processes.

I now use the analogy of a sphere to partially define 'temporality' in my music. This 'sphere' relates to a panopticon-like superstructure where all the interior space is accessible and formable. Importantly, the fundamental property of a geometrically perfect sphere is that the topography is unchanged across the surface and interior of the object, i.e. there are no defined points of entry, exit, beginning or end. Teleologically, this is significant as many of my works are currently imagined in terms of *nihil fit ex nihilo*.⁶⁵

Repositioning the thought processes surrounding temporality, elucidates a different perspective and resulting compositional method(s). This approach outlines the creation of a true object-centric, morphological form, contemplating moments in time and space rather than teleologically aiming for particular, unilateral points. As a compositional device in abstract musical forms, identity is significant in that the narrative argumentation is to be found between materials where the interconnections, interfaces and sinuous fibres transmute. In this context one should 'listen for fluid sense instead of hear fixed meanings'.⁶⁶ The notion of compositional components moving around within a construct, therefore, constitutes an interior network of 'textual' interaction. This is intersemiotically significant where a receiver can observe transitory polymorphism in action, as narrative. Vastly differing approaches have been used across my works to achieve a sense of pulse-less-ness, discouraging teleological listening.

⁶⁵ Eng.: 'out of nothing, nothing becomes'.

⁶⁶ Abramo, J. 2014, p.11

Structure in my work has evolved into a morphological framework for sonic space. Methods have been devised which do not consider structure in terms of a driving force, derived from telos. These methods form a means of architecture which configures and navigates in-concrete sonic space. Approaches have become polysemous and fluid, containing a myriad of eventualities applicable to the requirements of a particular compositional situation.

Treating the boundaries between physical (players, instruments, sounds) and non-physical identities (time, emotion, interpretation) as malleable, presents opportunity for distortion, further expanding possible narrative modes. Identity is also closely connected to self-similarity. An outline of a definable object's characteristics can be utilised as a decontextualised template of sorts. A gesture may be defined, for example, by an upward sweeping motion. This morphological outline can be reused on different pitches, over a different range and with a different instrument, yet there will be some linkage between the identity of the original gesture and the new one. I envisage the development of gesture in my work, using this type of procedure.

Extended techniques are often problematic to describe and explain, using conventional notation. Although there is a breadth of notational possibility and literature (Lachenmann and Czernowin have vastly differing methods of extended notation, for example), there are no fixed rules about representation of specific sounds. When considering the notation of unorthodox techniques, I often work on the basis of specificity and precision in describing exactly how the sound should be produced. There is always a 'pitched contingency', written into the score, which operates on normal registral principles and I attempt to alter conventional notation where possible (rather than invent entirely new symbols, for example). This is simply so that the player can relate the technique to their normal practice without too much 'loss in translation'. I have gravitated towards using my own notation for extended techniques rather than simply reusing others' or referring to manuals.

In combining all the techniques described above, a language of instrumentation has been developed which focuses on creating what Czernowin described as the "third state"; a higher perspective which considers the result as more than a sum of the parts.⁶⁷ Questions have been raised as to the identity of the instrument in solo and ensemble contexts respectively.

⁶⁷ Library of Congress/Czernowin, C. 2012

Within the language of instrumentation, I aim for a dilution of expectation. This has been achieved through techniques of composing where, not only are instrumental boundaries broken, but new, more complex objects are formed. Conceptually, 'ADSR' is a parametric group which also contributes to the dissolution of expectation.

Perhaps most importantly, the approaches to instrumentation now consider the music from the perspective of the performer. As a fundamental issue in the research, has been fully explored and has opened many approaches to dealing with the interfacing of composer/score/performer/receiver. Perspectives taken from each of these four points of contact now inform my compositional process.

In terms of limitations, this research has explored within certain defined boundaries – a necessity for psychic tensions within the creative framework to formulate new ideas. Knowingly, electronic music has been omitted but carries many possibilities for the types of exploration undertaken here. Similarly, textually-inclusive music has been side-stepped to avoid intertextual problems. The research has led to my music having a strong and unique identity and I now feel that I can confidently work with other media, to my advantage.

