

A portfolio of original compositions and exegesis submitted to the New Zealand School of Music in partial fulfilment of the requirements for the degree of a Master of Musical Arts in Composition.

The analysis of the propagation of energy in long-form structures and the development of texture in selected works by God Speed You! Black Emperor!, and Explosions in the Sky.

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May the next Paton roadie begin... Whatever that may be.

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May I see you all soon, to fill the gap of the last fourteen months.

Happy Days...

Abstract

This exegesis examines the propagation of energy in long-form structures and the development of texture in selected works by God Speed You! Black Emperor, and Explosions in the Sky and develops a methodology to cope with the stylistic traits of post-rock music. Music technology will be a key component in the conception, evolution, production and consumption of this project. The work done towards this Masters of Musical Arts will comprise an extended portfolio of technology-assisted compositions, as well as an accompanying analytical exegesis of the works that inspire them.

Chapter One: Introduction

This exegesis concerns the development and propagation of energy in the long-form structures of selected works by post-rock ensembles Explosions in the Sky and Godspeed You! Black Emperor! The objective of this research is to illuminate the methods of construction of long-duration trajectories in these examples and to then use these analyses to inform the creative process of a portfolio of original compositions.

I was drawn to these two ensembles by their ability to create and sustain energy through slowly evolving structures that show some indebtedness to the large-scale works of the symphonic canon, yet with an ensemble more associated with that of traditional rock. Godspeed You! Black Emperor! use a more ‘extended’ ensemble from than that of traditional rock, in that they incorporate strings, fixed-media audio and live visual backing.

When I first encountered these works, I was impressed by the way in which the ensembles created such a strong emotional experience and maintained my interest over long passages of time, even though their use of tonality was conventional and their orchestrational approaches were relatively limited. The answer appeared to be in the sophistication of the various textures that built up over time, the use of rhythm, and a relationship between the smallest subdivision of the bar versus the perceived subdivision of the bar. These characteristics are some of the defining features of post-rock, and will be further explored in Chapter Two.

One of the greatest difficulties in analysing post-rock is the absence of a score. As the music itself is not normally transcribed, this makes the question not just of ‘how’ to analyse but also ‘what’ to analyse more problematic. While a few established analytical methods concern music that lacks a score, most assume the presence of functional tonality or other stylistic conventions of the common-practice period. Some methods, however, take a broader view of musical materials and processes, and I devised some of my analytical frameworks around these. The methods that I have

employed place a great emphasis on the role of texture, rhythmic density and register in the creation of the musical form. Through the use of select analytical methods, I have developed a framework that captures the essential elements of long-term form in selected tracks from *Explosions in the Sky* and *Godspeed You! Black Emperor!*

The findings from my research directly influenced and informed the creation of the technology-assisted creative portfolio, as well as the experiences gained from being a music production assistant on an extended work by John Psathas, titled '*No Man's Land*' during the writing of this thesis. I was closely involved in production phases of the work, which gave me the opportunity to develop my own skills and gain knowledge about how to develop musical energy over time, as well as add emotional expression.

The creative portfolio is presented as a technology-assisted album. The term 'technology-assisted' means that computerised interfaces have aided the compositional process. For example, the portfolio has been largely created using a Digital Audio Workstation (DAW), with the use of some recorded performances, but the majority of the material comes from sound libraries and samples from sources such as East West Libraries and Native Instruments.

Chapter Two: Background

2.1 Post-rock

Post-rock music aspires to classification by non-classification. As James A. Hodgkinson contends, “The type of music generalised as post-rock is extremely hard to define, precisely because it attempts to escape mere classification by genre and because it does not represent any subculture”¹. Hodgkinson goes on to say that “the term post-rock was coined as a catch-all for expiatory music said to be going ‘beyond the limitations of rock’². While post-rock music utilises conventional rock instrumentation (guitar, bass, drums), this undertakes different roles timbrally and texturally than in conventional rock music. For instance, music by post-rock ensembles are noted for being almost completely instrumental³ (often entirely absent of vocals) and therefore more weight is placed on the role of timbral and textural development. Exceptions to this include bands such as Sigur Ros and Mogwai, who do utilise vocals in their repertoire.

Post-rock music can also be characterised as possessing an unconventional use of trajectory, melody and rhythm. Trajectory alludes to the way that musical parameters such as dynamics, tempo, and register are gradually altered during the course of a piece, often culminating at a climactic moment in the piece. Usually the trajectory of a section will contribute to the trajectory of the overall piece, and this, more often than not, will characterise the way that a piece develops towards a final climax. In post-rock music, trajectories take more time to unfold than in traditional rock music, often over a number of minutes and as a result, the way that texture is utilised differs from that of song form and takes on a structure more akin to that of the symphony. The development of melody in post-rock music, and the differing uses of melody between Godspeed

¹ Music Scenes, Local, Translocal and Virtual. *The Fanzine Discourse over Post-rock*. James A. Hodgkinson (2004). Nashville : Vanderbilt University Press. p.235.

