

JULIAN ANDERSON'S *SYMPHONY*: OTHER WORLDS REFLECTED

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ABSTRACT

In recent years, Julian Anderson's music has been gaining ever-increasing international attention, especially since his residency with the City of Birmingham Symphony Orchestra from 2001 to 2005. Some of Anderson's most important works were written during this period, including *Symphony* (2003). Through an examination of the work's technical construction as well as its connections to seminal works of literature and music, this dissertation gives an account of *Symphony* as a locus for Anderson's artistic concerns writ large.

BIOGRAPHICAL SKETCH

Michael Small was born in Birkenhead, England in 1988. He began his compositional training at the Royal Northern College of Music in Manchester in 2007, graduating with full honors, and then beginning his DMA at Cornell in August 2011. In 2014, Michael received the Alan Horne prize from the Royal Philharmonic Society as part of their annual Young Composer commissions. His piece for solo violin called *White Space* written for UK violinist Fenella Humphreys was premiered at the Presteigne Festival in August 2015 and has received performances in Bristol, Oxford, Liverpool, and London, and at the National Galleries of Art in Edinburgh, before a painting by the artist who inspired the work. Michael's piece for the Momenta Quartet, *Memory Palace* received its New York premiere in October 2015 as part of the Momenta Festival. In 2016 he was a Friends of Copland House Fellow at the Cultivate Residency, working closely with Music from Copland House, and participated in the Underwood New Music Readings with the American Composers Orchestra.

Michael's music has been performed by the Aspen Contemporary Ensemble, the Aspen Conducting Academy Orchestra, the American Composers Orchestra, and Music from Copland House, Ensemble 10/10, Chroma, and The Momenta Quartet.

For Steve, John, Taylan, Bob, and Judy

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When I began this degree, I must admit I was in denial about facing what seemed like an impossible task in writing my own dissertation. As a teenager, such an idea would have seemed ridiculously out of reach, and I would likely not have believed anyone that I (a rather unremarkable student at the time) would one day complete a doctorate.

What changed my mind? In short, I simply could not have done this without the people in my life.

I must begin by thanking my doctoral committee Kevin Ernste, Xak Bjerken, and Roger Moseley who have each in their own way inspired me during my time at Cornell through their teaching and their own creative, performing, and scholarly work. Learning is about original thought, and the environment which they collectively created at Cornell served as a catalyst for my thinking as well as that of many others.

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Introduction

Symphony is no longer a quotidian title. Since the advent of modernism, the title has become charged, even loaded with connotations of tradition, profundity, and loftiness. Composer who apply it to their own work are compelled to mean something by it, whether to indicate a new direction they are staking out for the form, to critique the tradition, or to advocate for the form's continued relevance in the contemporary music world. There can often be an inherent conservatism to the latter statements, given the tendency for such pieces to be focused so heavily on the language and gestures of the nineteenth century. Nonetheless, there is a great deal of long-form orchestral music written since 1950 that can be readily described as “symphonic” without risking an egregious misreading, but that prefers a more poetically or dramatically suggestive title.¹ On occasion, these pieces might even be retroactively claimed as symphonies.²

Although there is no longer such a pressing need to subscribe to a clear dichotomy in musical thinking between conservative and progressive, there is a more elusive—perhaps more “spiritual”—path that follows the subtle and independent attitudes of Sibelius if not his specific forms and techniques, as exemplified by the trail blazed by the Danish composer Per Nørgård in his eight mysterious and idiosyncratic symphonies written across the last 50 years.

Of these paths, Anderson's contribution to the genre relates much more closely to this latter scheme in that while it is a highly personal work that develops its own techniques and ideas, it is clearly influenced by other modes of thought, ranging from the example of Sibelius's generative formal and melodic processes to the spectral attitude towards representations of sound and its perception.

¹ I have personally lost track of the number of times I have read the phrase “a symphony in all but name” in concert reviews of contemporary pieces.

² During a spoken introduction at a May 2016 performance of *Harmonielehre* with the Baltimore Symphony Orchestra and the composer conducting, John Adams described his now 31-year-old work as a symphony.

Symphony contains several interrelated extramusical references, translates them into musical analogues, and establishes a dialogue between them using methods which relate to (but also differ from) the ideas of spectral music. While Anderson's music is often strongly engaged with the ideas, attitudes and works of the Modernist period, it is perhaps in *Symphony* that this association find its truest expression in his music so far. James Joyce's *Finnegans Wake* is a major influence on the work in the form of the four massive climaxes in *Symphony*. Axel Gallen-Kallela's painting *Morning by Lake Keitele* influences the piece through its mood, and through analogue by use of a recording of the sounds of a Finnish lake, which Anderson used as the basis of the timbres for the opening six-minute movement-section. Sibelius's pioneering 5th Symphony, (especially its form) is the main musical influence on the work, crossbred with more recent considerations of categorizing orchestral sounds and timbres which come from spectral attitudes to composing.

All of these conceptual parents bequeath certain core ideas to *Symphony*. The influence of *Finnegans Wake* is twofold: structure and sounds. The structure of *Symphony* is loosely inspired by the novel's historical allegory often associated with Giambattista Vico (a repeating four-part cycle consisting of a Divine Age, followed by a Heroic Age, a Human Age, and finally a "Ricorso", a period of chaos which ends in a catastrophic change in the narrative).³ The four major climaxes in *Symphony* (as labeled in Fig.) are connected to similar climaxes in the *Wake*, namely the "thunderclaps" or "thunderwords". These are 100-letter words which consist mainly of different words for "thunder" in different languages strung together. *Symphony* contains its own approximations of thunder sounds using the resources of the orchestra rather than language. Each thunderclap signals a major change in the trajectory of the piece just as the thunderwords in Joyce precede shifts in language, setting, plot, or a character's actions.

³ Tindall, William York. *A Reader's Guide to Finnegans Wake*. New York: Syracuse University Press, 1996, p.10.

Symphony is also in part an homage to Sibelius and his musical legacy. In Anderson's own contribution to the Cambridge Companion to Sibelius, he outlines the ways in which Sibelius's ideas are now so influential as to be "a key figure in the shaping of current musical thought"⁴ This essay was written concurrently with *Symphony*, so the early 2000s represented an extended period of reflection about Sibelius for Anderson. Sibelius's influence also affects *Symphony* on multiple levels simultaneously. The largest scale instance is the gradual process of acceleration across the entire work, with the slowest music, harmonic, and textural activity occurring at the beginning, and the most active occurring at the end. On another level, the entire form of the piece takes a four or five (attacca) movement layout in the mold of late Sibelius, and "shatters" it. The following is a diary entry from Sibelius while working on his 5th Symphony:

"It is as if God Almighty had thrown down pieces of a mosaic for heaven's floor and asked me to find out what was the original pattern"⁵

As Anderson commented in our correspondence: "So I thought, in this piece, I'd shatter [it] again".⁶ The formal diagram in Fig. A below shows several discernible movements, an Introductory slow movement, a scherzo, another slow movement and scherzo intercut together, and a final scherzo. These movements superimposed on a Joycean scheme of recurring climaxes is what produces the form of Anderson's work.

On a much more local level, Anderson's work references the world of Sibelius through more directly audible references. Apart from the very overt similarity of *Symphony*'s main theme to that of

⁴ Anderson, Julian. "Sibelius and Contemporary Music." In *The Cambridge Companion to Sibelius*. Edited by Daniel M. Grimley, Cambridge: Cambridge University Press, 2004, p.196.

⁵ Sibelius, Jean. *Dagbok 1909–1944*. Edited by Fabian Dahlström. Helsinki: The Society of Swedish Literature in Finland, 2005, p. 223.

⁶ Anderson, Julian. Correspondence by email, November 13th, 2016.

Sibelius's 5th, the opening "sound-sheet"⁷ of the Introduction contains a clarinet solo which emulates the sound of a crane call, a frequent obsession of Sibelius.

Anderson's recurring interest in the music of the so-called "spectral" trend informs the composition of this work on a very deep level. Since the early 1980s, Anderson stayed informed about contemporary developments in sound research through reading analysis and theory articles. One of these, the concept of the "timbre space" as researched by David Wessel,⁸ has proven very important in shaping composer's approaches to composition – Kaija Saariaho being one especially notable example. The timbre space is a two-axis graph onto which any sound can be plotted in terms of density/thinness (on the y axis), and sine/noise (on the x axis). According to Anderson, "every sound in [Symphony] was written considering this idea".⁹ The piece's large scale trajectories can be analyzed in terms of a sine-noise, or clear pitch-unclear pitch ratio, which is the basis of Chapter 2.

Symphony was composed for the City of Birmingham Symphony Orchestra and Sakari Oramo, during Anderson's tenure as their composer in residence. While none of the works from this time can be said to be unambitious, perhaps *Symphony* is the most radical work of the group, at least for Anderson personally, and maybe even for the symphonic genre at large. The work represents the composer's first attempt to integrate the aforementioned range of intra- and extra-musical interests into a single eighteen-minute compact symphonic form. What these materials are and how Anderson has synthesized them into his musical language is the core aim of my study.

In light of *Symphony*'s complex structure, the following is a formal diagram presented as a guide for the reader through the first chapter, which offers a detailed examination of the work's techniques

⁷ Hepokoski, James. *Cambridge Music Handbooks: Sibelius: Symphony No. 5*. Cambridge: Cambridge University Press, 1993. Hepokoski's term to describe large harmonically static passages of Sibelius's music.

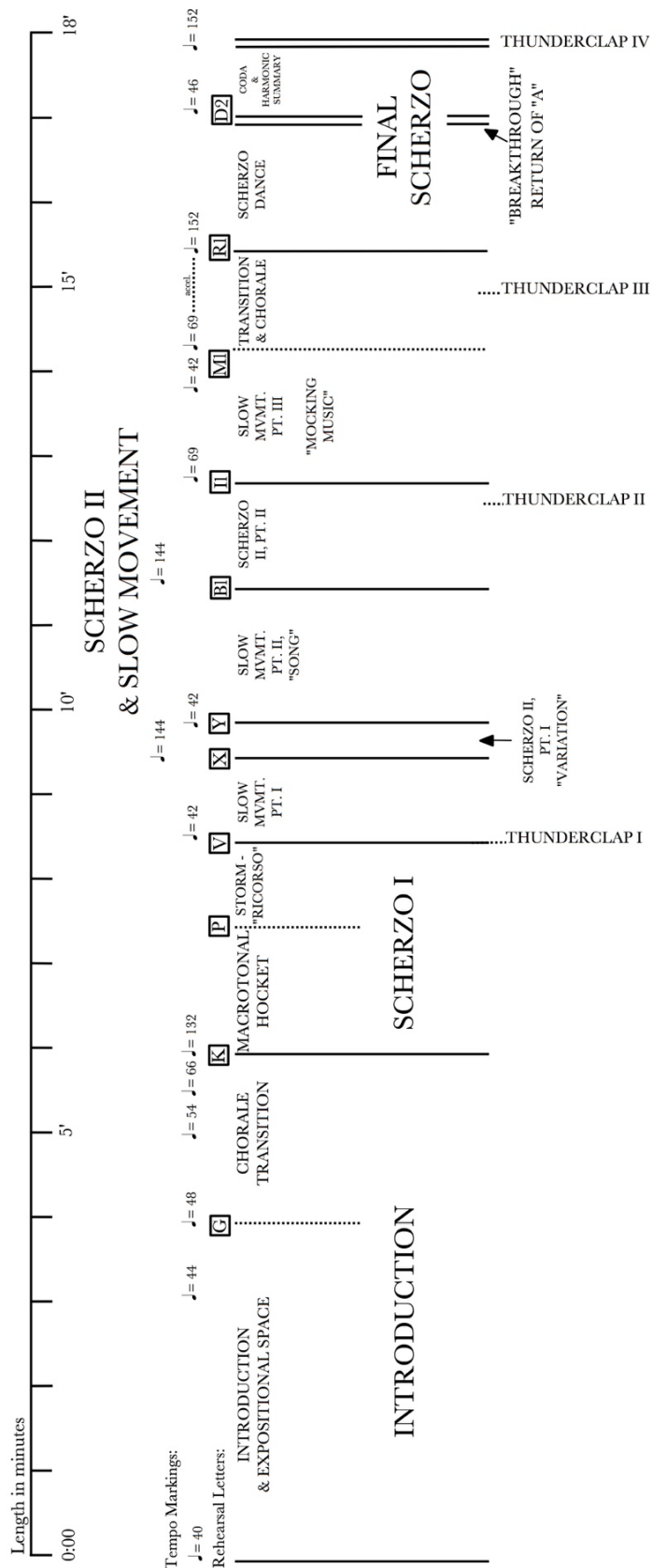
⁸ Wessel, David. "Timbre Space as a Musical Control Structure." in *Computer Music Journal*, Vol.3 No. 2, 1978.

⁹ Anderson, Julian. Conversation by phone, August 28th 2015.

and intra-mechanics. Following that, the form and the varied artistic influences on the work will be explored in the second and third chapters respectively.

Anderson's music is primarily about the joy of exploring and exploiting the properties of sounds. For this reason, it is highly recommended that the reader get to know the work in question before reading this study. The purpose of this paper is to illuminate the music, its ideas, and context, but in my view, listening should always come first.

Fig. A: Formal diagram of *Symphony*



CHAPTER 1: *Symphony's* Technical Resources

Anderson's *Symphony* presents an array of techniques ranging from the extremely strict and limited to the free and seemingly intuitive. This chapter will discuss the pitch language of *Symphony* and, where appropriate, explain the more systematic techniques at work. As is often Anderson's preference, some of the thematic material for the work appears to have a relationship to early "Western" musical history, especially plainchant.¹ Beyond that, the piece is a journey which encompasses a range of extremes from pitch consonance and dissonance, freely atonal passages alongside those with a strong pitch center, to pulsed music, static music and fluid rubato. *Symphony* places all of these possibilities on a single spectrum of options open to a composer and forms a dialogue between them. By charting recurring topics such as the relationship between strictness and freeness, this analysis will attempt to elucidate that dialogue.

While each of the more systematic techniques present is of individual interest and informs a deeper understanding of the whole piece, it is important to emphasize that no single technique dominates the whole work. Each technique is used as far as it is needed: from there, the music moves on. Though this may at first sound inefficient, there is a resourcefulness to Anderson's use of these techniques insofar as the same technique can produce two very different musical passages which may not sound alike.

Morning By A Lake: The Introductory Movement

The first six minutes of *Symphony* comprise an introductory slow movement. Though all of *Symphony* runs *attacca*, describing larger sections as movements allows salient distinctions between them. While

¹ Though this is most certainly not always the case in every piece. Much of the thematic material for his earlier work *Khorovod* (1994) comes from Eastern-European folk styles, especially Lithuanian melodies.

a fuller exploration of the formal language of *Symphony* is the main topic of Chapter 2, both the techniques in use and the musical structures which result are strongly tied to their context within the piece, so a brief précis of the formal surroundings will introduce each of the following subheadings.

The opening slow movement consists of two broad sections which are seamlessly melded together, forming an extremely static expositional space in which the many varied materials of the piece are introduced. These materials range from conventional melodies and short motives to timbres-as-material such as the brush bowing on the opening chord, the use of slide-mutes in the trumpets, and the association of certain instruments with certain themes. This first subsection also functions as an unfolding register wedge: the very opening is a central hexachord which emerges from noise, which is followed by the introduction of the lower register, and finally by the higher register in the woodwinds and percussion. Once this “opening” process has been completed and the melodic materials introduced, there follows a second subsection whose trajectory is a gradually inclined “ramp” which increases the harmonic tension and general rate of activity while serving as a transition to the second movement, the first of several scherzos. Though this transition has a local purpose, namely to push the music into a faster tempo which will allow further development, it could also be seen as a microcosm of the whole piece since it begins in near total harmonic and rhythmic stasis before accelerating to over four times the original beat speed. This is achieved by way of a long sequence of chords that gradually increase in frequency over three repetitions.

While these two subsections create a simple shape for the opening of the work, the complex entanglement of themes and materials within this quasi-tectonic process create the trajectories and raise the questions to be grappled with over the course of the piece.

Introduction Part I: *Symphony's* Themes

The first part of *Symphony's* main theme emerges organically from the static chord in the strings at the beginning. In broad terms, this chord is a 'seed' from which much of the piece grows (although there are numerous pitched, rhythmic, and timbral ideas in the work which do not grow from this small cell and will not be introduced until much later). The melody shares the same interval structure as the opening chord, and arises as an arpeggiation and extemporization of those properties. It grows into its full form over two iterations.

Fig. 1.1: Opening harmony and main theme (part I)



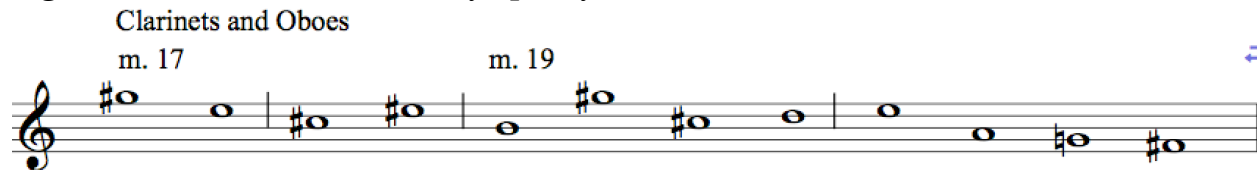
There follows a continuation of this theme in the horns which begins to reverse the process: each overlapping voice sustains its final note, now producing harmony from the melody.

Fig. 1.2: Main theme (part 2)



If the theme's length and modality bears resemblance to plainchant, this perhaps reflects the fact that Anderson frequently adapts plainsong chants to form the main melodies of his pieces.²

Fig. 1.3: Second set of themes of *Symphony*, mm. 17 & 19



² This is particularly true in *Stations of the Sun*, whose central dance section contains an adaptation of the *Alleluia Adorabo* chant.

Fig. 1.6: Kyrie IV in the Liber Usualis, p.25

IV. — For feasts of the II class. 1.

(Cunctipotens Genitor Deus)

1. 

All three groups of themes are distinct, yet closely related. This is not unlike the Berg Op.1 Piano Sonata, in which the first group and second group themes (while distinct) can be shown to be cousins of one another through inversions, retrogrades, or other reflections. Further similarities are perceptible if one allows for intervallic flexibility, viewing the themes not so much as specific pitch collections but rather as contour sets.

In *Symphony*, one can see these processes of metamorphosis at work over the course of the piece. What follows is a map of the three sets of themes and their reappearances and development throughout the work, taking into account their instrumentation. Perhaps what might interest Anderson about plainchant, besides its modality, is its internal consistency: the recurring appearances of simple and minute shapes are akin to the features and operations associated with “cells,” in the terminology of twentieth-century music theory. In this sense, a set of plainchants is rather like a family – an interconnected network of material that shares a certain amount of fundamental identity. Many passages in *Symphony* undergo local transformations, as in the upper wind and percussion lines during the first scherzo, which become more and more chromatic towards the climax. The themes themselves also undergo slight transformations, mostly through changes in instrumentation and harmonic or formal context, although their core intervallic identity is kept largely intact.

Fig. 1.7: Theme Evolution in *Symphony*

The diagram illustrates the evolution of a musical theme through three distinct instrumental sets:

- FIRST SET (m. 10-16):**
 - Fl. & Ob. m. 10:** The initial presentation of the theme.
 - Winds m. 15:** The theme is taken up by the woodwinds.
 - Vlins m. 16:** The violins play the theme.
 - Cl. m. 46:** The clarinet plays the theme.
 - Ob. m. 46:** The oboe plays the theme.
 - Vlins m. 66:** The violins play the theme.
 - Vlins m. 70:** The violins play the theme.
 - Vlins m. 88:** The violins play the theme.
 - Horns m. 95:** The horns play the theme.
- SECOND SET (m. 17-19):**
 - Clarinet and Oboe m. 17:** The theme is played by the clarinet and oboe.
 - Fl. & Ob. m. 47:** The flute and oboe play the theme.
 - Winds & perc. m. 123:** The woodwinds and percussion play the theme.
 - Oboes m. 112:** The oboes play the theme.
 - retrograde of 1st set theme:** A section where the theme is played in reverse.
 - similar to:** A section where the theme is played in a similar form.
 - Horns, Tpt, Winds m. 127:** The horns, trombones, and woodwinds play the theme.
 - Oboes m. 241:** The oboes play the theme.
- THIRD SET (m. 20):**
 - Clarinet m. 20:** The clarinet plays the theme.
 - Horn and Bassoon:** The horns and bassoons play the theme.
 - Tpt m. 47:** The trombone plays the theme.
 - Strings m. 159:** The strings play the theme.

Additional staves at the bottom show the evolution of the theme in other parts of the orchestra:

- Celli & Bsn m. 155:** The cellos and bassoons play the theme.
- Vlins & Horns m. 163:** The violins and horns play the theme.
- Set III-like m. 167:** A section with a Set III-like character.
- Winds m. 167:** The woodwinds play the theme.
- Celli m. 186:** The cellos play the theme.

Cello m. 196
 Horn m. 245 reordering
 Oboe m. 258 'fake recap'
 Brass m. 257
 Tpt & Strings m. 254
 Strings m. 260 chord from Scherzo II, Pt. 1 harp
 Strings m. 311-12
 Strings m. 334
 Clarinet m. 302
 Winds & Perc. m. 357
 Cl. m. 358
 Tpts, Cor Anglais m. 361
 Winds & Perc. m. 367-8
 Cl. m. 368
 Strings m. 373 onwards

The score consists of multiple staves for different instruments. The Cello part (m. 196) and Horn part (m. 245) are in the upper left. The Oboe part (m. 258) is labeled 'fake recap'. The Brass part (m. 257) and Tpt & Strings part (m. 254) are in the middle left. The Strings part (m. 260) is labeled 'chord from Scherzo II, Pt. 1 harp'. The lower left section contains the Strings parts for m. 311-12 and m. 334. The lower right section contains the Clarinet part (m. 302), the Winds & Percussion part (m. 357), the Cl. part (m. 358), the Tpts, Cor Anglais part (m. 361), the Winds & Percussion part (m. 367-8), and the Cl. part (m. 368). The bottom right section contains the Strings part for m. 373 onwards.

In a conversation with the composer⁴, he revealed to me that his initial plans for what he termed the “Kyrie” theme were more extensive – early in the composition process, it seemed that this theme would play a larger role than it did, which explains its relatively few appearances compared to the “main” theme. One wonders why it was not “revised” out of the piece. Yet, given the fact that the Introduction was based on a sound recording of a Finnish lake, (and that one early subtitle for the movement was “Scene with Cranes” in reference to Sibelius⁵) it is not so hard to see why it was kept in place. It contributes to making the Introduction a naturally diverse musical ecosystem, rich with a plurality of varied yet related themes. In other words, the Introduction is not just about the evocation of natural sound, but also about the natural production of diverse characters and patterns.⁶

The purpose of this diagram (Fig. 1.7) is to show the diversity and evolution of thematic appearances during the piece.⁷ It is notable that while the main theme is elongated, compressed, fragmented (m. 167), merged into other lines (m. 155), even stacked (m. 196), it is never inverted or retrograded. There is a series of reordered appearances from m. 245 onwards, but the upwards leap is still emphasized. In fact, the inverted form of the opening three-note cell is present in the latter parts of the first set (see Fig. 1.2, third group of notes).

Although Anderson stated that he considered what is referred to here as the first set of themes as one long theme, this set splinters into component parts. When they reappear, moreover, these restatements are *out of phase*, meaning that the theme never recurs in its entirety. The closest it comes to a full reappearance is at the end of the “song” slow movement at m. 196, where two statements of

⁴ Ibid.

⁵ Anderson, Julian. Correspondence by email, November 13th 2016.

⁶ The influence of nature, especially that of the sounds of nature, will be discussed in Chapter 3 along with other musical and non-musical influences on the piece.

⁷ A few guidelines for reading Fig. 1.7: The main themes introduced in the expositional space of the first six minutes appear along the top, with transformations and restatements in order of appearance shown below via arrows. Each arrowhead indicates a distinct appearance of a theme or cell. Certain arrows travel “behind” other examples for reasons of presentation that will become clear.

the three-note cell are elided on the A, followed by the G-D-C-A cell. This ‘out of phase’ concept is something which will return with the consideration of timbre later in this chapter. Apart from the oboe reappearance of the three-note cell in m. 258, this theme does not reappear at the same pitch level (A) until the end of the piece (m. 373), where it is placed in an accelerated canon.

Some apparently new inventions later in the piece turn out to be decorated or elaborated versions of older material, as in the oboe counter-melody which appears in the first scherzo. Here, the “Kyrie” theme from the third set has been slightly stretched and one of its later leaps repeated and emphasized.

Fig.1.8: Oboe melody at m. 112

Oboe, Cor Anglais,
and Clarinet in A, m.112-116

♩ = 132

notes with arrows show contour of "Kyrie" theme

ff vivo *sf* *sf* *p*

A few measures later, a more decorative figure appears in the winds and percussion (m. 123). This theme only appears during fast sections of the piece in layered textures, so it can be classified as secondary material. However, its internal construction also exhibits links to the “Kyrie” theme.

Fig. 1.9: Decorative figure in the winds at m. 123

Flute II and Oboe, m.123-126

♩ = 132

similar to "Kyrie" theme

ff 3

lower layer upper layer

This figure could be characterized as three descending tones decorated by upwards leaps. Failing that, it could alternatively be viewed as two descending three-note themes in a fast hocket.

Either way, this theme is then recombined with the “Kyrie” theme from the third set, a pairing which might at first seem incongruous. When one considers the generally descending direction of both and the common tone of C that anchors all three phrases, however, the association appears less arbitrary.

Of the themes from the second set, it is mostly the second and third groups (see Fig. 1.3) that are repurposed and make appearances again in the scherzos. The first group does not reappear until the Slow Movement (Part III), where it features as an accompanimental layer. Here, it becomes not so much an evocation of bird sounds and nature as a sardonic commentary on the slow and lyrical music beneath. (See Chapter 3 for additional commentary on the contrast between these strands.)

As Anderson admitted, the Kyrie themes did not turn out to be as important as he initially expected. Perhaps the main theme was simply more “pliable.”⁸ It retains its identity despite strikingly varied changes in its surrounding context, tempo, instrumentation, and texture, and it is perhaps this resilience which ultimately made it ideally suited for symphonic use. Throughout *Symphony*, themes are consistently invented, repurposed, and transformed to create a complex sonic fabric.. This is arguably why Anderson’s music, despite its immense variety of character and mood, retains a consistent identity, and “wholeness”. This resourcefulness, a core element of Anderson’s technical means that infuses the piece at all levels, is by no means limited to the use of themes: sound and instrumentation are equally important. In this regard, the introduction sets up a number of key sound-textures that also possess a strong and memorable identity, and thus are also part of the “recapitulatory” scheme of the work.

⁸ See ²⁷ for more on the concept of pliability.

Timbres, Space, Stasis: The Harmonic Background

One could describe the opening of *Symphony* as a “sound sheet” - a vast and layered edifice that builds up with the introduction of each of these themes by sustaining their core pitches. Each layer remains completely static until the beginning of the chorale sequence, almost as if each theme is being processed by an infinite reverb pedal. While not all of these layers sound at once (although there are as many as five sounding at a time, as in m. 20), what keeps each layer aurally distinct is its association with a bespoke theme. It is tempting to invoke a comparison to an ADSR (attack, decay, sustain, and release) envelope here: each layer appears to treat the appearance of the theme as an “attack,” followed by the sustaining of the main notes in either strings or woodwinds while further layers are introduced on top.

Fig. 1.10: “Attack” and “Sustain” of harmonic layers, mm.18-20
Oboes & Clarinets, m.19

The musical score for Oboes & Clarinets in measure 19 is presented in three staves. The top staff (Oboe) begins with a tempo marking of quarter note = 40. It features a melodic line starting with a quarter note G4, followed by quarter notes A4, B4, and C5, all marked with accents. A slur covers these four notes, which then lead to a half note G4. The middle staff (Clarinet) starts with a *ff* dynamic and contains a triplet of eighth notes (G4, A4, B4) marked with accents, followed by a quarter note C5. The bottom staff (Piano) is labeled "pitches sustain" and shows a series of chords: a dyad (G4, A4), a triad (G4, A4, B4), a dyad (G4, A4), a triad (G4, A4, B4), and a dyad (G4, A4). The final chord is marked with *ff* and a triplet of eighth notes (G4, A4, B4).

Although it is hard to overstate the sheer thickness of sound at this point, the orchestration and register distribution of each harmonic layer remains clear and does not devolve into chromatic saturation. What also helps is the modality and harmonic structure of each theme. While these do not coalesce into a single key area or pitch level, they retain an internal consistency which results in a kind of multi-tonality in the form of a collection of superimposed modal clusters.

Fig. 1.11: Harmonic Summary of opening “sound-sheet”, mm. 1-25

The musical score is organized into five sections, A through E, each with specific instrumentation and performance instructions:

- Section A (mm. 1-5):** Strings, brush bowing; Flutes.
- Section B (mm. 6-10):** Flutes; Oboe.
- Section C (mm. 11-15):** Flute; Oboe.
- Section D (mm. 16-20):** Horns; tied notes sustain; Cl. (Clarinet); Ob. (Oboe); Cl. (Clarinet); Fl. (Flute); hp., cl., bsn. (harp, clarinet, bassoon).
- Section E (mm. 21-30):** Woodwind outburst m. 21-22; m. 23; m. 26-30; brass mute fluctuations; pitches added to strings; hp. vc. cb. (harp, violin, cello/bass); Tuba & C.Bsn. (Tuba and Contrabassoon); Chorale begins.

The opening timbre does not reappear until m. 197, after the end of the “song” part of the slow movement. While the opening theme does not return, its timbre serves as a bridging passage of

harmonic stasis, a momentary calm before the storm of the Scherzo II, Pt. II, which ends with the second of four thunderclaps. This is what is meant by my previous assertion that the primary building blocks of the piece return ‘out of phase’. The main theme and the timbre in which it initially appeared reappear, but at different times and with different purposes. Perhaps only noticeable on repeated listening, or by consulting the score, is the fact that the sonic evolution of the opening sound sheet (with the brush bowing moving to free trumpet mute fluctuations) now progresses in *reverse*. In a sense, time seems to move backwards.

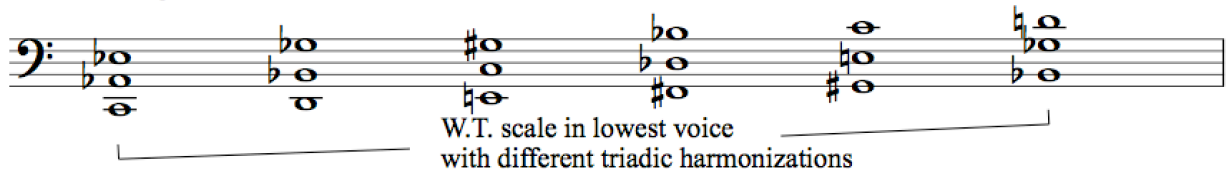
That is not the only moment in which an established logical order is inverted (or subverted), for the same happens to the chorale during the buildup to the first thunderclap. The chorale forms the backbone of the second half of the introduction, and an analysis of the technique used to construct it reveals further aspects of *Symphony*’s harmonic construction.

Introduction Part II: The Chorale

The Chorale first appears after the opening sound-sheet has unfolded. It appears to rise organically out of the bass register which has been completely static up to this point. In fact, this represents the first moment of true movement so far. For the remainder of the Introduction, it proceeds in a sequence of three iterations: the first of ‘fails,’ while the second elides and builds into the third. From there, the chorale breaks free of its procedural sequence and transforms into a bright and energetic hocket for the whole orchestra. This hocket reaches a climactic yet unstable harmonic goal before cross-fading into the beginning of the scherzo. This subsection of the chapter will cover the chorale’s harmonic content, its transformation during the introduction, and chart its reappearances throughout the rest of the piece.

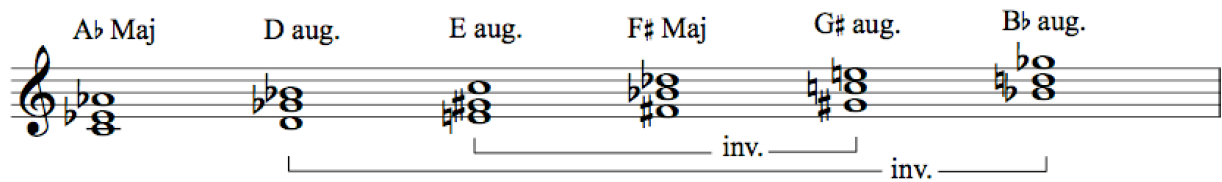
While each of the three appearances of the chorale is subtly altered by transposition and proceeds to a different end-point, the basic structure is shown below.

Fig. 1.12: The Chorale, m.29
 Strings at m.29-33



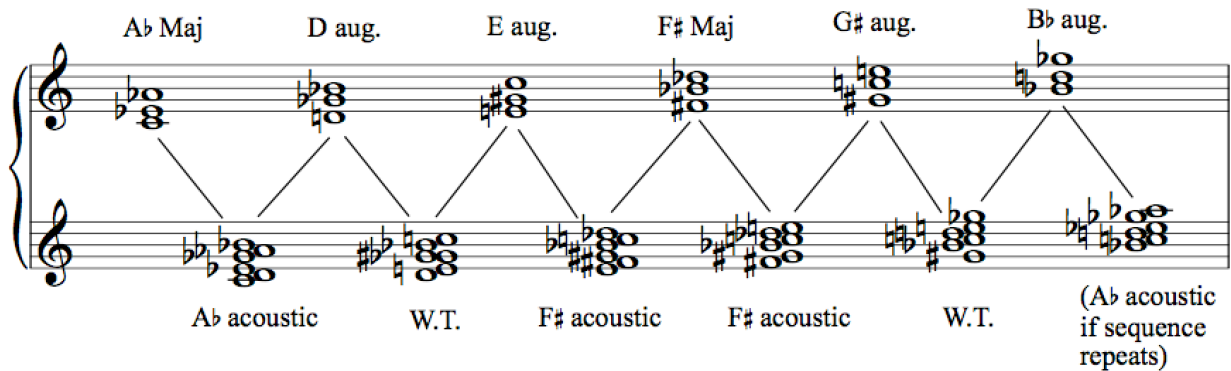
There are 6 trichords which overlap three-by-three creating a series of distinct hexachords. Their very simple harmonic structure becomes apparent when they are arranged as closed-position triads.⁹

Fig. 1.13: Chorale reduced to basic trichords



When overlapped, these chords produce a cycle of modal hexachords.

Fig. 1.14: Triads combined to form modal hexachords



⁹ Notes are kept the same as in the score, which are spelled for ease of individual part reading. For the sake of ease of comparison with the score, these spellings have been retained, so the term “augmented” refers to the sound of the triad, not its spelling.

So as written, the passage contains the following sequence.

Fig. 1.15: Chorale sequence and resulting hexachordal harmony

Strings at m.29-33

Ab acoustic W.T. F# acoustic F# acoustic W.T. (Ab acoustic if sequence repeats)

This sequence could very well be repeated verbatim; it has internal harmonic consistency, clear direction, and seems to be laying the ground rules of harmony and voice-leading for the piece. However, Anderson seems to have an instinct about when to throw a wrench in the works in the interest of avoiding predictability. The chorale begins to repeat from m. 33 onwards, but something goes wrong. The top voice begins to undershoot its leaps, and as a result the sequence distorts and compresses. This ‘warping of the rails’ proves enough to temporarily derail the train, and the entire movement grinds to a halt at the top of this failed sequence.

Fig. 1.16: Collapsing voice-leading halts musical progress

m.33

(undershoots F#)

parallel compresses parallel Reh. G

Ab Lydian
(possibly acoustic but no ^7 present)

Partial octatonic

Partial octatonic

When heard in context, a clear set of chords is somewhat difficult to discern owing to their seamless overlapping and careful orchestration in divisi strings. More readily perceptible is a gradual harmonic wash over the lower register which slowly rises towards the static fermata. As a result, the

chorale takes on the aspect of a ‘multi-purpose’ musical structure rather than a stable reiterative pattern (as might be found in a passacaglia or chaconne).

Its first appearance, while having the same pitch content as the beginning of the second and third appearances, is orchestrated and blended in such a way that only the modal flavors resulting from the overlapping of chords are clearly audible. This passage follows an extended outburst of woodwind activity which is at first a rhythmically chaotic squawking, reminiscent of flocks of waterfowl, before dissolving into a cloud of trills and grace-note runs (m. 21-30). The harmony of the underlying chorale is hinted at by the bass clarinet in m.31, but its figure is so similar in behavior to the trills and grace notes of the preceding passage that the ear will likely hear it as an outgrowth or remnant of that passage, not as a sign to pay attention to the harmony. This is a kind of orchestrational sleight-of-hand: what is, in fact, the second appearance of the chorale may seem to be the first, but the essential harmonic content has been latent for longer than one might think. This might be described as “concealing the scaffolding,” an idea to which I will return when discussing the first scherzo.

After a fermata at Rehearsal G, marked “long,”¹⁰ the sequence restarts – but something has changed: every second chord has now been transposed an octave down. When these chords overlap, they produce hexachords with far wider voicings, enabling the richness of these harmonies to emerge more fully. This second appearance is orchestrated in an extremely bare and elemental manner as if the piece is reassembling itself from its raw materials. The harp occasionally articulates the sounding harmony at various moments, but these punctuations do not always coincide with a chord change. As opposed to the first chorale which emerged underneath hyperactive winds and percussion, the progression of these chords is not shrouded in other textural layers. This section builds over the next

¹⁰ Anderson. Interview, September 10th, 2015. Anderson stated that he instructed the conductor of the premiere, Sakari Oramo, to make this pause “almost uncomfortably long.”

ninety seconds to an intense tutti climax, delineating a trajectory that is made more dramatic and dynamic by starting from the bare minimum of sound.