For the continuation of this research, I plan to incorporate both extra-musical text and electronic media into my work. I am currently collaborating with pianist Silvia Lucas to create a substantial work for piano and electronics. Bypassing electronics in the research has led to me having a different perspective and most likely, deeper understanding of this medium and its use as a compositional tool.

I believe this research holds much usefulness to those interested in similar compositional approaches. Additionally, there are broad musicological and psychological questions raised such as how performers will react to certain types of notation. The question of restriction as a development tool is also important. Rather than blindly attempting to create a compositional language, the development is created after objectives have been set.

I see through 'opaque windows' into other composers' worlds but never really wish to engage with them more intimately than this. I am very much aware of others' practices and developments but I actively choose not to utilise most of it, in the context of my own compositional development. I believe a complete reformulation is only possible when originating from within the self. This notion is supported by Czernowin:

Is creativity at its base experimental? It does not have to be. One creates variations on existing things that one likes so they will work even better. When we talk about experimental art or music we talk about art that is *the result of a particular kind of creative activity*. For me this is the most potent type of creative activity.⁶⁸

Overall, my music has evolved to operate away from observational conveyance. Rather, it has become about experiencing and inhabiting a particular sound world and its ambience, without thematic and teleological reliance. These considerations aim to go beyond discarding 'thematic' elements of music. Instead, the aesthetic methods have been entirely re-evaluated and created in order to set it in a constant state of 'semantic drift' and create movement or at least, the illusion thereof. As Alan Robinson states: '[...] the spectator's *imagination* [is stimulated] through the evocation of an alternative mode of reality.'⁶⁹

⁶⁸ Czernowin, C. 2018, p.31

⁶⁹ Robinson, A. 1985, p.20

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Bibliography and References

I – Textual Resources

Abramo, J. 'Music Education that Resonates: An Epistemology and Pedagogy of Sound' *Philosophy of Music Education Review* vol.22/1 (2014), pp.78-95

Almén, B. *A Theory of Musical Narrative* Bloomington: Indiana University Press, 2008

Andre, M. 'Concerning the Morphology of the Constituent Materials of "...IN..." for Amplified Bass Clarinet' *New Music and Aesthetics in the 21st Century Vol.2, Musical Morphology* Eds. Mahnkopf, C.S., Cox, F. and Schurig, W. (trans. Kanach, S.) Hofheim: Wolke Verlag (2004) pp. 22-33

Attali, J. *Noise: The Political Economy of Music* (trans. Massumi, B.) Minneapolis: University of Minnesota Press, 1985

Ball, P. *The Music Instinct: How music works and why we can't do without it* London: Vintage, 2011

Barthes, R. *Image, music, text / Essays selected and translated by Stephen Heath* London: Fontana Press, 1977.

Beil, M. 'Material Shift' *New Music and Aesthetics in the 21st Century, Vol.8, Musical Material Today* Eds. Mahnkopf, C.S., Cox, F. and Schurig, W. Hofheim: Wolke Verlag (2012) pp.9-21

Blatter, A. *Instrumentation and Orchestration* Boston: Schirmer, 1997

Bodman Rae, C. *The Music of Lutosławski* London: Omnibus Press, 1999

Cage, J. *The Future of Music: Credo* [n.p.], 1937/1958

Cowell, H. *The Joys of Noise* (1929) Kingston NY: McPherson & Company, 2002

Cox, C. and Warner, D. *Audio Culture Readings in Modern Music* New York: Continuum, 2009

Czernowin, C. 'Experimentation, Invention and Discovery' *Experimental Encounters in Music and Beyond* Ed. Cathleen Coessens Leuven: Leuven University Press (2018) pp. 31-37

Eco, U. *On beauty: A history of the Western Idea* London: Quercus Publishing, 2014

Eco, U. *The Limits of Interpretation* Bloomington: Indiana University Press, 1994

Fastl, H. & Zwicker, E. *Psychoacoustics Facts and Models* Berlin: Springer-Verlag, 2007

Ford, M. 'Processes of spectralization: From Josquin's Missa "L'homme armé" Super Voces Musicales to Haas's Tria ex Uno' *Musicologica Olomucensia* vol.22 (December 2015), pp.1-21

Textual Resources (contd.)