² Ibid.

³ Ibid.

You! Black Emperor! and Explosions in the Sky, are also worth noting. Explosions in the Sky create and move through many different melodic ideas, while Godspeed You! Black Emperor! who use fewer melodies throughout their work.

Rhythm is one of the most utilised stylistic aspects of post-rock music, with formal trajectories often being defined by the density at which the rhythmic elements “progress and recess”⁴ throughout the piece. The relationship between the largest subdivisions of a bar to the smallest subdivisions is an important function to be aware of in post-rock music and can be heard in the first entry of the snare at 1:55 in ‘First Breath After Coma’, where a minim pulse from the bass guitar and bass drum is prominent, yet demisemiquavers in the snare drum part provides the smallest subdivisional unit. (Fig.2.1.1)



Fig.2.1.1. Snare entry at 1:55 in ‘First Breath After Coma’.

In regards to the role of the drums in post-rock music, there is a tendency to avoid the usual rock pattern of kick drum on beats one and three, and snare drums on two and four. The choice is often made to opt for a consistent beat or pattern rather than something more dynamically variable line, such as in the cymbal washes from ‘First Breath After Coma’. The rhythmic consistency of Explosions in the Sky allows the ‘groove’ of their pieces to provide the energy, while remaining separate from the melody. This combination of two independent parts working together, and eventually having that energy transferred to other instruments, is one of the compositional traits of Explosions in the Sky.

⁴ Berry, W. (1987). *Structural Functions in Music*: Courier Corporation, p.186

Post-rock music tends to subvert standard rock forms and structures. For example, rather than use simple episodic forms comprising discrete sections such as verses, choruses and bridges, post-rock music tends to be built on more fluid structures with a clear indebtedness to the large-scale organic forms of the Western classical repertoire. It could be argued that post-rock ensembles sit between a traditional rock approach and that of orchestral symphonic music; indeed, Explosions in the Sky even label their works ‘cathartic mini-symphonies’⁵. This is achieved through a musical form that expands over longer timeframes than in conventional pop-rock songs, especially in regards to the process of harmonic and melodic development. In particular, in the works of Godspeed You! Black Emperor!, the economy of materials is extremely high, with some melodic fragments being used for a length of time that could contain multiple pop or rock songs. To compensate for the *ritardando* and lack of harmonic and motivic development, texture plays a more dominant role. The role of texture and timbre as a structural parameter in post-rock music is the focus of this exegesis, as they are key parameters in the propagation and control of musical energy in this genre.

⁵ The Paper Chase (March 17, 2007). "NPR Music". <http://www.npr.org/2007/03/17/8073247/explosions-in-the-sky-in-concert>. March 17 2007.

2.2 Godspeed You! Black Emperor⁶

Godspeed You! Black Emperor! released their debut album, *F#A#∞*, in 1997⁷. Formed by guitarist Efrim Menuck, who has at times been considered the group's leader, the group regularly changes personnel⁸ hailing from Montreal, Canada, and operating from music labels such as Constellation and Kranky, they quickly gained an enthusiastic fan base and became internationally prominent. Their aesthetic is a fusion of minimalism, found sound and metal-inflected noise, with a core group of six musicians, travelling with a further two, and have had eight other members come and go from the group. The group has released three studio albums and had toured regularly until the group disbanded in 2002. In 2012 they reformed and released the album *Allelujah! Don't Bend! Ascend!*⁹, their first album in ten years. Godspeed You! Black Emperor! also have an extended range of instrumentation, which, in addition to the standard lineup of guitar, bass and drums (including the use of effects such as reverb, delay, chorus to name a few), includes fixed-media audio, keyboards, violin, double bass, french horn, accordion, cello, bagpipes and even film projections. For these reasons, the group has sonic qualities that are very diverse and at times this caused issues for conventional analytical methodologies that assume a focused pitch reference, as will be discussed later.

⁶ Allelujah! Don't Bend! Ascend!, Youtube. <https://www.youtube.com/watch?v=CRIJuGgFkl4>. Retrieved 9 March 2015

⁷ Constellation Records. "F# A# ∞ release information". Releases. Constellation Records. Retrieved 2009-02-14.

⁸ Pitchfork. (October 2012) <http://pitchfork.com/reviews/albums/17283-allelujah-dont-bend-ascend/>. Retrieved 03/11/15.

⁹ "'Allelujah! Don't Bend! Ascend!'" at Discogs". Discogs. Discogs. Retrieved 9 March 2015.