Fig. 1.17: Re-spaced Chorale, rising for a second time

After Rehearsal G, m.35-42

The figure displays a musical score for a piano and organ. The piano part is written in treble clef, and the organ part is in bass clef. The score is divided into two systems. The first system (measures 35-42) features a piano part with a melodic line and a bass line, and an organ part with a complex harmonic texture. Annotations include 'extra chord' pointing to a chord in the piano part, 'F# stasis' pointing to a sustained note in the organ part, and 'Resulting harmonies' pointing to the overall texture. The second system (measures 43-50) shows a 'third chord from sequence with changed F#' in the organ part, an 'unexpected leap' in the piano part, and two 'deformed chords' from measure 34. A 'lower layer takes extra step' is noted in the organ part. The bottom system shows 'modality' and 'increasing chromaticism' in the organ part.

extra chord

F# stasis

Resulting harmonies

unexpected leap

first "deformed chord" from m.34

second "deformed chord" from m.34

third chord from sequence with changed F#

lower layer takes extra step

modality

increasing chromaticism

Again, the chorale does not repeat verbatim. While the layers should be alternating, the top layer gets ahead of itself by taking an extra step, producing a different resulting hexachord in the process. The lower layer then makes a sudden and unexpected leap from B \flat to E. From here, the

sequence continues harmonizing the rising whole-tone scale, but producing more and more chromatically dense chords. As the winds reintroduce the opening melodic materials in a mélange, not unlike the Introduction of *The Rite of Spring*, the chorale reaches another high point just before Rehearsal H. Instead of grinding to a halt, the music plunges back down deep into the bass register, and the sequence starts for a third time. The difference here is simply that the alternating octave-displaced layers have switched position, now with the lower layer coming first.

Fig. 1.18: Third Chorale

m.49-57 winds: paired with crotales - coloristic "grace-chords" on upper layer

new chord

Resulting hexachords

The image shows a musical score for the 'Third Chorale' from m.49-57. It consists of five staves. The top staff is for winds, and the second staff is for crotales. The upper layer (winds and crotales) features coloristic 'grace-chords' and a 'new chord' is indicated. The lower layer shows the resulting hexachords. The score is written in a complex, chromatically dense style, with many accidentals and a high density of notes. The key signature is one flat (B-flat major/D minor). The time signature is 4/4. The score is annotated with 'm.49-57 winds: paired with crotales - coloristic "grace-chords" on upper layer' and 'Resulting hexachords'.

The image shows a musical score for a piano piece, consisting of two systems of staves. Each system has a treble and a bass staff. The notation includes various chords and melodic lines. Annotations are present: 'pairs reverse' with arrows pointing to specific chord pairings in the upper voice, and 'motion towards Temporary cadence on D Major' with an arrow pointing to the final chords in the piece.

The third chorale is a continuation of the second, but also a reestablishment of the earlier pattern of chords. This pattern also quickly breaks down. The lower voice introduces a new chord on $E\flat$ that throws the repeating pattern in a different direction, and while further chords are often inversions or re-voicings of earlier chords, their consistent patterning has disappeared. The upper voice takes another extra step which seems to reverse the pairings of chords, though by this point their frequency has increased so much that they are all left ringing on top of one another, and therefore harder to group definitively. A clear temporary harmonic goal is reached in m. 57 (though not a *final* goal, as we shall see) whose two chords conform to the notes of the D major scale, a bright and sudden change from the dense harmonic palette of the previous few measures.

As may have become clear, each of the three phases of the Chorale ends with the internal structure of its component chords being subverted, stretched, or compressed. In other words, the harmony of this subsection of *Symphony* effectively serves to set up a trend of stricture devolving (or evolving) to freedom. This is something which will be further discussed in the second part of the Scherzo.

Since this entire subsection of the piece is an intensification of many parameters at once (harmonic density, textural layers, and volume), it is worth discussing the rhythmic distribution of these chords. Up to now, the chords have been presented without rhythm for ease of harmonic examination, but by the third iteration of the chorale, the sense of acceleration becomes audibly palpable.

Fig. 1.19: Rhythmic telescoping of Chorale in third iteration, mm. 49-60

49 $\text{♩} = 54$ Composite Rhythm
m. 49-60
Chorale reduced

54

58 *poco accel.*
Chorale slightly simplified from here *Subito stringendo*

While there is no precisely logarithmic sequence at work behind these rhythms, there are nevertheless patterns of regularity and irregularity. There is no marked accelerando laid across this

group of bars, but in measure 60 (the last measure of the above example) there is a “subito stringendo” which pulls the music suddenly into half the beat speed of the scherzo ($\frac{1}{4}$ note = 66). There follows a “doppio piu mosso” in m.64 which subdivides the beat into the basic $\frac{1}{4}$ note = 132 pulse for the remainder of the scherzo. The accelerando and transition into the scherzo is entirely written out. Perhaps deliberately, this transition is not a simple smooth line, but a general accelerando with phases of unevenness. The passage moves through phases of precise pulsation, but just when a pulse seems to have established itself, it breaks down or subdivides. This occurs in m. 54 shown above, which has a dotted eighth-note pulse, and again in mm. 55-56, whose eighth-note pulses remedy the lack of a consistent beat length over the previous few measures. A similar pattern happens in m. 58, where a hocketed triplet pulse stays consistent for two beats, but then once again shifts into a sixteenth-note subdivision of the beat. The rhythm never quite settles during the whole sequence. The chorale is always searching for a pulse, but ultimately in vain: it reaches a climactic chord (or rather trio of chords) in the second measure of the third system, which merge into a clanging polyrhythmic alternation shown below.

Fig. 1.20: “Crossfade” between chorale and scherzo’s opening ostinato, mm. 61-62

(Stringendo) ----- $\text{♩} = 66$
 m.61-62
 Brass and winds fail to merge contrasting pulses and fade out

Scherzo ostinato
ff stacc. *f sub*

Only with the ostinato that begins the second movement is a regular pulse established. Like the end of the first chorale, this passage represents a “failed” climax. It is questionable whether the

scherzo is even a continuation of the introduction, or whether this moment is a sort of passing of the baton from one musical stream to another. Either way, there is a stark difference between them. In the introduction, the increase in tempo feels hard-earned, with a great deal of harmonic and textural activity pushing from total stasis towards faster movement and more active textures: a radically different kind of music. The scherzo, by contrast, seems to exist effortlessly in the faster tempo before it even starts: the marking “sempre piu leggiero” is revealing in this regard. Its reduced instrumentation, lighter harmonic palette, and comparatively simple texture produce music of a markedly contrasting character to the brooding powerhouse of the introduction. It almost seems as though these are two different pieces coexisting in the same work. Yet it soon becomes clear that they are related after all, for the main theme’s contour reappears at m. 77 after a dance-like introduction which sets up the new harmonic world. Later on in this movement, moreover, the chorale also reappears in a new form.

The Brass Chorale before Thunderclap One

After the bright and radically different first scherzo, the music becomes stormier and more chromatic towards the first of four massive “thunderclaps,” musical cataclysms of sound which form highly dramatic and shocking interruptions. (Their formal function and extra-musical significance will be discussed in Chapters 2 and 3 respectively.) Before the first thunderclap, the chords of the chorale return in a decorated guise in the brass. Something strange happens to this chorale: it repeats its earlier trend of upward movement (each chord now adorned with grace notes), but when it reaches a clear high point, it appears to reverse direction. In the final measures before the thunderclap, it can clearly be heard to move backwards.

Fig. 1.20: Chorale reverses

The image shows two staves of musical notation. The top staff is titled "Brass Chorale, m. 136" and contains a sequence of chords. A bracket above the right side of this staff is labeled "deformed chords". The bottom staff is titled "Trajectory reverses towards first chord" and shows a sequence of chords that mirrors the structure of the top staff. An arrow points from the "deformed chords" section of the top staff down to the corresponding section of the bottom staff, illustrating the concept of trajectory reversal.

This further illustrates the flexibility of Anderson’s material and the means by which it can be repurposed. It is not just the notes themselves which Anderson reuses; the technique of overlapping simple chords to produce modal collections is a powerful tool used to great effect in the introductory movement, and it is this idea that recurs elsewhere in the piece, assuming a quasi-thematic function.

Overlapping reinterpreted: The Song

After the maelstrom of the first scherzo, *Symphony* enters a calmer, more reflective slow movement. As will be further examined in the next chapter on the form of the piece, the middle portion of *Symphony* consists of two different movements interspersed; a slow movement and a second fast movement. What will be referred to from now on as the “song”¹¹ is the second part of the slow movement, which consists mostly of the strings alone and a high melody in the celli. Anderson often demonstrates a fondness for inverting common textures. The melody in this passage is below the harmony, which may be a reference to two sources. In his comments in a podcast about his more recent work *The Discovery of Heaven* (2012), Anderson expressed his admiration of Gagaku music, especially the piece *Etenraku*, noting in particular that “the harmony is very high”.¹² One other influence is perhaps the music of Sir Michael Tippett (1905-1998), especially his work *Fantasia Concertante on a theme of Corelli*, whose first slow passage bears striking resemblance to this passage of

¹¹ Term used by the composer, during interview on September 10th, 2015.

¹² <http://www.lpo.org.uk/podcasts/podcast-mar12.html> Accessed February 10th 2016.

Symphony.¹³ In a sense, this passage is like Tippett crossbred with gagaku. Beyond this similarity, the high strings' harmonies turn out to be another application of the overlapping technique seen earlier in the construction of the chorale's hexachords. The harmony exists in two layers which function as antagonistic pairs. Each layer alternates changing chords, so that the harmony progresses step by step.

Fig. 1.21: Overlapping chords in strings, Slow Movement Pt. II, "Song" – m.178, Rehearsal Y

This simple technique generates a surprising proportion of *Symphony*'s significant harmonic structures. While the piece is hardly single-minded, it demonstrates an economy of means in developing two contrasting strands of music, radically different in character and mood, from the same basic idea of overlapping. The other major technical resource of this piece is "macrotonality", a harmonic system developed by Anderson and used for the first time extensively in *Symphony*, and it is to this important technique that I now turn.¹⁴

¹³ Passages of the *Fantasia* also bear significant resemblance to Anderson's 1997 work *Stations of the Sun*, also in first slow lyrical strings passage.

¹⁴ Anderson's 2015 work *Van Gogh Blue* marks one of his most recent uses of this system, in a strikingly similar texture. It appears in the final movement, *la nuit, peindre les étoiles (le 25 mai 1889, 4:40am)* in the form of a "cosmic dance" in non-standard tuning for two clarinets and the ensemble. In his program notes, Anderson describes "figures rotate...as if linked on a revolving orrery". The orrery is also the inspiration for his most recent orchestral piece *Incantesimi*.

Scherzo I: The Macrotonal Matrix

Since 2002, Anderson's music has made increasing use of quarter tones. These notes are derived almost exclusively from the harmonic series, and are deliberately limited to the lower naturally detuned pitches. In fact, chords deriving from the series usually relate to partials 1-14, though the fundamental is rarely present.¹⁵ This leaves only four naturally detuned notes, namely partials 7, 11, 13 and 14. Of these, 7 and 11 are highly favored, and 14 almost never appears. In the composer's own words:

I use a modal nontempered system I devised about 17 years ago which avoids any simultaneous or successive occurrences of any interval smaller than the tempered semitone. Because all the intervals involved are larger than the tempered semitone, never smaller than it, the term 'microtonality' was clearly not appropriate to this tuning system. 'Microtonality' means, of course, the use of intervals smaller than the semitone. So I call this system 'Macrotonality'. I dislike the sound of intervals smaller than a semitone - they generally sound like slides, or fuzzy, soured, out of tune tempered intervals. In order to avoid this problem, I focused upon intervals relatively low in the overtone series which are not in equal temperament... These sound clean and clear, identifiable, memorable, and - due to their fairly simple ratios - consonant and resonant, full of colour.¹⁶

Since the partials the composer favored have similar amounts of natural detuning (7 is flat by 36 cents, 11 is flat by 49 cents, and 13 is flat by 50 cents), they can be rounded up or down to the nearest quarter-tone, allowing them to be played on a range of orchestral instruments (although not by an entire string section).

Anderson has explored this system more fully in two instances by allowing it to govern the harmony of the entire work. *Eden* (2005), whose brevity and formal clarity perhaps allowed for a fuller employment of this single technique. The Second String Quartet, *300 Weihnachtslieder* uses this system even more extensively, and is used to create "hybrid" modes, with some melodies sharing notes between different overtone series. The other works in Anderson's output which use this system prominently meld passages produced by this method with differently constructed passages. *Symphony*

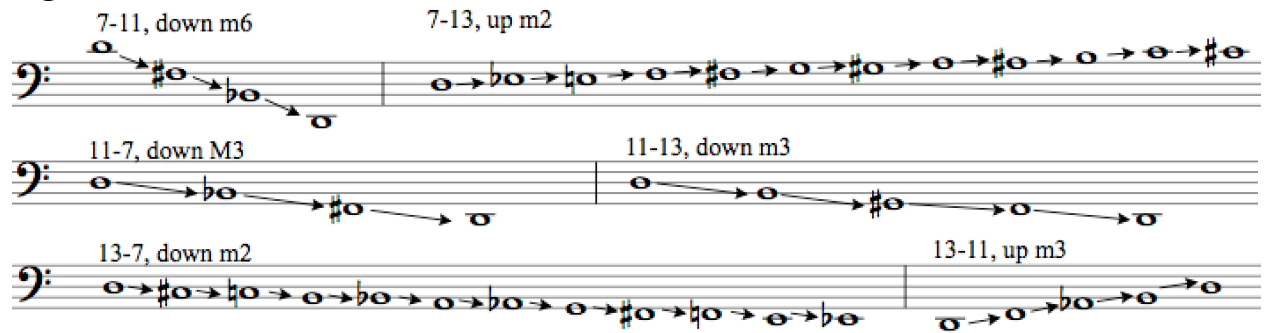
¹⁵ The fundamental tone is sometimes subverted or even replaced with a false fundamental, as is the case in the atmospheric closing moments of *Heaven is Shy of Earth*.

¹⁶ Anderson, Julian. Correspondence by email, August 28th 2015.

is one such piece, where the use of “macrotonality” is limited to the first half of the first scherzo, and three more isolated moments in the piece. Put simply, *Symphony* is not a piece that exemplifies this system as such; rather it forms one amongst many techniques which serves to create a distinct set of harmonic structures. The contrast between the harmonic worlds from the end of the introduction’s chorale and the beginning of the first scherzo is palpable, not just via the stark differences in timbre and the sudden appearance of regular pulse, but also by way of the method of construction that Anderson deploys. It transpires that macrotonality is a surprisingly (yet perhaps necessarily) regimented resource in *Symphony*, both despite and owing to the infinite potential of the system.

Precisely because the detuned partials 7, 11, and 13 have all been rounded out (or even “tempered” in a sense) to quarter tones, they can now serve as equivalents to one another. Each of these partials functions as a “pivot tone”, or perhaps more accurately a “pivot quarter-tone,” between different overtone series. It is in this manner that the harmony can “modulate” from one fundamental to another. From each fundamental, allowing movement by exchanging only partials 7, 11, and 13 for “common tone” equivalents belonging to other fundamentals, there are six other overtone series to choose from, which will produce movement in the bass (whether sounding or not) by six different intervals. The connections work as follows:

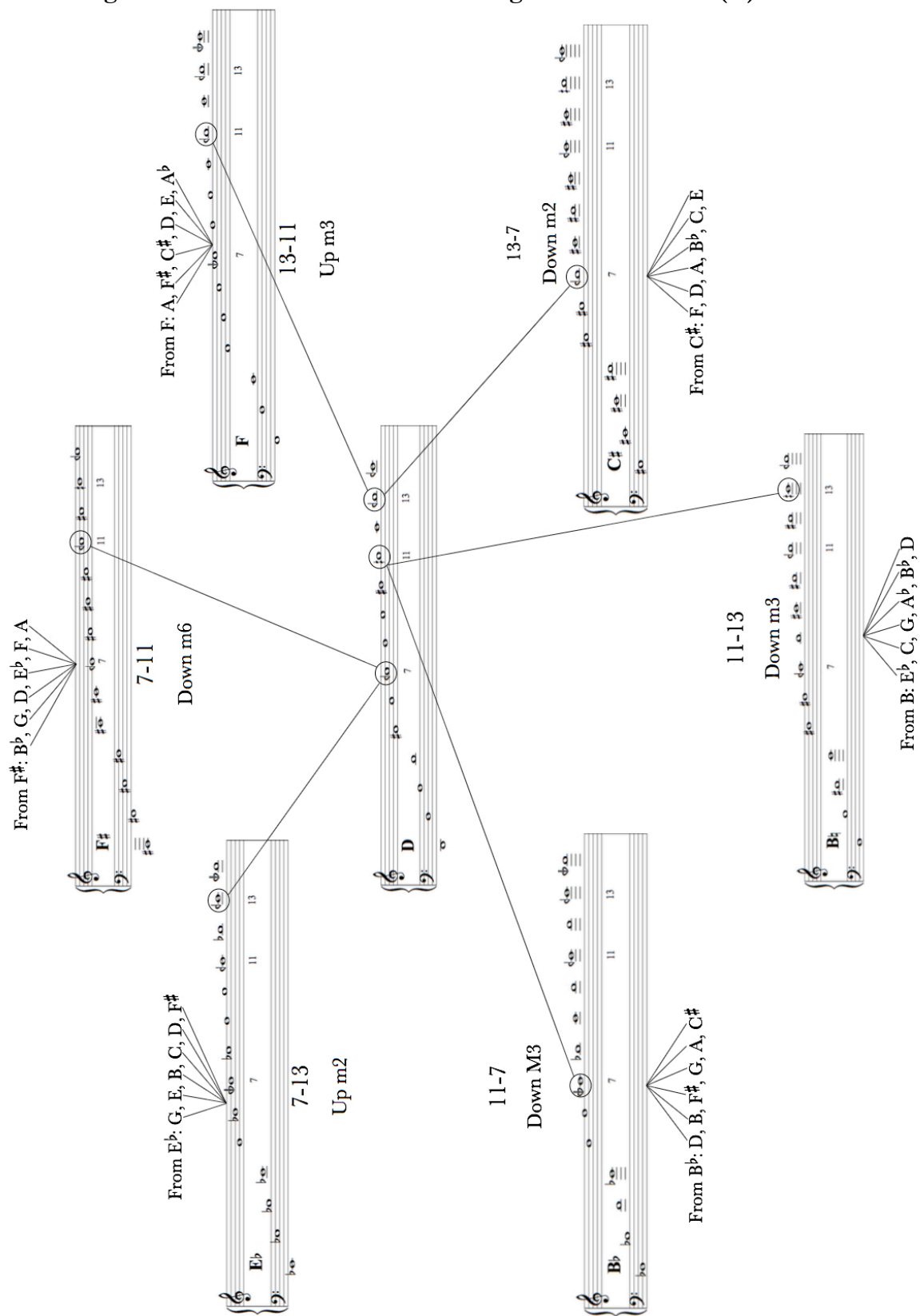
Fig. 1.22: Possible fundamental movement from a D



Each of these cycles’ fundamental movement links to a different interval cycle. However, in practice, one could also change what kind of connection to use on each step: if so desired, the music can move from anywhere to anywhere else with maximal economy. Yet this is not the way the system is used by

Anderson. While it is extremely versatile in the number of connections available from each fundamental tone, only certain connections are forged in *Symphony*, and their resulting overtone series are treated as pairs. Of those available, the composer favors exchanging partials 7 and 11, and very occasionally 7 and 13.

Fig. 1.23: Diagram of available connections from a given fundamental (D)



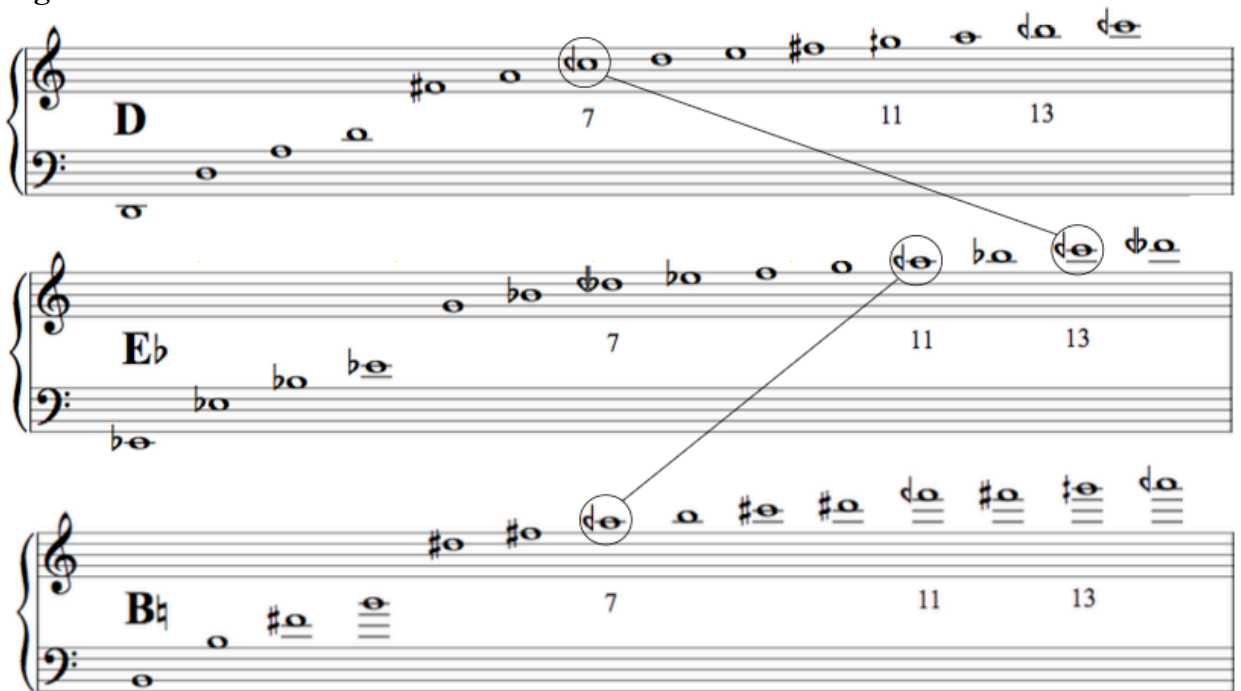
It is difficult to represent in a diagram such as this the fact that certain fundamentals can be reached by multiple routes. From D, for example, a B fundamental can be reached by exchanging an 11th partial for the B's 13th partial (assuming octave equivalence).

Fig. 1.24: An harmonic modulation exchanging an 11th partial for a 13th



One can also reach the same B by first exchanging the D's 7th partial for the 13th partial on an E^b, and then exchanging the E^b's 11th partial for the B's 7th:

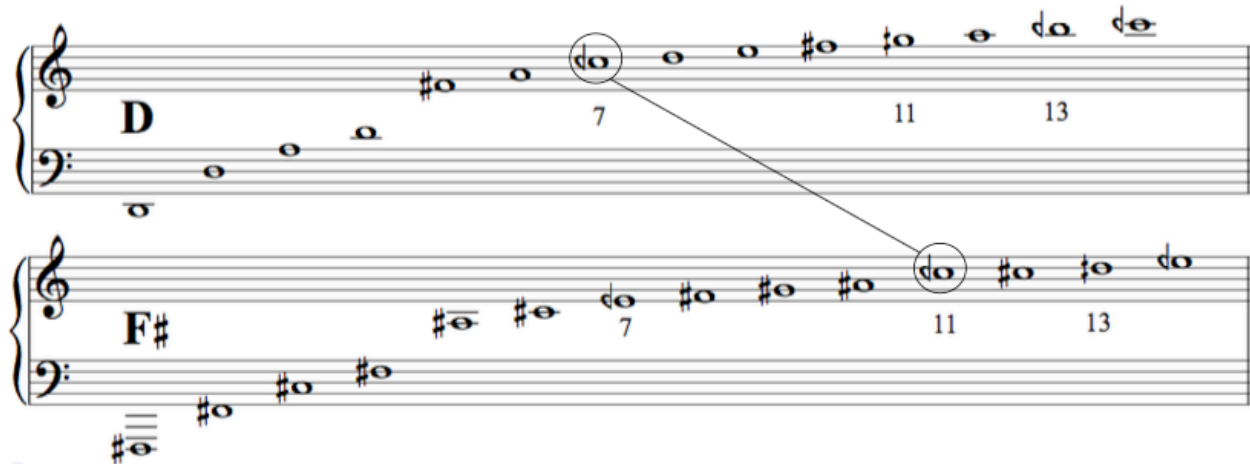
Fig. 1.25: An alternate route from a D fundamental to a B



The system usually only moves by *consecutive* connections, as shown above. Only very occasionally does Anderson leap from one fundamental to a “distant” one without sounding the intermediate series.

The most common connection is this one:

Fig. 1.26: An harmonic modulation exchanging a 7th partial for an 11th



The piece only explores a tiny area of the infinite potential of this system, but only a small area is needed. The point of using it is to create a very strict and clear set of rules to govern harmonic movement within a small section of the piece.

Obviously, the levels of organization in this system are similar to that of the tonal system. One can speak meaningfully of “distance” from a “home fundamental” to another one, and from each “home” overtone series there are a number of potential options for modulation. There are even pivot tones which sometimes change enharmonically, or rather ‘en-quartertonally’. What differs is the lack of the tonic-dominant relationship, though the closest thing to that is probably the regular use of the 7-11 pivot connection, linking D and F# via a downwards minor 6th leap. The presence of the detuned pitches also makes this system hard to compare to common-practice tonality, even though the sound of the overtone series natural contains and implies a major chord and a dominant 7th. It would be hard to find a convincing analogue for anything like a leading tone in this system, though the function of establishing a “tonic” could probably be found in the numerous appearances of the main theme at the same pitch level as the local fundamental tone. There is limited explicative value in comparing this

system to tonality too directly, but within this piece of music, there is something remarkable about the appearance of this kind of organization applied to relatively unfamiliar chordal structures in the “western” tradition.

Before delving further into how the system works in practice, it is important to address how this system relates to the genre of music referred to collectively as “spectral.” The use of the macrotonal system in this piece is a necessary if perhaps not sufficient attribute that qualifies it as belonging to the trend of spectral composition. The term itself is much debated (maybe even maligned), and Anderson himself wrote in his seminal essay *A Provisional History of Spectral Music* that it is “regarded by virtually every major practitioner of the trend as inappropriate, misleadingly simplistic, and extremely reductive.”¹⁷ What is most often meant in this reductive sense by the “spectral” label is the presence of harmonic structures whose origins may have been partly derived from an analysis of a given sound, whether harmonic or inharmonic. There is a moment later on in *Symphony* (Thunderclap II) whose shape and sound was based on a recording of a real thunderclap¹⁸, but that section of music lies outside that which is governed by the macrotonal system. While there are other works of Anderson’s which do use harmonies derived from sound analysis (the large shining chords in *The Discovery of Heaven*’s first movement came from analysis of the sound of the Japanese shō), most of those that contain detuned pitches do so to create chords relating to the harmonic series, or chords produced by synthetic techniques like ring modulation or frequency modulation, particularly in *Book of Hours* (2004). Anderson used a program called CataRT to compare the opening six minutes

¹⁷ Anderson, Julian. “A Provisional History of Spectral Music.” In *Contemporary Music Review*, Vol.19, Part 2, 2000, p.7-22.

¹⁸ Anderson, Julian. Interview, September 10th, 2015. The composer used a program called AudioSculpt to view the shapes and profiles of the sound, and applied those shapes to the orchestration of Thunderclap II.

of *Symphony* to the recording of a lake that inspired the introduction¹⁹, but this was a post-hoc analysis done in order to test how close his own intuitive evocation of natural timbres had been to the source, and did not play into the sketching or composition of the work. Instead, Anderson drew up a very precise timbre map which included all the possible orchestral sounds he might use, inspired by the work of David Wessel on the idea of the “timbre space”.²⁰ *Symphony* evinces a repeated fascination with this timbre space as a structural idea, as will be explored in greater depth in the next chapter. For now, it is important to emphasize that the genre of “spectral” music is concerned not only with striking harmonies and use of microtones, but also with slowly evolving formal processes and metamorphoses, as well as with the elucidation of relationships between traditionally “separate” music parameters such as pitch, rhythm, harmony, and timbre. Vertical harmony is only one amongst many interrelated concerns of those composers most strongly associated with the term.

When speaking of *Symphony* as a whole, however, one can mostly definitely describe the piece as being informed and influenced by the presence of the “spectral” trend as a musical preoccupation of the composer. Anderson even suggested that one of his aims when writing the opening of *Symphony* was to find a new way of using natural sound, in contrast to the use of such sources in Tristan Murail’s piece *Le Lac*. Just as Anderson applied the title *Symphony* to a piece which seems to deconstruct that form, so his use of nature sounds constitutes a critique of one particular application of them as much as it belongs to the trend of natural sound-inspired pieces.

To take a cue from Anderson’s own seminal article charting the history of the “spectral” trend in music, *Symphony*—and by extension certain other key works (*Book of Hours*, *Eden*)—might well belong to Anderson’s own “third phase: since the late eighties”²¹, and not just in generational terms.

¹⁹ The recording contains sounds like gentle wind, the lapping of the water, and cranes. From a phone conversation with the composer, August 28th, 2015.

²⁰ Wessel, 1978.

²¹ Anderson, 2000, p.19.

Anderson has been most compositionally active since the late eighties, even recently publishing an early String Quartet called *Light Music* (1984-5) which he claims to be the first piece of instrumental spectral music by a British composer. His music since then might be described in the terms in which he himself appraises Magnus Lindberg's works: "a composer who benefited from the liberating influence of spectral music, without hampering his personal style or becoming part of any 'sect.'"²² Put simply, there is more to the story of Anderson's music than its relationship to the spectral trend. To explore how the system of Anderson's own devising works in practice, what follows is an examination of an extended passage from the first scherzo of *Symphony*: a hocketed dance.

Macrotonality Applied

In practice, the macrotonal system is a network of modes rather than entire harmonic series. The pitches are generally limited to partials 7 through 13, and so the fundamental is not stated. In order to trace the harmonic movement of this passage, we must first find the fundamental upon which the mode is based. The lowest staff in Fig. 1.27 shows the movement of the fundamental tone. As mentioned earlier, one of the main building blocks of this passage is the association of the two series, D and F#, via the partial 7-11 exchange. The alternation of these chords in this first passage is strikingly similar (though perhaps not on first hearing) to a chord I-V alternation in common practice tonal music. The alternation does not set up a regular meter or hypermeter, however, and it is here that we find another example of a 'micro-acceleration'. The period length of each chord at first lasts almost two measures (as in the fourth and fifth chords shown below) before being compressed into a single beat over the course of three systems. This has two functions: first, it marks a subtle rethinking of the idea of acceleration as heard in the end of the last chorale in the first movement; and second,

²² Ibid., p.20.

this reinterpretation of acceleration serves to reinforce the functional kernel of this new harmonic system, that of the two modes related by two fundamentals a minor 6th apart.

Fig. 1.27: Scherzo I hocket passage showing fundamental tone movement, mm. 65-98

Allegro (♩ = 132)

65 **K** Strings
mp legg.
mf Percussion, Winds, Clavinova
ff
 Fundamental tone movement

70 Clarinet in A
mf grazioso
f
mf sim.
 Strings
 Clarinet in A
mp

74 Strings & Perc.
p grazioso
 new harmonic area-
 momentary interruption
mp legg.
mf

78

mp sub. *f sub.* *mf* *sf sf*

82

f *mf*

New chord pairing, Eb and B

86

f *fp* *mp legg.*

first pairing

90

Harmony created through sustaining hocket's notes

B and F# related through an inaudible intermediate step, D

The image shows two systems of musical notation. The first system, starting at measure 92, is for piano. It consists of three staves: a treble clef staff with a key signature of one sharp (F#), a grand staff (treble and bass clefs), and a bass clef staff. The piano part is highly chromatic, with many accidentals. A text annotation in the middle of the system reads: "Modulation" towards G, via Eb →. The second system, starting at measure 94, is for Horns. It consists of a treble clef staff and a bass clef staff. The key signature changes to one flat (Bb). The music is marked *mf legg.* and *mp dolce*. The horns part features a melodic line with many accidentals and a steady accompaniment in the bass.

In m. 75, there is a sudden motion to a new series, this time a B \flat , related by exchanging a 13th partial for a 7th. These pivot tones link the chords together in the system, but they are not always audible. The avoidance of intermediate steps characterizes Anderson's use of the system in practice, as shown in m. 91 where a B is alternating with an F# in place of the D. A "secondary" harmonic area is established in m. 82, where the alternation between E \flat and B begins and perhaps establishes a kind of 'cumulative' arc to this passage. Where in the beginning there were just two chords, D and F#, the secondary area adds the new fundamentals of E \flat and B. (D \flat will here be treated as a momentary interruption, not a fully established harmonic area.) The passage which follows alternates B and F#, and then 'modulates' to G, a pitch level never clearly stated before now in the whole piece. This modulation is done by moving from B through E \flat . All the modes used—B, E \flat , D and F#—are previously established harmonic areas.

In terms of rhythm, the whole passage sets up a conflict between duple and compound pulses, alternating between them in an agile manner not unlike the lyrical use of such time signatures in Steve Reich's *Tebillim*. Indeed, the texture (but not the harmony) at this moment resembles that in the first movement of Reich's work. However, while *Tebillim* is constantly in flux, and never seems to settle on

one pulse or another, the music in *Symphony* reaches a moment of metric stability in mm. 94-95 shown above, where the main theme returns in the horns, now refracted through the lens of a harmonic series on G.

The manner in which not only the fundamentals are hidden, but also often the pivot tones which connect the series to one another, and even the omission of intermediate steps implicate this passage in the idea of “concealing the scaffolding,” to which I alluded earlier. For instance, in mm. 66-74, governed by D and F# modes, the pivot tone C-quarter-flat which connects them is present in both chords at different times, but does not audibly sound over the break between them. In m. 85, the A-quarter-flat which connects B to Eb sounds in both chords, one octave apart. In m. 86, the same pivot-quarter-tone sounds, but here it is held over the break: this is an instance of the functioning common quarter-tone being audible. During the modulation to G, the connecting D-3/4-flat is also audible in measures 94 and 95. This system is therefore not used didactically, but rather provides a supportive background to specific surface chordal relationships. In Fig. 1.28, one can see the motion of this passage around this harmonic “map.” Again, only a small subsection of this potentially endless network of connections is required. The pairing of certain chords is more harmonically efficacious than using every connection, since limited use prioritizes functions while enabling a sense of tension and release to emerge. There is a palpable sense of arrival or release at the new harmonic area of G. It is not likely that the intricacies shown above will be obvious to the listener, but the strict organization and limited use of this system creates the sense of logic required for the arrival on G to achieve its effect. In conversation, Anderson stated²³ that he “refined” the system during the 1990s. Until its first appearance in this piece, it is possible that the composer had yet to find the best way of employing it. Anderson’s predilection for the choral pairings mentioned above may have arisen naturally from

²³ Anderson, Julian. Interview, September 10th 2015.

investigating the potential of this system. Those two harmonic series enable the listener to perceive the shrinking of periodicity during the introductory passage, and they are thus vital to charting the narrative of acceleration over the course of the whole piece.

Fig. 1.28: Harmonic areas used during mm. 65-98

PRIMARY HARMONIC AREA: D&F#
m.66-74

SECONDARY HARMONIC AREA: B&E♭
m.82-88

MODULATION: G m.95

INTERRUPTION: B♭ m.75

7-11
Down m6

11-7
Down M3

11-13
Down m3

7-11
Down m6

Even the texture of the music was likely arrived at via similar investigations. In order to write music which is practically playable at a faster tempo, it is more effective to instruct certain wind players to double on retuned instruments, usually a quarter-tone down, in order to play partials 7, 11 and 13. To require a wind section to rapidly shift back and forth from playing tempered pitches and non-tempered pitches is difficult enough in slower music: in order for the notes to be clear, alternation between conventional instruments and retuned instruments is the best solution. Thus the use of a hocket at this moment in the music is at once a natural solution to the practical limits of the system and a musically effective passage in contrast to the preceding slow tempo introduction.

Much of the music written in the second half of the twentieth century that explores sonorities lying outside the equal-tempered system has tended either to adopt a very slow tempo or to feature slow (if not totally static) harmony. The reasons for this are not purely aesthetic: preparing instruments in alternate tunings can be cumbersome, inconvenient, and time-consuming, especially in an orchestral setting when most players will simply not be accustomed to performing and listening in this manner. Many composers have sought practical remedies to these problems such as limiting their use of microtones to a single instrument or electronic sound source, or reducing the rate of harmonic change to near-stasis, allowing the performer to concentrate on the manifold pressures and complications of finding precise tunings. By instead limiting the degrees of detuning to quartertones and separating the detuned instruments from those in equal temperament, Anderson's "macrotonal" method allows a far greater agility in terms of harmonic movement and may well be one of the first examples of a genuinely "fast"²⁴ music incorporating non-equal tempered notes.

Strictness to Freeness: End of Scherzo I

One of the most important questions in an analysis is to ask whether there is a guiding force or principle behind the whole work. The composer may even misdirect readers in their own statements to believe that there is or is not a single technique or key to their language (as in the case of the evasive Scriabin or Stravinsky) and so a search for such a technique must sometimes avoid giving too much credence to the composer as a primary source.