Harrison, B. *Cyclical Structures and the Organisation of Time (a commentary on my recent compositional work)*, Ph.D Thesis, University of Huddersfield, 2007

Holmes, T. *Electronic and Experimental Music* London: Routledge, 2002

Hodges, N. 'A Volcano Viewed from Afar': The Music of Salvatore Sciarrino *Tempo New Series*, No. 194 [Italian Issue] (October 1995), pp. 22-24

Johnston, B. *Tonality Regained* Illinois: University of Illinois Press, 1974

Mahnkopf, C.S. *Musical Material Today Vol.8* Hofheim: Wolke Verlag, 2012

Mahnkopf, C.S. *New Music and Aesthetics in the 21st Century Vol.2, Musical Morphology* Eds. Mahnkopf, C.S., Cox, F. and Schurig, W. Hofheim: Wolke Verlag, 2004

Margulis, E. 'Moved by Nothing: Listening to Musical Silence' *Journal of Music Theory* vol. 51/ no. 2 (2007) pp. 245-276

Nattiez, J. 'Can one speak of narrativity in music?' *Journal of the Royal Musical Association* vol. 115/No. 2 (1990) pp. 240-257

O'Callaghan, C. 'Sounds and Events' *Sounds and Perception: New Philosophical Essays* Eds. Nuds, M. and O'Callaghan, C. Oxford: Oxford University Press, 2009 pp.26-49

Pareyon, G. *On Musical Self-Similarity Intersemiosis as Synecdoche and Analogy* Helsinki: International Semiotics Institute, 2011

Robinson, A. *Poetry, Painting and Ideas, 1885-1914* London: Macmillan, 1985

Reynolds, R. and Takemitsu, T. 'A Jostled Silence: Contemporary Japanese Musical Thought (Part One)' *Perspectives of New Music* vol. 30/No. 1 (Winter, 1992) pp. 22-35

Schafer R.M. *Music of the Environment* Vienna: Universal Edition, 1973

Schönberg, A. *Style and Idea* Faber and Faber: London, 1975

Sergeant, M. *the churches of lalibela: erosion and encrustation as transformative musical processes*, Ph.D Thesis, University of Huddersfield, 2013

Steinitz, R. *György Ligeti Music of the Imagination* London: Faber, 2003

Trakl, G. *Sebastian im Traum* Chicago: University of Chicago Press, 2016

Whittall, A. 'Subjectivity, Synthesis, and Hermeneutic Narrative: Dissenting Voices' *The Musical Times*, vol. 141/No. 1873 (2000) pp. 7-14

II – Musical Scores

Andre, M. *22.13* Leipzig: Edition Peters, 2017

Andre, M. *abll* Leipzig: Edition Peters, 1996/1997

Andre, M. *...als... ll* Leipzig: Edition Peters, 2000-2001

Andre, M. *riss l* Leipzig: Edition Peters, 2017

Berg, A. *Fünf Orchesterlieder, nach Ansichtkarten-Texten von Peter Altenberg* Vienna: Universal Edition, 1911-12

Billone, P. *1 + 1 = 1* [n.p.], 2006

Billone, P. *Legno.Edre V.Metrio* [n.p.], 2004

Crumb, G. *Black Angels Thirteen Images from the Dark Land (Images I) for Electric String Quartet* Leipzig: Edition Peters, 1970

Czernowin, C. *Ayre: Towed through plumes, thicket, asphalt, sawdust and hazardous air I shall not forget the sound of Mainz*: Schott, 2015

Czernowin, C. *Maim* Mainz: Schott, 2007

Czernowin, C. *String Quartet* Mainz: Schott, 1995

Goves, L. *the clouds flew round with the clouds* self-published by the composer, 2012

Haas, G.F. *String Quartet No. 1* Vienna: Universal Edition, 1997

Iannotta, C. *Limun* Leipzig: Edition Peters, 2011

Kurtag, G. *ΣΤΗΛΗ [Stele] op.33* Budapest: Editio Musica Budapest, 2006

Lachenmann, H. *Allegro Sostenuto* Wiesbaden: Breitkopf and Härtel, 1986-1988

Lachenmann, H. *Guero* Wiesbaden: Breitkopf and Härtel, 1969

Lachenmann, H. *Zwei Gefuehle - Musik Mit Leonardo* Wiesbaden: Breitkopf and Härtel, 1992