2.3 Explosions in the Sky¹⁰

Explosions in the Sky are an American post-rock band from Texas. Despite being labelled as ‘post-rock’, and displaying many stylistic traits of post-rock music, they still consider themselves “to be a rock band”¹¹. Comprising four members, the group changed their name to *Explosions in the Sky* in 1999. They refer to their shows and their music as “cathartic mini-symphonies,”¹² and primarily play with three electric guitars and a drum kit, with one band member at times swapping between his electric guitar and a bass guitar. They recently added a fifth member to the band, and, like *Godspeed You! Black Emperor!*, their music is entirely instrumental.

The album *The Earth is Not a Cold Dead Place* contains the two tracks that are analysed in this exegesis, ‘First Breath After Coma’ and ‘The Only Moment We Were Alone’, the first and second tracks off the album respectively. These two tracks in particular demonstrate the way in which rhythm and texture are controlled in such a way that they build towards the maximum impact at the moment of the final climax at 8:30 in ‘The Only Moment We Were Alone’, creating a sustained moment of musical intensity. These selected tracks by Godspeed You! Black Emperor! and Explosions in the Sky form the focus of the analysis chapter, as exemplars of the large-scale, trajectory-based compositional approaches that characterise post-rock music.

¹⁰ The Earth Is Not a Cold Dead Place, Youtube, <https://www.youtube.com/watch?v=Ziw4yd5R0QI>. Retrieved 9 March 2015

¹¹ Juliet Eilperin (September 25, 2006). "Out of Texas, a Wordless Wonder". The Washington Post. Retrieved June 28, 2007.

¹² The Paper Chase (March 17, 2007). "NPR Music". <http://www.npr.org/2007/03/17/8073247/explosions-in-the-sky-in-concert>. March 17 2007.

Chapter Three: Methodology

In analysing the chosen works, the lack of appropriate analytical methodologies was revealed. The absence of a publicly available score for the tracks meant that the musical elements had to be ascertained using aural transcription. I also used various computer-based analysis algorithms to assist in analysing the energy trajectories of the original sound-file. In searching for appropriate analytical methodologies, I looked for analysts who had approached a range of musical parameters across a variety of different genres, and did not assume the presence of common-practice functional tonality. In the end, I settled on the following three texts as a starting point for my analytical methodology; *Structural Functions in Music*¹³ by Wallace Berry, *The Music of Debussy*¹⁴ by Richard Parks, and a brief use of *Spectromorphology: explaining sound-shapes*¹⁵ by Denis Smalley. Both Parks and Berry take very similar views on the use of rhythm, texture and tempo in the formation of structural processes, outlining the ‘progression’ and ‘recession’ of texture, as well as an expanded array of terminology relevant to the subject of post-rock analysis.

I was particularly interested in analysis that dealt with textural density as a primary parameter, Berry describes the functional aspects of density: thus:

Density may be seen as the quantitative aspect of texture—the number of concurrent events (the thickness of the fabric) as well as the degree of “compression” of events within a given intervallic space. There is a vital relation between density and dissonance; the relative intensity of a highly compressed textural complex (say, three components within the range of a minor third) is a product of the severity of dissonance as well as of density¹⁶.

¹³ Berry, W. (1987). *Structural Functions in Music*: Courier Corporation.

¹⁴ Parks, R. (1989). *The Music Of Claude Debussy*: Yale University Press, 1989.

¹⁵ Smalley, D. (1997). *Spectromorphology: explaining sound-shapes*. *Organised Sound*, 2, p.107-26.

¹⁶ Berry, W. (1987). *Structural Functions in Music*: Courier Corporation. p.184

I measured and interpreted multiple parameters in order to ascertain the degree to which each parameter was affecting the final outcome. These parameters included: texture¹⁷, attack activity¹⁸, tempo, registral spread, dynamics, melodic content, repetition, orchestration. Having chosen two tracks from Explosions in the Sky and one longer piece from Godspeed You! Black Emperor!, the methods for quantifying these parameters involved software assistance, graphing, and aural transcription. All parameters were measured across the entirety of each piece to provide information to compare, contrast, and deduce patterns and regularities in the long-form structure of the selected works.

As a part of the analytical process, I also transcribed various hierarchical levels of harmonic progression and rhythmic development. There are at times fully transcribed and notated passages are provided. In the works of Godspeed You! Black Emperor!, in particular, the musical material at times approached the kind of sonic dimensions of electroacoustic music, whereas with Explosions in the Sky, I was more able to faithfully transcribe the sonic fabric of the work using standard Western notation. For the former, my methods were also based on some of the concepts and principles of electroacoustic music analysis found in Smalley¹⁹ and Roy.²⁰

¹⁷ Berry, W. (1987). *Structural Functions in Music*: Courier Corporation. p.184

¹⁸ Parks, R. (1989). *The Music Of Claude Debussy*: Yale University Press, 1989. p.205

¹⁹ Smalley, D. (1997). Spectromorphology: explaining sound-shapes. *Organised Sound*, 2, p.107.