However, when one examines *Symphony*, the composer's statements and what one finds in the score are highly congruent. This is not a work derived from a single principle that guided the generation of harmony or rhythm, but rather a tapestry of interwoven techniques and ideas in localized

²⁴ That is, both a fast beat speed *and* fast harmonic rate.

sections. What is remarkable is that these techniques do not produce standalone blocks of material which develop independently. Rather, they produce highly malleable and fluid passages of music which seamlessly transition into passages that are constructed quite differently. This is one of the most inviting aspects in the music of *Symphony*: the ability of the musical fabric to absorb, meld, and form a dialogue between multiple means of construction. Much of the time, these techniques are not audible on the surface and serve instead as sub-surface scaffolding, and sometimes the stricter passages do not even sound strictly constructed.²⁵ Anderson is highly skilled at adapting these techniques to produce passages of music with entirely different character, texture or mood as in the aforementioned “song” section in the slow movement. What binds all of this together is technique in a more oblique and general sense: an instinct for rhetorical direction, pacing, orchestration, and dramatic contrast. Anderson reveals some of his thoughts on the subject in this passage from a recent interview:

I admit very happily into my music all the contradictions of the world I see and experience, which basically means I’m not a fundamentalist. In fact, everything I compose is anti-fundamentalist, and the regrowth of fundamentalism that we’ve seen in so many areas of life in the past thirty-five years is frankly repugnant to me. There’s no doubt that new music, too, has its fundamentalists: people who believe that all problems in composition can be solved by subscribing blindly to a single overriding aesthetic, for life. Such people admit no contradictions and are perhaps the greatest single danger to creativity (some of them teach composition, alas). Clearly, some people are very frightened by danger and ambiguity. I grew up in the 1980s, and the hideous political climate of that time – social and sexual intolerance, dogma against dogma, while society went to the bad – gave me a permanent allergy to all extremism and really left me wondering what to expect from politics. We’re still told in art – generally by failed practitioners, admittedly – that it’s great to push things to extremes. But, with very few exceptions (Feldman’s *Coptic Light* is one) artistic extremism for its own sake results in art that’s hopelessly adolescent. And it’s too easy – anyone can think up an extreme artistic product these days. Nothing simpler. However, if the music simply emerges as something pushing at the limits, without conscious posing on the composer’s part, that’s fine and honest, and it’s clearly going to happen when it’s intrinsically necessary. I tend to feel that the world is more complex and interesting than fundamentalists will allow, and so are our brains. So when I’m composing I’d rather be surprised by what I write than merely fill out music according to a pre-decided aesthetic position. The result is that I don’t write that quickly. I *can’t*, given that I’ve often no idea what to compose when I start a piece, and little notion as to how to compose it. This makes starting a work very difficult and often very protracted; but once I get going, the journey of discovering what the piece will be is terribly exciting. You never know where you’ll end up, and I’m usually very surprised by what the finished work is.²⁶

²⁵ As in the case of his work *Eden*, which sounds very free even if it only uses one kind of harmonic technique.

²⁶ Palmer, Andrew. *Encounters with British Composers, Julian Anderson*. London: Boydell & Brewer, 2015, p.12.

Anderson's statements here are borne out by the music he composed in *Symphony*, a piece that begins with an extended, slow, largely harmonically static introduction before launching into a scherzo of almost entirely different character and harmonic, rhythmic, and textural construction, reaching a cataclysmic climax, followed by a tangled slow movement, scherzo, and further volcanic climaxes, and ultimately concluding with rapidly changing harmony, dissonant chromatic chords, and almost the exact *inverse* instrumentation of the opening. If one listened to just the first few minutes, it is hard to imagine that anyone could correctly guess where the piece would ultimately end up, or even go next. To use the composer's own phrase, the piece is a journey of discovery. Phrasing the trajectory of the piece in this way speaks to an important aspect of Anderson's compositional strategy, which involves searching for contrasts and developing the music through exploring the same material in new contexts. Anderson said as much in a podcast interview about his piece *The Stations of the Sun* from the London Philharmonic Orchestra:

This is not uncommon with me, that I use a starting point that's *very* common (material), because I find that if the material that you start with is very unusual all you can do, if you'll forgive me, is just to state it. You just put it there. But if the material is more pliable than that, and more common material is often much more pliable, you can discover new things and alter it, put it on itself, and make it grow, and that's what I was doing with this little three notes [cell] that I played you there, and that can have many meanings in the piece.²⁷

Anderson is referring here to a three-note cell which generates the opening section of *Stations of the Sun*, which isn't exactly simple—but the material which generated it is. The sense of starting somewhere more or less familiar (despite the unusual sound of the brush-bowed strings), with a static background harmony and slowly emerging themes layered on top and subsequently developing it in unexpected directions is also present in *Symphony*. This strategy is probably intended to prevent the resulting music from becoming predictable. The same is true of the way that several sections transition

²⁷ Podcast interview from the London Philharmonic Orchestra, from 2011 <https://soundcloud.com/londonphilharmonic/julian-andersons-the-stations> Accessed 5th February 2016. Italics are my own.

seamlessly into quite radically different kinds of music, even while sharing the same pulse, and occasionally the same instrumentation.

One such section takes place at the end of the first scherzo: it leads into a much stormier passage, followed by the reappearance of the chorale, and ultimately the first “thunderclap.”

Fig. 1.29: Layers and interruptions at Rehearsal R, mm. 127-130

The musical score for Rehearsal R (mm. 127-130) is presented in a multi-staff format. The top staff is labeled "Winds and Percussion" and features a melody with triplets and a dynamic marking of *ff*. The second staff is for "Tpt. (st. mute)" with a dynamic marking of *f*. The third staff is for "Upper strings arco" with a dynamic marking of *ff* and the instruction "brassy". The fourth staff is for "Strings pizz." with a dynamic marking of *ppp* that changes to *ff*. The fifth staff is for the lower strings, with a dynamic marking of *f* that changes to *ff* and then *fff*. The score includes various annotations such as "first chord contains sustained melody notes" and "like a fragment of the alternating layered chorale". The tempo is marked as $\text{♩} = 132$.

This is the first appearance of the scherzo’s signature motive: a bright modal theme in the trumpets which reappears in the final scherzo’s collage of material. It is immediately thrown into contrast with two instances of reworked earlier material. The high winds and percussion reiterate a modified version of the oboe’s theme from a few moments earlier (m. 123: see Fig. 1.9) while the upper strings capture and resonate a few key pitches from the end of these lines (top system, Fig. 1.29) and the lower strings continue the brass’s triplet polyrhythm with dissonant register-alternating

pizzicato chords, reminiscent of the chorale from the introduction. These chords are mostly collections of either a partial octatonic or acoustic mode voiced over two octaves.

As well as serving to introduce new material, this passage might further indicate the composer's interest in perception, a concept common to many composers influenced by the spectral trend in music.²⁸ In fact, the interest in perception may be more indicative of the influence of that trend than the presence of harmonies derived from sound analysis. The choice to bring back earlier material in a much higher register, and most importantly a much faster tempo, conditioning the listener to perceive the material in a very different way, could be seen as a result of the influence of spectral thinking. What was first a mid-register theme has now transformed into a contrapuntal decorative layer accompanying a different piece of material. The same is true of the chorale fragment, first a slow moving set of sustained, carefully overlapping harmonies in the introduction, now a very brief flash of pizzicato – with a much shorter decay, different pitches (though with similar voicings to the more dissonant chords in the latter stages of the chorale's second and third phase), a much lower register, and a faster tempo.

All this contrast might be too much if it were not for the subtle use of common tones to link these concepts into a whole. The upper strings' sustained chord is the same as the first of the lower strings' pizzicato chords, which in turn came from sustaining key pitches (Ab, D, F) from the winds in the previous measure. The trumpet's Gb enharmonically connects with the third pizzicato chord's F# (along with the F and C from the first chord). The same pitch continuity also happens just a few measures earlier at m. 126, where the arpeggios of the two rising clarinets spell out the second of the pizzicato chords. This may not be consciously noticeable by the listener, but keeping the pitches consistent across the timbral change allows the two musical objects to be connected, even if only

²⁸ For example, Kaija Saariaho's comments on how different tempi affect perception of the same material in her work *Lanterna Magica* in her pre-concert talk from the 2012 BBC Proms performance.

subconsciously. The same technique appears in the 2010 version of *Heaven is Shy of Earth*, particularly at mm. 60-63 in the *Kyrie*, where the waving orchestral lines introduce the pitches of a chord one by one. In that context, this is done for the highly practical reason of feeding much-needed pitches to the choir, while it has the added advantage of further relating the sonic worlds of the chorus and orchestra across the timbral divide. This technique aids counterpoint and allows such sharp contrasts to remain as dramatic and aurally distinct as possible while simultaneously avoiding abject incongruity. The trumpets' increasingly ornate lines arrive on three key pitches in mm. 134-135, namely D below the treble staff, the F# below that, and the Bb in the middle of the treble staff. These three notes are then stated vertically as the first chord of the brass chorale.

Fig. 1.30: Reduction of Brass and Wind layers before Chorale, mm.134-136

The image shows a musical score reduction for measures 134-136. It consists of two staves. The top staff is labeled 'Winds, percussion, celeste' and contains complex rhythmic patterns with triplets and quintuplets. Above this staff, notes F, G, E, D, and C# are indicated, with corresponding notes on a staff below. The bottom staff is labeled 'm. 134 Brass' and contains a melodic line with a quintuplet and a triplet. Annotations include 'ff' (fortissimo) and 'starting pitches of the chorale' pointing to specific notes in the brass line.

This is one of the most complex and dense passages of the piece. At most there are three layers separated by register or timbre/orchestral section: high winds and percussion, brass, strings pizzicati and low unpitched percussion. The interrelation of these layers is governed by judicious separation of timbre: the high lines are bright and metallic, and the brass are hard-edged and mid-range, punctuated by low, dull, even pitch-less pizzicato. A mixture of high and bright hues with mid-range brass sound is followed by an interruption of mixed pizzicato and sustained string sound – a quick succession of distinct, clear colors or timbres. This timbral pattern repeats (albeit slightly extended) and morphs into the brass chorale section. The internal structure of these layers may not be very “strict” in terms of pitch, but they are consistent in terms of their behavior. The brass lines

splinter from one unison melody (m. 127), to an imitative canon (m. 131) to several lines that harmonize at the chorale.

Fig. 1.31 shows how the high wind lines undergo a similar transformation, beginning as one solo oboe (m. 112: see Fig. 1.8), to two parallel lines²⁹ (m. 117), then two more rhythmically distinct iterations with different instrumentations (m. 124 and m. 127), and then in parallel major 6ths at m. 131. The layer then becomes a string of trichords (m. 134) following the same non-parallel voice-leading rules of the introduction's chorale, before exploding into an aggressive, additive series of chords during the brass chorale at Rehearsal T, m. 136.

Fig. 1.31: Evolution of wind layers from mm.117-146

The figure displays three systems of musical notation for wind instruments. The first system, labeled 'm.117', features two staves: 'Flute I & Clavinova' and 'Cl. in A'. The flute part has a dynamic marking of *f*. The second system, labeled 'm.124', shows 'Fl. & Ob.' with a dynamic marking of *ff* and a triplet marking of '3'. The third system, labeled 'm. 127', is for 'Winds and Percussion' and features a dynamic marking of *ff* and four triplet markings of '3'. The notation includes various notes, rests, and articulation marks such as accents and slurs.

²⁹ Likely generated by a difference tone calculation – which would make sense given the consistently parallel interval of a minor 6th plus 1/4 tone. The (unsounding) carrier frequency would be in between the two lines.

m. 131

fff *vivo*

Winds, percussion, celeste
m.134

ff

Winds and Trumpet III, m.136 on

Triplet pulse continues →
harmonic summary to show chordal addition

ff

1 2 1 2 2 3 4 1 2 3 4

Chords notated one octave below sounding pitch
High winds
from m.143, beat 3

first group of chords, 1-4 144 second group 5-9

2 1 2 3 2 3 4 5 6 7 8 9 5 6 7 8 9

↑
B₂ altered

145 146 same as chord 2 from m.136

1 2 3 4 2 1 2 3 4 1 2 3 4 1 1 1

The pizzicato layers also gradually transform over the course of the same passage. Pizzicato sound first appears in m. 115, where it begins to open out the register space. The scherzo has thus far been very registrally focused on the mid to upper range of the orchestra. They continue through m. 118 as a sequence of freely chosen dyad stacks before becoming four- and five-note chords in mm. 119-120. While they seem freely chosen, they intersect with important pitches in other textural layers,

such as in m. 122 where they punctuate the entrance of the clarinet duet. After a brief four-chord interruption in m. 126 which serves to mark off the preceding music from the next section, pizzicati also double the trumpet theme in m. 127. A second interruption (previously discussed) occurs in m. 130, and then continues to migrate further into the bass register from m. 131 until m. 134. During those few measures, the chords are built out of two alternating layers of pizzicato chords on top of one another. The chords then stop to allow the brass and wind layers to come through more clearly for a moment, only to return in the brass chorale at m. 136 as much more violent and less pitch-distinct punctuations. All three of these textural layers then collide at the first “thunderclap” at m. 147 (Rehearsal U). Each of those layers contains certain consistent elements which are reordered and invigorated as the music moves towards the thunderclap climax.

The pizzicato layer has an extra function which is distinct from the other two, namely that of providing the previously mentioned dramatic interruptions at m. 126 and m. 130. A use of interruption or discontinuity as a dramatic tactic appears frequently throughout this piece in many guises, in subtle pitch alterations during the sequence of chords in the Introduction’s chorale, the long fermata after the chorale’s first phrase, and in the interruption of the two alternating macrotonal chords (based on D and F# harmonic series) with a sudden detour to the Db harmonic series. In these moments, there is a significant break in continuity from what has gone before, deliberately undermining music which might otherwise become predictable. This strategy is clearly employed in many other pieces besides *Symphony*. It forms part of the less easily definable area of “technique”; not that of canons, variation technique, harmonic multiplications, or overlapping, but technique in a broader sense – one which encompasses orchestration, an ear for timbre and register, and a sense of how to interlock passages of music produced by different processes.

This passage bears a striking resemblance to the central movement of Henri Dutilleux’s orchestral work *Métaboles*. From Figure 29 to the brass outburst (itself very much like a Thunderclap)

before Figure 31, the orchestra is divided in almost precisely the same way. The brass drives the passage with a consonant chorale harmonization of the 12-note row that forms the backbone of the movement; the winds have repetitive triplets, in the same register as this part of *Symphony*, with roughly quartal voicings which begin to cascade downwards; and the percussion have interjecting punctuations. The division of labor is almost identical, as is the distribution of register space. One reason that this is so successful (and audibly so, if one studies the recording) is that each layer of activity stays out of the others' registers while retaining its timbral independence. This might constitute a reference to another composer, along with Grisey and Sibelius.

Fig. 1.32: Pizzicato layer evolution from mm.132-146

Strings
m.132-134

Rehearsal T
Molto Vivace
(♩ = 144 subito)

low brass,
low strings (arco)
and bass drum

m.136

mf *ff* *ff*

Strictness breaks down

The fabric of the scherzo has gone from a very tightly constructed and systematically governed melody and harmony to a freewheeling and chromatic fantasy invention around a brass chorale, culminating

in a thundering climax. This “gathering storm” presents a musical onomatopoeia of natural sound in its depiction of impending chaos. If the later passages of this scherzo are not governed by the macrotonal system, there must be a moment in between where the system breaks down. The most likely point occurs during the interruption of the oboe melody (mm. 112-115: see Fig. 1.8).

Fig. 1.33: The crossfade of the macrotonal system, mm.111-119

The musical score for Fig. 1.33 is divided into two systems, each with five staves. The top staff is for Winds and Clavinova (hocketed), the second for Oboe, Cor Anglais, and Clarinet in A, the third for Horns, the fourth for Strings (pizz.) and assorted winds, and the fifth for Fundamentals (unsounding). The score is in 4/4 time and features various dynamics and articulations.

System 1 (mm. 111-115):

- Winds and Clavinova (hocketed):** Measures 11, 11, 13, 11. Dynamics: *ff vivo*, *sf sf*.
- Oboe, Cor Anglais, and Clarinet in A, m.112-116:** Dynamics: *sf sf*.
- Horns:** Eb series "surge".
- Strings (pizz.) and assorted winds:** Dynamics: *f*, *mf*, *f*.
- Fundamentals (unsounding):** Dynamics: *f*, *mf*, *f*.

System 2 (mm. 116-119):

- Winds and Clavinova (hocketed):** Dynamics: *p*.
- Oboe, Cor Anglais, and Clarinet in A, m.112-116:** Dynamics: *mf (echo)*.
- Horns:** Harmonics on 'C' open.
- Strings (pizz.) and assorted winds:** Dynamics: *mf (echo)*.
- Fundamentals (unsounding):** Dynamics: *mf (echo)*.
- Fundamentals (unsounding):** (Fundamentals end).
- Strings (pizz.) and assorted winds:** lower Strings pitches.

The image shows a musical score for several instruments. The top staff is for Oboe II. The second staff is for Flute I & Clavinova. The third staff is for Winds. The fourth staff is for C series, Winds, percussion, clavinova. The fifth staff is for Horn. The score is in 3/4 time and features dynamic markings like *f* and *ff*. Annotations include "bright chords" Brass, "grace chord", and "G quarter-flat suggests partial 7 on an 'A' series".

A subtle shift in function helps to conceal the rupture. From mm. 112-113, the horns build up a harmonic series cluster on Eb, which contains the flattened 7th, while the oboe theme has most of the notes of A major. This is not only the moment when the macrotonal system ends, but also where the texture begins to split into multiple layers. From here on, detuned notes continue to be present for another few measures, but their function has changed. In m. 116, the horn “comments” on the oboe’s melody by repeating the last three notes – now with the Bb detuned to a B-3/4-flat – which approximates a flattened 7th partial, suggesting that this melody has been reharmonized over a C fundamental. The horn is marked “mf (echo)” and instructed to play “Harmonics on ‘C’”. This fragment of melody seems less functional and more coloristic, audibly changing the framing of the previous oboe melody. The following measures (117-119) also contain detuned pitches: the 1st flute plays a cluster of them that mix with the other woodwind figurations and were likely arrived at by calculating difference tones from the lower woodwind line. This brief outburst is underpinned by two bright chords (m. 117, last beat, and m. 119, first beat), the second of which has a “grace-chord” not unlike those in the third phase of the Introduction’s chorale. The latter two chords (shown above in

Fig. 1.33) contain more detuned pitches, and while these may relate to harmonic series³⁰, the overall texture of the music has long since passed the point of being “on” any of those series. The detuned pitches are now “mixing” with the more dissonant chords which will form the basis of the next minute of music. From m. 120 (until Scherzo II), all instruments have reverted to equal temperament.

The change is so seamless and there is so much textural activity that it is unlikely a listener will guess that anything has changed. Again, we return to concealment of scaffolding: the macrotonal system cross-fades with more intuitive means of governing pitch and texture. The use of microtones beyond the break prevents them suddenly disappearing, which would make the cross-fade less smooth. One of the regular topics in the “spectral” trend is the idea of degrees of harmonicity of sounds moving towards inharmonicity. This kind of crossfade may be a variation on that idea, but uses consonance (the harmonic series) and dissonance (the thunderclap/noise) as the two extremes.

The remainder of the scherzo is a highly turbulent minute of music, which is likely intended to be a musical “ricorso”, a term describing a period of civilizational chaos preceding a catastrophe or radical change. This relates to one of the piece’s extra-musical sources: James Joyce’s novel *Finnegans Wake*. Given the suddenness of the build up to the “thunderclap” climax at Rehearsal U, m. 147, the whole of the scherzo could be viewed as an *accelerando*, not in terms of beat speed, but in rates of change in other parameters; textural activity, textural thickness, and timbre. The macrotonal hoquet is timbrally homogenous and focuses on a particular group of instruments, while the climax and the preceding passage are a tutti, a collision of multiple layers and sections of the orchestra. This relates directly to the Joycean concept of the thunderclap as a historical allegory, to be discussed in Chapter 3.

³⁰ The (concert pitch) G-1/4-flat in measure 119, Horn III is marked “11th harmonic on ‘Db’” – however, given the presence of E and C# in the chord, it may be intended to pose as a 7th harmonic in the A series. Note that the fundamentals are referred to in the score at *concert* pitch, hence the inverted commas in the score.

If the first scherzo was an interplay of several textural layers built out of different sections of the orchestra, the second scherzo is an interplay of layers of tempo. There are as many as four separate superimposed tempi which collide at the second, even more violent thunderclap.

Heterophonic Melody: The Second Scherzo, Part II

The form of *Symphony* becomes increasingly sectional in the second half of the piece, as will be addressed in Chapter 2. After the first thunderclap, there is a brief lyrical episode suggestive of a slow movement, which provides further subtle theme development and a dramatic respite from the maelstrom of the first half of the piece. What follows is a short “variation”³¹ that recalls the textural lightness of the (beginning of the) first scherzo, the aforementioned “song” for strings, and the first recapitulation of the opening brushed-bowing and muted-trumpet texture. After these three distinct sections comes the second scherzo, announced with a series of non-equal-tempered chords which invigorate the music with a new sense of pulse (see Fig. 1.34). On a purely timbral level, the strings’ vertical bowing and the trumpets’ mute fluctuations create an unfocused, unmeasured surface impression of irregularity.³² These chords appear to focus this shimmering surface into a regular pulse.

³¹ Anderson, Julian. Interview, September 10th 2015. Term used by the composer.

³² Anderson often uses the technical marking “morse code tremolo” to elicit a particular kind of irregularly pulsed tremolando, to contrast with the common “measured” or “unmeasured” tremolando sounds.

Fig. 1.34: Linked Overtone chords at m.204

The musical score is divided into two systems. The first system covers measures m.205 to m.211, and the second system covers m.212 to m.214. The parts are:

- Horns, Perc., and Clavinova (detuned):** Shows complex overtone chords in the treble clef.
- Harp & strings:** Shows a single note in the treble clef, labeled as the "pivot tone (unsounding)".
- fundamental (unsounding):** Shows a single note in the bass clef, labeled as the "fundamental (unsounding)".

Arrows and numbers indicate relationships between the pivot and fundamental tones across measures:

- m.205: Pivot tone 13, fundamental 7.
- m.207: Pivot tone 13, fundamental 14.
- m.208: Pivot tone 14, fundamental 13.
- m.211: Pivot tone 13, fundamental 11.
- m.212: Pivot tone 7, fundamental 13.
- m.213: Pivot tone 14, fundamental 14.
- m.214: Pivot tone 11, fundamental 7.

A note above m.214 states: "N.B. flattened G is **not** sounding".

This sequence shows a rare instance of an exchange between partial 14 and other partials. They produce new fundamental movements previously unheard in *Symphony* – major 2nds (F#-E) and perfect 4ths (E-A).

The presence of the major ninth in the harp and strings recalls the prominence of that interval in the first scherzo (see Fig. 1.27, center system). Three overtone series chords (on G, F#, and E) are answered by an arpeggiated flourish in the winds, derived from the notes of the series. In each case,

the detuned chord is treated as a six- or seven-note mode³³, which can repeat at the octave. The concept “activated harmony” might be invoked here insofar as a static chord is arpeggiated by fast notes to create a texture of purely sonic movement.³⁴ These three layers (sustained major ninth, detuned chords in the brass and wind arpeggios) immediately begin to slip out of phase with one another, making their independence clearer. The ninth and the detuned chords continue from mm. 210-215 re-ordered (E, G, F#, E) and now occurring at different regular rates, almost like a written out polyrhythm. The ninth repeats every two beats and the detuned chords every two and a half beats, with the detuned chords beginning one and a half beats later, over a regular sixteenth-note pulse. A new pairing of detuned overtone-series chords built on A and C is then announced at mm. 213-218. These chords fit the partial 7-11 partial-exchange pattern. The notes of the C chord are then “activated” at two different rates simultaneously – as fast figures of sixteenth notes and a long violin section melody.

The violins’ lyrical line is the main foreground element of the second scherzo. Given the long celli melody in the preceding “song” section, this melody could be viewed as a continuation of “slow” music³⁵ in a “fast” music³⁶ context. It could be another example of the idea of tempo and contextual changes renewing and refreshing the listener’s perception of material. Long melodies written at fast

³³ Most of them contain the lower detuned notes in the series, partials 7, 11, 13, and 14. The only note which appears to lie outside this system is the A quarter-flat in m.205, 1st Clarinet (Note that since the score is transposed, and the detuned clarinets are written as a playing and not a sounding pitch, all clarinet notes must be transposed a whole tone down, and then a *further* quarter-tone to find the sounding pitch). A quarter-flat does not conform to the notes of a G overtone-series, below the partials of 1-14, so this pitch could be considered a “passing quarter-tone”, since its presence produces a smoother arpeggio for the clarinets and flutes.

³⁴ Of the many examples of this concept, the best known in the orchestral repertoire might be the wind, harp, and celeste arpeggios in the sunrise from Ravel’s *Daphnis et Chloé*.

³⁵ where “slow” means music with both a slow harmonic rate and slow beat speed.

³⁶ where “fast” means a fast beat speed – however the harmonic rate of change is still fairly slow in this section.

beat speeds will necessarily be approached and expressed differently by the players (if only subconsciously) than the same material in a slow tempo.

Beat speed and harmonic speed are two distinct concepts. Assessing the harmonic speed is less straightforward during Scherzo II, Pt. II, since the texture is not clearly homophonic, but rather heterophonic. Accompanying the melody are rapid canons in the winds of ascending scales.³⁷ The “harmonic rate” must thus be measured in terms of the addition and subtraction of notes from the sounding segment of the scale. This is what is known as the “slide-rule” technique.³⁸

Fig. 1.35: Melody and heterophonically migrating harmony from mm. 219-224

Four after Rehearsal D1,
m. 219-224
Wind patterns

Wind patterns

Vln I

p *f* *espress. sempre*

G stops, D added

E added

C stops, F# added

D and E stop, B added

B \flat added

piu f sempre espr.

The melody and the accompaniment unfold at two distinct and superimposed tempi. This view of the textures becomes more apparent with the appearance of a third contrasting tempo on the slowest level in the form of the background harmony, which coincides with the introduction of the

³⁷ Even though they begin before the melody enters, I suspect that they were likely derived from the melody, and not the other way around. During our conversation on 10th September 2015, Anderson referred to wanting the “vertical” to still make sense in a bifurcated texture. At that moment he was referring to the “mocking” section at m.242. The source for both melody and accompaniment were clearly the C overtone chord in m.218 (the same as that in m.214 shown in Fig. 1.34 above), so it is possible that both the melody and its accompaniment were generated at the same time, from this one source.

³⁸ Used most notably in the “Kanon” section of the “Solo, Intermezzo, Mixtur, Kanon” movement of Ligeti’s *Hamburgisches Konzert* from 2003.

bass register in m.227-229. There is then a fourth contrasting tempo at Rehearsal G1 (m. 232), where the oboes, clarinets, and marimbas activate four notes of the sustained chord in the local background harmony. They set up a 3/8 pulse which syncopates against the slow melody as well as the fast arpeggiations. These four pulses collide in a suddenly unified climax at Rehearsal H1, m.237, the second of four thunderclaps in the piece.³⁹

Fig. 1.36: Conflicting pulses from m.225 to Rehearsal G1, m.232

The figure displays two systems of musical notation. The first system consists of three staves. The top staff contains a melodic line with annotations: "C# altered to D, E altered to Eb" and "C added". The middle staff features a rhythmic pattern with a triplet of eighth notes and a note with an accent (>). The bottom staff shows a sustained chord with a dynamic marking of *p*. Labels "Fastest pulse level", "Mid pulse level", and "Slowest pulse level" are placed near the respective staves. The second system also has three staves. The top staff shows an arpeggiated melody with a dynamic marking of *ff*. The middle staff contains a triplet of eighth notes with an accent (>) and a dynamic marking of *f*. The bottom staff shows a sustained chord with a dynamic marking of *mf*. The annotation "Arpeggiated melody from 228-229, plus B and Eb" is placed above the top staff.

³⁹ The opening of *Stations of the Sun* also has a short passage where a 3/8 pulse is briefly written out and marked across a 3/4 bar – at mm. 23-26 before Rehearsal A.

G1 3/8 pulse begins

This might be called a form of musical “parallax,” a term which describes the phenomenon whereby objects at a greater distance will appear to move more slowly from a moving viewpoint than closer objects. If the listener were understood as the viewer in this scenario, then the four pulse layers could be organized in terms of “distance”: the background harmony is the most distant layer whereas the rapid wind and percussion notes form the nearest layer.

This section forms part of *Symphony*’s exploration of “speed” as a musical concept. Given the work’s established overall tendency towards acceleration, this episode could be seen as a polyphonic variation on the idea of musical velocity. The use of “concepts” acting as background-level motives in this sense will be further investigated in Chapter 2.

The Final Scherzo and “collage”

The climactic moments of the final scherzo are worthy of attention since they continue to develop the kind of densely layered music which has already formed several large sections of the piece. Given the increasing piling up of timbres and motives from earlier in *Symphony*, it seems apt to describe this section as a kind of “collage.”

The beginning of the final scherzo comes after an extremely dissonant and “volcanic” version of the rising chorale, whose layers once again coalesce and focus onto a small group of rotating chords in the brass. Along with bright flashes (perhaps suggestive of lightning) of extremely high chords in the winds and additive iterations of rising triplet chords in the lower strings, brasses, and woodwinds, the contrasting pulses now merge into a single tactus, unlike the “failed” climax of the crossfade between the Introduction and Scherzo I. The high winds (mostly in offbeat eighth notes), lower brasses, woodwinds and strings (in triplets), and high brasses (in sixteenth-note syncopated subdivisions of the main beat) all participate in a giant tutti accelerando (from $\frac{1}{4} = 69$ to $\frac{1}{4} = 152$) and a simultaneous rise in register into the high treble. Where the first scherzo emerged seemingly out of nowhere over the top of a fade out of the introduction’s “failed” polyrhythm, this transition is a seamless blend from a multilayered, registrally saturated, explosive passage for the full orchestra to bright, contrapuntally uniform, registrally focused, lightly scored music with a beat speed over twice the original. This is the third thunderclap, and it appears to be a success.⁴⁰ After the tumultuous harmonic movement of the transition, the music seems to have pushed through a dramatic obstacle to a sense of harmonic arrival and sudden stasis on a six-note segment of a D acoustic mode at Rehearsal R1, m. 294.

It isn’t long before layers begin to split apart again with the repeating ostinato canons which appear in the winds at m. 302. These canons gradually phase in position with regard to the bar line because of their pattern of five eighth notes in a 6/8 meter. Ostinato forms of earlier material, primarily the main theme and the “Kyrie,” make up most of the repeated note pulses in the final scherzo. This is especially evident in the extreme compression of pulse and motive at what I will henceforth refer to as the “breakthrough” climax of the scherzo (mm. 370-377).

⁴⁰ See Chapter 3 for more on the Joycean thunderclaps as catalysts for progress, an analogy which applies particularly well here.

From Rehearsal Z1 (m. 355), the layers begin to pile on at a faster rate. During the final “collage,” the music becomes replete with snapshot references to earlier themes which depart radically from their original order of appearance. This is another form of “ricorso,” a chaos (which is naturally nothing of the sort, but rather a highly *un*-chaotic, controlled, but dense musical fabric) which foreshadows another radical change in the music – in this case the return of the pitch center of “A” at the “breakthrough.”⁴¹ The triplets in the upper strings contain fragments and altered versions of the main theme at different transpositions, while the winds have the secondary set of themes (see Fig. 1.3), the oboe theme from Scherzo I (at m. 112: see Fig. 1.8), the “Kyrie” theme (see Fig. 1.4) the trills from the Introduction (from the Grisey reference at m. 24), the “decorative figure” from m. 123 (see Fig. 1.9), and the trumpets reprise the grace-note theme from the maelstrom of Scherzo I (m. 127: see Fig. 1.29). This sense of textural overload appears to be the main thrust of the section: a gradual and seemingly inexorable increase in surface density which ends in (or perhaps causes) the “breakthrough”.

In the mid-register layer, the running triplet pulse in the strings continues, splitting into localized canons which foreshadow the prominent motivic canons from mm. 371–377. These “fraying ends” (mm. 352 and 358, for example) seem to be a microcosm of what is happening to the piece at this moment – a two-dimensional texture splitting into many parts.

The low pizzicato layer, which reappears at m. 355 and continues unbroken through to the “breakthrough” at m. 370, contains recycled chords from earlier moments in the piece, shorn of their original harmonic context. While this will hardly be evident to the listener, and is certainly not audible on the premiere recording, it nevertheless points to a method of construction. This passage is not just a vertically dense collage of layers and materials. Rather, this one layer is also a horizontal collage of

⁴¹ The composer stated in our conversation on September 10th 2015 that he had studied Schenkerian analysis during his undergraduate studies, and that was something he had in mind when deliberately avoiding the pitch center of A until this moment in the piece.

harmonic structures from elsewhere in the piece laid onto an eighth-note grid. What the listener will most likely hear in the foreground is not the harmonic construction of the bass layer, but the accumulation of melodic ideas in the treble and high treble, until the music passes the point of being parsable into separate layers. Given how chromatically dense the music becomes prior to the return of the “A” pitch center at the breakthrough, harmony appears to break down as an engine of direction. Texture usurps that role. Thus, the bass pizzicato chords do not need to be strictly organized, since what is important is the presence of their timbre as a pulse generator. That might account for their “randomized” nature and the composer may have borrowed them freely from the stock of harmonies in the rest of the piece, or from sketches.⁴² Timbre and instrumentation are being given sway here over harmony. This is partly what is meant by the idea of “broader” technique beyond pitch manipulations and the construction of intricate rhythmic structures.

The texture of this section points to a few possible influences. It might well lead some listeners to think of jazz, and the brisk tempi of bebop in particular. Gesturally, it has some superficial similarity to Scriabin’s later works, especially works like *The Poem of Ecstasy* and the 5th Piano Sonata, where an intense triplet pulse ends in the achievement of a trance-like state of spiritual revelation, which itself is bound up in spiritual images such as the “whirling dervish.” The use of the bass register might have come to Anderson via the works of Messiaen, in which there is often a dissonant bass counterpoint (usually in the low piano) to a largely consonant modal or melodic layer of music in the mid register in works like *Turangalila Symphony*, *Visions de l’Amen*, and the *Trois Petites Liturgies*.⁴³

⁴² I should be careful to point out here that this in no way suggests haphazardness or an “anything goes” attitude.

⁴³ This use of the bass register also appears in the final movement of Anderson’s later piece *Fantasias* after Rehearsal D, measures 56-70. There, the double basses play scurrying 16th notes which produce a kind of low rumble akin to a bass drum, while a dance-like winds melody is threaded above.

This all adds up to an extraordinary buildup to the final climax by producing an increase in density in all parameters at once: density of texture, saturation of all registers, dynamics, harmony, superimposition of timbres in a thick, accelerating polyphonic dance towards the sudden harmonic stasis of the “breakthrough.” Here, almost all of the orchestra is suddenly cut out and only the strings in the high treble register remain, repeating an ostinato fragment of the main theme in a tight canon. Having achieved an “escape velocity” of sorts, the music is marked “Subito accel possibile” into the coda, which suddenly adopts almost the slowest tempo of the whole piece.

Coda: A Harmonic “Summary” of the Piece?

The “coda” is a series of brightly orchestrated overlapped chords for the whole orchestra. While the overlapping nature suggests another chorale-type construction, these chords were more likely arrived at by a form of chord multiplication.⁴⁴

Fig. 1.37: Chord multiplication in the Coda, mm.377-383

The figure shows a musical score for the Coda (mm. 377-384) for a full orchestra. The score is written for four staves (treble and bass clefs). Key annotations include:

- Chord I - verticalization of main theme** (mm. 377-380)
- Chord II** and **Chord III** (mm. 380-383)
- E₃ borrowed from Chord I** (mm. 380-383)
- D is new pitch** (mm. 380-383)
- B is new in this octave** (mm. 380-383)
- these chords begin new cluster:** (mm. 383-384)
- new pitches sustain in this order:** (mm. 383-384)
- (white notes)** and **(black notes)** (mm. 383-384)
- C₄ prepares Thunderclap IV chord** (mm. 383-384)
- chords transpose through:** (mm. 377-380)
- multiplied sounding harmony** (mm. 377-380)
- new combinations drawn from sounding harmony** (mm. 380-383)

⁴⁴ A technique Anderson has previously used in the opening of *The Stations of the Sun*.

The first three chords have the same intervallic construction and each transposition adds new notes to the sounding harmony. These chords are orchestrated to ring over one another like a form of “natural echo” akin to the orchestrated effect in the famous “Swan Hymn” section of the finale of Sibelius’s 5th Symphony.⁴⁵ From m. 379, the orchestra begins to announce new chords containing either borrowed notes from other chords (as in the E natural from the first chord which appears in place of the Eb in a restatement of the second chord), or new combinations from the available sounding harmony, with only minor additions. At the end of the coda in m. 383, all sounding pitches cluster together in the densest harmony of the whole piece, an aggregate with several octave duplications.

This coda could well be a summary of the whole piece, though not by way of a literal recapitulation of the harmonies from earlier. The first three chords are a verticalization of the main theme, and their method of overlapping recalls the overlapping harmony in the Introduction. The aggregate at the end could be a summary of the final scherzo given the gradual increase in pitch density and the crescendo: it forms a micro-version of that shape. The final thunderclap consists of five chords harmonizing a high trumpet restatement of the fragmented canons from the final scherzo. Since top C# in first of these chords is prepared by the top note of the aggregate in the previous measure, it seems likely that these chords may have been extracted from the aggregate.