Ligeti, G. *Hamburg Concerto* Mainz: Schott, 1998-1999/rev. 2003

Ligeti, G. *Requiem* Leipzig: Edition Peters, 1963-1965

Lim, L. *Invisibility* Munich: Ricordi, 2009

Saunders, R. *Fury II*, Leipzig: Edition Peters, 2009

Saunders, R. *Vermilion*, Leipzig: Edition Peters, 2004

II – Musical Scores (contd.)

Scelsi, G. *Natura Renovatur* Paris: Edition Salabert, 1967

Sciarrino, S. *Shadow of Sound* Italy: RAI Trade (RTC 1534), 2005

Sergeant, M. *bet merkorios* self-published by the composer, 2012

Stravinsky, I. *Le Sacre du printemps* London: Boosey and Hawkes, 1913

Porvaldsdóttir, A. *Hidden* Reykjavík: Icelandic Music Information Center, 2009

Xenakis, I. *Pithoprakta* London: Boosey and Hawkes, 1956

Živković, Đ. *On the Guarding of the Heart* Stockholm: Edition Octoechos, 2011

III – Recordings

Boards of Canada *Tomorrow's Harvest* (Warp Records, 2013)

Coltrane, J. *A Love Supreme* Decca (UMO, 1965 [2005 CD re-release])

Erlandsson, M. *New Memories* [from *You and Me Now*, Tape 6] (Posh Isolation, 2016)

Huerco S. *Those Of You Who Have Never (And Also Those Who Have)* (Proibito, 2016)

Kammarheit *The Starwheel* (Cyclic Law, 2005)

Köner, T. *Daikan* (Rhizomatique, 2002)

Köner, T. *Nova Zemlya* (Touch, 2012)

Köner, T. *Nuuk*, (Rhizomatique, 2010)

Masayoshi, F. & Jelinek, J., *Schaum* (Faitiche, 2016)

Mogard, A. *Works* (Ecstatic Recordings, 2016)

Not Waving *Redacted* (Ecstatic Recordings, 2013)

Raison d'être *The Stains of Embodied Sacrifice* (Cold Meat Industry, 2009)

Vatican Shadow *Death Is Unity With God* (Hospital Productions/Modern Love Records, 2014)

IV – Other/Miscellaneous

Arsenio Hall/Miles Davis interview, *Arsenio Hall Show* (14.06.1989), New York: Arsenio Hall Communications, 1989

Brody, R. 'Coltrane's Free Jazz Wasn't Just a "Lot of Noise"' *The New Yorker*, 2014

CRMMusic, *Gran Cassa and the interactive instrument Feed-Drum (Part I)* <https://www.youtube.com/watch?v=chhxK_RhZIk> [n.d.] [accessed 14.06.2017]

IRCAM/Czernowin, C[sic.] *Chaya Czernowin : Analyse de Infinite Now* <<http://medias.ircam.fr/xf50f4>> (2017) [accessed 11.06.2017]

Library of Congress *Library of Congress - Composer Chaya Czernowin and Orchestra 2001 percussionist David Nelson discuss an evening concert of works by George Crumb and a Library of Congress Dina Koston and Roger Shapiro Fund for New Music commission by Czernowin, "Slow Summer Stay II: Lakes"* <<https://www.youtube.com/watch?v=drpwhWkKW0>> (2012) [accessed 17.04.2016]

NewMusicBox/Czernowin C. *A Strange Bridge Toward Engagement* <<https://vimeo.com/24177634>> (2011) [accessed 09.02.2015]

Open Music: Designed and developed by the IRCAM Music Representation research group © 1998 - 2013 Carlos Agon, Gérard Assayag, Jean Bresson

Schumacher, P. 5 07 12 PATRIK SCHUMACHER HOW TO CREATE QUALITY SPACE USING NEW ARCHITECTURAL TECHNOLOGIES LECTUR [sic.]. <<https://www.youtube.com/watch?v=HKjr1QWde6U>> (2012) [accessed 20.03.2017]