²⁰ Roy, S. (1998). Functional and implicative analysis of Ombres blanches. *Journal of New Music Research*, 165-84.

3.1 Structural Functions in Music

In *Structural Functions in Music*, Wallace Berry analyses the relationship between the changes in musical parameters and how that translates into the experience that one has when listening to music.

As Berry puts it;

Outside of the simplest genres, it is unlikely that we ever attain full understanding of a particular musical experience, so complex are its elements, their actions, and interactions. This book seeks to move towards a better understanding of structure and experience; it does so in systematic exploration of the elements of structure and the important interrelations, laying out a variety of approaches to the analysis of the directed successions of events involving tonality, melody, harmony, texture, and rhythm - each of these treated throughout much its range of potential operations²¹.

Berry's idea of progressive action (Fig.3.1.1)²² can be found in many different compositional elements of the tracks by Explosions in the Sky and Godspeed You! Black Emperor!. The typical formal progression from minimal textural density to maximal textural density, as well as minimal complexity to maximal complexity²³ are the focus of this exegesis.

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Fig. 0-1. <i>Some premises respecting intensity values within the spectrum of qualities pertaining to each of certain fundamental elements of musical structure.</i>		
Element	Progressive action: 	
<i>Melody</i> , a line of contiguous pitches	<i>Up</i> ; leap expecting closure, especially when dissonant; instability of tonal or other felt tendency	
<i>Harmony</i> , the line of harmonic succession	<i>Away from tonic</i> ; dissonant; inverted; complex forms; chromatic (deviation from primary diatonic resource)	
<i>Tonality</i> , the line of tonal reference	<i>Away from primary system</i> , in relation to tonal "distance" and assuming referential adherence of primary I; chromatic succession and expansion	
<i>Meter</i> , the succession of accent-delineated units	<i>Toward shorter units</i> ; asymmetry and fluctuation; clarity of more frequent accent (acceleration); toward instability, departure from relational unit norm	
<i>Tempo</i> , or rhythmic "pace"	<i>Acceleration</i> in rate of occurrence at given level	
<i>Texture</i> , the line of changes in numbers and interactions of components	<i>Greater interlinear diversity</i> and conflict; increased density; wider spatial field	
<i>Timbre</i> , events involving coloration, dynamic level, registrational change, articulation	<i>Increased sonorous weight and penetration</i> (strings  woodwinds  brass?); louder; higher registers—sharper "focus" of intense color; more percussive, stressed articulation	

Fig.3.1.1. Berry's table regarding Progressive action the opposite of these actions would define recessive action.

²¹ Berry, W. (1987). *Structural Functions in Music*: Courier Corporation. p.386

²² Berry, W. (1987). *Structural Functions in Music*: Courier Corporation. p.11

²³ Berry, W. (1987). *Structural Functions in Music*: Courier Corporation. p.185

Berry lays out these categories for the following musical processes: progressive, recessive or static;²⁴

- *Progressive*: Material becomes more: dense; loud; expansive; and fast.
- *Recessive*: Material becomes more: spacious; quiet; minimal; and slow.
- *Static*: Material will occupy one pitch only, and no parameters will vary.

These processes can be articulated by any of the following parameters:

- *Tonality*: a move from one tonal centre to another, or the introduction of new pitch-classes.
- *Melody*: The shape of a phrase and the choice of notes in an arc will allow more change to take place depending on the severity of the action.
- *Harmony*: Very closely related to tonality, but regards the relationship of each harmonic change in context with the events either side of it rather than the melodic direction that tonality will look at; range, dynamics, and orchestration choices are taken into large consideration when talking towards texture.

Rhythmic density is articulated through the density of attack points, relating to texture in regard to the way that instrumentation and dynamics help shape the pieces. In *Explosions in the Sky*, this is particularly heard in the relationship between the drum kit and the other players and the changing of rhythmic subdivisions, while in *Godspeed You! Black Emperor!* the use of ‘non-percussive’ instruments combined with the use of extended techniques such as delay, helps create more rhythmic subdivisions before the introduction of a drum kit.