Conclusion

To summarize the concepts introduced in this chapter, we have found that the piece does not rely on a single method of organizing pitch and rhythm; what is more, even a combination of the systematic techniques discussed above can account for only a fraction of the piece’s pitch structures. In a recent

⁴⁵ See Chapters 2 and 3 for more on *Symphony*’s relationship to Sibelius 5.

interview celebrating the centenary of the birth of Henri Dutilleux, the conductor Esa-Pekka Salonen remarked that Dutilleux's music seems not to be so concerned with the exploration of material, as was the music of some of his French contemporaries (most notably Boulez): instead, that material was "something he needed to create a certain type of [poetic] narrative."⁴⁶ This is the spirit in which *Symphony* seems to have been composed. While the piece is hardly programmatic, and is only vaguely suggestive of a dramatic narrative, the idea that the music drives the need for a system might offer a productive way to approach the work. Why else would the system be so well concealed? As Oscar Wilde states in the beginning of *The Picture of Dorian Grey*, "to reveal art and conceal the artist is art's aim." Even in the most rigorously controlled passages of the macrotonal hocket in first scherzo, one hears neither the fundamentals of each chord nor the pivot-quarter-tones which connect them. The rising chorale fades seamlessly in underneath other layers of textural activity in the introduction. It only becomes a foreground element *after* its first iteration. The macrotonal system then fades out as the first scherzo becomes more densely layered.

Perhaps this suggests something about Anderson's composition process. His first sketches for a piece could be purely experimental, playing with scales and chords. This might account for how the chorale originated in the first place. The macrotonal system was likely arrived at in a similar fashion: by imposing restrictions (no detuned pitches above the fourteenth partial, thereby favoring those non-tempered notes larger than a semitone, and using those detuned partials as equivalents to one another) and seeing what could be created within these rules. Given how "buried" in other more intuitively composed music these structures are, sewn into the fabric of the piece as if they and the surrounding "freer" passages were one and the same material, it is tempting to suggest the use of these systems as

⁴⁶ "Entretien avec Esa-Pekka Salonen #Dutilleux2016"
<https://www.youtube.com/watch?v=NwLnovVZFzk> Accessed 28th September 2016.

a means to get started, to produce a critical mass of material which could then be manipulated and played with in less governable ways.⁴⁷ As more and more of the piece emerges, the stricter structures become more integrated with free structures. If the “free” is still within the realm of technique, then this is far from being a compromise; it rather constitutes the work’s triumph, suggests an achievement of a much higher level of technique – the full cooperation of the freely intuitive and the strictly systematic.

Anderson’s treatment of timbre and form require further investigation. The second chapter will focus on the form of *Symphony*, the timbral journey of the piece, and how the climaxes and other texturally dense moments align or conflict with that form.

⁴⁷ This approach is common amongst many composers, forming a contrast with the sketching processes of both Saariaho and Dutilleux.

CHAPTER 2: *Symphony's Form*

Symphony builds on Anderson's approach to form in his large ensemble and orchestral compositions from the decade or so prior to 2003. From 1988-1990 he composed *Diptych* (originally titled *Dark Night*, despite having no programmatic content), which consists of two powerful large-scale movements for full orchestra. As one might expect, *Diptych* shows Anderson employing formal shapes which were to be further developed in later pieces, including *Symphony*. The first movement, *Parades*, is a volatile and organic piece that displays Anderson's precocious talent (he composed this piece between the ages of 21 and 23) while the second movement, *Pavillons en l'Air*, is a continuous and drawn-out exploration of a full-orchestral heterophonic¹ texture so dense that the composer wrote it straight into full score.² Of these, *Symphony* has more in common with the first movement of *Diptych*, given its two massive climaxes that significantly alter the course of the music that follows them.

The accumulation of sounding material in the orchestra, the violence of the climaxes, the clear use of orchestration to distinguish polyphonic layers by timbre, and the use of gradations and trajectories moving from clear pitch to noise are all concepts that are developed in *Symphony*. These concepts are in one sense inseparable from the form, since it is these cumulative processes which produce the climaxes and guide the direction of *Parades*. *Symphony* also does not proceed from a superimposed form; rather, the form emerges from the behavior of the music.

As mentioned in the introduction to Chapter 1, noise, pure sound, pitch consonance, dissonance, strict organization, freedom, pulse, and rubato are all available in Anderson's language: they unfold across a unified continuum. In *Symphony*, Anderson develops new means of forming a dialogue between them by building on advances made in previous works.

¹ Resembling Ligeti's dense explorations of heterophony from the late 1960s such as *Lux Aeterna*, *Requiem* and *Lontano*.

² Palmer, 2015, p.13.

Since 1982³ Anderson has been aware of a concept known as the “timbre space,” a means of plotting any kind of timbre onto a four-quadrant graph with two axes that was developed by David Wessel at IRCAM. The lateral axis reads “sine-to-noise” and the vertical axis shows “density to thinness”.⁴ Every sound in the orchestra, including the individual timbres of orchestral instruments, can be plotted onto the timbre space. According to Anderson, every sound in *Symphony* was written using the idea of this timbre space, especially the opening six minutes.⁵

Symphony relates extremes of consonance and dissonance in the pitch domain both by sudden changes from one to the other, or by smooth transitions. Both Scherzo I and Scherzo II, Pt. II run the gamut from extreme consonance or “pure sound” (the harmonic series) to extreme dissonance, or “noise” (inharmonicities) in the form of Thunderclaps I & II. As suggested by the use of the timbre space, it is not just *pitch* consonance at play here. *Symphony* also relates extremes of “definite pitch” versus “indefinite pitch”: in other words, the work moves along a sine-to-noise gradient. Perhaps unsurprisingly, the moments with the greatest clarity in pitch are large passages in the Introduction and the beginning of the first scherzo, while the moments of the greatest “roughness” in sound are the Thunderclaps. There are also a few polyphonic combinations of noise and pitch, as in the final scherzo dance with low pizzicato. One simple way of spotting the difference is to look for the presence of unpitched or pitched percussion. The beginning of Scherzo I, and Scherzo II Pt. II are both colored carefully with metallic, resonant percussion in the form of either vibraphone or tubular bells. The most prominent use of the bass drum, side drum, a “large military drum” and low timpani (with an emphasis on register, since notes become less pitch-definite below the staff) is in Thunderclaps I, II, III, and IV. Some subtle mixtures also feature prominently, especially in the opening moments where

³ Anderson, Julian. Correspondence by email, November 13th 2016.

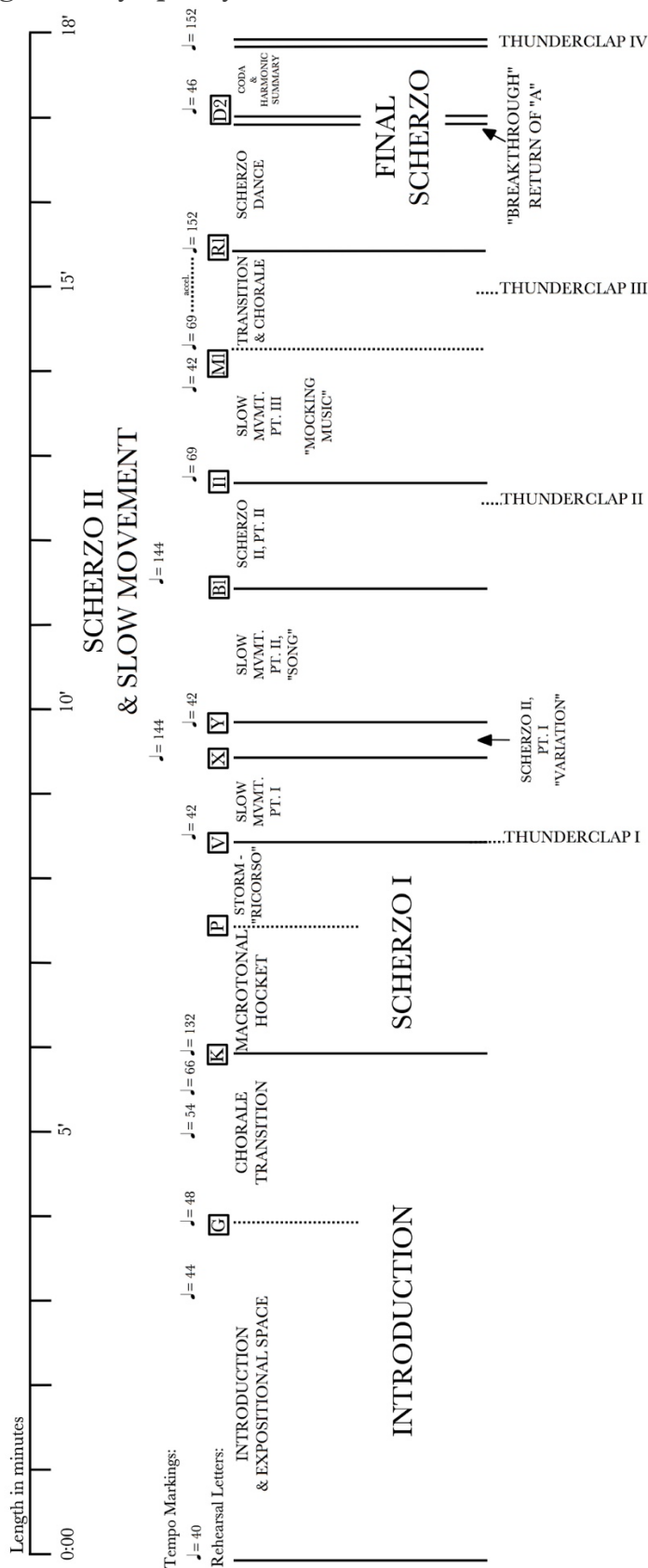
⁴ Wessel, 1978.

⁵ Anderson, Julian. Conversation by phone, August 28th 2015.

mostly unpitched brush-bowing and side drums with wire brushes mix with tremolando cello harmonics and flutter-tongued flutes. Broadly speaking, the Thunderclaps are the moments when *Symphony*'s timbre reaches the “noise” end of the sine-noise continuum. Just as in terms of pitch consonance, Scherzo I and Scherzo II, Pt. II feature a complete transition from one end of that continuum to the other. Pitch consonance, textural density, and timbre are working in tandem to produce the major structural events that define the formal language of the piece. They are almost like “gravity wells” of multi-parameter dissonance into which the music is pulled. These extremes produce major changes in the course of the piece which will be explored further in Chapter 3 in light of their relationship to *Finnegans Wake*.

The following diagram shows the proportions of the form of *Symphony* on a grid of 18 minutes. The size of each of the sections is proportionally correct and can therefore be used to draw detailed conclusions about their interaction with other sections. Naturally, this graph and table display only one reading of the form, which could be subjected to further subdivisions. The tempi can be viewed along the top: while they are not an exhaustive list of all the tempo markings, they provide a tempo for each of the sections and show the general (though not uninterrupted) trajectory of acceleration across the whole piece.

Fig. 2.1: Formal Diagram of *Symphony*



The proportions of the sections are laid out in Fig. 2.2. I define “fast” tempo music both as pulsed music with a fast harmonic rate and a beat speed over 100 bpm. The timings below were calculated both from reading the full score and the duration of each section on the only currently available commercial recording of *Symphony*, so these data should be taken merely as a rough estimate in order to ascertain the broad proportions of the work.

Fig. 2.2: Length of Sections of *Symphony*⁶

“Slow” tempo music	Length (minutes & seconds)	“Fast” tempo music	Length (minutes & seconds)
Introduction & Chorale	6:05	Scherzo I: Macrotonal Hocket	2:25
Slow Movement, Pt. I	1:00	Scherzo II, Pt. I “Variation”	0:30
Slow Movement, Pt. II “Song”	1:30	Scherzo II, Pt. II	1:15
Slow Movement, Pt. III & Transition	2:40	Final Scherzo	1:35
Coda	1:00	Thunderclap IV	0:10
Total	12:10		5:50
Total length of piece: 18:00			

To put this in context, Fig. 2.3 provides the sectional proportions of *Stations of the Sun* with regard to the amount of “fast” music and “slow” music. The same caveat applies to the changeability of the timings, which were extracted from the first commercial recording with the BBC Symphony Orchestra conducted by Oliver Knussen. Again, in detail, the form of *Stations of the Sun* can be read at a much deeper and more complex level, but for the purposes of elucidating the relationship between the two pieces, the broader former summary must suffice.

⁶ N.B. the sections can be read in the correct order if one reads across all four columns.

Fig. 2.3: Length of Sections of *Stations of the Sun* (1998)⁷

“Fast” tempo music	Length (minutes & seconds)	“Slow” tempo music	Length (minutes & seconds)
First Dance (Dance 1)	2:10	Slow Movement with folk melody	5:10
Winds Dance (Dance 2)	0:46		
Brass Alleluia (Dance 2 cont’d)	1:14	Brass Melody with Bells	2:15
Strings Dance (Dance 3) and reprise of first dance’s climax	3:45	Cantilena (closing modal tutti)	2:50
Total	7:55		10:15
Total length of piece: 18:10			

Naturally, the subject matter, mood, and material of *Stations of the Sun* are very different, but what one finds in common with *Symphony* here is a similar approach to dividing up a timespan of 18 minutes. Both pieces have alternating “fast” and “slow” tempo sections (roughly a third to two fifths “fast” music) which run attacca and feature several climaxes that build in intensity. In a more general sense, both pieces renew and refresh material by placing it in different contexts, whether temporal, textural, timbral, or formal. The climaxes are reached gradually by the accumulation of pulse and textural density, and their aftermaths often leave fragmented melodies or sounds that slowly coalesce as they move towards the next climax. By contrast, Anderson’s more recent orchestral work *The Discovery of Heaven* (2011-12) is around the same length (19-20 minutes) and consists of three movements of roughly equal length: only the second and third run together. *Fantasias* (2009) is even more dramatically contrasted, lasting 25 minutes in 5 movements (likely in dialogue with both Schoenberg’s *Five Orchestral Pieces*, op. 16, and Janáček’s *Sinfonietta*) and the micro-form of each of the movements is easily as complex as the entirety of *Stations*.

⁷ N.B. The “fast” and “slow” columns have switched positions here, since the piece begins with a scherzo, not a slow introduction, as in *Symphony*.

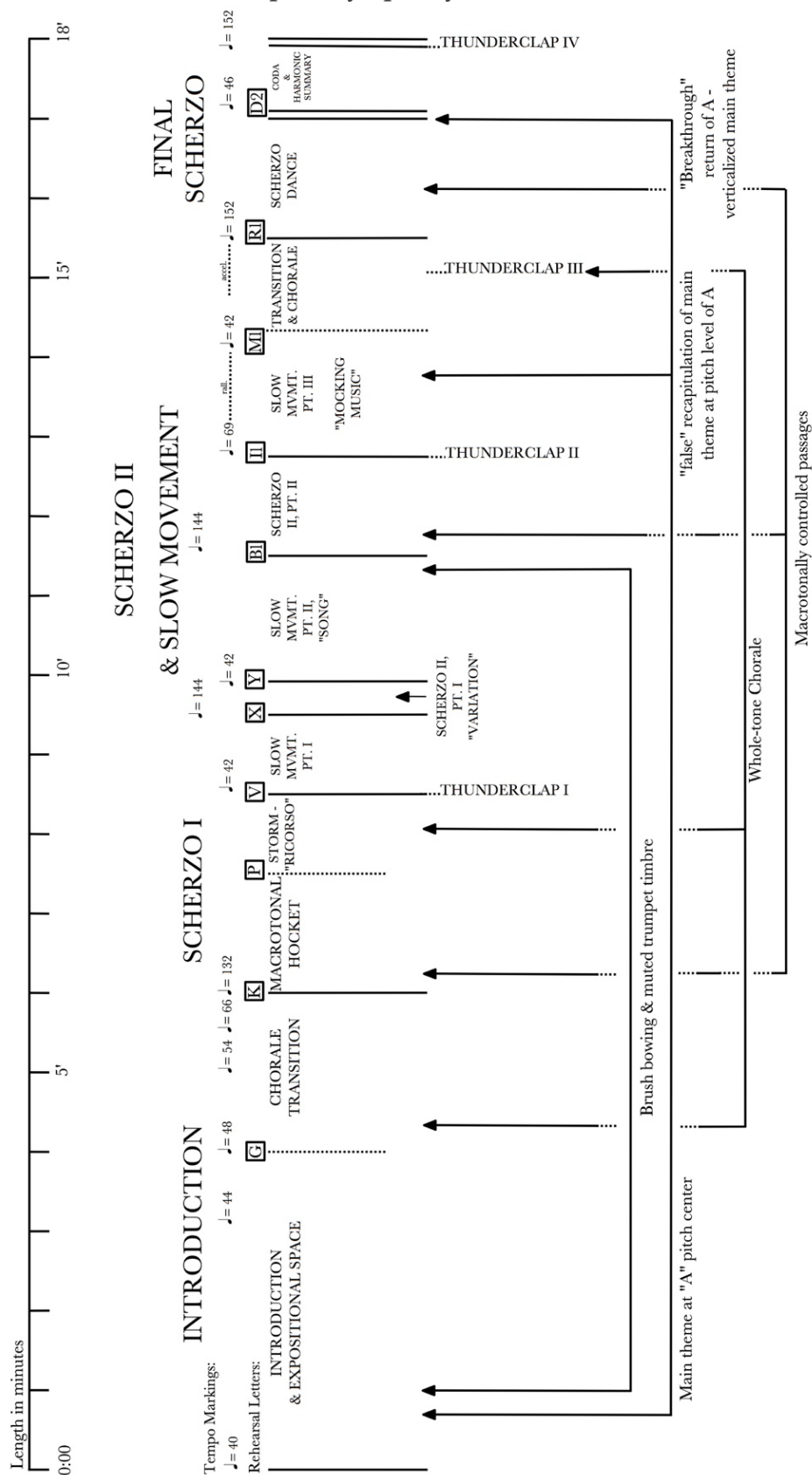
Stations of the Sun establishes one sort of relationship between tempi. Part of the formal argument of *Symphony* is about the forging of relationships between fast and slow harmonic rates and beat speeds through accelerandos. This can be understood as part of the strategy to establish relationships between other parameters through direct transition – consonance and dissonance, pure sounds and noise, and density and sparseness of texture as well as tempo. On the highest level, the accelerando across the whole piece from beginning to end might be described as a “pulse train,” since by the coda of *Symphony*, the main theme’s cell is being repeated so fast that it becomes a new kind of harmonic stasis which segues directly into the bright overlapping chords, elaborated with flutter-tongued brasses which suggest even faster pulse. *Stations of the Sun* addresses this relationship in a different way: while the transitions are often seamless, the types of transition one hears between the monumental chords of the chorale transition of *Symphony* (Slow Movement, Pt. III) and the written out accelerando into the Final Scherzo for instance, do not appear so conspicuously.⁸

As they are introduced, the following concepts will be mapped on the next figure (Fig. 2.4), a more detailed diagram of the form. While *Symphony* does not have a traditional recapitulation⁹, there is a recapitulatory scheme of sorts. What is innovative here, as noted in the first chapter, is that many of the ideas introduced return out of phase, without respect to their original order or appearance (thereby departing from the strict use of “rotation” as a formal principle). The opening timbre of brush-bowed strings mixed with muted trumpet fluctuations returns just before Scherzo II, Pt. II. As mentioned above, this timbre returns “in reverse”, with the trumpets beginning, followed by thinning down to just the vertical-bowed strings.

⁸ Though a good candidate for finding this concept “in utero” might be the written-out acceleration of accented notes in the strings just before the “Winds Dance” (mm.138-142).

⁹ Anderson, Julian. Conversation by phone, August 28th 2015. Anderson stated that he “both agrees and disagrees with Messiaen that the recapitulation is the redundant part of a sonata form”.

Fig. 2.4: Structural interrelationships in *Symphony's* form



While this may become perceptible on a third or fourth hearing, it is audible once noticed, and holds interesting implications for the progression of linear time within the work. It is as if for one moment, time moves backwards. This also may be relatable to the idea of “chaos” in a ricorso, which precedes a major climax – the second Thunderclap happens just over a minute later. Such chaos induces disorientation and confusion, and there could hardly be a better way to represent this than for time to move in the wrong direction.

In this light, the form of *Symphony* takes on a very organic character, with paths splitting into multiple directions out of the introductory movement. The melodic material grows out to produce the slower episodes (the Slow Movement parts I, II, and III all develop the main theme from the opening by breaking it down and integrating it into other lines, as shown in Chapter 1’s Fig. 2.7) while the scherzo themes also come out of the introduction. Scherzo II, Pt. I (the “variation”) is almost completely constructed from the superimposition of the main theme upon itself to create canonic textures.

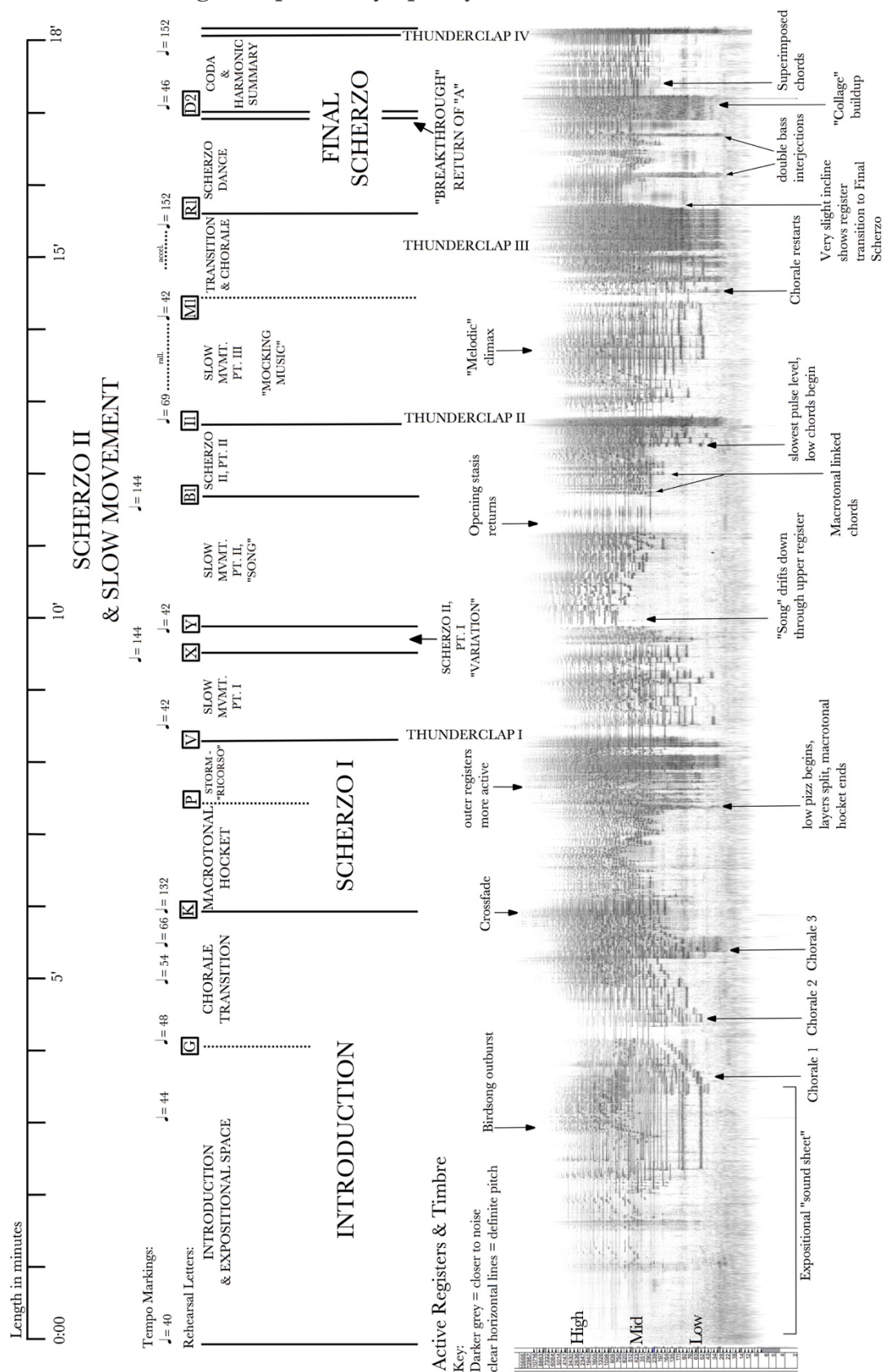
Two more diagrams will illustrate first how the textural layering fits into the form at the densest and most dissonant moments, and second the timbral polarities and use of register space. While it is difficult to represent such concepts without glossing over a certain amount of detail, a “low-resolution” image of the denser parts of the piece can be revealed in this way. Fig. 2.5 marks the densest passages of the piece into the overall form.

In orchestral music, the fastest sections tend to be the loudest and the most polyphonically dense. While this holds true for large swathes of *Symphony*, Anderson also subverts these tropes. Density does not always coincide with dissonance, fast tempi, or with a loud dynamic.¹⁰ Although it is generally true that the music becomes denser and more dissonant towards the climaxes, the expositional space is dense but very still and quiet, timbrally clear in terms of pitch, and not especially dissonant. The Chorale transition becomes much louder and thicker in scoring, but by the end the two layers have merged into one texture for full orchestra. As discussed previously, the tempi vacillate between fast and slow, and most of these slow sections are texturally very uniform and dynamically quieter in the wake of a dense, loud climax.

The following is a frequency analysis of *Symphony* lined up with the previous formal diagram which both confirms the timbral scheme, and reveals some new conclusions.

¹⁰ In *Stations of the Sun*, Anderson's strategy for composing what I call the "Winds Dance" (m.142) seems to be an attempt to vary one of these tropes. Though it is at a very brisk tempo, (1/4 note = 140, Vivace) the texture is very light, clear, and while the parts are marked forte and fortissimo, the played dynamic in performance sounds much softer due to the light orchestration. This may be something which references Sibelius's work *Rakastava*, whose central movement is a brisk scherzo-like dance in 3/4 whose dynamic is mostly 'p', and never raises above 'mp'.

Fig. 2.6: Timbre and Register space in *Symphony*



When reading this frequency analysis, one must bear certain provisos in mind before drawing conclusions. The “rougher” timbral areas are those which appear as solid grey and are uniform across all registers. Each of the Thunderclaps exhibit just this characteristic, confirming that they are at the “noise” extreme of the sine to noise continuum. Because unpitched sound is closer to noise, it occupies more frequencies, and appears as more solid vertical grey bars. Conversely, the areas with tight horizontal lines indicate clear definite pitch. The opening sound sheet is a good example of this, as are the suddenly calm moments which follow most of the Thunderclaps, and also the coda, which appears as bold superimposed stacks of horizontal lines. The low band of grey across the whole diagram is ambient hall noise, reflecting that this visualization was made from a live recording of the premiere. Since dynamics are also taken into account, the louder moments appear as darker grey. This affects how noise and clear pitches appear in a quiet context. “Quiet noise,” as in the opening of the piece, almost fails to register, and quiet clear pitch appear as very faint horizontal lines. From a broad perspective, one can see very quickly how static the piece is at the beginning and how increasingly active it becomes later on. On closer inspection, the “attack and decay” profile that defines the introduction of most of the melodic material can be seen quite clearly. The chorales appear as blocks of horizontal lines which move upwards and can be found where each begins in the lower register. The scherzos naturally have less in the way of sustained sound and so they appear as cut up and granular, as does the woodwinds’ birdsong outburst during the Introduction. Polyphonic combinations of timbres, such as that which occurs in the collage of the Final Scherzo (dissonant, muddy bass pizzicatos with clear pitched layer on top), would not show so clearly. If one looks very closely, a granular texture can be seen within the grey “noise” in the Final Scherzo, but it is extremely faint. Any conclusions drawn must thus be compared with what one can glean from the score.

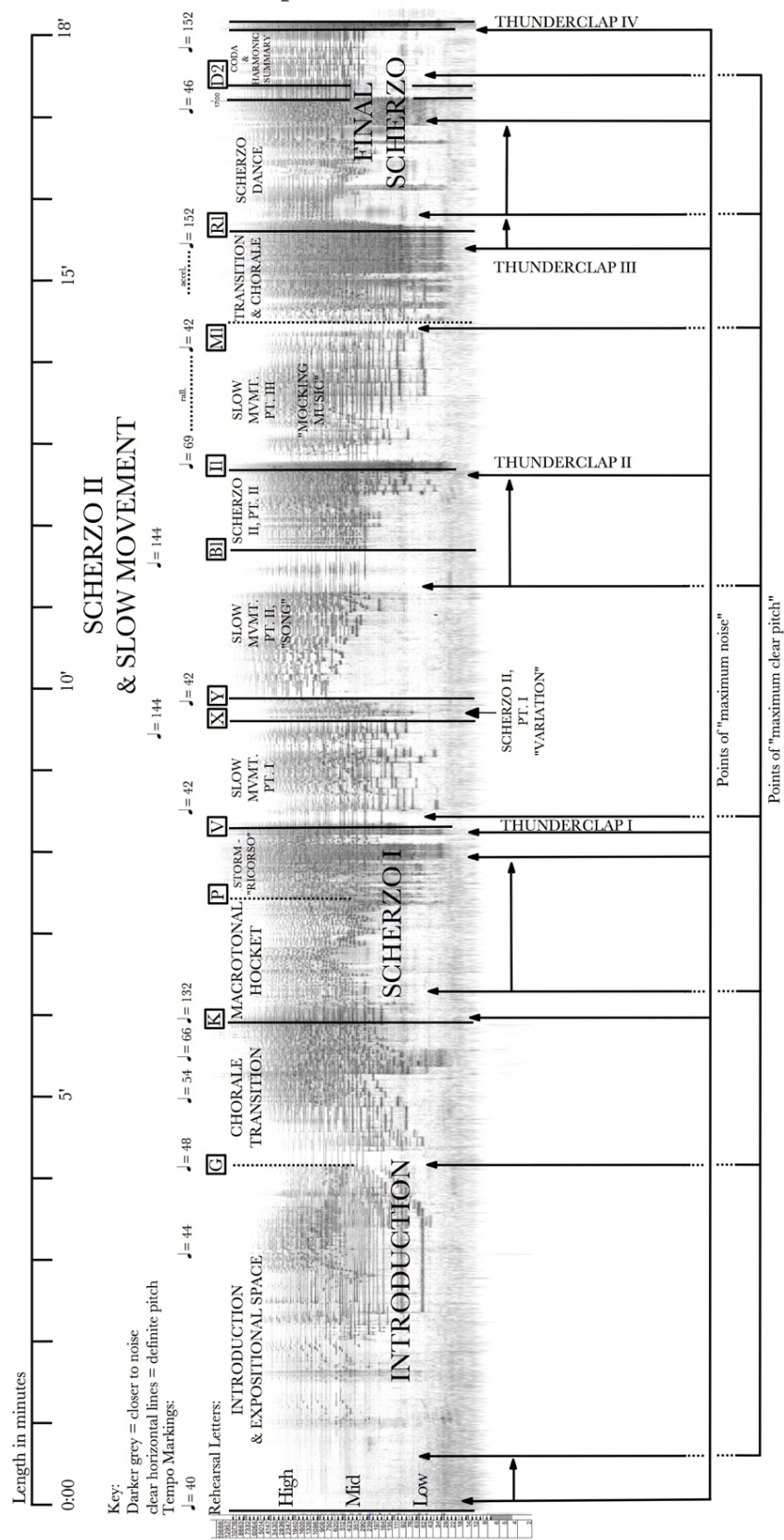
One can readily perceive how the piece establishes the dialogue between timbres. This relationship is explored in several ways, sometimes through a smooth transition from one to the other,

and at other times through more jarring contrasts, such as during the scherzos and after the Thunderclaps. After the first and second Thunderclaps, there is a clear slice of daylight before more complex sounds build up again.¹¹ These are those moments of sonic repose, which coincide with a slowing of tempo and textural activity and allow space for the music to build anew.

Fig. 2.7 shows the extremes of clear pitch and noise plotted onto the diagram. Passages that move fairly smoothly from one extreme to the other are shown with lateral arrows. Although the piece is progressive across many parameters (certainly in pulse, texture and pitch density), this analysis reveals a cyclical aspect of the piece. It begins and ends closer to the “noise” end of the sine-to-noise continuum, though the context is different (the beginning is a very different kind of instrumental timbre than the end). This suggests a pattern of circularity and simultaneous progress, or variation, which links *Symphony* to similar expressions of circularity in both *Finnegans Wake* and Sibelius’s 5th Symphony. This is not to say that the piece feels as though it will repeat itself at the end, but rather to imply that the return to the maximal noise from which the piece emerged at the end constitutes a subtle form of variation, renewing perception of material by changing the context (as also mentioned in Chapter 1). If the idea of “timbre” can be an idea subjected to variation, just as a melody can be, then it too is an idea that is given many meanings during the course of the piece. The opening evokes one sort of “meaning” of noise, and the end another: at the same time, both are noise.

¹¹ If one were to zoom in very close on this analysis, one would see that there is actually a very quick transition from noise to clear pitch. This is usually accomplished through orchestrational sleight of hand – or the trope of “revealed sonority”. The strings hold a static, consonant Lydian chord following the second Thunderclap which is only audible after the intense noise of the climax has died down. Of course, this can all be seen in the score, but this analysis provides empirical confirmation of the difference between audible noise and audible clear pitch.

Fig. 2.7: Extremes of noise and clear pitch



Clear pitch tends to transition smoothly towards noise and back again but with one exception: the transition between Thunderclap III and the consonant, clearly pitched beginning of the Final Scherzo. This could be another kind of “breakthrough”, but a formal one which allows a new relationship between pitch and noise.

More generally, this frequency map allows clear register shapes to emerge, showing which reveals much about Anderson’s approach to texture, often packing one register with a lot of dense information while allowing it to diffuse across others. The piece has a tendency to open sections by focusing on a particular register (usually mid to high) and then progressing outwards and/or downwards from there, initiating motion towards a climax. This process also works in tandem with those mentioned above (textural density, pitch dissonance, and timbral roughness) to create a sense of momentum towards the climaxes. Once introduced, activity in these registers remains present either until a major climax or until it ebbs away, as in the fermata at Rehearsal G. This resembles a wedge shape which consistently grows from the central register outwards, either towards the bass or the treble. The introduction begins by establishing a focus on the mid register before opening out towards the bass and then into the high treble with the woodwinds’ birdsong outburst. The First Scherzo begins more focused within the upper register, comfortably around the treble staff; at the moment when the macrotonal system ends (m. 114), however, the lower strings’ pizzicati drift into the lower register. From here, the middle and outer registers are increasingly occupied by continuous activity until Thunderclap I. The “Song” (Slow Movement Pt. II) also begins in the very high register, and expands outwards. The expansion process appears to be halted by the return of the opening timbre, which interrupts the flow of the music and appears to be pulling it back to its original stasis. This too is interrupted by the return of macrotonal chords which are again focused on the middle to high registers. This is Scherzo II, Pt. II, which expands dramatically towards Thunderclap II with the introduction of contrasting pulse levels, again in different registers. The final scherzo also begins by

being focused on the upper register, which is gradually infiltrated by intermittent streams of noise-like low bass sounds. Just as the timbral trajectory is a meta-theme which is varied over the course of the piece, so too is the expanding register shape.

Conclusion

Anderson's orchestral works from *Symphony* onwards make increasing uses of similar formal shapes as they simultaneously grow in complexity. The new forms encountered in *Fantasias* (2009), *Heaven is Shy of Earth* (2006/9), and *The Discovery of Heaven* (2011-12) may not have been possible without *Symphony*'s exploration of musical parameters. In addition, all of those works contain further explorations of sonorities lying outside equal temperament. This places *Symphony* as a turning point in Anderson's output.

It should also be noted that the Thunderclaps are not the only climaxes. The Thunderclaps have a specific function which is broadly to change the course of the music. Arguably the first climax at the crossfade does not *produce* the cross-fade, and so cannot be said to change the course of the music. The other moment which could count as a local goal might be the "melodic" climax during the Slow Movement, Pt. III. Again, this climax is not followed by a major formal break or radical change in direction or behavior, so it is distinct from the function of the four Thunderclaps.

The remaining trajectories and references within *Symphony* can only be explained by further examining the extra-musical associations of the work, which are numerous. In the final chapter, I will chart the allegorical scheme of the Thunderclaps, the origin of a few of *Symphony*'s sound textures in a Finnish painting (and by extension Finnish nature-mysticism), and the close relationship of the work to another seminal piece in the symphonic genre: Sibelius's 5th Symphony.

CHAPTER 3: *Symphony's* Artistic Heritage

One of the most remarkable aspects of Anderson's *Symphony*, and of his whole output in general, is his ability to juggle multiple influences in the same work which somehow coexist side by side. These influences and the means by which their artistic worlds form a crossroads in this piece are discussed in this chapter. Concepts arising from the previous chapter, such as notions of acceleration, circularity, interruption, and nature, will be traced through their associations with—and even origins in—these sources.