Altevista Organisation <<http://shadowsculptures.altevista.org/rashad-alakbarov/>> [n.d.] [accessed 29.09.2014]

Smith, A. *An analysis of my chamber work: unsettled paths* [slides from conference paper given at the SMA-TAGS conference, London, 03.04.2016] (2016)

Spinola, J., *Convoluting Impulses and Sound-Postcards Mark Andre's Physical Metaphysics*, <<https://www.wiko-berlin.de/wikothek/koepfe-und-ideen-2013-translations/14-mark-andre/>> (2013) [accessed 26.07.2017]

Winter, D., *Construction workers in Manhattan this Month* [© Damon Winter] [From: Irwin, N. *Why Is Productivity So Weak? Three Theories* 28.04.2016, *New York Times*] (2016)

Appendices

Appendix I – Aled Smith, Complete List of Compositions (2014-2017)

The following list documents, in chronological order, all of my works composed within the period of this research (September 2014 - March 2017) and not the contents of the accompanying portfolio (see Appendix II).

Title: *Serenity*

Composed: September 2014

Instrumentation: piano, violin, violoncello

Duration: c.8'

First Performance: N/A

Notes: Unperformed, written for the Lord Mayor's Composition Competition, 2014

Title: *Suspended Above Shadows*

Composed: December 2014 - February 2015

Instrumentation: solo clarinet and orchestra

Duration: c.11'

First Performance: Royal Northern College of Music Concert Hall, Manchester, UK, 2015

Performer(s): Emma Haughton (solo clarinet), Royal Northern College of Music Brand New Orchestra, Jan Wierzba (cond.)

Title: *Beneath Fallen Skies*

Composed: February - April 2015

Instrumentation: piano solo

Duration: c.6'

First Performance: The Wonder Inn, Manchester, UK, 07/12/2016

Performer(s): Lauryna Sableviciute

Notes: Part of 'Kinetic @ The Wonder Inn' event

Title: *Immolation (in Water)*

Composed: May - June 2015

Instrumentation: 1,1,1,1/ 1,1,1,0/ 1 perc./ hpsd./ 2,1,1,1

Duration: c.7'30"

First Performance: Royal Northern College of Music Concert Hall, Manchester, UK,
24/06/2015

Performer(s): Royal Northern College of Music New Ensemble, Mark Heron (cond.)

Notes: Part of the Royal Northern College of Music 'Seven Gates Festival', 2015

Title: *unsettled paths*

Composed: July - September 2015

Instrumentation: flute, clarinet, harp, violin, violoncello

Duration: c.16'+ (flexible)

First Performance: Llangollen Royal International Pavilion, Wales, UK, 28/11/2015

Performer(s): NEW Sinfonia, Robert Guy (cond.)

Notes: a NEW Sinfonia commission as part of their 'new sounds collective'

Title: *clouds, so to speak...*

Composed: December 2015

Instrumentation: four harps

Duration: c.4'+ (flexible)

First Performance: Royal Northern College of Music, Carole Nash Recital Room, Manchester,
UK, 06/03/2016

Performer(s): Stephanie Halsey, Sophie Rocks, Steaphaidh Chaimbeul, Kathryn Mason

Notes: Part of the Royal Northern College of Music Chamber Music Festival, 2016

Title: *intimations*

Composed: February - April 2015

Instrumentation: flute, clarinet, trumpet, marimba, contrabass

Duration: c.4'

First Performance: Royal Northern College of Music, Studio 6, Manchester, UK, 05/2016

Performer(s): Manchester Camerata

Notes: Workshop performance

Title: *out of reach, but seen by us both*

Composed: February - April 2016

Instrumentation: horn in F, violoncello, piano

Duration: c.12'

First Performance: Alba Music Festival, Alba, Italy 26/05/2016

Performer(s): Tim Gil (vc.), Nathaniel Silberschlag (hn.), David Gompper (pno.)

Notes: Part of composition course, recorded by Elliott Mckinley (engineer)

Title: *shadows in the purple sun (sketches after Trakl [unfinished])*

Composed: April 2016

Instrumentation: choir (SSAATTBB)

Duration: c.5'

First Performance: Workshop Performance, Mechelen, Belgium 05/2016

Performer(s): Latvijas Radio Koris, James Wood (cond.)