Berry argues that rhythm is central to the perception of musical process. While acknowledging that the perception of rhythm is very subjective (as is any function of music) he states that “all element processes are rhythmic. In an important sense, the study of rhythm is thus the study of all musical elements, the actions of those elements producing the effects of pace,

²⁴ Berry, W. (1987). *Structural Functions in Music*: Courier Corporation. p.86, 307.

pattern, and grouping which constitute rhythm...it [rhythm] is a vital basis of construction and interpretation of phrasing and articulation”.²⁵

Berry decomposes rhythm into a network of rhythmic sub-parameters, as shown in Fig.3-1²⁶ below.

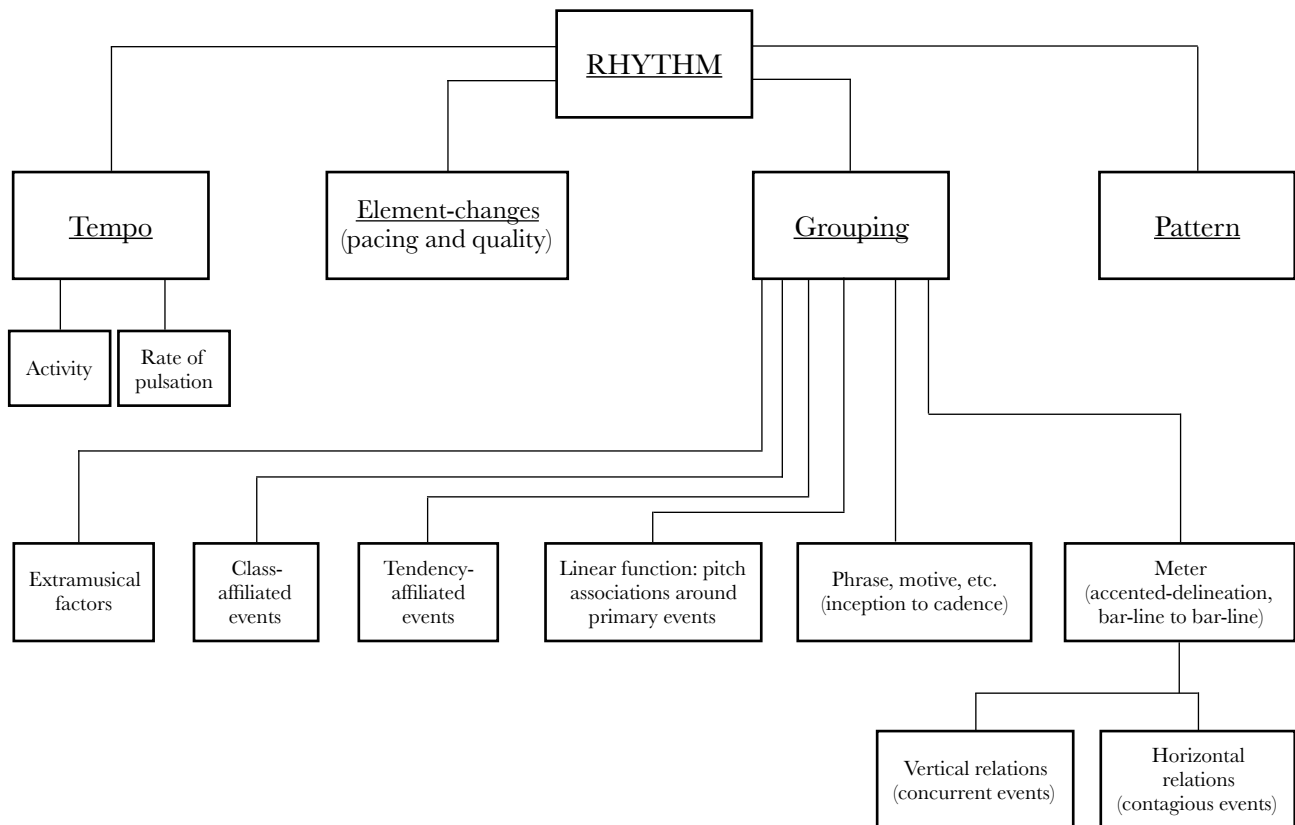


Fig 3-1

The diagram above created the framework for my vision of rhythm during my analysis. In particular, I was applying the four main sub-parameters of: tempo; element-changes; grouping; and pattern. The various elemental sub-groups of each sub-parameter are used to varying degrees, with more weight being placed on meter, phrase, motive, and pitch at primary events. What this meant for my analysis of rhythm was that it was much more in depth and different aspects could be accurately isolated and articulated in the analysis chapter.

²⁵ Berry, W. (1987). *Structural Functions in Music*: Courier Corporation. p.301.

²⁶ Berry, W. (1987). *Structural Functions in Music*: Courier Corporation. Fig 3-1, p.304.