Visual Art: *Morning by Lake Keitele* by Akseli Gallen-Kallela

According to the composer¹, an early title for *Symphony* was “Unfreezing.” This implies that of the many influences on this piece, the first may have been the painting by the Finnish artist Akseli Gallen-Kallela, a friend of Sibelius and noted painter of allegorical scenes from the mythical epic tale, the Kalevala. *Morning by Lake Keitele* (1905)², a painting of a lake in the process of thawing, is one of a series of simplified landscape scenes he painted in the first decade of the twentieth century. Gallen's earlier work on the Kalevala and his work on scenes of nature were part of a wider movement in Finnish creative culture to emphasize the bespoke character of Finland's (super)natural beauty through the arts. This same trend also influenced Sibelius's thinking, especially through his tone-poems and later symphonies. Anderson's *Symphony* establishes a dialogue between contemporary orchestral music and Finnish artistic culture through its meditation on this painting.

¹ Anderson, Julian. Conversation by phone, August 28th 2015.

² This is currently the only painting of Gallen's housed outside of Finland, in the National Gallery in London. Anderson stated in his correspondence with me on November 13th 2016 that he saw it in Finland in 1999 just before it was acquired by the National Gallery. See reproduction in the visual appendix.

Anderson's use of the painting appears at first to be highly mimetic. The extremely quiet brush-bowing of the opening few minutes of *Symphony* aim to evoke very precisely the gently shimmering and overlapping shapes of the lower portion of the painting – suggestive of waves and ripples (Fig. 3.1). The second three notes are an inversion of the first three, perhaps indicating the concept of reflection in the water. The sense of simultaneous activity and stasis suggested by these brush strokes are mirrored by the sound of the strings – one perceives very fast brushes, but extreme harmonic stasis.

Fig. 3.1: Opening of *Symphony*, harmonic reduction: the “seed” of the whole piece

The image shows a musical score for the opening of *Symphony*, measures 1-6, for strings using brush bowing. The score is presented as a harmonic reduction on a grand staff. The upper staff (treble clef) contains notes G4, A4, and B4. The lower staff (bass clef) contains notes E3, D3, and C3. An arrow points from the text "'reflection'" to the notes in the lower staff, indicating they are an inversion of the notes in the upper staff. At the end of the six measures, there is a boxed letter 'A' above the notes, representing the final chord. Below the staff, the text 'Pitches introduced in this order' is written.

The bright and explosive presence of A Major at the end of *Symphony*, an apparent reference to the extended arrival passage in E^b Major at the end of the first movement of Sibelius's 5th Symphony, was apparently suggested to the composer by the bright sunlit clouds at the very top of the painting.³

In the program notes to *Symphony*, Anderson states that:

With a great economy of means, the artist manages to suggest to the viewers that the lake is actually unfreezing before their eyes. Thus the principal musical notion is that of 'unfreezing'...⁴

³ Anderson, Julian. Interview with the composer in London, 10th September 2015.

⁴ <http://www.fabermusic.com/repertoire/symphony-994> Accessed December 9th 2015.

The concept of unfreezing can itself be related to the music in many ways, mostly mimetic in nature. The almost obsessive use of acceleration on the small and large scale discussed in the previous two chapters finds its impetus here in the painting. However, one might observe that acceleration alone is not enough to account for what is happening – the accumulation of rhythmic, timbral, and textural energy which pervades entire sections of the piece (especially the monumental introductory movement) and the sense of ‘awakening’ generated by the piecemeal introduction of new musical elements over the course of the first four minutes of the work do indeed suggest the notion of “unfreezing,” a musical “quickenening,” this time, “before one’s ears.”

The strong diagonal bands in the lower third of the painting seem to imply upward motion: perhaps it was this which gave the opening of *Symphony* its own upwards direction, not just in terms of the upwardly mobile chorale, but also in terms of the aforementioned awakening of musical energy and the accumulation of new materials in the expositional space of the introductory movement. The distorted clouds in the water’s surface foreshadow themselves only to be revealed in their conventional shape and proportions at the very top of the painting. They begin as a murky, indistinct reflection but transform into sharp and focused shapes at the top. This parallels the manner in which a multitude of ideas and cells are introduced in the expositional space of *Symphony* only to be developed and contextualized much later on.

There is a cycle of movement in the painting. The shapes of ripples on the water’s surface mirror the undulating shapes of the silhouetted hills and the clouds at the top, relating the very small to the very large. Anderson’s cyclical treatment of musical speed parallels features of each of these influences. At the opening of *Symphony*, the pulse is extremely slow, while the brush-bowed strings produce an unmeasured tremolo-like illusion of speed. At the very end, the pulse is extremely fast, and the strings are playing fast triplets on a similar static chord in one of the final measured passages of the whole work. This progression is not direct, and a variety of other events occur which interrupt

and frustrate the progress of this straight line. One of the most remarkable aspects of this cycle is that it brings together opposites in a continuum – the usual dichotomy of extreme stasis and extreme speed are here viewed as inherently connected to and implying one another. On the basis of *Symphony*'s progress from the extremely slow to the extremely fast, its association with the earliest image being drawn from the lower portion of Gallen's painting and its last image from the very top, we may begin to see the whole work as being in certain respects a linear reading of the painting.

While the painting clearly impelled a great number of musical decisions, it is certainly not the only influence on *Symphony*. Gallen's visual work inspired the timbral beginnings of *Symphony* and might also be implicated in the optimistic, progressive trajectory towards greater musical activity. As mentioned earlier, there are cross-currents and barriers which interrupt this forward motion. These moments, specifically the four cataclysms discussed previously, are strongly associated with the Viconian thunderclaps in *Finnegans Wake*. Joyce's novel was influenced by the idea of uniting opposites in the same way that Anderson relates musical extremes in *Symphony*, and *Finnegans Wake* provides a poetic rationale for the presence of the climaxes and cycles of consonance to noise which were discussed in the previous chapter.

Literature: *Finnegans Wake* by James Joyce: The Thunderwords

The bringing together of opposites is a concept that Anderson has explored since *Symphony*. His 2012 orchestral work *The Discovery of Heaven* contains another confrontation of this topic in its first movement. Extremely fast rivulets of notes in the woodwinds are pitted against monumental shining static chords in the whole orchestra. It is almost as if *An Echo from Heaven* picks up where *Symphony*

left off, and the great upwards struggle of earlier piece has propelled the conflict of speed against stasis into the stratosphere.⁵

Perhaps for Anderson, viewing the most basic elements of music in this way produces large-scale structural arguments, forming a central part of his technical outlook. While it may also be influenced by his examination of the music of Pierre Boulez and the “play of oppositions” referred to by Jonathan Goldman and others, this investigation of parameters of music seems also to be prompted by an external source, or even a parallel innovation from a different art form. In this regard, James Joyce’s thundering masterwork *Finnegans Wake* exerted a major influence on *Symphony*, and its impact seems to deliberately frustrate the progress of the previously established arc of acceleration in the work.

Finnegans Wake is a highly idiosyncratic work of fiction which has remained a source of fascination for linguists, artists, and writers since its appearance in 1939. Though still an enormously difficult novel to access (it usually requires consulting a detailed plot synopsis and readers’ guide book to gain a basic understanding of the work’s themes, goals, and techniques), it is perhaps not surprising that it is often described as a musical novel in light of its highly playful use of sound. Indeed, *Finnegans Wake* has elicited responses from composers like John Cage and Toru Takemitsu with its wondrous jesting with sound and layers of meaning.⁶

⁵ This is another work which melds a multitude of influences. The title comes from a Harry Mulisch novel whose narrative alternates between celestial and earthly scenes, while much of the timbral language of the work, especially in the first movement, is associated with Japanese Gagaku music, particularly the bright, high tessitura of the shō.

⁶ Takemitsu appears almost fixated with *Finnegans Wake* during the 1980s, perhaps when he first encountered the novel. *Far Calls. Coming, Far!* for violin and orchestra was composed in 1980, followed by *a way a lone* (I & II) for string quartet or string orchestra in the same year and 1984’s *riverrun* for piano and orchestra. Both of these last two titles coming from the significant first/last sentence of *Wake*, which suggests that the whole cycle of the novel will begin again. The presence of circularity or the idea of the “cyclic” in all of the works influencing Anderson’s *Symphony* is an important issue to be addressed below.

One of the most remarkable (and to those who have encountered the book, the most immediately striking) features of *Finnegans Wake* is its startling array of neologisms, particularly the infamous “thunder-words.” These are ten monstrous, one-hundred-letter words scattered throughout the novel that constitute highly original uses of onomatopoeia.⁷ Upon further analysis of these words, they are in fact constructed from stacking together ten or twelve words, all meaning “thunder” (as in the case of the first two) in different languages, often with phonetic spelling. As evidenced by Joyce’s characterful recordings of excerpts of the book (some dating from its long gestation of fourteen years, when it was still called *Work in Progress*), this is a work which is in some sense meant to have two lives; one on the page (given the attention to layout) and one through reading it aloud. It is in the latter form that much of the language of the work comes to life. Below are each of the ten words with their page numbers and (approximate) meanings and functions.

Fig. 3.2: The Ten Thunder-Words of *Finnegans Wake*

<u>No.</u>	<u>Word</u>	<u>Page</u>	<u>Meaning</u>
1	bababadalgharaghtakamminarronkonnbr onntonneronntuonnthunntrovarrhounaw nskawntoooordenthurnuk! ⁸	1	Thunder ⁹
2	Perkodhuskurunbargruauyagokgorlayo rgromgremmitghundhurthrumathunara didillifaititillibumullunukkunun!	23	Thunder. A phonetic spelling of the colors of the rainbow is present just before this word. Contains the Finnish word for thunder, “ukkonen”, spelled “ukkunun”

⁷ The first eight of these thunders are associated with the fall and rise of the central character (or character complex) of H.C.E., while the last two are associated with his son, Shaun, suggesting that the cycle of falling and rising will repeat itself. The historical analogy of the novel is thus tied to the fates of individual characters, much like Anderson’s own thunderclaps are tied to the progress of *Symphony*’s accelerational narrative.

⁸ Joyce, James. *Finnegans Wake*. Oxford: Oxford University Press, 2012.

⁹ Most of the deconstruction of these words can be found on the excellent website www.fweet.org accessed 23rd December 2015, an invaluable resource for exploring the book.

3	Klikkakkakkaklaskaklopatzklatschabatta creppycrottygraddaghsemihhsammihn ouithappladdykonpkot!	44	Applause. Heralds the beginning of a short song, notated in the book. The song is also apparently about falling, or falling from grace
4	Bladyughfoulmoecklenburgwhurawhor ascortastrumpapornanennykocksapasti patappatupperstrippuckputtanach	90	This is in a courtroom scene, and consists mostly of curses in various languages
5	Thingcrooklyxineverypasturesixdixlik encehimaroundhersthemaggerbykinkin kankanwithdownmindlookingated	113	Takes place during a scene of someone writing a letter. Again, some lewd references and curses
6	Lukkedoerendunandurraskewdyloosho ofermoypportertooryzoosphalnabortan sporthaokansakroidverjkapukkapuk	257	“Shut the door”, written as sounds of doors slamming
7	Bothallchoractorschumminararoundgans umuminarumdrumstrumtruminahumpt adumpwaultopoofoolooderamaunsturn up!	314	The exact center of the book: includes references to ‘falls’ of various sorts, Humpty Dumpty and Waterloo amongst them, jumbled references to other passages both rhythmic and semantic, “drum” and “strum” both suggest musical instruments and their sounds
8	Pappapapparrassannuaragheallachnatul laghmonganmacmacwhackfalltherdebb lenonthedubblandaddydoodled	332	References to “father”, “devil”, and references the song on p.44, on which thunder-word 3 appears
9	Husstenhasstencaffincoffintussemtooss emdmandamnacosaghcusaghghobixhat ouxpeswchbechoscashlcarcaract	414	Mostly sounds of coughing
10	Ullhodturdenweirmudhaardgringnirurd rmolnirfenrirlukkilokkibaugimandodre rinsurtkrinmgernrackinarockar	424	References to the end of the world: Loki, Thor and Ragnarok all appear in this section

Examining these extraordinary inventions of Joyce perhaps reveals another reason why *Wake* continues to be of interest to musicians. Its approach to spelling is very similar to a particularly modern approach to notation – often spelling out the desired sound (of thunder, or applause) to be realized through reading aloud, much as musical notation describes the desired sound to be realized through performance.

The thunder-words also perform an important dramatic and structural function as well as a semantic one. They often announce a major shift in the world of the novel, such as the third, which

precedes a song that closes the chapter. All ten are scattered across the whole novel, which consists of four “books,” each with its own subdivisions of cycles. These cycles mirror the view of history described by Giambattista Vico in his 1725 work *Scienza Nuova*. What is important to grasp here is the cyclical concept of the *Wake*, which encapsulates repetition within simultaneous variation. William York Tindall’s description of the cycle of *Finnegans Wake* is worth quoting in full:

As Homer’s story, freely adapted, determines the three-part structure of *Ulysses* and the sequence of chapters, so Vico’s system, freely adapted, determines the four-part structure of the *Wake* and the sequence of its chapters. Part I is Vico’s divine age, Part II his heroic age, Part III his human age, and Part IV an enlarged *ricorso*. The seventeen chapters also follow this sequence. Chapter I of Part I is a divine age, Chapter II a heroic age, and so on – wheels within a wheel. The eight chapters of Part I represent Viconian wheels within, and affected by, the general divinity of the part. The eight chapters of Parts II and III – four chapters in each – represent two cycles within, and affected by their heroic and human contexts. Chapter XVI of Part III, for example, though a *ricorso*, is a *ricorso* within a human age, hence different in character from Chapter IV of Part I, a *ricorso* in a divine age. Part IV, the general *ricorso*, has one chapter, which, though a *ricorso*, is by position in the sequence another divine age or its herald. Each of the parts and chapters, whatever the age it celebrates, contains elements of the other ages. Chapter I of Part I, a divine age within a divine age, displays the city which arises in the human age.¹⁰

While the exact cyclical four-part structure is not directly replicated in *Symphony*, the concept of a cycle or process is present. As counterparts to Joyce’s thunder-words, four thunderclaps are dispersed at certain key points throughout *Symphony*.

Fig. 3.3: The Four Thunderclaps in *Symphony*

<u>No.</u>	<u>Measure No., Rehearsal Letter</u>	<u>Position in Form</u>
1	m.146, U	End of Scherzo I
2	m. 237, H1	End of Scherzo II, Part II
3	m. 280, P1	End of Slow Movement, Part III, before ‘breakthrough’ to Final Scherzo

¹⁰ Tindall, William York. *A Reader’s Guide to Finnegans Wake*. New York: Syracuse University Press, 1996, p.10.

The thunderclaps represent a kind of musical chaos, several of which are preceded by “ricorso” moments. As discussed in the previous chapter, these climaxes represent the maximum of noise in the piece. Not all of the thunderclaps are equal in their construction, however: the greatest freedom in terms of pitch, timbre, and texture is exhibited by the second thunderclap. The book becomes denser towards its center, and generally more accessible towards the outer edges, evincing a similar sense of gravitational pull.

In addition to their sound, the thunderclaps have ripples of impact across the rest of the piece; the world of the work is never quite the same again after these cataclysms. This points towards their function in the piece as a whole – as interruptions to the arc of acceleration and its implied straight line of progress. These moments ‘do violence’ to the piece, and the impact can be clearly viewed in technical terms.

Though the form of the piece seems to follow a gradual acceleration, moving from larger sections (the lengthy six-minute introductory movement and the four-minute scherzo) to much shorter sections that resemble brief variations, a question remains: what drives this acceleration? Thunderclap I occurs at the end of the last of the larger movements. Thereafter, it becomes increasingly difficult to group the smaller sections together into one large, consistent movement. This “sectionalizing” of the latter half of the piece appears intentional given the more frequent changes in tactus beat. The first thunderclap appears to mark the moment when the piece can no longer progress in larger chunks: it *breaks* the form.

For its part, Thunderclap II breaks the *texture*. Whereas the effect of the previous thunderclap was to split the piece vertically, this event cracks the piece along the horizontal axis. While there have certainly been contrapuntal layers before (the introduction contains as many as five layers of distinct material at once), those layers existed within a more uniform “sound sheet,” to use James Hepokoski’s

term.¹¹ The music which follows is self-reflexive insofar as it is composed of two distinct characters, one slow, and lyrical, the other fast and jesting.

Thunderclap III is harder to relate to this scheme. It takes place during a highly volcanic and vigorous reprise of the chorale idea by transitioning to the final scherzo but while the first chorale “failed” to merge its pulses with the scherzo pulse at mm. 61-62, this transition appears to be a success. While it seems that this event now breaks the cycle of rapid formal alternation, it is also conceivable that the function of this thunderclap is to press the music forward through this last barrier to the final scherzo, much as the thunder-words in *Wake* represent the effect of terrifying natural disasters and phenomena on early humankind, forcing them to seek shelter and thus developing language and civilization. These musical thunderclaps are progressive; they engender forward development and ensure continual movement towards *Symphony’s* ultimate goal. While this thunderclap does not “break” anything, what it does accomplish is to successfully push the music into a faster tempo, in contrast to the “crossfade” between the Chorale the Scherzo I.

Thunderclap IV is the last sound we hear. After a striking slow coda section in which the basic harmonic elements of the work are restated in a blended, apparently directionless vortex of sound, a near total-chromatic chord builds up, followed by the final three bars of explosive brass chattering. If the previous thunderclaps split formal and textural delineations, then this thunderclap “breaks” the whole piece, and causes it to destroy itself. It is worth pointing out that the last of the Joycean thunder-words symbolizes the end of the world (see Fig. 3.2): perhaps, in a sense, this thunderclap symbolizes the ‘end of the world’ of this piece.

¹¹ Hepokoski, James. *Cambridge Music Handbooks: Sibelius: Symphony No. 5*. Cambridge: Cambridge University Press, 1993.

The Joycean thunder-words are not just metaphors for nature’s engendering of civilizational progress; they are also *themselves* linguistically progressive. If one surveys them from first to last, they move from being multiple, confused iterations of single words towards almost resembling sentences.¹² Anderson’s thunderclaps seem to have their own progressive trajectory; while having their own dramatic and metaphorical functions, each of them sounds different.

The first one is of particular interest, in that it may be the closest to an imitation of a Joycean thunder-word. Anderson’s first thunderclap ‘stutters’ *musically* – it consists of a vertical collection of notes which repeats in a confused and fractured manner. The following excerpt shows the ‘stuttering’, repeated musical syllables of Anderson’s thunderclap, which is hocketed, dispersed around the orchestra resulting in the composite rhythm shown below.

Fig. 3.4: Thunderclap I, reduced, mm. 146-147

¹² Note that the first word begins with a stuttered version of the word “Babel,” indicating a biblically inspired initial confusion, whereas the later thunder-words almost describe scenes in themselves.

These notes are taken from the following chord:

Fig. 3.5: Thunderclap I's 10-note "mother chord"



From here, Joyce's and Anderson's thunderclaps begin to diverge in their immediate sonic similarity (though the function of the last thunder-word and the last thunderclap remain linked).

Thunderclap II's heralding of self-commentary is one of the most dramatic moments in the work. While harmonically each "layer" belongs to the same well-related harmonic world, the behavior of these two characters is highly contradictory. Thunderclap III is an extended passage rather than the previous two Thunderclaps, which were briefer explosion of noise.

So far, the conceptual scheme of the symphony is one of gradual progressive acceleration interrupted and/or driven by these dramatic events. It is the musical influence of Sibelius and his formal, nature-mystical, and technical innovations that may provide the final ingredient capable of binding all of these influences together.

Music: Sibelius's Symphony No. 5

Symphony does not represent the first time that Anderson has written a work which alludes to (though does not quote) another significant work from the "Western" repertoire. The first section of his earlier orchestral work *Stations of the Sun* (1997) includes several subtle references to Debussy's *La Mer*. The three note "cell" that forms the first key motif of the work and generates the opening descending chord sequence (using chord multiplication) is strikingly similar to the climactic moment in the first

movement of *La Mer*, four measures after Rehearsal 8. Indeed, the first climax of *Stations of the Sun* is orchestrated in a very similar manner. Buried within the wheeling wind lines in the first section is an even more direct reference to the melodic world of *La Mer*.

Fig. 3.6: Debussy's *La Mer*, 2 measures before Rehearsal 3, and Anderson's *Stations of the Sun*, m. 47



This is hardly a direct quote – the lower example shows how Anderson has simply applied the *contour* of Debussy's arabesque theme to the accumulated scalar harmony present at that moment. In fact, it is very difficult to make it out in performance or recording, but its presence in the score is enough to indicate Anderson's interest in forming a dialogue with Debussy's work.

That also describes the kind of relationship that exists between Anderson's *Symphony* and Sibelius's Fifth Symphony: one of dialogue with Sibelius's approach to form, perhaps also his compositional attitude and sensitivity to nature, as well as with late nineteenth-century 'fantasy' form on a broader scale. On a superficial level, the most basic materials of both pieces are similar. The opening measures of Anderson's *Symphony* (See Fig. 3.1) and the opening of Sibelius's Fifth (1915 version) bear an obvious resemblance:

Fig. 3.7: Sibelius Symphony No. 5 opening: 1915 version



It is almost as if Anderson is exploring a path Sibelius left unexplored – the opening of the 1915 version even shares the same symmetry. They also share the same function: a frozen harmonic seed awaiting ‘heat.’ In Hepokoski’s estimation, the opening measures of the 1919 version are a “misfired cadence that set the whole process in motion.”¹³ Anderson’s piece progresses from the frozen cell by a process of rhythmic, textural and harmonic invigoration as discussed in the previous two chapters. *Symphony* is connected to the first movement of Sibelius’s 5th. As described by Hepokoski, “In terms of surface energy the movement is a carefully phased *accelerando*.”¹⁴ Indeed, Anderson himself gave Hepokoski’s book a positive review in the December 1993 edition of *The Musical Times*¹⁵ (a whole decade before *Symphony*), so it is possible that it was this very concept that influenced not only the composer’s view of Sibelius’s work, but was likely in mind when writing his own contribution to the genre.

Part of what makes Sibelius’s Fifth significant as a departure from the formal language of the Fourth is its approach to form from “first principles,” which can be understood as the result of examining the inherent properties of the themes and materials and subjecting these to an organic growth which produces the whole. “Structure grows from the words,” as Tindall describes *Finnegans Wake*.¹⁶ Given that one of the first themes to be sketched for Sibelius 5 (in its original four-movement form) was what we now know as the *final* appearance of the Swan Hymn, it is almost as if Sibelius

¹³ Hepokoski, 1993, p.84.

¹⁴ Ibid., p.60.

¹⁵ Anderson, Julian. “Review of Sibelius: Symphony No. 5 by James Hepokoski.” In *The Musical Times*, Vol. 134, No. 1810 (Dec., 1993), p.709.

¹⁶ Tindall, 1996, p.147.

took it as a starting point and designed the Fifth as an exercise in reverse-engineering. Acceleration also seems to also be the initial concept of *Symphony*, and it is arguably from the examination of this concept that the piece grew. This development was then further fertilized by other elements. New themes, textures, and the thunderclaps emerge, complicating the acceleration trajectory. It is this process that results in the sequence of events with which listeners are ultimately presented.

Accelerations are to be found on large and small scales in both pieces: Sibelius's 5th has a gradual buildup in energy and tempo across the first movement (partly owing to the melding of the first two movements of the 1915 original), but also features "micro-accelerations" such as the compression of the original melodic cell in the trumpets from Rehearsal R onwards. Anderson's *Symphony* also contains micro-accelerations (detailed in Chapter 1), exemplified by the compression of the alternating chords in the first scherzo (m. 74, Rehearsal L).

Sibelius's 5th represents a remarkable rhetorical achievement in formal construction, so much so that Sibelius was reluctant to even apply the title "Symphony" to the work. Both the Fifth and the Seventh had alternate original titles which implied a "fantasy" on the idea of a symphony. What Sibelius ultimately developed as a formal technique was distinct from late-nineteenth and early-twentieth century departures from the Sonata form (outlined by Hepokoski as "sonata deformations") and so required a new formal outlook, namely the concept of "rotational form."

In *Symphony*, there is something of this rotational attitude to certain aspects of the form. The chorale described in Chapter 1 returns just before the first thunderclap at the climax of Scherzo I (see formal scheme in Chapter 2). Other themes, including the Kyrie and latter parts of the main theme, return in the scherzo in new combinations. This is almost a second 'rotation' in the Sibelian sense of the word – a reuse of material in a new context. These themes do not reappear in their original order, however, and are stripped of their original harmonic context, so this use of the idea does not exactly follow the progressive pattern that defines the concept of a true rotation.

The moment referred to at m. 371 of *Symphony* as the “breakthrough” and the first return to the pitch center of A are strikingly similar to the joyous eruption of Eb just after Rehearsal P in the first movement of Sibelius’s 5th. Both moments are preceded by prolonged passages of free chromatic development over a triple pulse in the strings, arriving in a climax which immediately establishes a firm tonal center and an even faster beat speed.

Finally, much has been written on the connection between Sibelius, nature, and mysticism. Given that most of the sketches for the post-1914 works seem to have been interlinked, one could almost describe the forests of *Tapiola* as being the world that all of Sibelius’s later works inhabit.¹⁷ These mystic associations with nature both arose from and intensified the resurgence of interest in Finland’s landscapes and mythology during the late nineteenth century. Anderson’s own work contains recurring instances of taking nature as subject matter: his 2006 (revised 2009) choral-orchestral work *Heaven is Shy of Earth* meditates on these themes using both the Latin Mass and Emily Dickinson texts about the beauty of nature; arguably *Stations of the Sun*’s large formal arc describes a natural, even seasonal cycle; and his recent violin concerto *In lieblicher Bläue*, (a Friedrich Hölderlin poem) takes “beauty” as its theme. In many of these cases, *Symphony* included, Anderson’s thoughts seem to be refracted through the lens of another thinker, whether it be a poet, a painter, or composer. There was a more direct natural influence on *Symphony*, however. According to the composer,¹⁸ the timbre and sonic evolution of the opening movement of the piece was guided by examining a recording of a Finnish lake. This was apparently not done by any exact “spectral” method, but rather by heuristic “rules of thumb,” associating the timbre of certain instruments with the timbre of certain sounds on the recording. What is important here is that this shows further parallels with a use of natural sound practiced by Sibelius:

¹⁷ Subtext of Hepokoski, 1993, p.33.

¹⁸ Anderson, Julian. Conversation by phone, August 28th, 2015.

Sibelius took pride in the individualized quality of his orchestrations, and he seems to have regarded them with mystical attributes that he associated with the objects, colours, and sounds of nature.¹⁹

This suggests an almost synesthetic sensitivity to the sounds of nature. The translation of his spiritual associations with nature into sound is evident in the Swan Hymn of the last movement, but also in the natural echo he orchestrates in the strings as a sort of “artificial pedal.”²⁰ “When we see those granite rocks we know why we are able to treat the orchestra as we do!”²¹ In Anderson’s work, the presence of the thunderclaps is both sonically and dramatically evocative, as are the “crane calls” (the clarinet’s interjection at m. 17) and water-lapping sounds of the opening. The Messiaen-esque²² squawking birdsong at m. 23 (which leads into a “homage partiel à G.G.”, Gerard Grisey) is another isolated example of nature sounds forming the sonic fabric of the piece. These are all forms of concept-painting (if not word-painting), but their affinity with Sibelius lies in the fact that they are not merely isolated vignettes as one might find in Richard Strauss’s semi-programmatic works (such as the bleating sheep or the waterfalls in the Alpine Symphony). Sibelius’s and Anderson’s natural sound events have a dramatic, concrete, and consequential impact on the large-scale structure of their respective works.

Gallen’s paintings often use “non-local color” not to evoke the way the natural world *looks*, but perhaps to suggest how it *feels*, describing its mood and effect on the consciousness that observes it. The composer’s intention with the use of the lake recording was to use a different approach to that of Murail in his work *Le Lac*, which the composer found to be “too literal.”²³ This is art *approximating* the real world through formal metaphor and association with the quality of orchestral sounds. Beyond

¹⁹ Hepokoski, 1993, p. 28.

²⁰ Ibid., p.81.

²¹ Ibid., p.28, quoting Sibelius in a letter to Bengt De Törne.

²² I describe it as such because of its similarity to a passage in Anderson’s earlier work *Imagin’d Corners* from 2002, which is marked as an “Homage à O.M.” – most definitely Messiaen.

²³ August 28th, 2015

the superficial sounds, it is the natural processes in these works that suggest a single concept capable of binding all these influences together.

Conclusion: Cycles and Circularity

What is remarkable about each of these influences is how they are melded into the surface (and sub-surface) of the resulting work. I believe that this is part of Anderson's compositional practice – this is perhaps what it means to be “inspired” by another work of art. A source's inspirational value (in addition to its emotional meaning) might connote the work's capacity to suggest new directions for the artist as viewer, listener, and reader. Is the great artist one who steals and does not borrow? This in some sense refers to the artist's independence of thought and guile, the ability to adapt the conclusions drawn from other art into their work, to take ownership of it by infusing it with a new sense of identity.

Sibelius's flute theme from the second movement of the Fifth has been described as “both a closing and an opening.”²⁴ The formal technique Sibelius uses allows events to repeat themselves, but constantly to reinvent the context within which they appear. *Finnegans Wake* is a giant tract of time containing multiple historical and dramatic cycles. The first sentence is a continuation of the last sentence (or vice-versa). While they may seem very different, Joyce and Sibelius's structural innovations within their own art forms bear some similarities. They both allowed time to form a progressive loop. I suggest no direct parallels here, but it is unlikely that these formal ideas escaped Anderson's notice.²⁵ The concept of repetition and simultaneous variation can be found in the “Swan Hymn” as well, especially when one considers the heterophonic texture. The beginning of each

²⁴ Hepokoski, 1993, p.72.

²⁵ In our conversation on September 10th 2015, Anderson spoke mainly about the structure of *Finnegans Wake* and how the thunderclaps relate to it, suggesting that this was an aspect of particular importance to him.

iteration of the shortest rhythmic level in the horns is marked by a different note in the double basses and bassoons, which spell out a slower version of the hymn theme. It is itself a closed loop (though in its first version, the two dyads carried on splaying apart, as they do in what became the final version), and so this is a form of multilayered repetition where each iteration has a different bass note, renewing the overall harmony. Once again, *Finnegans Wake* and the concept of progress enmeshed in a repeating historical cycle relates to Sibelius's 5th.

It is the sense of a progressive cycle which binds all these influences together in *Symphony*. It is almost as if *Symphony* forms a thought-space in which the composer is meditating on the modernist innovations of artists from different times and places. *Symphony* is an essay on what a new symphonic work *can* be, even as it refers back to the tradition. There are scherzos, expository and introductory episodes, and minute materials undergoing constant development; yet, just as Sibelius found it difficult to apply the title of "Symphony" to his own subtly radical contributions to the form, Anderson's work articulates an even more ambivalent formal rhetoric. Again, this could be an even higher-level example of repetition and progress – composers continue to return to the form of the symphony, but refresh it with the introduction of hitherto unseen ideas, such as organizing the trajectory of the work around the concept of a sine-to-noise continuum.

In the final epilogue, I will examine several issues arising from the preceding three chapters and assess *Symphony*'s complex formal language, touching on its critique of symphonic form, the use of multiple techniques, as well as the question of Anderson's place in today's musical world.

Conclusion

Anderson's output as a whole is both anchored in the past, and looking towards the future. However, that which he inherits from tradition never goes unchallenged, and is sometimes totally subverted. In many ways, *Symphony* is a piece that subverts one's expectations of what a "symphony" can be even as it acknowledges the influence of the tradition. In a revealing quote from a recent interview:

I've written a Symphony, or rather a piece with that title. But it questions the genre as much as it enshrines it. I mean, what exactly is symphonic about a work whose first two minutes include almost no pitch at all within a texture in which almost every instrument is being played abnormally? And answering that question became, in one way, the journey of the piece. The integration of noise into a complex journey of transforming sound, timbre, rhythm and harmony is what that Symphony's about. Any thematic aspect is just part of working that out.¹

In addition to the unconventional characteristics Anderson names above, the piece also has tropes that bring it closer to the tradition: a main line of trajectory, small thematic cells which develop and recombine with other themes, a slow movement (or movements) with sweeping lyrical passages, a "double-function" form (which has its roots in the Schubert *Wanderer* Fantasy, the Liszt B Minor Sonata, and Sibelius's 7th Symphony), and an explosive ending. What will likely be shocking to a concert listener accustomed primarily to nineteenth century symphonic music is that these events happen in an unconventional order. In this sense, the use of the title is both the work's subject and its genre. It is a piece that is as much about the symphony as it is an example of that tradition. The use of the title indicates a desire to engage in a dialogue with that tradition while introducing concepts which have seldom been seen before in the history of the form.

A number of concepts arising from the examination of the piece in previous chapters help define the complex nature of *Symphony*. The piece reflects the influence of spectral thinking beyond the use of harmonies relating to the harmonic series, including the control of timbre as a major

¹ Palmer, 2015, p.12.

structuring device;² the avoidance of any single overriding technique, rather the presence of strictly controlled structures and apparently free and intuitive structures side by side; a prominent cross-fade between two contrasting strands of music, suggestive of an electronic studio technique; a wide variety of influences from literature, to cinema, to visual art, and the symphonic tradition coexisting in the same work; references to other music (but no direct quotations)³; and an unusual form, almost as if Anderson took a symphonic form in the mold of late Sibelius and “shattered” it. Perhaps this is a surrealistic look at the symphony as a genre⁴ - it relates previously “opposing”, even “contradictory” forces such as pure sounds and noise, allowing noise to be a participant factor in a symphonic form, associating familiar or familiar-seeming tropes (remembering Anderson’s comment about choosing a starting point constituted by “common” material in order to vary and distort it all the more radically) with sharply contrasting music and staging their encounter in a dreamlike landscape.

This piece is a surrealist “anti-symphony,” a work that takes symphonic tropes and deliberately subverts and throws them into contrast with their inversions. *Symphony* relies heavily on Anderson’s command of technique, which encompasses everything from his ear for timbre and color to theoretical ideas to do with the harmonic series as well as his treatment of voice-leading, large scale form, the relative (un)predictability of rhythm, and the mastery of counterpoint and meta-counterpoint.⁵ His artistic success in this work and others would be unthinkable had he not undertaken such detailed studies of the music of other composers and research into the properties of sound itself, but perhaps what distinguishes him further is his ability to absorb these techniques and ideas and integrate them

² Of the aspects of the piece which connect to spectralism, the harmonic series is almost the least significant, given how important other concerns of perception and controlling pure sound and noise turn out to be.

³ The closest to a direct quote is the Grisey homage which follows the woodwind outburst.

⁴ Given how often the term “surreal” or “surrealist” appears in Anderson’s program notes for *Dptych*, the influence of that form of creative thinking appears to loom large in his work.

⁵ i.e. pitting already contrapuntal textures against one another.

into his own musical world. This, combined with a principled and open approach to composing, suggested by his avoidance of “artistic fundamentalism” and “blindly subscribing to a single overriding aesthetic for life,” tells us much about why he composes as he does, and these are two of the factors which have established him as one of the composers whose music has retained a bright and striking individuality in the wake of spectralism.

Anderson’s music resists classification just as much as he personally does in his interviews and his academic writing. Anderson’s use of the techniques and ideas of his time, his acceptance of “contradiction” and contrast, and his avoidance of didacticism or demagoguery are crucial to understanding why his music stands out. In this context, *Symphony* stands out as the work in which he first tried to meld all of his influences together as a summation of his abilities. Indeed, that fact might have been the ultimate reason why he felt that the title was appropriate. Spectral ideas coexist with bright modal harmonic constructions in a symphonic dialogue about timbre and formal drama. While many of his works from the 1990s are important precursors, only in *Symphony* was the idea of both the timbre space and the macrotonal system fully employed for the first time. One can argue whether he has achieved a more successful cohesion of these elements in his works since, but *Symphony* is unique as the first confluence of tributary rivers, an explosive and stormy meeting point between all of his diverse interests. In that spirit, the work is very much in the tradition of the symphony as a major statement of a composer’s abilities, but without regurgitating older means of expression, or at least without leaving them unquestioned.

This work represents an important turning point in Anderson’s output that, like the thunderclaps, has had significant repercussions in later works. His early String Quartet from 1984, *Light Music* (only recently published), was an attempt at composing with spectral techniques, which were then largely abandoned until *Symphony*. Spectral thinking clearly influenced the composition of *Khorovod* (1994) and *Stations of the Sun* (1997-8), but his use of quartertones was spare until *Imagin’d*

Corners (2002), which uses the harmonic series, but does not modulate using the macrotonal system. *Symphony* represents his first attempt to rationalize a method for using harmonies outside equal temperament, beginning a period of experimentation and development which continues to the present day. *Heaven is Shy of Earth* (2006/2009), *Fantasias* (2009), *The Discovery of Heaven* (2011-2012), his first opera *Thebans* (composed from ca. 2009-2014), the string quartet *300 Weihnachtslieder* (2014) and *Van Gogh Blue* (2015) all use harmonies incorporating quartertones, and continue to integrate and develop ideas derived from the study of sounds and timbre.