Text: Georg Trakl *To The One That Died Early* (1914)

Notes: TENSO Choral Network, Tenso Young Composer Workshop.

Title: *tied to silence*

Composed: February - April 2016

Instrumentation: a.fl., c.a., b.cl., cbsn./ 1,1,1,0/ 1 perc./ pno./ 2,1,1,1

Duration: c.6'30"

First Performance: Workshop performance The Warehouse, London 29/05/2016

Performer(s): London Sinfonietta, Martyn Brabbins (cond.)

Title: *eigengrau*

Composed: July 2016 - January 2017

Instrumentation: 3 (1=picc.), 3 (3=c.a.), 3 (2, 3=b.cl.), 3 (3=cbsn.)/4,3, 3,1/ 4 perc./hp./pno./ str.

Duration: c.13'30"

First Performance: Royal Northern College of Music Concert Hall, Manchester, UK 24/01/2017

Performer(s): Royal Northern College of Music Brand New Orchestra, Edmon Levon (cond.)

Title: *transmissions*

Composed: October 2016 - February 2017

Instrumentation: Brass Band (divided into three groups)

Duration: 6'30"

First Performance: Royal Northern College of Music, Studio 5, Manchester, UK 14/03/2017

Performer(s): Royal Northern College of Music Brass Band, David Thornton (cond.)

Notes: Workshop Performance

Title: *pulse*

Composed: July 2016 - March 2017

Instrumentation: 3 (3=a.fl.), 3 (3=c.a.), 3 (2+3=b.cl.), 3 (2+3=cbsn.)/3,2, 3,1/ 3 perc./harp/vc.
solo/str.

Duration: 18'

First Performance: Royal Northern College of Music Concert Hall, Manchester, UK 27/04/2017

Performer(s): Kotryna Šiugždinytė (solo vc.), Royal Northern College of Music Brand New Orchestra, Edmon Levon (cond.)

Title: *Dämmerung*

Composed: March - May 2017

Instrumentation: violin, violoncello, piano

Duration: c.9'

First Performance: Royal Northern College of Music Concert Hall, Manchester, UK 17/06/2017

Performers: Isobel Scott (vln.), Rachel Morton (vc.), Giulia Contaldo (pno.)

Notes: Commissioned for the Royal Northern College of Music Gold Medal Competition 2017 (Winner)

Appendix II – Contents and Order of Accompanying Portfolio of Compositions

eigengrau 2017 [large orchestra]

tied to silence 2016 [large chamber ensemble]

Dämmerung 2017 [violin, violoncello, piano]

unsettled paths 2015 [flute, clarinet, harp, violin, violoncello]

clouds, so to speak... 2016 [harp quartet]

Beneath Fallen Skies 2015 [solo piano]

transmissions 2017 [brass band]

out of reach, but seen by us both 2016 [horn, piano, violoncello]

Immolation (in water) 2015 [large chamber ensemble]

pulse 2017 [solo violoncello and orchestra]

Appendix III – Accompanying USB Stick, Track Details

[USB Stick- Track Order]

track 1.....	<i>eigengrau</i> (13'51")
track 2.....	<i>tied to silence</i> (06'37")
track 3.....	<i>Dämmerung</i> (08'54")
track 4.....	<i>unsettled paths</i> (16'20")
track 5.....	<i>clouds, so to speak...</i> (03'47")
track 6.....	<i>Beneath Fallen Skies</i> (06'00")
track 7.....	<i>transmissions</i> (06'37")
track 8.....	<i>out of reach, but seen by us both</i> (11'56")
track 9.....	<i>Immolation (in water)</i> (07'48")
track 10.....	<i>pulse</i> (20'01")

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USB stick is named 'IDIP-17'

All recordings are available to stream from the following link:

<https://soundcloud.com/aledsmith>

All recordings and scores are available at the following link: https://www.dropbox.com/sh/rtp4z5b00kxly6t/AAC-Rhv3M-3C_eVIFQvsHrTCa?dl=0

Total running time: 101'51"

Appendix IV – Teardrop Structure