3.2 Form-defining parameters

A similar to approach defining broad, abstract categories of formal process is taken in *The Music of Claude Debussy*, by Richard Parks. Parks outlines eleven different kinds of *form-defining parameters*: meter, tempo, successive-attack activity, sonorous density, harmonic resources, thematic/motivic resources, repetition, quality of texture, orchestration, register, and loudness. For the sake of this exegesis, I will focus three of these: tempo, rhythmic density, and dynamics, to act as the structural anchors for the works examined in the exegesis:

a) Tempo and metre, which Parks defines as “referring simply to notated bar-line meter²⁷, is also defined by the Oxford English Dictionary as “the speed at which a passage of music is or should be played.²⁸

b) Successive attack-activity/density, defined as the number of notes articulated in succession for a given durational unit which is one of the key parameters in the accumulation and propagation of musical energy. This encompasses the quality of rhythmic and harmonic texture and the way in which trajectories build over time. There will be a larger focus on rhythm due to the more static approach to harmony found in the music of Godspeed You! Black Emperor! and Explosions in the Sky.

c) Register and dynamics, in particular focusing on the transitional moments between sections and the resulting effect that has as a listener. The use of registral expansion and contraction, as well as crescendo and decrescendo, are common in the fashioning long-term trajectories.

By using these categories from Parks’ methods, we can break down the broader formal processes into their respective parts. This provides us with an analytical view that resembles a type of structural counterpoint. In particular, Parks, develops a number of approaches to visualising form that will be used in conjunction with that of the graphs from the Sonic Visualiser to better display

²⁷ Parks, R. (1989). *The Music Of Claude Debussy: Form and Proportion*. p.205.

²⁸ Oxford Dictionary. (2016). <http://www.oxforddictionaries.com/definition/english/tempo>. Retrieved 20/03/2016.

the findings in my own research. They allow a much clearer and more concise way of visualising the shapes and forms that will be discussed throughout the exegesis. The Sonic Visualiser was developed by the Centre for Digital Music, at the Queen Mary University of London. It provides a number of different ways to assess the wave forms and produce data that can aid the analytical process of various parameters.

3.3 Computer-aided Analysis

One analysis tool used is Logic Pro X's Beat Mapping plug-in, which allows the user to analyse tempo fluctuations in a metrical track. The beat-mapping process allowed me to accurately track tempo fluctuations at varying levels. This information could be exported as time versus beats per minute graphs, as seen in figure 3.2.2 (p.21). Once the audio file had been entered into the DAW, the obvious fluctuations in dynamics could be seen very easily. Limitations to this part of the process arose when considering how the waveforms were transformed as a standard part of the mixing and mastering process especially in the use of compression and limiting, which often disguises the true cumulative build-ups in energy. Because of this problem, I used a computer-assisted analysis algorithm in Sonic Visualiser to graph and visualise the average RMS energy and textural density of the pieces.

This analysis clearly visualises typical long-form trajectories of energy propagation in post-rock music, such as the ubiquitous quiet start and build-ups to a sustained high-point of energy at the end.