Anderson's output points to a kind of "new openness," part of a postmodern wave of composers who have benefited from the rigor of modernist approaches, but who do not employ a single technique or method in their works didactically. This "openness" refers not just to the composer's readiness to employ any sound or material, but also to the willingness to adapt techniques to his or her own purpose, even if that application runs counter to more orthodox uses of the technique (for example, rounding out the overtones of the harmonic series, or using computer software to aid in "sketching" an instrumental synthesis of sound, as in *Thunderclap II*.) In essence, many of Anderson's pieces are meeting points between multiple techniques, and the collisions which result are often what produces the most interesting contrasts and trajectories in his music. In a positive sense, Anderson's work is the music of cognitive dissonance, having a predilection for seemingly contradictory musical forces at the same time.⁶ This ties together with what I have previously called "concealing the scaffolding." Anderson's music is extremely fluid on the surface. What serves, or produces that fluidity is precisely this idea of openness, where one can transition seamlessly from a strict technique to a freer one, from something very consonant to something very dissonant, or from something continuous to something more disjunct. The result is a music which feels as if it can go

⁶ It was notable how often Anderson used phrases like "I both agree and disagree" when referring to Messiaen, and others in our various conversations.

anywhere at any time, since one never quite knows what sound is going to turn up next. This new openness is my term for describing a current strand in contemporary music which includes composers like Hans Abrahamsen and Anderson who can never truly be grouped into a single school by sound alone but rather by their methods of interrelating different sounds and techniques. In Anderson's case, he seems to want spontaneity in his music, but the impression of spontaneity so often has to be hard earned. That is the reason why all of those techniques are so carefully embedded into the fabric of the music. These techniques ultimately serve a higher purpose, which is the detailed surface that listeners perceive. *Symphony* is also very conceptually cross-bred, with recurring climaxes influenced by Joyce, a formal template influenced by Sibelius, and colors and moods influenced by Gallen-Kallela. This openness also then extends to the extra-musical influences on the work, allowing ideas from other artists to form critical parts of the work's narrative.

In a poignant radio interview from 1948, Sibelius, in the last five years of his life, remarked that he was "most interested in the form of the symphony" and the direction it might take in the future.⁷ So what direction might Anderson be taking in his work in the future? To follow the trend in his most recent works, there appears to be a return to abandoned or aborted projects from his youth, or revisiting literature and art he first encountered as a young man. These include Hölderlin's poem *In lieblicher Bläue*, which formed the basis of his 2015 violin concerto of the same name. The composer first encountered the poem when he was thirteen and immediately began making sketches for a violin concerto inspired by the piece.⁸ "I have no idea why I felt that Hölderlin should be represented by a

⁷ "The only recorded interview with Jean Sibelius, Dec. 6th, 1948"
<https://www.youtube.com/watch?v=zdeZs4K28uk> Accessed 1st November, 2016. Sibelius tellingly avoids the question of whether he is still composing, this being well into the "Silence of Järvenpää" period.

⁸ "Julian Anderson introduces "In lieblicher Bläue""
<https://www.youtube.com/watch?v=xM7dzOEFfTMk> Accessed 1st November 2016. Includes some tantalizing shots of his sketches, which include "circular" staff fragments, clearly made with a

violin concerto but I always felt this.”⁹ His opera *Thebans* has evidently been a project he has considered for many years, stating in another interview that “it came about through my doing Greek A-Level”, which included a translation of *Oedipus the King*.¹⁰ Perhaps this return to the works which so provoked Anderson’s imagination in his teenage years is prompted by a similar sentiment as that stated by Tristan Murail in his short essay “After Thoughts”:

Only now have I begun to feel as if I have obtained the technical means to achieve my dreams of adolescence: I imagined certain ambitious works but lacked the capacity to realize them.¹¹

It can hardly be said that either Murail’s works before the year 2000 or Anderson’s works before now are unambitious, but it seems that both had unique visions of music from a young age. Perhaps what makes his work so attractive and successful is its fluidity, and the feeling of suspense and drama which comes from its genuine ability to surprise listeners. This spontaneity is achieved through slow and methodical work, with sections seamlessly joining into the next, concealing the scaffolding beneath. For this reason, I can think of no more apt characterization of his work than that of the ambitious dreams of another artist, the fictional Lily Briscoe from Virginia Woolf’s *To the Lighthouse* (1927):

...the problem of space remained, she thought, taking up her brush again. It glared at her. The whole mass of the picture was poised upon that weight. Beautiful and bright it should be on the surface, feathery and evanescent, one colour melting into another like the colours on a butterfly’s wing; but beneath the fabric must be clamped together with bolts of iron.¹²

rastrum, or “Stravigor” device, as well as rhythmic fragments which are embellished with expressively painted petals of primary colors.

⁹ Ibid.

¹⁰ “The making of opera: words and music” <https://www.youtube.com/watch?v=10pgCUmbWq0> Accessed 1st November 2016. Anderson remarks that he was particularly struck by the famous line “You would provoke a stone to anger”.

¹¹ Murail, Tristan “After-thoughts”, *Contemporary Music Review*, Vol. 19, 2000, Part 3, p.9.

¹² Woolf, Virginia *To the Lighthouse*, San Diego: Harcourt, 2005.

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VISUAL APPENDIX



Akseli Gallen-Kallela. *Morning by Lake Keitele* (1905). Oil on canvas, 53 x 66 cm, National Gallery of Art, London. Reproduced from National Gallery, <http://www.nationalgallery.org.uk/paintings/akseli-gallen-kallela-lake-keitele> (accessed December 31st 2015)

PORTFOLIO OF THREE WORKS

A Dissertation

Presented to the Faculty of the Graduate School

of Cornell University

In Partial Fulfillment of the Requirements for the Degree of

Doctor of Musical Arts

by

Michael John Sherman Small

May 2016

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PORTFOLIO OF THREE WORKS

Michael John Sherman Small D.M.A.

Cornell University 2016

ABSTRACT

This portfolio includes three works written more or less back to back during my last year at Cornell. Since I knew that I had only one year left at Cornell, I decided to treat it almost like a residency and make use of all the performance opportunities I could. The first piece was written in 2014 for Ryan McCullough and Elizabeth Lyon, and is called *I was the shadow of the waxwing slain* for Cello, Piano and Electronics, inspired by reading Nabokov's novel *Pale Fire*, which is likely set in Ithaca (though not by name). The second work, *Memory Palace* was written for the Momenta Quartet, longtime friends of Cornell and generous champions of young composers. The final work called *Visible World* was inspired by Samuel Van Hoogstraten's perspective boxes, and was written for the annual Festival Chamber Orchestra, a rare and valuable chance to work with a full sinfonietta directed by Christopher Kim. My thanks to his hard work in preparing our pieces in such a tight rehearsal schedule, and to the musicians for persevering with my lengthy and challenging piece.

BIOGRAPHICAL SKETCH

Michael Small was born in Birkenhead, England in 1988. He began his compositional training at the Royal Northern College of Music in Manchester in 2007, graduating with full honors, and then beginning his DMA at Cornell in August 2011. In 2014, Michael received the Alan Horne prize from the Royal Philharmonic Society as part of their annual Young Composer commissions. His piece for solo violin called *White Space* written for UK violinist Fenella Humphreys was premiered at the Presteigne Festival in August 2015 and has received performances in Bristol, Oxford, Liverpool, and London, and at the National Galleries of Art in Edinburgh, before a painting by the artist who inspired the work. Michael's piece for the Momenta Quartet, *Memory Palace* received its New York premiere in October 2015 as part of the Momenta Festival. In 2016 he was a Friends of Copland House Fellow at the Cultivate Residency, working closely with Music from Copland House, and participated in the Underwood New Music Readings with the American Composers Orchestra.

Michael's music has been performed by the Aspen Contemporary Ensemble, the Aspen Conducting Academy Orchestra, the American Composers Orchestra, and Music from Copland House, Ensemble 10/10, Chroma, and The Momenta Quartet.

ACKNOWLEDGEMENTS

Though a more compendious list of my dear friends and family can be found in the front matter to my written thesis, I must especially thank my teachers Steven Stucky, David Horne, and Kevin Ernste, who have done so much to inspire me and broaden my musical thinking. It is often said that one learns as much from one's colleagues as from one's teachers, and Cornell certainly proved this little piece of folk wisdom true. My thanks go to my esteemed colleagues at Cornell, Christopher Stark, Tonia Ko, Loren Loiacono, Louis Chiappetta, Andrew Zhou, Ryan McCullough, and Nicco Athens, who are all doing important work at an extremely high level of this profession. I couldn't be prouder to call you my friends.

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I WAS THE SHADOW OF THE WAXWING SLAIN

- REFLECTIONS AFTER NABOKOV -

for Cello, Piano and Electronics

Michael Small
2014

“I was the shadow of the waxwing slain
By the false azure in the window pane
I was the smudge of ashen fluff — and I
Lived on, flew on, in the reflected sky.”

— John Shade in *Pale Fire*, Vladimir Nabokov

“The winter owl banked just in time to pass
And save herself from breaking window glass
And her wide wings, stretched suddenly at spread,
Caught color from the last of evening red
In a display of underdown and quill
To glassed-in children at the window sill”

—*Of a Winter Evening*, Robert Frost

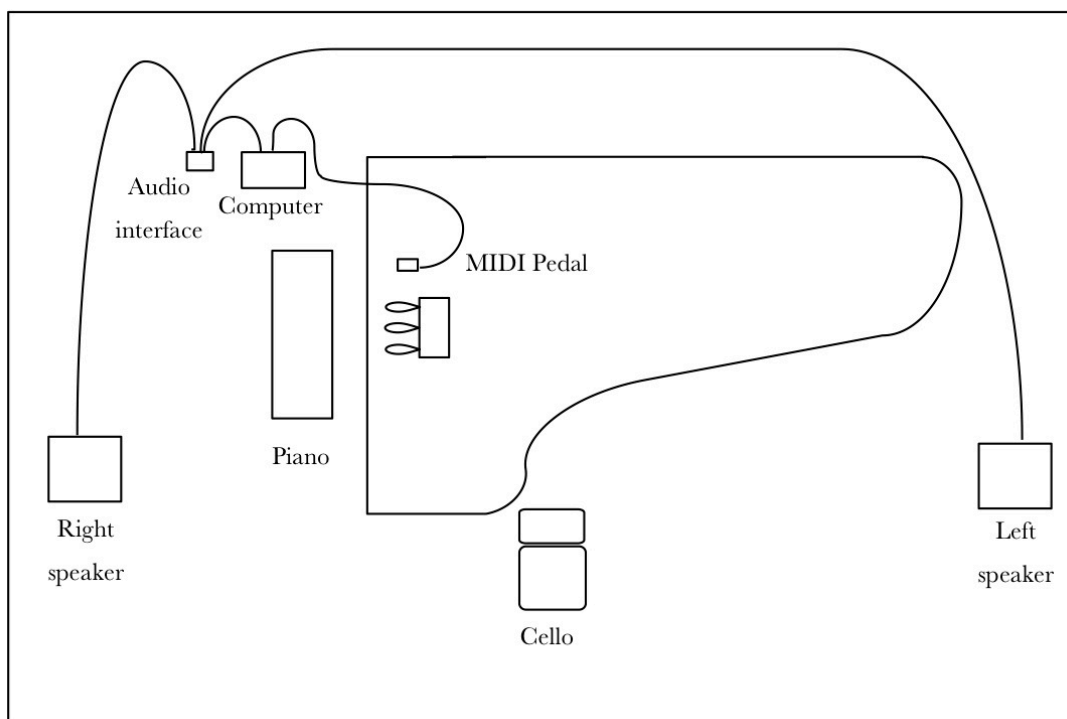
ELECTRONICS:

The electronics part is made up of 45 separate cues which are marked in the score with large bold asterisked figures. In order to realize a performance, you will require a laptop capable of running a program called Max Runtime - available for free at this website:

<http://cycling74.com/downloads/runtime/>

The “patch” (simply a piece of software specially designed in Max to trigger the sounds) will run using this program, and can be provided to you by the composer. Once installed, pressing space will load the sounds automatically - all 45 are pre-loaded into the patch. They can be triggered by pressing the right-arrow key, in reverse order with the left arrow key, and if anything goes wrong, pressing “R” will stop all sounds. Pressing the backspace key will reset the counter to zero.

In performance, a MIDI pedal will be needed by the pianist to trigger the sounds on cue. The sounds are in stereo, so in order to set up for a performance, follow this diagram:



The speakers, and computer will both need a power source, and the audio interface may need one too. Most audio interfaces will connect to a computer with a USB port, as will a MIDI pedal. Use XLR cables to connect the speakers to the interface.

For any further questions, please contact the composer at:
michaelsmallcomposer@gmail.com

I WAS THE SHADOW OF THE WAXWING SLAIN

for Cello, Piano and Electronics

6'

2014

Vladimir Nabokov's *Pale Fire* was begun in Ithaca in the late 1950s. The house it was begun in (and the real-life counterpart of the window-pane in the opening passage) is very close to where I currently live. It is a curious puzzle of a novel, which presents itself as a poem by a fictional American poet called John Shade (who strongly resembles Robert Frost both in style and physical appearance) with an extensive, eccentric, and in places quite manic commentary by a second, possibly unreliable narrator. The poem is a poignant reflection on death, the afterlife, loss and the nature of art which is gradually interrupted, hijacked, and reimaged by the second narrator, who adds increasingly far-fetched details about a fictional kingdom called Zembla.

My own piece is a response to the imagery in the book - primarily of the opening passage, with the other themes in the book in the background - frozen time, dreams and hallucinations, flight and escape, reflections, interruptions and transformations. Nabokov had been one of the first people to translate Lewis Carroll into Russian, and as some readers might know, the image of "through the looking glass" haunts this book, as Nabokov's imagery haunts this music. The opening passage goes on to describe a world inverted - furniture all sitting out on the lawn, and the sky is inside, through the power of the reflective surface. This disorientation and strangeness played a significant part in how I thought about transforming and developing the music. Though there is no direct plot allusion in the music, there are parallel processes like the gradual usurping of narrative control from the Cello and Piano by the electronics. Those not familiar with book need not then worry that they might miss a level of detail in this music - it is always my hope that the listener will feel free to form their own images and ideas.

I WAS THE SHADOW OF THE WAXWING SLAIN is dedicated with gratitude and admiration to Christopher Stark - an inspiring composer, mentor and friend.

- Michael Small

for Christopher Stark

I WAS THE SHADOW OF THE WAXWING SLAIN

- REFLECTIONS AFTER NABOKOV -

for Cello, Piano and Electronics

Michael Small (b.1988)

Luminescent ♩ = 66

The score is for the piece "Luminescent" by Michael Small, originally for Cello, Piano, and Electronics, arranged for Violoncello, Piano, and Electronics. It is in 5/4 time with a tempo of 66 beats per minute. The score is divided into two systems. The first system includes Violoncello, Piano, Electronics, and Pedal cues. The second system includes Violoncello, Piano, and Electronics. The Violoncello part features dynamic markings such as *p*, *mf*, *f*, *pp*, and *p*, along with performance instructions like "senza vib.", "vib.", "glowing", and "legatiss.". The Piano part includes dynamic markings like *mf*, *mp*, *p*, and *ppp*, and technical markings such as "15ma" and "6". The Electronics part uses dynamic markings like *ppp* and includes "8va" markings. Pedal cues are marked with asterisks and numbers 1 and 2. The second system includes Violoncello, Piano, and Electronics, with similar dynamic and performance markings. The Violoncello part in the second system includes dynamic markings like *mf*, *f*, *pp*, and *p*, and performance instructions like "senza vib.". The Piano part includes dynamic markings like *mp*, *ppp*, and *mf*, and technical markings such as "3", "5", "7", "15ma", and "8va". The Electronics part includes dynamic markings like *ppp* and "8va" markings. Pedal cues are marked with asterisks and numbers 1, 2, and 3.

Violoncello

Piano

Electronics

Pedal cues:

Vc.

Pno.

Elec.

* 1

* 2

* 3

3 *senza vib.* *mf* *f* *p* *p* *f* **II**

Vc. *vib.*

Pno. *15^{ma}* *mf* *p* *8^{va}*

Elec. *mp* *pp* *p* *Soft piano resonance*

4 **senza misura** *molto vib.* *senza vib.* *vib.* *senza vib.*

Vc. *p* *mp* *p* *mp* *p* *mf* *p*

Pno. *15^{ma}* *||.v.* *p* *8^{va}*

Elec. *(26s)* *pp* *8^{va}*

Tempo I

5

Vc. *p* < *f* *p* ————— *mp* > *pp* *mp* < *mf* > *pp*

Pno. *mf* > *p*

Elec. *Ped.*

15^{ma}

l.v.

5

7 **Tempo I**

Vc. *p* *non legato* *molto vib.*

Pno. *mp* *mf* *p*

Elec. *Ped.* *resonance "surge"*

3

3

6

9 *molto sul pont.* *ord.*

Vc. *sfz* *mp* *p*

Pno. *PPP* *white-note gliss* *(loco)* *repeat ad lib.*

Elec. *Piano black-note gliss* *15^{ma}* *repeats (16 s.)*

gliss.

gliss.

gliss.

15^{ma}

7 *8^{ub}*

11 *molto sul pont. ord.*

Vc. *sfz* *p* *mp* *p* *mf* *f* *sfz* *p* *mf* *f*

Pno. (glissandi continue)

Elec. (glissandi continue)

14 III

Vc. *pp* *mf* *pp*

Pno. *mp* *p* *mf* *mf*

Elec. *

8

16 I

Vc. *p* *mf* *pp* *mf* *p* *p* *f* *mf* *p*

Pno. *p* *pp* *ppp* white-note gliss. *8^{vb}* *15^{ma}* repeat ad lib. *gliss.*

Elec. *gliss.* *15^{ma}* black-note gliss. *8^{vb}* *

9 10

19

Vc. *p* < *f* *mf* > *p* *f* *mf* *f* *mf* > *p*

sul pont. ord. sul pont.

Pno. glissandi continue white-note gliss. *f* gliss. black-note gliss. gliss. (senza Ped.)

Elec. glissandi continue

21

Vc. *ff* *p* *mf*

molto sul pont.

Pno. *ff* *p* *mf* *p*

22

Vc. *f* *ff*

ord.

Pno. *mf* *f*

23 *molto sul pont.*

Vc. *ff* *mf* *f* *mf*

Pno. *sfz* *sfz* *p* *pp*

8^{va}

Red.

7

5

(M.S.P.)

24

Vc. *f* *p*

Pno. *f* *mf* *p* *pp*

6

7

7

Red.

3/4

25

Vc. *ff* *pp*

Pno. *mf* *f* *mf*

3

3

3

Red.

3/4

Elec. *p*

*

11

27

Vc. *pp* *f* *pp* (3)

Pno. *P*

Elec. *mf* *pp*

29

Vc. *f* *sfz*

Pno. *mf > p* *mf* (3) *8va*

Elec. *p* *mf > p* (12)

31 $\text{♩} = 52-56$

Vc. *sf* *p* *mf* *p* *pp* (3)

Pno. *mf* *pp* *mf* (7) *p* (6)

Elec. *p* *mf > p* (12)

Vc. *p* *mf* 3 *p* *mf* 3 *p*

Pno. *mp* 7 7 *p* *mf* *p* *pp*

8^{va} 8^{va}

Vc. *mf* *ff* 3 *p*

Pno. *mp* *ff* 3 6 *p* *pp*

Elec. 13 *pp*

I $\text{♩} = 60$ molto vib.

Vc. *pp* *ppp imperceptibly* *mf* *f*

Pno. *pp* *ppp imperceptibly* *mf* *f*

Elec. *p* *mp* *f*

gliss. 3 ord. → sul pont. → extreme sul pont. senza vib. → poco vib. → molto vib.

gradually lift with cello channels split

40

Vc. *ord. senza vib.*

fp savage *pp* *ff* *p* *ff* *mf*

Pno. (D) (E)

f like a flash

Elec. pulsing

mp *f*

42

Vc. *extreme sul pont.*

ff *sfz* *fff*

Pno. (D#) (C)

Cello - *extreme vib.*

Elec. *fff* *fff*

Cello polyphony and piano resonance

43

Elec.

irregular tremolo

45

Vc.

Pno.

Elec.

Ped.

47

Vc.

Pno.

Elec.

49

Vc. *p* ————— *f* ————— *fff*

Pno. *p* ————— *f* *p* ————— *f*
p ————— *f* *p* < *f* *p* < *f* *p* < *ff*

Elec. *f* ————— *ff*

51

Vc. *pp*

Pno. *fffz* *fff*
fff

Elec. *fff*

52

Vc. *mf* ————— *p*

Pno. *pp* ————— *mp*

Elec. *ppp*

54

Vc. *pp* *sfz*

Pno. *p* *ppp* *8va* (Ped. sempre)

Elec. *p* *

15

55

Vc. -

Pno. *p* *ppp* *p* *8va*

Elec. *ppp* *p* *ppp* *8va*

16

56

Vc. III *p espress.* *mp* *mf* *n* 3

Pno. *ppp* *p* *ppp* *p* *8va*

Elec. *p* *ppp* *p* *8va*

17 18

57

II

Vc. *mp* *mf* 3 *n* 3

Pno. *ppp* *p* *8va-*

Elec. *ppp* *p* *ppp* *p* *8va-*

19 20

58

molto sul pont.

ord.

Vc. 7 *sfz* *f* *n*

Pno. *ppp* *p* *ppp* *8va-*

Elec. *ppp* *p* *ppp* *p* *8va-*

21

59

molto vib.
non legato

Vc. *sfz* *sfz* *sfz* *f espress.*

Pno. *p* *ppp* *p* *pp* *8va-*

Elec. *ppp* *p* *mf* *f* *p* *8va-*

22 23

60

Vc. *ff* *n³*

Cues { * 24 * 25

Pno. *mf* *p* *mf* *8^{va}*

Elec. *pp* *mf* *p* *mp*

61

Vc. *molto sul pont.* *ff* *sfz* *ff*

Cues { * 26

Pno. *p* *mf* *8^{va}*

Elec. *mf* *8^{va}*

62

Vc. *non legato* *molto vib.*

mf *f*

3

Cues { * 27

Pno. *8va*

p *mf*

Elec. *p* *f* *8va*

63

Vc. *molto sul pont.* *molto vib.*

mf *f* *fp* *f*

7

3

Cues { * 28

Pno. *8va*

p *mf*

Elec. *p* *f* *mf* *p* *8va*

64

Vc. *molto sul pont.* *mf* *3* *7* *f* *molto vib.* *ffp* *f*

Cues { * 29 * 30 }

Pno. *p* *f* *8va*

Elec. *p* *mf* *8va*

65

Vc. *ff* *fff*

Cues { * 31 }

Pno. *mf* *ff* *8va*

Elec. *p* *f* *fff* *8va*

66

Vc. *ff* intense — *ffp* — *ff* ³ *fp* — *fff*

Pno. *fff* intense *sfz* *sfz* *sfz* *sfz* *fp* — *fff*

Elec. *pp* — *ff*

*
32

69

Vc. *ff* bright *pp* *ff* *pp* *ff* *p*

Pno. *sfz* resonant

Elec. *ff*

* 33 * 34 * 35 * 36

senza vib. sempre

71

Vc. *ff* *p* *p* *ff* *ff* *p* *ff*

Pno. *ff* *mf*

Elec. 37 38 39

8^{va}---1

73

Vc. *p* *ff* *p* *ff* *p* *fp* *ff* *fp* *f*

Pno. *fff* *mf* *f* *p* *mf* *p*

Elec. 40 41 42

I sul pont.
II

75

Vc. *ff* *p* *p* *ff* *p* *f* *p*

sul pont. → ord. →

Pno. *f* *p* *f* *ff* *f*

Elec.

77

Vc. *mf* *ppp* *sfz > p* *fff*

molto sul pont. → ord. I senza vib. vib.

Pno. *mf* *p* *sfz > p* *sfz* *p* *8va*

Elec. *pp*

79

Vc. *pp* *mf* *f* *ff* *p*

molto vib. → extreme vib.

Pno. *ffz*

Elec. Cello - wide vib. *pp* *ff* *p*

* 43

81

Vc. *fff* *mf* *pp*

gliss.

Pno. *pp* *ff*

Elec. *pp* *ff*

* 44

♩ = 130 - 136

off the string

84

Vc. *p*

Pno. *8va*

84

87

Vc. *f*

Pno. *f*

87

90

Vc. *sul pont.* *ord.* *tr*

Pno. *loco* *p ghostly*

90

93

Vc. *tr*

Pno.

p

3

3

3

3

sf

96

Vc. *molto vib.*

mf espress.

Pno. *mp warm*

ped.

99

Vc. *sul pont.*

p 3 *mf* 3 *p*

extreme sul pont.

pizz. ord.

sf

Pno.

p

102

Vc. arco *f* *p* *f* *p* sul pont. 3

Pno.

♩

105

Vc. 3 *mf* *p* ord. senza vib. *mf* *p* gliss.

Pno. *mf*

♩

108

Vc. pizz. *ppp* *sfz* arco *p still*

Pno. *f* *mf* *mp*

Elec. *f* 3

* 45

♩

MEMORY PALACE

for String Quartet

Michael Small
2014-15

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Written for the Momenta Quartet and premiered 23rd April 2015

MEMORY PALACE

For String Quartet

10-11'

2014-15

For several years I have been preoccupied with taking external sources as starting points for my pieces. Before *Memory Palace*, the sources were always non-musical, whether they were texts being set to music, (with or without voice as in *A Gasp of Blue*) paintings, photography, or ideas from novels.

In this piece, I took the first measure of Ravel's *Sonatine* for piano, whose characteristic falling fourth has been linked to several other works by Ravel, and even suggested by Roger Nichols to be a tacit reference to his mother, as Jacques Février believed - substantiated by its appearance at the very end of *L'Enfant et les sortilèges* with the child singing "*Maman!*". This extremely simple idea appears at first very fluid in length and sound - almost as if damaged or distorted. The way I approached some of the reappearances of this motif was not unlike the way in which an electronica artist might approach a "sample" - teasing out different characteristics of this very short excerpt. The opening section which plays with this repeating fragment through different lenses of string quartet sound leads through a fiery climax into a lengthy scherzo built around the minor third accompanying figuration. "Damage" or decay is evident here too, since many of the accompanimental figures in this part of the piece appear very frail, fleeting, and in some cases are barely audible. A second, more volcanic climax gives way to a state of almost total entropy. From here the music slowly begins to re-assemble itself into a second, briefer scherzo which shows glimpses of "repaired" versions of earlier material, before pushing on into a bright, ecstatic conclusion.

There are however many unrelated materials which arose unexpectedly out of the composition process - a fascination with rising chord sequences, a recurring pizzicato interruption, as well as detailed and scurrying pulsed music. The idea of "self-repair" as a trajectory in the work didn't really occur to me until about half-way through its composition. This was a discovery which radically altered my plans for the remainder of the piece. Whatever one's familiarity with Ravel and his music, I hope that any listener will find this work intriguing and surprising.

My warmest thanks to the Momenta Quartet for performing this work, and for their skill and wisdom during its preparation.

PERFORMANCE DIRECTIONS

S.P. = Sul ponticello

S.T. = Sul tasto

E.S.P = Extreme sul ponticello

E.S.P. = Extreme sul tasto

Some harmonics have a fragile timbre - this is intentional.

The harmonics on the Maj. 3rd touch points may not work the same on every instrument or string depending on it's age. There are other touch points which may work better for certain pitches.

The whistling in the latter part of the piece is intended to resemble upper partials of the played notes. These partials are inherently unstable, so the unavoidable minor inaccuracies of tuning when both whistling will actually produce the desired result. If one of the players cannot whistle, the pitches can be redistributed amongst the other players.

Duration: 11:30-12 minutes

MEMORY PALACE

for the Momenta Quartet

Michael Small

Violin I
♩ = 63 S.P. 3 6 ord. S.P. 6
ppp mp pp p

Violin II
ppp mp pp p

Viola
ppp mp 3 pp p

Violoncello
ppp mp pp p

Vln. I
3 ord. S.P. 3 6
mp p pp mp p pp

Vln. II
mp p pp ord. S.P. 6
mp p pp

Vla.
mp p pp mp 3 3 p pp

Vc.
mp p pp mp p pp

Vln. I
5 S.P. ord. S.T.
fp > pp > n pp mp 6 6 6 p pp
gliss.

Vln. II
S.P. ord. S.P. 6
fp > pp > n pp mp p pp

Vla.
S.P. ord. S.T.
fp > pp > n pp mp p pp

Vc.
S.P. ord. S.T.
fp > pp > n pp mp p pp

7 S.P. ord.

Vln. I *ff* *mp* *pp* *mf* *p* *mp* *lontano*

Vln. II S.T. S.P. ord. *ff* *mp* *pp* *mf* *p* *pp*

Vla. *gliss.* *ff* *mp* *pp* *mf* *p* *pp*

Vc. *ff* *mp* *pp* *mf* *p* *pp*

9 *gliss.* *gliss.*

Vln. I *mp* *p* *mp* *p*

Vln. II *mp* *p* *pp* *f* *mf* *gliss.*

Vla. *mp* *p* *f* *pp* *f* *pp*

Vc. *mp* *p* *pp* *f* *p* *pp*

11 E.S.P. ord.

Vln. I *mf* *p* *f* *f* *mf* *S.P.*

Vln. II *p* *mf* *p* *mf* *p* *gliss.*

Vla. *mf* *p* *pp* *mf* *p*

Vc. *mf* *p* *pp* *mf* *p*

13

Vln. I *gliss.*
mf — *p* — *mf* — *p*
wide vib. ord.

Vln. II
p — *f* — *mf* — *p* — *mf* — *p* — *mf* — *p*
3 S.P. ord.

Vla.
mf — *p* — *pp* — *fp* — *p* — *pp*
3 E.S.P. ord.

Vc.
mf — *p* — *pp* — *fp* — *p* — *pp*
3 ord.

15

Vln. I
mf — *p* — *fp* — *pp* — *fp* — *p* — *p* — *f* — *p*
3

Vln. II
mf — *p* — *mf* — *p* — *mf* — *p* — *mf* — *p*
3 S.P. ord.

Vla.
fp — *pp* — *fp* — *pp*
3 ord.

Vc.
fp — *pp* — *fp* — *pp*
3 S.P. ord.

17

Vln. I
f — *p* — *mf* — *f* — *p*
6 S.P. ord.

Vln. II
f — *p* — *f* — *p* — *f* — *p* — *f* — *p* — *f* — *p* — *f* — *p*
6 S.P. ord.

Vla.
fp — *pp* — *f* — *pp*
3 *mf* bright

Vc.
fp — *pp* — *f* — *pp*
3 *6* ord.

19

Vln. I *f pp mf p* S.P. *f p mf*

Vln. II *f mf p* S.P. *f p mf p*

Vla. *f pp* S.P. *f p mf p*

Vc. *f pp* S.P. *f p mf p*

21

Vln. I *pp < f p pp* ord. E.S.P. *< fp pp n*

Vln. II *pp < f pp* E.S.P. *< fp pp p 6*

Vla. *pp < f pp* E.S.P. *< fp pp n*

Vc. *pp < f pp* E.S.P. *< fp pp n*

23

Vln. I *p sf mf > pp* ord. *p < mf f subito ff* pizz.

Vln. II *mf 6 3 fp mf > p* non legato *fp mf 6 6 f < ff* pizz.

Vla. *p sf p > pp* ord. *p < f mf*

Vc. *p sf mf > p* ord. *p < f mf*

25

Vln. I *arco* *ff* *fp non cresc.* *ff* *fp*

Vln. II *f* *fp* *f* *fp*

Vla. *ff* *fp non cresc.* *ff* *fp*

Vc. *ff* *fp non cresc.* *ff* *fp*

arco III II S.P.

27

Vln. I *f* *pp fp* *pp*

Vln. II *fp < f* *pp* *p*

Vla. *f > p* *pp fp* *pp*

Vc. *f > p* *pp fp* *pp*

non legato repeat while glissing

29

Vln. I *f p* *sf* *sf* *sf < ff* *pp*

Vln. II *f* *sf* *sf* *sf < ff* *pp*

Vla. *f p* *mf* *f* *pp*

Vc. *f p* *mf* *f* *pp*

32

Vln. I *fff* intense *sf* *sf*

Vln. II *fff* intense *sf* *sf*

Vla. *fff* intense *sf* *sf*

Vc. *fff* intense *sf* *sf*

34

Vln. I *fff* *f*

Vln. II *fff* *f*

Vla. *fff* *sf* *sf* *f*

Vc. *fff* *sf* *f*

36

Vln. I *fff* espress. *bright*

Vln. II *fff* espress. *bright*

Vla. *fff* espress. *sf* *bright*

Vc. *fff* espress. *bright*

♩ = 120 Quicksilver,
evanescent

38

Vln. I *ff* *fff resonant*

Vln. II *ff* 5 3 3 3 *fff ppp subito*

Vla. *ff* 5 6 *fff resonant*

Vc. *ff* *fff resonant*

41

Vln. I S.T. *p* *mf* *gliss.*

Vln. II *sf* 3 3 3 3 3 3 3 3 3 3 *pizz.*

Vla.

Vc.

44

Vln. I *gliss.* *n* *ord.* *pp* 3 *sf* 3 3 3 3 3 3 *gliss.*

Vln. II 3 3 3 3 3 3 3 3 *pp* *mf*

Vla.

Vc. *sf*

47

Vln. I

Vln. II

Vla.

Vc.



50

Vln. I

Vln. II

Vla.

Vc.



53

Vln. I

Vln. II

Vla.

Vc.

56 ord.

Vln. I *p*

Vln. II *p* S.P.

Vla. *p* S.P. *ff*

Vc. *p* S.P. *f*

58 S.P.

Vln. I *p* *f*

Vln. II *mp* *p* *f*

Vla. *pizz.* *p* *mf*

Vc. *f* *ord.* (C#) *pizz.*

60

Vln. I *p* *pp*

Vln. II *mf* *ord.* *S.P.*

Vla. *f* *ord.* *p* *mf*

Vc. *f* *ord.* *p* *mf*

62

Vln. I

Vln. II

Vla.

Vc.

3 ord. *p* < *mf* *p* < *mf* *p*

f

p *ff* *p*

p *ff* *p*

S.P.

64

Vln. I

Vln. II

Vla.

Vc.

pp

ord. *pp*

pp

pp

66

Vln. I

Vln. II

Vla.

Vc.

p < *f* *p*

mp

mp *pp* < *mf* *pp*

mp *mf* *pp*

S.P.

68

Vln. I

Vln. II

Vla.

Vc.

ord.

non legato

3

mf

pp

f

70

Vln. I

Vln. II

Vla.

Vc.

ord.

f

p

mf

f

mf

fp

f

72

Vln. I

Vln. II

Vla.

Vc.

pizz.

3

f

mf < f

mf

f

f

74

Vln. I *mp* arco S.P. *ord.* *sf* > *sf* > *sf* >

Vln. II *mf* pizz. *f*

Vla. *f* *f* *f*

Vc. *f* *fp*

76

Vln. I pizz. *mf* arco *f*

Vln. II arco S.P. *mf* *p*

Vla. *mf* *f* *p*

Vc. *ff* *fff* *f*

78

Vln. I *f* > S.P. *mf* *f*

Vln. II pizz. *f* arco 3 *mf*

Vla. *mf* *f*

Vc. *ff* *mf* *ff*

80

Vln. I pizz. *f*

Vln. II *f* pizz. *f*

Vla. *fp*

Vc. *fff*

82

Vln. I *fff*

Vln. II *fff*

Vla. *fff*

Vc. *p faint* 3 S.T. col legno ord.

84

Vln. I arco S.T. col legno ord. 3 3

Vln. II *p faint* 3 *mp*

Vla.

Vc. (S.T.) 3 *mp* 3 3 col legno 3 3 *p*

86

Vln. I

(S.T.)

Vln. II

Vla.

Vc.

arco
S.T.
col legno

p faint

p

88

Vln. I

(S.T.)
(c.l.)

ord.

col legno

S.T.
col legno

mp

p

p

Vln. II

Vla.

S.T.
col legno

ord.

col legno

p faint

mp

Vc.

90

Vln. I

(S.T.)
(c.l.)

ord.

col legno

mp

Vln. II

Vla.

(S.T.)

p

Vc.

S.T.
col legno

p

92 (S.T.) 3

Vln. I *p* S.P. *f* *ff*

Vln. II *p* S.P. *f* *ff*

Vla. S.P. non legato *f* *ff*

Vc. (c.l.) → ord. S.P. *f* 3 3 3 *ff*

94 ord. *p* still, bright

Vln. I ord. *p* still, bright

Vln. II ord. 3 3

Vla. 5/4

Vc. 5/4

96 behind bridge *p'* behind bridge

Vln. I 5/4

Vln. II 5/4 3 5/4

Vla. 3 6 6 6 *p'* behind bridge

Vc. 3 6 6 6 *p'* behind bridge

98

Vln. I

Vln. II

Vla.

Vc.

p' 3

6

6

6

p'

100

Vln. I

Vln. II

Vla.

Vc.

fff

fff
ord.

fff
ord.

fff

n

n

n

n

n

n

E.S.P.

pp

102

Vln. I

Vln. II

Vla.

Vc.

(D)

p espress

mf

p

p

104

Vln. I

Vln. II

Vla.

Vc.

p *f* *p*

p *f*

p *f*

p *f* *pp*

IV

gliss.

106

Vln. I

Vln. II

Vla.

Vc.

pp

pp *mp* *p*

S.P.

p *pp*

3

gliss.

108

Vln. I

Vln. II

Vla.

Vc.

S.P.

mf *pp*

p *f*

110

Vln. I *p espress* ord. *mf* *pp*

Vln. II *p espress* ord. senza vib. *mf* *pp*

Vla. *p* 3 *mf* 3 *pp*

Vc. *p espress* *mf* *pp*

112

Vln. I *p*

Vln. II S.P. *pp* *ppp* S.T. *p* S.T.

Vla. *p*

Vc. *p*

114

Vln. I *f* *pp* S.T. *pp* S.T.

Vln. II *mp* *p* S.T. *pp* ord.

Vla. *mp* *p* *pp* *p* *pp*

Vc. *mp* *pp* S.P. *p*

116

Vln. I

Vln. II

Vla.