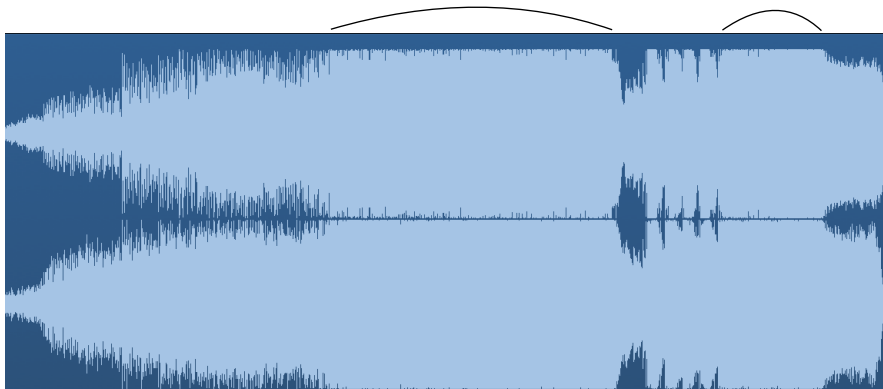
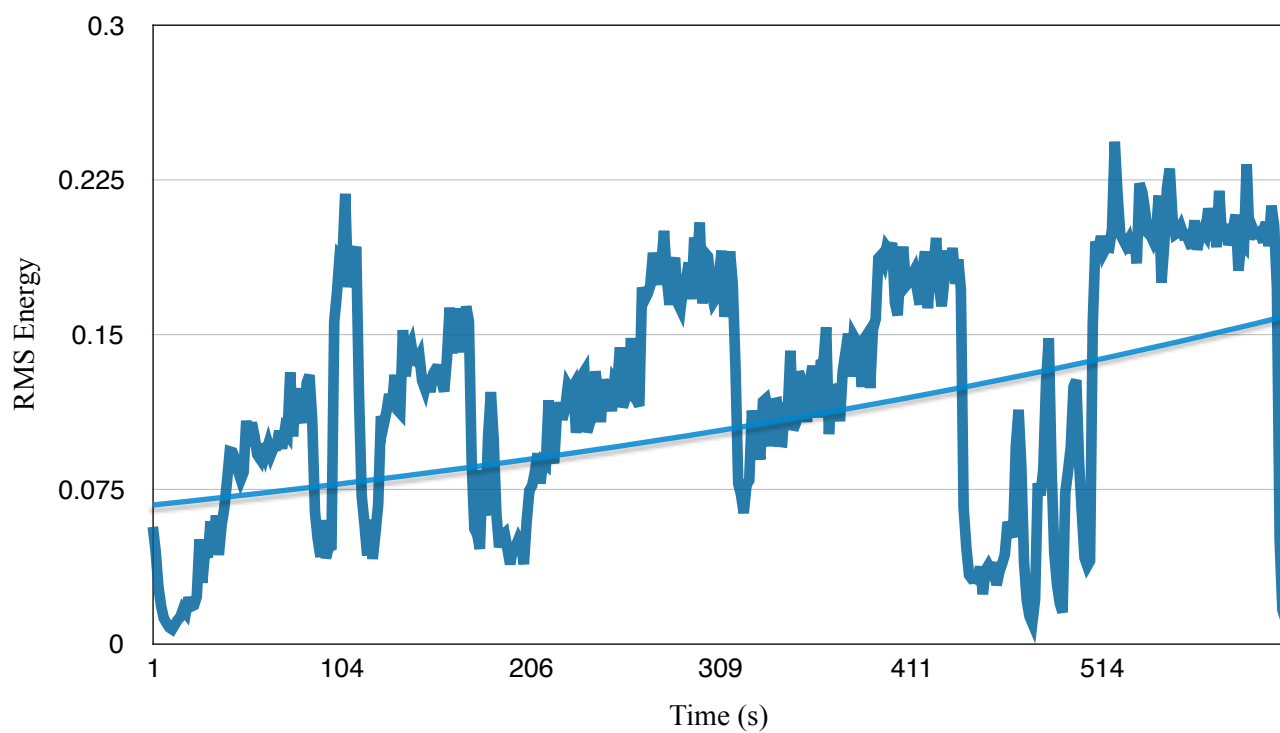


Fig.3.2.1. Example of compression and limiting in a waveform

Fig.3.2.2

RMS Energy vs Time Graph for Explosions in the Sky, 'The Only Moment We Were Alone'



Chapter Four: Analysis of the Works

4.1 Texture and Rhythm

The building blocks of attack activity and density can rely heavily on the instruments available. In the works of Godspeed You! Black Emperor! and Explosions in the Sky, the majority of the attack points come from the drums and other percussion. Instruments such as the kick drum and the snare drum are used in all three pieces as the driving force of the piece. The dynamic of the snare drum varies greatly. It can be played at any dynamic, from the almost inaudible to the very loud, and thus is one of the key instruments to the build up of timbral energy.

Each individual attack point of the snare drum can be accented and adjusted to fit the groove, once the piece establishes a clear semiquaver lattice that has been formed. (For example at 1:56 in 'First Breath After Coma'.) In 'First Breath After Coma' the accents are on the same part of the beat that the bass drum has been up until this point, being added in to help support it. The bass line also uses the same rhythmic stresses. The first big moment at 3:19 sees the aligning of the semi-quaver lattice from the rhythm section with the melodies, and this continues until 4:20, by which point the overall energy has been built up enough that the form demands that either the piece finishes or a changes direction. In 'The Only Moment We Were Alone', the emphasis is placed more on the syncopation of the opening melody, with the first instance of compound time in the album. The middle layer, however, is influenced by the opening fragment from 'First Breath After Coma', in the sense that it is a rhythmically charged, single-note melody that holds a steady quaver pulse, which establishes forward momentum. At 1:52, the shaker enters on a subtle semiquaver groove for the rest of the instruments to be fuelled by. Through this process of gradual accumulation of rhythmic energy, there is a concomitant culmination of tension through the harmonic, rhythmic and registral characteristics of the track.

The tension achieved through this relationship of the perceived subdivision has another facet to it, which is that it allows the group to maintain a relatively simple texture while shifting the

tempo. For example, in ‘We Drift Like Worried Fire’, a large-scale accelerando and crescendo forms the basic structural process of the piece, while the material within the orchestration is very consistent. Unlike the rapid melodic changes found in Explosions in the Sky, Godspeed You! Black Emperor! maximise the economy of the material used while deploying a larger ensemble of a more diverse range of instruments and sound.