Vc.

S.P.

p

ord.

mf

pp

mf

p

118

Vln. I

Vln. II

Vla.

Vc.

ord.

pp still

pp still

ord.

pp still

120

Vln. I

Vln. II

Vla.

Vc.

mf

pp

mf

mf

mf

mf

3

3

3

3

3

3

3

3

3

3

3

122

Vln. I *p* *pp*

Vln. II *p* *pp*

Vla. *p* *pp*

Vc. *p* *pp*

124

Vln. I *f* *pp*

Vln. II *f* *pp*

Vla. *f* *pp*

Vc. *f* *pp*

126

Vln. I *f* *p* *f*

Vln. II *f* *p* *f*

Vla. *f* *p* *f*

Vc. *f* *p* *f*

128 behind the bridge

Vln. I *p'*

Vln. II *p*

Vla. *mf* *p*

Vc. *mf* *p*

130 ord.

Vln. I *p* *fff* fiery, volcanic

Vln. II *p* *fff* fiery, volcanic

Vla. *p* *fff* fiery, volcanic

Vc. *p* *fff* fiery, volcanic

132

Vln. I *sfz*

Vln. II *sffz* *sfz*

Vla. *ff*

Vc. *3*

134

Vln. I

Vln. II

Vla.

Vc.

sfz

f

fff

fff

3

3

3

5/4

5/4

5/4

5/4

136

Vln. I

Vln. II

Vla.

Vc.

pizz.

ff

fff

fff

fff

5

3

5

3

G.P.

G.P.

G.P.

G.P.

5/4

5/4

5/4

5/4

138

Vln. I

Vln. II

Vla.

Vc.

arco

fff

sfz

fff

sfz

arco

fff

arco

fff

arco

fff

arco

3

3

3

3

p

p

p

p

5/4

5/4

5/4

5/4

140

Vln. I *fff* *ff*

Vln. II *fff* *fff*

Vla. *fff* *espress.* *SOLO sfz*

Vc. *fff* *fff* *sfz*

142

Vln. I *mf* *ffp*

Vln. II *ffp* *ffp*

Vla. *ffp* *ffp*

Vc. *ffp*

144

Vln. I *sfz* *ff*

Vln. II *sfz* *ff*

Vla. *ff* *sfz*

Vc. *ff* *sfz*

146

Vln. I

Vln. II

Vla.

Vc.

sfz

ff

ffp

sfz

3

5

148

Vln. I

Vln. II

Vla.

Vc.

fff

sfz

fff

fff

fff

sfz

3

5

150

Vln. I

Vln. II

Vla.

Vc.

sfz

f

sfz

ff

sfz

sfz

3

3

152 (C#)

Vln. I *fff*

Vln. II *sfz* 3 *mf*

Vla. *sfz* 3 *sfz* *mf*

Vc. *sfz* *mf*

154

Vln. I *fff* *f*

Vln. II *sfz* 3 *sfz*

Vla. *sfz* *sfz* *sfz*

Vc. *sfz*

156

Vln. I *ff*

Vln. II *sfz* 3 *sfz* *sfz* *ff*

Vla. *sfz* *sfz* 3 *ff*

Vc. *sfz* *sfz* 3 *sfz* *ff*

158 non legato

Vln. I *fff* scurrying

Vln. II non legato *fff* scurrying

Vla. non legato *fff* scurrying

Vc. *fff* scurrying

160

Vln. I *ff* searing *fff* *mf*

Vln. II *ff* searing *fff*

Vla. *ff* searing *fff*

Vc. *ff* searing *fff*

162 practise mute

Vln. I *ffff*

Vln. II *ffff*

Vla. *ffff* *p*

Vc. non legato *ffff* *pp* murmuring

6 6 9

164

Vln. I *pp* *mp*

Vln. II *pp* *mp*

Vla.

Vc. 6 9 *mf* *n*

165

Vln. I

Vln. II *p* *mp* *pp*

Vla.

Vc. *pp*

166

Vln. I *pp* *p* S.P.

Vln. II *pp* *p* *mf*

Vla.

Vc. *p* *mf* S.P.

168 *ord.* $\text{♩} = 48-52$ **Very serene and mysterious**

Vln. I *mf ord.*

Vln. II *pp* remove mute

Vla. *ord.* *pp* *pp* *p* IV

Vc. *ord.* *pp* *pp* *p* *pp* *p*

170

Vln. I *pp* *p* III (d) *pp* remove mute

Vln. II IV (d) *pp* *p* *pp* *p* perfectly still

Vla. (IV) *pp* *p* *mf* *pp*

Vc. *p* *pp* *mp* *pp*

172

Vln. I

Vln. II *pp* *n* remove mute

Vla. II *mp* *pp*

Vc. *pp* *p* *mf* molto vib.

174

Vln. I

Vln. II

Vla.

Vc.

III 5 II I II III

pp *mf* *pp*

176

Vln. I

Vln. II

Vla.

Vc.

pp *mp* *pp*

S.P.

p

ord. vib.

178

Vln. I

Vln. II

Vla.

Vc.

S.T. ord.

pp *p* *pp*

mf *p* *pp*

ord.

ppp completely still

ppp completely still

180

Vln. I *ppp* *pp*

Vln. II *p* *pp* *p*

Vla. *pp* *p*

Vc. S.P.

WHISTLING: a clear tone, stagger breathing (8^{va}) *pp*

182

Vln. I *pp* *p*

Vln. II *pp*

Vla. *pp* *pp*

Vc. ord. *pp*

WHISTLING: a clear tone, stagger breathing (8^{va}) *pp*

WHISTLING: a clear tone, stagger breathing (8^{va}) *pp*

WHISTLING: a clear tone, stagger breathing (8^{va}) *pp*

184

Vln. I

Vln. II

Vla.

Vc.

pp *mp* *p*

p *pp* *mp*

mp *p* *mp*

p *pp*

(8^{va}) *b* *b* *b* Improvise freely: move by step, change notes once a breath

(8^{va}) *#* *#* Improvise freely: move by step, change notes once a breath

(8^{va}) *#* *#* Improvise freely: move by step, change notes once a breath

(8^{va}) *#* *#* Improvise freely: move by step, change notes once a breath

186

Vln. I

Vln. II

Vla.

Vc.

mp *p*

p *mf* *p*

p *mf* *p*

mf *p*

pp *mp*

(pause whistling if necessary)

6 3

Vln. I *mf* *p* *pp* *mf* *p*

Vln. II *p* *mf* *p* *mp* *f*

Vla. *mf* *p* *mf* *p*

Vc. *p* *pp* *mf* *p*



Vln. I *pp* *mf* *p* *mf*

Vln. II *pp* *mf* *p*

Vla. *f* *p* *mf*

Vc. *mf* *p* *mf*

gradually change to: (8^{va})

gradually change to: (8^{va})

gradually change to: (8^{va})

gradually change to: (8^{va})

192

Vln. I

Vln. II

Vla.

Vc.

p *pp*

mf *p* *pp* *mf*

p *mf* *p* *mf*

p *mf* *f* **6**

194

Vln. I

Vln. II

Vla.

Vc.

mf *p* *f* *p*

p *mf* *p* *f* *p*

p *mf* *p* *f* *p*

3 *p* *mf* *p* *f* *p*

196

Vln. I

Vln. II

Vla.

Vc.

mp *p*

mp *p* *mf*

pp *p*

pp *mf* *pp* *mf* *pp* *mf* *pp*

198

Vln. I

Vln. II

Vla.

Vc.

mf *p* *ppp*

p *mf* *pp* *ppp*

pp *mf* *ppp*

mf *p* *mp* *ppp*

fade out *fade out* *fade out* *fade out*

200 $\text{♩} = 92$ **Fleeting**

Vln. I *fp* *gossamer* S.P.

Vln. II *p* *gossamer*

Vla. *fp* *gossamer* S.P.

Vc. *fp* *gossamer* S.P.

202

Vln. I *mf* *fp*

Vln. II *mf* *p*

Vla. *mf* *p* *fp*

Vc. *mf* *fp*

204

Vln. I *fp* S.P.

Vln. II *mf* *p*

Vla. *fp*

Vc. *fp* *pp*

206 $\text{♩} = 120$
ord.

Vln. I *f*

Vln. II *mf* *f*

Vla. *f*

Vc. *f*

ff ord.

ff ord.

ff ord.

208

Vln. I *sfz*

Vln. II *sfz* *pp*

Vla. *sfz* *pp subito*

Vc. *sfz* *pp*

210

Vln. I *p* *mf* *p*

Vln. II *ff* *p* *p* *mf* pizz.

Vla. *p* *f* *f*

Vc. *f* *f*

212

Vln. I *f* *p*

Vln. II *f* *p*

Vla. *arco*

Vc. *ppp*

214

Vln. I *non legato* *f* *ff*

Vln. II *non legato* *f* *ff*

Vla. *non legato* *f* *ff*

Vc. *fp* *f*

216

Vln. I *fp* *pp*

Vln. II *pizz.* *f*

Vla. *ff* *p*

Vc. *ff* *p*

218

Vln. I *mf* > *f* *fp*

Vln. II

Vla. *fp*

Vc. *fp*

220

Vln. I *f*

Vln. II *f*

Vla.

Vc.

222

Vln. I *p* *mf* *p*

Vln. II *p* *mf* *f* *p*

Vla. *fp*

Vc. *sf* *p* *sf* *p*

arco pizz. arco

225

Vln. I *f* *trm* 5 3 3

Vln. II *f* *trm* 5 3 *p*

Vla. *fp* 3 *f* *p*

Vc. *fp* 3 *mf* 3

227

Vln. I *mf* 3 3 3 3 *arco* *fp*

Vln. II *pizz.* *f* *f*

Vla. *f*

Vc. *f* 3 3

229

Vln. I *fp* *fp* *mf* 3 3 3

Vln. II *pizz.* *arco* 3 3 3

Vla. 3 *ff*

Vc. 5 5 3 *ff*

231

Vln. I *mf*

Vln. II *fp*

Vla. *mf*

Vc. *mf*

233

Vln. I *fff*

Vln. II *fff*

Vla. *fff*

Vc. *fff*

235

Vln. I *ff*

Vln. II *ff*

Vla. *ff*

Vc. *ff*

molto vib.

237

Vln. I *sfz*

Vln. II *sfz*

Vla. *sfz*

Vc. *sffz* *ff* *fp*

239

Vln. I *fff*

Vln. II *fff*

Vla. *fp* *ff* *fp* *f*

Vc. *ff*

241

Vln. I *sffz* *ff*

Vln. II *sffz* *ff*

Vla. *p* *ff* *p* *sffz* *f* *p*

Vc. *p* *fp* *fff*

243

Vln. I *p* *fff* *ff*

Vln. II *p* *fff* *ff* *trm* *trm* *p*

Vla. *f* *p* *fff* *mf* *ff* *p*

Vc. *f* *p* *mf*

246

Vln. I *mf* *fff* *ff*

Vln. II *ff* *mf* *fff* *ff* *trm* *mf*

Vla. *f* *fff* *f* *ff*

Vc. *fff* *p*

249

Vln. I *fff* *p*

Vln. II *fff* *p*

Vla. *fff* *mf* *p*

Vc. *p*

251

Vln. I *f* *molto vib.* *3* *3* *3* *p* *fff espress.*

Vln. II *f* *fff espress.*

Vla. *mf* *p* *fff espress.*

Vc. *f* *ff*

253

Vln. I *fpp* *3* *3* *3*

Vln. II *f* *p*

Vla. *fpp*

Vc. *p*

255

Vln. I *3* *3* *3* *3* *fp*

Vln. II *ff* *gradually transition to molto vib.*

Vla. *ff*

Vc. *ff*

257

Vln. I *fff*

Vln. II *fff*

Vla. *fff*

Vc. *fff*

259

Vln. I *fff* possibile! *f* *pizz.* *f* *p* 5

Vln. II *fff* possibile! *f* *pizz.* *f* *p*

Vla. *molto vib.* *fff* possibile! *f* *pizz.* *f* *p* 3

Vc. *fff* possibile! *f* *pizz.* *f* *p* 4

VISIBLE WORLD

FANTASY *after* VAN HOOGSTRATEN

for Sinfonietta

Michael Small
2014-15

VISIBLE WORLD

FANTASY

after

SAMUEL VAN HOOGSTRATEN

Michael Small
2014-15

VISIBLE WORLD

FANTASY *after* VAN HOOGSTRA TEN

For Sinfonietta

Michael Small

2014-15

*Written for Chris Kim and the Festival Chamber Orchestra
Cornell University, April 2015*

INSTRUMENTATION

Flute (dbl. picc.)

Oboe

Clarinet in B ♭

Bassoon

Horn in F (Straight mute)

Trumpet in B ♭ (Harmon mute, Straight mute)

Trombone

Percussion (1 player):

Tam-tam, Vibraphone, Glockenspiel, Crotales, Tubular Bells, Bass Drum, Whip,

Piano

Violin I

Violin II

Viola

Violoncello

Double Bass (low C extension not required)

Score in C

Duration: 15 minutes

VISIBLE WORLD

Fantasy after Samuel Van Hoogstraten

13-14'

2015

I wrote *Visible World* as the penultimate in a cycle of several pieces taking visual inspirations as their starting points.

Samuel Van Hoogstraten was a highly influential painter and theorist of the Dutch Golden Age (the late 17th Century) whose works include paintings, poetry, and his treatise on art *Introduction to the Academy of Painting or the Visible World*, from which I took my title. His treatment of perspective as a technical tool in the artist's arsenal was central to his notion that the visual art should be considered a science; a means of investigating the natural world. Amongst his most famous works are "perspective boxes" - usually a small wooden case with one side panel missing (to allow light in) and all the remaining interior sides painted. At each end, a small hole allows the viewer to see a very realistically depicted domestic interior, a testament to the power of his perspective and illusive skills. However, when viewed from a point other than one of the two peepholes, the illusion is broken and the scene becomes dazzlingly distorted and bizarre.

My work does not depict any particular figurative detail of these extraordinary pieces, but rather I took the ideas of perspective, "in/out of focus" and attention to minute detail and applied them to a musical world in various byzantine methods of my own devising. As the piece evolves, material "viewed" from the wrong angle becomes unraveled, and rewritten; the rather dense and rapidly changing opening two minutes is untangled somewhat in the following four minutes. I also imagined the form of the piece as being like a series of perspective boxes, each with their own particular mood and character, which could join on to each other in bizarre and unexpected ways. Doors that should lead outside instead lead back into a previous chamber, and later sections of the work might resemble earlier passages in rhythm, harmony or character, but not in other parameters. This being said, my aim is always to create a bewitching and surprising musical experience regardless of the listener's familiarity with the source material.

The music is highly virtuosic and places a great emphasis on individual players in the ensemble, so my warmest thanks go to the instrumentalists of the Festival Chamber Orchestra and Christopher Kim for bringing my piece to life.

VISIBLE WORLD

Fantasy after Hoogstraten

Michael Small

♩ = 90-96

Flute *p* *ff* *mp* 3

Oboe *p* *ff* *mp* 3

Clarinet in Bb *ff* 3

Bassoon *ff* *p* *f* *p* *f* *p* *f*

Horn in F *f* *ff* *f* *ff* *f* *ff* *p* *ff* 3

Trumpet in Bb *con sord. (str.)* *mf* 5 *sfz* *p* 5 *mf* 3

Trombone *ff* 3

Tam-tam *Tam-tam* *sec.* *f* *f* *sec.* *f* *sec.* *f*

Piano *sfz* 3 3

Violin I *pizz.* *ff* 3 3 5

Violin II *pizz.* *ff* 3 5

Viola *ff* 3 3 *f* 3

Violoncello *p* *f* *p* *f* 3 *sfz* 3

Double Bass *sfz* *p* *ff* *p* *f* *sfz* 3

4

Fl. *mf* *f* *ff* *p*

Ob. *f* *p*

Cl. *p* *ff* *p* *f* *ff* *p*

Bsn. *p < f* *sfz* *p < f* *f* *ff*

Hn. *f* *ff* *sfz* *p* *mf* *f* *ff* *p* *mf*

Tpt.

Tbn. *p* *ff* *3* *p* *f* *ff* *3* *mf*

T-t. *< f* *< f* sec. to Vibraphone

Pno. *p* *sfz* *p* *sfz* *sfz*

Vln. I *ff* *f*

Vln. II *f*

Vla. *ff* *p* *f* *p* *f*

Vc. *p < f* *p < f* *p* *fp*

Db. *p < f* *sfz* *p < f* *p* *fp*

7

Fl. *f* *ff* *f* *mf* *p*

Ob. *f* *p* *f* *p*

Cl. *f* *p* *f* *ff*

Bsn. *p* *f* *p* *f* *p* *ff*

Hn. *f* *mp*

Tpt. *mf* *f*

Tbn. *p* *f* *p* *ff* *pp* *mf* *f* SOLO

T-t. *p* *mp* *p*

Pno. *sfz* *sfz* *mp*

Vln. I *p*

Vln. II *p*

Vla. *pizz.* *f* *p*

Vc. *f* *p* *p* *ff* *p* *f* *mp* *mf*

Db. *f* *p* *p* *ff* *p* *f* *mp* *mf*

10

Fl. *f* *ff*

Ob. *f* *ff*

Cl. *mf*

Bsn. *ff* *p*

Hn. *f* *mf* *f* *f* *<ff* *f* *ff*

Tpt. *ff* *p*

Tbn. *ff* *fff*

Vib. *p*

Pno. *ff*

Vln. I *ff*

Vln. II *f* *ff* *p*

Vla. *f* *ff* *p*

Vc. *ff* *mf*

Db. *ff* *mf*

13

A

Fl. *f* *ff*

Ob. *f* *ff*

Cl. 3

Bsn. *p* *ff* *f* *ff* *sfz*

Hn. *mf* *f* *ff*

Tpt. *mf* *f* *ff*

Tbn. *sfz*

Vib. *f* *senza Ped.*

Pno. *sfz* *f* *f*

Vln. I *5* **A** *ff*

Vln. II *5* *ff* 3

Vla. *mf* *ff* *pizz.* *sfz*

Vc. *f* *f* *ff* *pizz.* *sfz*

Db. *fff* *sfz*

This page of a musical score, numbered 85, contains parts for various instruments. The score is organized into systems, with measures 16, 17, and 18 indicated at the top of each system. The instruments and their parts are as follows:

- Flute (Fl.):** Part 1, measures 16-18. Includes a trill in measure 17.
- Oboe (Ob.):** Part 1, measures 16-18.
- Clarinet (Cl.):** Part 1, measures 16-18.
- Bassoon (Bsn.):** Part 1, measures 16-18.
- Horn (Hn.):** Part 1, measures 16-18.
- Trumpet (Tpt.):** Part 1, measures 16-18. Includes dynamics *mf* and *ff*.
- Tuba (Tbn.):** Part 1, measures 16-18.
- Vibraphone (Vib.):** Part 1, measures 16-18. Includes dynamic *p*.
- Piano (Pno.):** Part 1, measures 16-18. Includes dynamic *p*.
- Violin I (Vln. I):** Part 1, measures 16-18.
- Violin II (Vln. II):** Part 1, measures 16-18.
- Viola (Vla.):** Part 1, measures 16-18.
- Violoncello (Vc.):** Part 1, measures 16-18.
- Double Bass (Db.):** Part 1, measures 16-18.

The score includes various musical notations such as slurs, ties, and dynamic markings. The time signature changes from 3/4 to 5/4 between measures 17 and 18.

19

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Vib.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Db.

p

f

ff

ff

p

p

21

Fl. *ff*

Ob. 3 3

Cl.

Bsn. 3

Hn. *ff* *f* *ff*

Tpt. 3 *mf*

Tbn. 3

Vib. *ff* 5 *p* *ff* 5 *p* *ff*

Pno. *ff* 5 *p* *ff* 5 *p* *ff* 3

Vln. I *ff*

Vln. II *ff* 3 3

Vla. 3

Vc. 3

Db. 3

28

B

Fl. *ff* glittering

Ob. *ff* glittering *f* *ff* *mp*

Cl. *ff* *fff* *mf* *f*

Bsn. *fff* *mf*

Hn. *mf* *f* *mf* *f* *mf* *f* *f*

Tpt. *ff* *f* *mf* *p*

Tbn. *fff* *mf* *p*

Vib. Tam-tam *f* damp gradually *n* to Vibraphone

Pno. *f* *mf*

Vln. I *ff* *fff*

Vln. II *ff*

Vla. *ff* *fff* *mf*

Vc. arco *fff* *mf*

Db. arco *fff* *mf*

31

Fl. *ff*

Ob. *fff* *mp*

Cl.

Bsn. *p* *p* *mf* *pp*

Hn. *mf* *f* *mf* *ff*

Tpt. *<mf*

Tbn. *p* *mf* *pp*

T-t.

Pno. *mf*

Ped.

Vln. I *ff*

Vln. II

Vla. *p* *pizz.*

Vc. *p*

Db. *p*

33

Fl. *f* *ff* *fff*

Ob. *f* *ff* *fff*

Cl. *f* *ff*

Bsn. *mf* *f*

Hn. *fff*

Tpt. remove mute

Tbn. *mf* *f* *mf*

T-t.

Pno. *p* *mf* *mp bright* senza Ped.

Vln. I *f* *ff* *f*

Vln. II *mf* *ff* *f*

Vla. arco *mf* *ff*

Vc. *mf* *ff* *mf*

Db. *mf* *fff*

35

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

T-t.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Db.

sfz

f

p

mf

f

ff

f

37

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

T-t.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Db.

C

ff

f

ff

f

mf

p

fff

ff

mf

fp

ff

senza sord.

ff

mf

Vibraphone

ff

ff

mf

mf

pizz.

pizz.

ff

mf

fff

40

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Vib.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Db.

to Glockenspiel

mf *f* *ff* *mf* *f* *ff* *fff* *fff* *mf* *f* *ff* *f* *ff* *f* *ff* *f* *ff* *f* *ff* *fffz* *p* *mf* *fff*

♩ = 63-66 Frozen,
delicate, nocturnal

D

43

Fl. *ff* *fff* *fff* *fff* *fff*

Ob. *ff* *fff*

Cl. *ff* *fff*

Bsn. *fff*

Hn.

Tpt.

Tbn.

Glockenspiel *f* *fff*

To Vibraphone *fff*

Pno. *fff* *fff*

♩ = 63-66 Frozen,
delicate, nocturnal

D

Vln. I *fff* *fff* *p* < *fff*

Vln. II *fff* *fff* *p* < *fff*

Vla. *fff* *fff* *p* < *fff*

Vc. *fff* *fff* *p* < *fff*

Db.

46 *ppp*

Pno.

49 *ppp*

Fl.

Ob.

Hn.

Glock.

Pno.

Vla.

Vibraphone

SOLO

ppp

p

pp

ppp *p* *pp*

53

Fl.

Ob.

Cl.

Vib.

Pno.

Vla.

mf *p* *p*

pp

ppp

56

Fl.

Ob.

Cl.

Hn.

Vib.

Pno.

ppp

p

mf

pp

ppp

p

ppp

pp

pppp



59

E

Fl.

Ob.

Hn.

Vib.

Pno.

mf

mp

mf > p

pp espress

pp

p

mf > pp

p

mp

pp

To Crotales

p

63

Fl. *pp* *p* *mp*

Ob. *f* *p* *mf*

Cl.

Bsn.

Hn. *ppp* *mp* *pp* *p*

Tpt.

Tbn.

Vib. Crotales *mf* to Tam-tam

Pno. *mf*

Vln. I *mf* *p*

Vln. II *mf*

Vla. *f espress.* *< fp*

Vc.

Db. *p*

66

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Crot.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Db.

Tam-tam To Crotales

Crotales

p *mp*

p *mp*

p *mp*

p *mp* *mf*

mf *p* *mp* *p*

pp *f*

p *f*

p *arco* *p*

p *arco* *p*

f *mf*

mp *p* *mp* *p*

mp *p*

69

F

Fl. *mf* *f* *p*

Ob. *mf* *f* *p*

Cl. *mf* *fp* *f* *p*

Bsn. *f* *p*

Hn. *p* *sf* *pp* *p* *pp*

Tpt. *pp* *p* *pp*

Tbn. *pp* *p* *pp*

Crot. *ff* *mf* *p*

Pho. *ff* *mf* *p*

Ph. *ff* *mf* *p*

J senza Ped.

F

Vln. I *mf* *fp* *f* *p*

Vln. II *mf* *fp* *f* *p*

Vla. *ff* *fp* *ff* *p*

Vc. *mf* *fp* *ff* *p*

Db. *ff* *p*

IV III 6

III IV 6

72

Fl. *mf* *p* *mp* *mf* *p*

Ob. *pp* *mf* *p*

Cl. *pp* *mf*

Bsn.

Hn.

Tpt.

Tbn.

Crot. *p* To Vibraphone

Pno. *f*

Vln. I *pp* *f* *mf* *p* *3* arco

Vln. II *mf* *pizz.* *p* *mf* *p* *3* arco

Vla. *pp* *f* *mf* *p* *3* arco

Vc. *pp* *mf* *p*

Db. *mf* *p*

76

Fl. *f* 3 *f* 5 *pp*

Ob. *p* 6 *f* *p* *fff*

Cl. *p* 5 *f* *p* *fff*

Bsn.

Hn. *p* *p* *f* *pp* 3

Tpt. *p* *mf* 5 3 *p* *f*

Tbn.

Crot. *ff* *pp* *Red.*

Vibraphone *ff* *pp* *Red.*

Pno. *mf* 3 7 *fff* *Red.*

Vln. I *f* *pizz.* 3 *arco* *p* *fff*

Vln. II *f* *pizz.* *arco* *p* *fff*

Vla. *f* *arco* *p* *fff*

Vc. *f* *arco* *p* *fff*

Db. *f*

2 + 3

78

Fl. *mp* *p* *pp* ³ *mf* **G**

Ob. *p* *mf* ⁴ *p* ³ *mf*

Cl. *p* ³ *mf*

Bsn. -

Hn. ³ *mf* ^{5:3} *f* *sf* *f*

Tpt. -

Tbn. -

Vib. ^{5:3}

Pno. *p*

Vln. I **G** *fp* *pp*

Vln. II *fp* *pp*

Vla. *fp*

Vc. *fp* *pp*

Db. *fp*

82

Fl. *p*

Ob. *f* 3

Cl. *p* *mf* *mp*

Bsn. *mf* 3 5 *f* 3 *mf* 3 5

Hn. *mf* *p* *mp* +

Tpt. *p* 3

Tbn.

Vib. *p*

Pno. *mf* 3

Vln. I *mf*

Vln. II *mf*

Vla. *pp* *mf*

Vc. *mf*

Db. *pp* *mf*

Detailed description: This page of a musical score covers measures 82, 83, and 84. The woodwind section includes Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), Bassoon (Bsn.), Horn (Hn.), Trumpet (Tpt.), and Trombone (Tbn.). The string section includes Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Double Bass (Db.). The piano (Pno.) part is also present. Dynamics range from *pp* (pianissimo) to *f* (forte). The flute plays a sustained note in measure 82, then a triplet in 83, and a single note in 84. The oboe plays a triplet in measure 83. The clarinet and bassoon have melodic lines with dynamics *p*, *mf*, and *mp*. The bassoon has triplet and quintuplet markings. The horn has a sustained note in 82, then a triplet in 83, and a note with a '+' sign in 84. The trumpet and trombone are mostly silent, with a triplet in the trumpet in measure 83. The strings play sustained notes, with the double bass starting at *pp* and moving to *mf*. The piano has a triplet in measure 82 and a chord in measure 83.

85

Fl. *mf* *ppp* *p*

Ob. *mf* *mp* *pp*

Cl. *p* *pp*

Bsn. *f* *pp* *mf* *pp*

Hn. *p* *pp*

Tpt. *mp* *p*

Tbn.

Vib. *mp* *ppp*

Pno. *mp* *ppp*

Vln. I *p* *pp*

Vln. II *p* *pp*

Vla. *p* *pp*

Vc. *p* *pp*

Db. *p*

Detailed description: This page of a musical score covers measures 85, 86, and 87. The instrumentation includes Flute, Oboe, Clarinet, Bassoon, Horn, Trumpet, Trombone, Vibraphone, Piano, Violin I, Violin II, Viola, Violoncello, and Double Bass. The score is written in a common time signature. Measure 85 begins with a dynamic of *mf* and features a triplet in the Flute. Measure 86 starts with *ppp* and includes a triplet in the Bassoon. Measure 87 concludes with a *pp* dynamic. The woodwinds and strings play melodic lines, while the brass and piano provide harmonic support. The piano part features a triplet in the right hand and a triplet in the left hand.

88

Fl. *pp*

Ob. *n*

Cl. *n*

Bsn.

Hn.

Tpt.

Tbn.

Vib.

Pno.

Vln. I *n*

Vln. II *n*

Vla. *n*

Vc. *n*

Db. *n*

H

91 **Slower** ♩ = 52-54

Fl. *p* *mf* *f*

Ob. *p* *f*

Cl. *p* *f*

Bsn. *pp* *mf* *f*

Hn. con sord. *ppp* *mf* *f*

Tpt. con sord. *ppp* *mf* *f*

Tbn.

Vib.

Pno.

Ped.

H

Slower ♩ = 52-54

Vln. I *ppp* *mf* *f*

Vln. II *ppp* *mf* *f*

Vla. *ppp* *mf* *f*

Vc. *ppp* *mf* *f*

Db. *ppp* *mf* *f*

93

Fl. *f* *mf* *pp* *p* *mf*

Ob. *f* *mf* *p* *mf* *f*

Cl. *mf* *p* *pp* *p* *mf*

Bsn.

Hn. *ff* *p* *ppp* *ff*

Tpt. *ppp* *ff*

Tbn.

Vib. *p* *pp*

Pno. *pp*

Vln. I *ff* *p* *ppp* *ff*

Vln. II *ff* *p* *ppp* *ff*

Vla. *ff* *p* *ppp* *ff*

Vc. *ff* *p* *ppp* *ff*

Db. *ppp* *ff*

95

Fl. *f* 6 *p* *mf* 3 *p* *f* 3 *p*

Ob. 6 *p* *mf* 5 3 *p* 6 *pp*

Cl. 5 *p* 5 *mf* 3 6 *p*

Bsn.

Hn. *mf* *p* *pp*

Tpt. insert harmon mute (stem in)

Tbn.

Vib. *mp* 5 *p* 3 *pp* 6 5 3 *ppp*

Pno.

Vln. I *mf* 5 *f* 3 *p*

Vln. II *mf* 6 *p* 6

Vla. *mf* *p* pizz. *f* 3 *p*

Vc. *mf* *p* pizz. *f* 3 *p*

Db. *mf* *p* pizz. 3 3 *f* *p*

97 **I**

Fl. *fp* *fp* *fp*

Ob. *fp* *fp* *fp*

Cl. *fp* *fp* *fp*

Bsn. *fp* *fp* *fp*

Hn. *mf* *p* *mf* *p* *mf* *p* *mf* *p* *p < mf* *pp* *p*

Tpt. *p* *mp* *p < mpp* *mp* *p < mp* *p* *mp* *p < mpp* *p* *p < mp* *p* *mp* *p*

Tbn. *p < mf* *p* *p < mf* *p* *mf* *p*

Vib. *p* *pp* *p*

Pno. *mf* *p* *p*

ℳ. *mf* *p*

Vln. I *fp* *fp*

Vln. II *fp* *fp*

Vla. *arco* *mf* *p* *mf* *p* *mf* *p* *mf*

Vc. *arco* *p* *f > p*

Db. *arco* *p* *f > p*

to Tubular Bells Tubular Bells

101

Fl. *fp*

Ob. *fp* *fp*

Cl. *fp*

Bsn. *fp*

Hn. *mf* *p* *mf*

Tpt. *p* *mp* *p* *mp* *p* *mp* *p* *mp* *p*

Tbn. *p* *mf* *p* *p*

Tub. B.

Pno. *pp* 5

Vln. I *fp* *fp*

Vln. II *fp*

Vla. *mf*

Vc.

Db.

103

Fl. *fp* *fp*

Ob. *fp*

Cl. *fp* *fp* *fp*

Bsn. *fp* *fp*

Hn. *p* *mf* *p*

Tpt. *mp* *p* *p* *mp* *p* *mp* *p* *mp* *p* *mp* *p*

Tbn. *mf* *p* *p* *mf* *p*

Tub. B.

Pno. *8^{va}* *8^{va}*

Vln. I *fp*

Vln. II *fp* *fp* *fp*

Vla. *mf* *p*

Vc. *f* *p*

Db. *f* *p*

105

Fl. *fp* *ff* 6 *sf*

Ob. *fp* *ff* 5 *sf*

Cl. *fp* *ff* 6 *sf*

Bsn. *fp* *ff* *sf*

Hn. *p* *mp* *p* *mp* *p* *mp* *p* *mp*

Tpt. *mp* *p* *mp* *p* *mp*

Tbn. *p* *mp* 3 *p* *p* *mp* *p* *mp* 3 *mp* *p*

Tub. B. 3 To Bass Drum

Pno. *f*

Vln. I *fp* *fp* *ff* 5 *mf* *sf*

Vln. II *fp* *sfz* *ff* 5 *mf*

Vla. *p* *mp* 3 *p* *mf* *p* *mf* 3 *mf*

Vc.

Db.

107

Fl. *sf sf sf ff*

Ob. *sf sf sf ff*

Cl. *sf sf sf ff*

Bsn. *sf sf sf sf ff*

Hn. *p mp p mp p mf ff* flz.

Tpt. *p mp p mp p ff* flz.

Tbn. *mp p mp p mp p ff* flz.

Tub. B. *pp p ff*

Pno. *ff*

Vln. I *sf sf sf ff*

Vln. II *sf sf sf ff*

Vla. *p mf p mf p f p f mf ff*

Vc. *f mf f mf fp ff*

Db. *f mf f mf fp ff*

J109 **Tempo I** ♩ = 96 **Furtive**

Bsn. *p*

Hn. *p*

Tbn. *pp* *n* *p*

B. D. *pp*

Pno.

J**Tempo I** ♩ = 96 **Furtive**

Vc. *p*

Db. *p*

111

Bsn. *mf* *f*

Hn. *mf* *f*

Tbn. *mf* *f*

B. D. *mf* *f*

Pno.

Vc. *mf* *f*

Db. *mf* *f*

To Vibraphone

113

K

Fl. *ff* *f*

Ob. *ff* *f*

Cl. *ff*

Bsn. *fff*

Hn. *ff* senza sord.

Tpt. *ff*

Tbn. *f* *ff* *p*

B. D. *ff*

Pno. *fff*

Vibraphone

K

Vln. I *ff*

Vln. II *ff*

Vla.

Vc. *fff*

Db. *fff*

117

Fl. *ff* *fff* *f*

Ob. *ff* *fff* *f*

Cl. *fff* *mf* *f*

Bsn. *p* *fff*

Hn. *fff* *ff*

Tpt. *fff* *ff*

Tbn. *p* *ff* *p*

Vib. *p*

Pno. *fff*

Vln. I *fff*

Vln. II *fff*

Vla. *ff*

Vc. *ff*

Db. *p* *fff*

119

Fl. *ff* *f* *ff* *f* *ff*

Ob. *ff* *f* *ff*

Cl. *ff* *mf* *f* *mf*

Bsn. *fff*

Hn. *f* *f*

Tpt. *f* *f*

Tbn. *f* *f*

Vib. *mf* *mf*

To Glockenspiel

Pno. *mf* *mf*

Vln. I *f* *f*

Vln. II *f* *f*

Vla. *f* *f*

Vc. *f* *f*

Db. *mf*

Detailed description: This page of a musical score (page 119) features a variety of instruments. The woodwind section includes Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), Bassoon (Bsn.), Horn (Hn.), Trumpet (Tpt.), and Trombone (Tbn.). The string section includes Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Double Bass (Db.). The piano (Pno.) and vibraphone (Vib.) are also present. The score is divided into two measures. The first measure contains complex melodic lines for the woodwinds and strings, with dynamic markings ranging from *mf* to *fff*. The second measure continues these lines, with the piano part featuring a prominent melodic line and the vibraphone playing a rhythmic pattern. The text 'To Glockenspiel' is written above the vibraphone staff in the second measure. The page number '119' is located at the top left.

121

Fl. *mf* *f* *mf* *f* *ff* flz.

Ob. *mf* *f* *f* *ff*

Cl. *f* *p* *ff* *f* *ff*

Bsn. *sffz*

Hn. *sffz*

Tpt. *sffz*

Tbn. *sffz*

Vib. Glockenspiel *mf* *f*

Pno. *ffff* *ff* *fff* *mf* *f* *f* *fff*

Vln. I *ff* *fff* *ff* *fff*

Vln. II *ff* *fff* *ff* *fff*

Vla. *f* *ff* *f* *fff*

Vc. *f* *ff* *f* *ff*

Db. *sffz*

128

Pno.

Vln. I

Vln. II

Ob.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Db.

Ob.

Hn.

Vln. I

Vln. II

Vla.

Vc.

Db.

Tempo III
♩ = 52-54

Tempo III
♩ = 52-54

lift gradually

p *mp* *pp* *sfz* *mf*

p *mp* *pp*

pp *p espres* *mp > p* *mf* *f*

lift gradually

n *pp* *p*

pp arco *p*

pp arco *p*

pp *p*

pp *p*

p *pp* *mf*

pp *mp* *p*

mf *p* *pp*

mf *p* *pp*

mf *p* *pp*

mf *p* *pp*

mf *p* *pp*

136

Ob. *f* *p* *pp* *mf*

Vib. *p* *mp*

Vln. I *mf* *p* *p*

Vln. II *mf* *p* *p*

Vla. *mf* *p* *p*

Vc. *mf* *p* *p*

Db. *mf* *p* *p*

Ob. *mf* *f* *p* *mf* *p*

Cl. *p* *f* *p* *mf* *p*

Bsn. *f* *p* *mf* *p*

Vib. *f* *mf* *p*

Phno. *f* *f*

Vln. I *mf* *ff* *p* *f*

Vln. II *mf* *ff* *p* *f*

Vla. *mf* *ff* *p* *f*

Vc. *mf* *ff* *p* *f*

Db. *mf* *ff* *p* *f*

Tempo II
♩ = 63-66

141

The musical score is arranged in systems. The first system includes Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), and Bassoon (Bsn.). The second system includes Horn (Hn.), Trumpet (Tpt.), and Trombone (Tbn.). The third system includes Vibraphone (Vib.) and Piano (Pno.). The fourth system includes Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Double Bass (Db.).

Measure 141 (left):
- Fl., Ob., Cl., Bsn.: Rest.
- Hn.: pp (quarter note), ppp (quarter note), ppp (quarter note).
- Tpt., Tbn.: Rest.
- Vib.: mp (quarter note), p (quarter note), p (quarter note).
- Pno.: Rest.
- Vln. I, Vln. II, Vla., Vc., Db.: p (quarter note), pp (quarter note).

Measure 142 (right):
- Fl., Ob., Cl., Bsn.: Rest.
- Hn.: ppp (quarter note), ppp (quarter note), ppp (quarter note).
- Tpt., Tbn.: Rest.
- Vib.: Rest.
- Pno.: p (quarter note), p (quarter note).
- Vln. I, Vln. II, Vla., Vc., Db.: Rest.

M

143

Fl. *p*

Ob. *6*

Cl. *5*

Vib. *3* Vibraphone *pp*

M

Vln. I *mf* sul pont.

Vln. II *mf* sul pont.

Vla. *p* *pp* *mf*

144

Fl. *3* *6* *6*

Ob. *6*

Cl. *5* *5* *5* *5*

Hn. *+* *5* *5* *5*

Vib. *5* *pp*

Pno. *pp* *mp* *ppp*

Vln. I *pp* *ord.* *p*

Vln. II *pp* *ord.* *p*

Vla. *pp* *ord.* *p*

Fl. *mf* *f*

Ob. *ff* *f*

Cl. *mf*

Bsn. *p*

Hn. *mp* *f* *mf*

Tpt.

Tbn.

Vib. *p*

Pno.

Vln. I *mp > p* *p* *mf*

Vln. II *mp > p* *p* *mf*

Vla. *mp > p* *pizz.* *mf*

Vc. *pizz.* *mf*

Db. *pizz.* *mf*

147

Fl. *mf* *f* *ff*

Ob. *f* *ff*

Cl. *f* *ff*

Bsn. *ff*

Hn. *mf* *f*

Tpt. *mf* *f*

Tbn. *f*

Vib. *f*

Pno. *mf* *f* *ff*

Vln. I *f* *ff* *f* *ff*

Vln. II *f* *ff* *f* *ff*

Vla. *f*

Vc. *f*

Db. *f*

149 **N**

Fl. *fp* *f⁶* *mf* *f* *3* *5*

Ob. *fp* *f* *6* *6* *mf* *3* *fp*

Cl. *fp* *mf* *3* *6* *f* *3* *fp*

Bsn. *fp* *3* *fp*

Hn. *sfz* *f* *f*

Tpt. *f* *3* *f*

Tbn. *sfz* *sfz* *3*

Vib. *ff* *mf* *3* *f* *3* *ff*

Pno. *fff* *3* *5* *3*

Vln. I **N** *fp* *fp* *fp* *fp*

Vln. II *fp* *fp* *fp* *fp*

Vla. *arco* *fp* *3* *fp* *3* *fp*

Vc. *arco* *fp* *3* *fp* *3* *fp*

Db. *fff*

151

Fl. *fp* *fp* *f* *fp*

Ob. *fp* *fp* *f* *fp*

Cl. *fp* *fp* *p* *ff* *fp*

Bsn. *fp* *p* *f*

Hr. *f* *fp* *f* *ff* *p* *f* *p*

Tpt. *f* *p* *f* *f*

Tbn. *f* *p* *f* *p* *f* *p*

Vib. *f* *ff* *f* *f*

Pno. *sffz* *ff*

Vln. I *fp* *fp* *fp* *fp* *fp* *fp* *fp*

Vln. II *fp* *fp* *fp* *fp* *fp* *fp* *fp*

Vla. *fp* *fp* *fp* *fp*

Vc. *fp* *fp* *fp* *fp*

Db.

153

Fl. *f* 5 *ff* *p* 5 *f* 7 *ff* 6 5

Ob. *f* 5 *ff* *p* 5 *f* 6 *p* *ff*

Cl. *f* 5 *ff* *p* 6 *f* 3 *ff*

Bsn. *fp* *fp* *fp* 3

Hn. *fp* *fp* *f* 3 *p*

Tpt. *mf* *p* *mf* 3

Tbn. *fp* *fp* *fp*

Vib. *mf* 3 5 *ff* 3 *mf*

Pno. *fff* *ff* *sfz* *ff* *mf*

Vln. I 3 3 *fp* 3 *fp* *p* *f*

Vln. II 3 3 *fp* 3 *fp* *p* *f*

Vla. *fp* *fp* *fp*

Vc. *fp* *fp* *fp*

Db.

155

Fl. *fp* *f* *fp* *ff* *fp* *fff*

Ob. *fp* *f* *fp* *ff* *fp* *fff*

Cl. *p* *f* *fp* *ff* *fp* *fff*

Bsn. -

Hn. *fp* *f* *fp* *ff* *fp* *fff* flz.

Tpt. *f* *ff* *f* *fff*

Tbn. *fp* *f* *fp* *ff* *fp* *fff* flz.

Vib. *f* *ff*

Pno. *f* *ff* *mf* *ff* *fff*

Vln. I *fp* *f* *fp* *ff* *fp* *fff*

Vln. II *fp* *f* *fp* *ff* *fp* *fff*

Vla. *fp* *f* *fp* *f* *fp* *ff*

Vc. *fp* *f* *fp* *f* *fp* *ff*

Db. -

O

♩ = 120

158

Fl. *fp* *fff* *p*

Ob. *fp* *fff* *p*

Cl. *fp* *fff* *p*

Bsn. *fp* *fff* *p*

Hn. *fp* *fff* *pp*

Tpt. *fp* *ff*

Tbn. *fp* *fff*

Vib. *fff*

Pno. *ff* *fff* *p*

una corda

O

♩ = 120

Vln. I *fp* *fff* *ff* *p* *pizz.*

Vln. II *fp* *fff* *ff* *p* *pizz.*

Vla. *ff* *fff* *ff* *p*

Vc. *ff* *fff*

Db. *p* *pizz.*

161

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Vib.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Db.

mf

p

f

mf

f

u.c.

Detailed description of the musical score: This page contains measures 161 and 162 of a symphony. The score is arranged in a standard orchestral format. The woodwind section (Flute, Oboe, Clarinet, Bassoon) and strings (Violins I and II, Viola, Violoncello, Double Bass) are active in both measures. The Flute, Oboe, and Clarinet parts feature complex rhythmic patterns with triplets and slurs. The Bassoon part has a dynamic marking of *p* in measure 162. The Horn part starts with a dynamic marking of *mf*. The Trumpet and Trombone parts are silent. The Violin I and II parts have dynamic markings of *f* and *mf*. The Viola part has dynamic markings of *f* and *mf*. The Violoncello and Double Bass parts are silent. The Piano part has a dynamic marking of *p* and a 5-measure rest in measure 161, followed by a complex melodic line in measure 162. The page number 161 is written at the top left.

163

Fl. *mf* *f* *p* 3 5 3

Ob. *p* 3 3 3

Cl. *mf* *f* *p* 5

Bsn. -

Hn. *p* *mf*

Tpt. -

Tbn. -

Vib. *p* 3 3 3

Pno. *p* 3 3 3

Vln. I *mf* *f* 3 5 3

Vln. II *mf* *f* 3 5 3

Vla. *f*

Vc. -

Db. 3

Detailed description: This page of a musical score covers measures 163 and 164. The score is for a full orchestra. The Flute part (Fl.) begins in measure 163 with a triplet of eighth notes marked *mf*, followed by a five-measure phrase marked *f*, and ends with a triplet marked *p*. The Oboe (Ob.) and Clarinet (Cl.) parts have similar rhythmic patterns, with the Clarinet also featuring a five-measure phrase. The Bassoon (Bsn.) is silent. The Horn (Hn.) part has a short melodic phrase in measure 164, marked *p* and *mf*. The Trumpet (Tpt.) and Trombone (Tbn.) parts are silent. The Vibraphone (Vib.) and Piano (Pno.) parts play a triplet of eighth notes marked *p*. The Violin I (Vln. I) and Violin II (Vln. II) parts have a triplet marked *mf* and a five-measure phrase marked *f*. The Viola (Vla.) part has a short phrase marked *f*. The Violoncello (Vc.) and Double Bass (Db.) parts are silent.

165

Fl. *f*

Ob. *f*

Cl. *f*

Bsn.

Hn. *f*

Tpt. *f* *ff* *f* *ff*

Tbn.

Vib. *mf*

Pno.

Vln. I *p* *mf* *f* *ff* arco

Vln. II *p* *mf* *f* *ff* arco

Vla. *ff* arco

Vc. *p*

Db.

Detailed description: This page of a musical score covers measures 165, 166, and 167. The woodwind section (Flute, Oboe, Clarinet, Bassoon) and strings (Violin I, Violin II, Viola, Violoncello, Double Bass) play a rhythmic pattern of eighth notes with triplets. The woodwinds and strings are marked *f* (forte). The Flute, Oboe, and Clarinet parts feature triplets. The Horns and Trumpets play a melodic line with a quintuplet in measure 166, marked *f*. The Trombones play a melodic line with triplets, marked *f*, *ff*, *f*, and *ff*. The Vibraphone plays a melodic line marked *mf*. The Piano part features a complex rhythmic pattern in the right hand and a bass line in the left hand. The Violin I and II parts play a melodic line with triplets, marked *p*, *mf*, *f*, and *ff*. The Viola part plays a melodic line with a quintuplet, marked *ff*. The Violoncello part plays a melodic line marked *p*. The Double Bass part plays a melodic line with triplets.

168

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Vib.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Db.

con la tutta forza 5

ff

f

mf

sfz

p

f

mf

p

ff

ff

ff

ff

ff

ff

ff

f

ffz

P

171 Slightly slower ($\text{♩} = 116$)

Fl. *pp* *mf* *p* *flz.* *mf* *pp*

Ob. *mf*

Cl. *p* *mp* *pp*

Bsn. *p*

Hn. *p* *pp*

Tpt. *p* *pp*

Tbn. *p* *pp*

Vib. *p*

Pno. *pp* *f* *f* *p* *mf* *pp*

P

Slightly slower ($\text{♩} = 116$)

Vln. I *p* *pp*

Vln. II *p* *mp* *p* *pp*

Vla. *p* *pp*

Vc. *p* *pp*

Db. *arco* *p*

174

Fl. *mf* 3 6 6 *flz.* *p* 3 3 *mf* *p* *mf* 6

Ob. *mf* 3 3 *p* 3 3 *mf* 3 3 *p*

Cl. *p* 3 3 *mf*

Bsn. *p* *pp* *mf* 3

Hn. *p* *pp* *mf* 3

Tpt. *p*

Tbn. *p* *pp* *mf* 3

Vib. 3 3 3 *mf*

Pno. *p* *fp* 3 3 3

Vln. I *p* *pp* *mf* 3

Vln. II *p* *pp* *mf* 3

Vla. *p* *pp* *mf* 3

Vc. *p* *pp* *mf* 3

Db. *p*

177

Fl. *p* *f* *mf* *p* *mf* *p* *ord.*

Ob. *f* *mp* *p* *p*

Cl. *f* *mf* *p*

Bsn. *f* *mf* *p*

Hn. *mf* *p* *p*

Tpt. *mf* *p*

Tbn. *mf* *p* *p*

Vib. *mf* *p*

Pno. *f* *p*

Vln. I *f* *mf* *p*

Vln. II *f* *mf* *p*

Vla. *f* *mf* *p*

Vc. *f* *mf* *p*

Db. *f* *p*

180

Fl. *mf* *f* *p* *f* *p*

Ob. *mf* *f* *f* *mf* *p*

Cl. *mf* *f* *mf* *p*

Bsn. *mf* *mp* *f* *mf* *mp*

Hn. *mf* *mp* *f* *mf* *p* *mp*

Tpt. *f* *mf* *p* *mp*

Tbn. *mf* *mp* *f* *mf* *mp*

Vib. *mf* *p*

Pno. *f* *ff*

Vln. I *mf* *mp* *f* *mf* *mp*

Vln. II *mf* *mp* *f* *mf* *mp*

Vla. *mf* *mp* *f* *mf* *mp*

Vc. *mf* *mp* *f* *mf* *mp*

Db. *f* *mf* *fp*

183

Fl. *mf* *p*

Ob. *mf*

Cl.

Bsn. *p*

Hn. *p*

Tpt. *p*

Tbn. *p*

Vib. *mf* *p*

Pno. *mf*

Vln. I *p*

Vln. II *p*

Vla. *p*

Vc. *p*

Db. *p*

Detailed description: This page of a musical score covers measures 183 and 184. The music is in 5/4 time. The Flute part (Fl.) begins in measure 183 with a triplet of eighth notes marked *mf*, followed by a rest in measure 184. The Oboe (Ob.) and Vibraphone (Vib.) parts enter in measure 184 with triplets of eighth notes marked *mf*. The Piano (Pno.) part also features triplets in measure 183. The Bassoon (Bsn.), Horn (Hn.), Trombone (Tbn.), Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Double Bass (Db.) parts play sustained notes, mostly marked *p*. The score includes various musical notations such as triplets, slurs, and dynamic markings.

185

Fl. *p* *mf* *p* *pp*

Ob. *p* *mp* *p*

Cl. *p* *mf* *p*

Bsn. *ppp*

Hn. *ppp*

Tpt.

Tbn. *ppp*

Vib. *p* *mf* *pp* *ppp* To Glock.

Pno. *pp*

Vln. I *ppp*

Vln. II *ppp*

Vla. *ppp*

Vc. *ppp*

Db. *pp*

(8)

188 **Q**

Fl.

Ob.

Cl.

Bsn.

Hn. *fff* bell up! *3* *3* Continue with this intensity by improvising on these pitches in a "chattering" fashion. Pause for breaths as needed.

Tpt. *fff* bell up! Continue with this intensity by improvising on these pitches in a "chattering" fashion. Pause for breaths as needed.

Tbn. *fff* bell up! *3* *3* *3* Continue with this intensity by improvising on these pitches in a "chattering" fashion. Pause for breaths as needed.

Vib. Glockenspiel *f* *3* To Crotales

Pno. *sfz* *ff*

Vln. I **Q** *ff* pizz. *3*

Vln. II *ff* pizz. *3*

Vla. *ff* pizz. *3*

Vc.

Db.

190

Fl. *ff*

Ob. *ff*

Cl. *ff*

Bsn.

Hn. *ff* ord.

Tpt.

Tbn.

Crot. *f* Crotales To Tam-tam

Pno. *sfz*

Vln. I *ff* arco

Vln. II *ff*

Vla. *sfz* pizz.

Vc. *sfz* pizz.

Db. *sfz* pizz.

192

R

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Crot.

Pno.

Vln. I

Vln. II

Vla.

Vc.

Db.

fff

fp

f

ff

mf

p

f

fff

fp

arco

fp

arco

fp

arco

ff

mf

Tam-tam

l.v. to Vibraphone

(8)

Edo

195

Fl. *sffz* *mf*

Ob. *fp*

Cl. *fp*

Bsn.

Hn.

Tpt.

Tbn.

T-t.

Pno. *fff*

Vln. I *fp*

Vln. II *fp*

Vla. *fp*

Vc. *fp*

Db. *p*

197

Fl. *fp*

Ob. *ff* *f* *sfz*

Cl. *fp*

Bsn. *fp*

Hn. *p* *f*

Tpt. *pp* *f*
flz. con sord.

Tbn. *fp*

Vibraphone *ff*
Ped.

Pno. *sfz*

Vln. I *fp*

Vln. II *fp*

Vla. *fp*

Vc. *fp*

Db.

199

Fl. *p* *f* *fp*

Ob. *f* *ff* *f*

Cl. *ff*

Bsn. *f* *p*

Hn. *ff* *f* *ffz* *f* *ff*

Tpt. *f* *ff* *fp*

Tbn. *f* *p*

Vib. *f* *ff*

Pno. *fff*

Vln. I *fp*

Vln. II

Vla. *f* *ff*

Vc. *f* *ff*

Db. *ff* *mf*

202

Fl. *mf* *fp*

Ob. *ff*

Cl. *mf* *fp*

Bsn. *mf* *fp*

Hn. *f* *ff* *p* *fp*

Tpt. *mf* *f* *ff*

Tbn. *mf* *fp*

Vib. To Tam-tam

Pno.

Vln. I *fp*

Vln. II *fp*

Vla. *mf* *fp*

Vc. *mf* *fp*

Db. *p*

remove mute

204

Fl. *fp* *fp* *fff* *pp*

Ob. *mf* *ff* *fff* *pp*

Cl. *fp* *fff* *pp*

Bsn. *fp* *ffz*

Hn. *fp* *fffz* *pp* *f*

Tpt. *pp* *f*

Tbn. *fp* *ffz*

Vib. Tam-tam *mf* *f* sec

Pno. *ff* *fff* *p*

Vln. I *ff* *fff* *pp* sul pont.

Vln. II *ff* *fff* *pp* sul pont.

Vla. *ff* *fff*

Vc. *fp* *ffz*

Db. *pizz.* *p*

8^{va}

S

207

Fl. *ff*

Ob. *ff*

Cl. *ff*

Bsn.

Hn. *p* *sfz*

Tpt. *p* *sfz*

Tbn.

T-t. *f* To Vibraphone *lv.*

Pno. *fffz*

Vln. I *fff* ord. *p*

Vln. II *fff* ord.

Vla. *fff* ord.

Vc. *fff*

Db. arco *fff*

⑧.....
Ped.

210

Fl. *f* *ff*

Ob. *f* *ff* 3 3

Cl. 3 3 *f* *ff*

Bsn.

Hn. *p* *ff* *p*

Tpt. 3 *p* *ff*

Tbn. *p* *ff*

Vib. *f*
non legato

Pno. *f* *ff* 3

Vln. I *ff*

Vln. II *p* *ff* *ff* *p*

Vla. *p* *ff* *p*

Vc. *p* 3 *fff*

Db. 3 *fff*

212

Fl. *mf*

Ob. *ff*

Cl. *f* *ff* *f* *ff*

Bsn. *ff*

Hn. *f* *p* *f* *p* *f* *p* *f* *p*

Tpt. *f* *p* *f* *p* *f* *p* *f*

Tbn. *p* *f* *p* *ff* *3*

Vib. *p*

Pno. *ff* *fff*

Vln. I *p* *ff* *p*

Vln. II *ff* *ff*

Vla. *ff*

Vc. *ff* *ff*

Db. *ff* *3*

214

Fl. *ff* *p* *ff* *p* *ff* *p*

Ob. *p* *ff* *p* *ff* *p*

Cl. *p* *ff* *p* *ff* *p*

Bsn. *mf* *p* *ff* *p*

Hn. *p* *ff* *p* *ff* *p* *ff* *p* *sfz*

Tpt. *f* *p* *ff* *p* *ff* *p* *ff* *p*

Tbn. *f* *p* *ff* *p* *ff* *p* *ff* *p* *ff* *p* *sfz*

Vib. *mf*

Pno. *fff* *mf*

Vln. I *ff* *p* *ff* *p*

Vln. II *ff* *p* *ff* *p*

Vla. *p* *ff* *p* *ff*

Vc. *p* *ff* *p* *ff* *p* *ff* *p* *ff*

Db. *fff*

216

Fl. *ff* *p* *ff* *p*

Ob. *ff* *p* *ff*

Cl. *ff* *p*

Bsn. *ff* *p* *ff* *p*

Hn. *sfz* *sfz* *p* *ff*

Tpt. *ff* *mf* *ff* *p* *ff*

Tbn. *sfz* *sfz* *ff*

Vib.

Pno.

Vln. I *ff* *p* *ff* *p*

Vln. II *ff* *p* *ff* *p* *f*

Vla. *p* *ff* *p* *f*

Vc. *p* *ff* *p* *f*

Db. *p*

Tempo III
♩ = 53-54

218 **T**

Fl. *fff* *fp* *fp*

Ob. *fff* *fp* *fp*

Cl. *fff* *fp* *fp* *fp*

Bsn. *fff* *fp* *fp*

Hn. *fff* *ff* *fff*

Tpt. *fff* *ff* *fff* *fff* *f*

Tbn. *fff* *fp* *fp* *fp* *fp*

Vib. *ff* *f* *fff* *fff* To Crotales

Pno. *fff* *f* *fff* *sffz*

Tempo III
♩ = 53-54

T

Vln. I *fff* *fp* *fp*

Vln. II *fff* *fp* *fp* *fp*

Vla. *fff* *sffz* *f*

Vc. *fff* *sffz* *f*

Db. *fff*

220

Fl. *fp* *ff* *fff* *ffff* flz.

Ob. *ff* *fff* *ffff*

Cl. *ff* *fff* *ffff*

Bsn. *fp* *fff*

Hn. *fff*

Tpt. *fff*

Tbn. *fff*

Vib.

Pno.

Vln. I *fp* *ff* *fff furioso* *pp still*

Vln. II *ff* *fff furioso* *fffz*

Vla. *ff* *fff furioso* *fffz*

Vc. *ff* *fff furioso* *fffz*

Db.

U

222

Fl.

Ob.

Cl.

Bsn.

Hn.

Tpt.

Tbn.

Vib.

Pno.

U

Vln. I

Vln. II

Vla.

Vc.

Db.

225

Fl. *molto vib.*

Ob. *pp* *mp* *p*

Cl. *pp still*

Bsn.

Hn. *p*

Tpt.

Tbn.

Vib. *p* *pp*

Pno. *p* *pp*

sost. Ped. *Ped.*

Vln. I *mp* *p* *pp* *ppp* *pp* *p espress.* *3* *mp*

Vln. II *mp* *p* *pp* *pp* *p*

Vla. *pp* *p*

Vc. *pp* *p*

Db.

Fl.

Ob. *mf* > *p*

Cl. *mp* *3* *p* *mf*

Bsn. *mf* > *p*

Hn. *mp* *p* *mf* *p* *3* *mf*

Tpt. *mf* > *p*

Tbn. *mf* > *p*

Crot.

Pno.

Vln. I *p* *3* *mf* > *p*

Vln. II *mf* > *p*

Vla. *pp* *mf* > *p*

Vc. *mf* > *p*

Db. *f* > *p*

Musical score for page 229, featuring woodwinds, strings, and a horn. The score is divided into two systems. The first system includes Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), Bassoon (Bsn.), Horn (Hn.), Trumpet (Tpt.), and Trombone (Tbn.). The second system includes Crotchet (Crot.), Piano (Pno.), Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Double Bass (Db.).

Woodwind parts (Fl., Ob., Cl., Bsn.) play a melodic line starting with a half note, followed by a quarter note, and then a quarter rest. Dynamics range from *mf* to *pp*.

The Horn (Hn.) part has a more complex line, starting with a half note, followed by a quarter note, a quarter rest, and then a quarter note. It features a triplet of eighth notes and a dynamic of *mp*.

String parts (Vln. I, Vln. II, Vla., Vc., Db.) play a simple melodic line starting with a half note, followed by a quarter note, and then a quarter rest. Dynamics range from *mf* to *pp*.

Crotchet (Crot.) and Piano (Pno.) parts are silent throughout the page.

Fl.

Ob.

Cl.

Bsn.

Hn. *pp* *p* *mp*

Tpt.

Tbn.

Crot.

Pno.

Vln. I *ppp* *p*

Vln. II *ppp* *p*

Vla. *ppp* *p*

Vc. *ppp* *p*

Db. *ppp* *p*

This musical score page, numbered 233, is set in 4/4 time. It features the following instruments and parts:

- Flute (Fl.):** Enters in the second measure with a melodic line starting on a half rest, marked *mp*.
- Oboe (Ob.):** Enters in the second measure with a melodic line starting on a half rest, marked *mp*.
- Clarinet (Cl.):** Enters in the second measure with a melodic line starting on a half rest, marked *mp*.
- Bassoon (Bsn.):** Enters in the second measure with a melodic line starting on a half rest, marked *p* and *mp*.
- Horn (Hn.):** Plays a melodic line starting on a half rest, marked *p*, *mp*, and *mf* with a triplet in the final measure.
- Trumpet (Tpt.):** Remains silent throughout the page.
- Tuba (Tbn.):** Remains silent throughout the page.
- Cymbal (Crot.):** Enters in the second measure with a rhythmic pattern, marked *mf* and *f* with a triplet in the final measure.
- Piano (Pno.):** Enters in the second measure with a complex rhythmic pattern, marked *f*, featuring a quintuplet (5) and a sextuplet (6) in the final measure.
- Violin I (Vln. I):** Plays a melodic line starting on a half rest, marked *pp*, *p*, and *mp*.
- Violin II (Vln. II):** Plays a melodic line starting on a half rest, marked *pp* and *mp*.
- Viola (Vla.):** Labeled "SOLO", plays a melodic line starting on a half rest, marked *pp*, *f*, *fp*, and *ff*.
- Violoncello (Vc.):** Plays a melodic line starting on a half rest, marked *pp*, *p*, and *mp*.
- Double Bass (Db.):** Plays a melodic line starting on a half rest, marked *pp*, *p*, and *mp*.

Piccolo

235

Musical score for Piccolo and other instruments, measures 235-237. The score is written in 4/4 time and features a key signature of one flat (B-flat). The instruments and their parts are:

- Fl.** (Flute): Starts with a *mf* dynamic, then a *f* dynamic with a trill and a five-note scale.
- Ob.** (Oboe): Starts with a *mf* dynamic, then a *f* dynamic, and finally a *ff* dynamic with a five-note scale.
- Cl.** (Clarinet): Starts with a *mf* dynamic, then a *f* dynamic, and finally a *ff* dynamic with a five-note scale.
- Bsn.** (Bassoon): Remains silent throughout the measures.
- Hn.** (Horn): Starts with a *f* dynamic, then a *ff* dynamic with a trill and a five-note scale.
- Tpt.** (Trumpet): Remains silent throughout the measures.
- Tbn.** (Tuba): Remains silent throughout the measures.
- Crot.** (Cymbal): Starts with a *f* dynamic, then a *ff* dynamic with a trill and a five-note scale.
- Pno.** (Piano): Starts with a *ff* dynamic, then a *ff* dynamic with a trill and a five-note scale.
- Vln. I** (Violin I): Starts with a *mf* dynamic, then a *f* dynamic, and finally a *ff* dynamic with a five-note scale.
- Vln. II** (Violin II): Starts with a *mf* dynamic, then a *f* dynamic, and finally a *fff* dynamic with a five-note scale.
- Vla.** (Viola): Starts with a *mf* dynamic, then a *f* dynamic, and finally a *ff* dynamic with a five-note scale.
- Vc.** (Violoncello): Starts with a *mf* dynamic, then a *f* dynamic, and finally a *fff* dynamic with a five-note scale.
- Db.** (Double Bass): Remains silent throughout the measures.

The score includes various dynamics (*mf*, *f*, *ff*, *fff*) and articulations (trills, slurs, accents). The Piccolo part is marked with a *f* dynamic and a five-note scale. The Crot. part is marked with a *f* dynamic and a five-note scale. The Pno. part is marked with a *ff* dynamic and a five-note scale. The Vln. I and Vln. II parts are marked with a *mf* dynamic, then a *f* dynamic, and finally a *ff* or *fff* dynamic with a five-note scale. The Vla. part is marked with a *mf* dynamic, then a *f* dynamic, and finally a *ff* dynamic with a five-note scale. The Vc. part is marked with a *mf* dynamic, then a *f* dynamic, and finally a *fff* dynamic with a five-note scale.

V

Tempo IV ♩ = 120

237

Picc. *ff*

Ob. *ff*

Cl. *ff*

Bsn.

Hn.

Tpt.

Tbn.

Crot.

Pno. *fff*

15^{ma}

8^{va}

V

Tempo IV ♩ = 120

Vln. I *ff* pizz.

Vln. II *ff* pizz.

Vla. *sfz* pizz. *f*

Vc. *sfz* pizz.

Db. *sfz* pizz.

Musical score for measures 239-240. The score is in 4/4 time and features the following instruments:

- Picc.**: Piccolo, playing a melodic line with triplets in measures 239 and 240.
- Ob.**: Oboe, playing a melodic line with triplets in measures 239 and 240.
- Cl.**: Clarinet, playing a melodic line with triplets in measures 239 and 240.
- Bsn.**: Bassoon, playing a melodic line with triplets in measures 239 and 240.
- Hn.**: Horns, playing a sustained chord.
- Tpt.**: Trumpets, playing a sustained chord.
- Tbn.**: Trombones, playing a sustained chord.
- Crot.**: Cymbals, playing a sustained chord.
- Pno.**: Piano, playing a complex rhythmic pattern with triplets in measures 239 and 240.
- Vln. I**: Violin I, playing a melodic line with triplets in measures 239 and 240.
- Vln. II**: Violin II, playing a melodic line with triplets in measures 239 and 240.
- Vla.**: Viola, playing a melodic line with triplets in measures 239 and 240.
- Vc.**: Violoncello, playing a melodic line with triplets in measures 239 and 240.
- Db.**: Double Bass, playing a melodic line with triplets in measures 239 and 240.

241

W

Picc. *fp*

Ob. *fp*

Cl. *fp*

Bsn. *fp*

Hn. *ff*

Tpt.

Tbn. *fp*

Crot. *ff*

Pno. *ff*

Vibraphone *ff*

Vln. I *arco*

Vln. II *arco*

Vla. *arco* *fp*

Vc. *arco* *fp*

Db.

Musical score for measures 243-245, featuring Piccolo, Oboe, Clarinet, Bassoon, Horn, Trumpet, Trombone, Vibraphone, Piano, Violin I, Violin II, Viola, Violoncello, and Double Bass. The score includes dynamic markings such as *fp*, *ff*, *p*, and *f*, and articulation like accents and slurs. Trill ornaments are present in the Piccolo, Oboe, Clarinet, Bassoon, Horn, Violin I, Violin II, Viola, and Violoncello parts. The Piano part features complex chordal textures with trills. The Double Bass part is silent in these measures.

This musical score page contains two measures of music for a large ensemble. The instruments are arranged in the following order from top to bottom: Piccolo (Picc.), Oboe (Ob.), Clarinet (Cl.), Bassoon (Bsn.), Horn (Hn.), Trumpet (Tpt.), Trombone (Tbn.), Vibraphone (Vib.), Piano (Pno.), Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Double Bass (Db.).

The score is written in 3/4 time. The key signature has one sharp (F#). The first measure (measure 245) features a woodwind section with Piccolo, Oboe, Clarinet, and Bassoon playing a melodic line with a triplet of eighth notes. The Horns play a triplet of eighth notes, and the Trumpets and Trombones play a melodic line with a crescendo from piano to forte. The Piano and Vibraphone have rests. The Violins and Violas play a melodic line with a crescendo from piano to forte. The Double Bass has a rest.

The second measure (measure 246) continues the melodic lines. The Piccolo, Oboe, Clarinet, and Bassoon play a melodic line with a triplet of eighth notes. The Horns play a melodic line with a crescendo from piano to forte. The Trumpets and Trombones play a melodic line with a crescendo from piano to forte. The Piano and Vibraphone have rests. The Violins and Violas play a melodic line with a crescendo from piano to forte. The Double Bass has a rest.

Dynamic markings include *fp* (fortissimo piano), *f* (forte), *p* (piano), and *sfz* (sforzando). Performance instructions include accents (>) and slurs.

This musical score page, numbered 247, is arranged in a standard orchestral format. It features the following instruments and parts:

- Picc.** (Piccolo): Treble clef, 2/4 time. Dynamics include *f*, *ff*, and *f*. Includes a triplet of eighth notes.
- Ob.** (Oboe): Treble clef, 2/4 time. Dynamics include *fp*, *ff*, and *fp*. Includes a triplet of eighth notes.
- Cl.** (Clarinet): Treble clef, 2/4 time. Dynamics include *fp*, *ff*, and *fp*. Includes a triplet of eighth notes.
- Bsn.** (Bassoon): Bass clef, 2/4 time. Dynamics include *fp* and *fp*.
- Hn.** (Horn): Treble clef, 2/4 time. Dynamics include *f* and *ff*. Includes a triplet of eighth notes.
- Tpt.** (Trumpet): Treble clef, 2/4 time. Dynamics include *f* and *ff*. Includes a triplet of eighth notes.
- Tbn.** (Trombone): Bass clef, 2/4 time. Dynamics include *fp*.
- Vib.** (Vibraphone): Treble clef, 2/4 time. Includes a triplet of eighth notes.
- Pno.** (Piano): Treble clef, 2/4 time. Includes a triplet of eighth notes.
- Vln. I** (Violin I): Treble clef, 2/4 time. Dynamics include *fp*, *ff*, and *fp*. Includes a triplet of eighth notes.
- Vln. II** (Violin II): Treble clef, 2/4 time. Dynamics include *fp*, *ff*, and *fp*. Includes a triplet of eighth notes.
- Vla.** (Viola): Bass clef, 2/4 time. Dynamics include *fp* and *fp*. Includes a triplet of eighth notes.
- Vc.** (Violoncello): Bass clef, 2/4 time. Dynamics include *fp* and *fp*. Includes a triplet of eighth notes.
- Db.** (Double Bass): Bass clef, 2/4 time. Part is mostly silent.

Picc. *ff* *f* *fff*

Ob. *ff* *fp* *fff*

Cl. *ff* *fp* *fff*

Bsn. *ff* *fff*

Hrn. *f* *fff*

Tpt. *f* *fff*

Tbn. -

Vib. *pp* *f* To Whip

Pno. *pp* *ff*

Vln. I *ff* *fp* *fff*

Vln. II *ff* *fp* *fff*

Vla. *ff* *fp* *fff*

Vc. *ff* *fp* *fff*

Db. -

251 **X**

Picc. Musical notation for Piccolo, starting with a treble clef and a 3/8 time signature. It features a series of eighth notes with accents, followed by a change in key signature and time signature.

Ob. Musical notation for Oboe, starting with a treble clef and a 3/8 time signature. It features a series of eighth notes with accents, followed by a change in key signature and time signature.

Cl. Musical notation for Clarinet, starting with a treble clef and a 3/8 time signature. It features a series of eighth notes with accents, followed by a change in key signature and time signature.

Bsn. Musical notation for Bassoon, starting with a bass clef and a 3/8 time signature. It features a series of eighth notes with accents, followed by a change in key signature and time signature. A *fff* dynamic marking is present.

Hn. Musical notation for Horn, starting with a treble clef and a 3/8 time signature. It features a series of eighth notes with accents, followed by a change in key signature and time signature.

Tpt. Musical notation for Trumpet, starting with a treble clef and a 3/8 time signature. It features a series of eighth notes with accents, followed by a change in key signature and time signature.

Tbn. Musical notation for Trombone, starting with a bass clef and a 3/8 time signature. It features a series of eighth notes with accents, followed by a change in key signature and time signature.

Vib. Musical notation for Vibraphone, starting with a treble clef and a 3/8 time signature. It features a series of eighth notes with accents, followed by a change in key signature and time signature. A *ff* dynamic marking and the word "Whip" are present.

Pno. Musical notation for Piano, starting with a grand staff and a 3/8 time signature. It features a series of eighth notes with accents, followed by a change in key signature and time signature.

Vln. I Musical notation for Violin I, starting with a treble clef and a 3/8 time signature. It features a series of eighth notes with accents, followed by a change in key signature and time signature. A **X** marking is present.

Vln. II Musical notation for Violin II, starting with a treble clef and a 3/8 time signature. It features a series of eighth notes with accents, followed by a change in key signature and time signature.

Vla. Musical notation for Viola, starting with an alto clef and a 3/8 time signature. It features a series of eighth notes with accents, followed by a change in key signature and time signature.

Vc. Musical notation for Violoncello, starting with a bass clef and a 3/8 time signature. It features a series of eighth notes with accents, followed by a change in key signature and time signature.

Db. Musical notation for Double Bass, starting with a bass clef and a 3/8 time signature. It features a series of eighth notes with accents, followed by a change in key signature and time signature.

255 Y

Picc. *f* *pp*

Ob. *ff* *fff* *pp*

Cl. *ff* *fff*

Bsn. *ffz* *mf*

Hn. *ffz* *p*

Tpt. *ffz*

Tbn. *ffz* *p*

Whip

Pno. *p*

Vln. I *ff* *fff* *pp*

Vln. II *ff* *fff* *pp*

Vla.

Vc. *pizz.* *mf*

Db. *mf*

259

Picc. *sfz*

Ob. *sfz*

Cl. *mf* *sfz*

Bsn. *ff* *ffff*

Hn. *fff* *ffff*

Tpt.

Tbn. *fff* *fff*

Vibraphone *mf* *f* sec.

Pno. *fff* *ffff*

Vln. I *sfz*

Vln. II *sfz*

Vla.

Vc. *ff* *fff*

Db. *ff* *fff*