The smallest subdivision of any piece of music will often be the one that contributes the most energy to the resulting sound, but only if it is articulated as a clear pulse-stream. Having said that, the perceived rhythmic density, may differ, particularly if it is not the smallest subdivision that is absent from the melody, resulting in a slower ‘groove’ and feel, albeit full of energy. The relationship between the smallest and the largest subdivision is one that always has a great influence on the way the music can take itself can progress, recess and regress onto a more subverted layer, but also the way that that energy can be transferred from one instrument to another can allow the instruments to gradually adopt the musical energy of one another until the texture is saturated, often a climactic points.

4.2 First Breath After Coma

The way that tempo, texture and thematic material are crafted is the cornerstone of the Explosions in the Sky tracks. In ‘First Breath After Coma’ melodic lines are used to steer the piece towards the climax on top of a layer of concentrated textural energy. The repetition of these lines, and the way they are transformed and gradually overlaid, allows the music to create a palpable sense of travelling. The groups’ relatively small instrumentation requires careful orchestration, resulting in an impressive sound from only a five-piece band. This is achieved by the way in which each instrument is given a role similar to that of a choir, in which parts occupy relatively separated registral spaces in order for each voice to be heard clearly, yet as an ensemble give the impression of mass.

This piece is divided into four broad sections;

- 1 - Introduction. (00:00 - 1:40).
- 2 - Rise to the First Plateau. (1:40 - 4:20).
- 3 - Lull and Build. (4:20 - 8:11).
- 4 - Climax. (8:11 - 9:34).

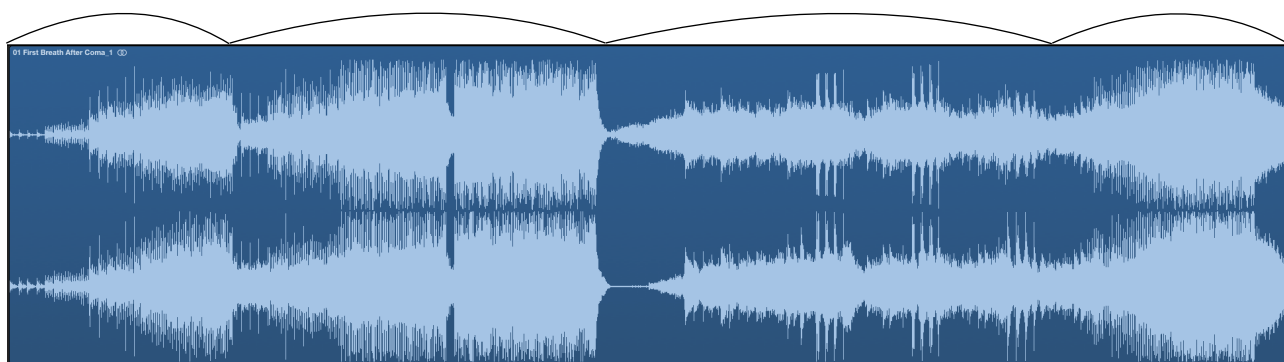


Fig 4.2.1. Waveform of ‘First Breath After Coma’ and the respective sections.

The overall dynamic profile shows three main progressive rises, with each rise climbing to a more intense dynamic level than the one preceding it, with the exception of part three. In between these rises are brief lulls, with the last lull before the final build being longest and least dense of them all,

containing the lowest rhythmic density. It is at this point that the music reaches its greatest textural density, highest volume and the greatest amount of noise. This general pattern occurs in slightly different forms across both of the *Explosions in the Sky* pieces analysed in this exegesis.

The large-scale crescendo, as a constant feature of all the music in this exegesis, can be developed in many different ways, including the addition of new material, alteration of parameters, and deception. Deception is a method used to maintain interest in many forms of music, especially that of film music and cinema, often in the form of interrupted, and imperfect cadences. From bar one we are led to believe we are in a tonality with A lydian as the root chord however it is ultimately E major that prevails .

Prevailing: E: IV V vi I
 Perceived: A: I II iii V

Fig.4.2.2. Offset harmony in 'First Breath After Coma'.

A solo, guitar line provides the primary material, and is supported shortly after by a steady bass drum pattern. The rhythm on this single-note melody (Fig.4.2.3) injects it with rhythmic energy and momentum that allows the development of a sonic texture within which there is scope for more material to be added. The shape of the phrase provides a sense of breathing and evolving through the articulation and dynamic change within each phrase.

Fig.4.2.3. Opening guitar melodies and development in 'First Breath After

Many of the pieces analysed begin at a minimal dynamic level, a small span in register, and a simple arrangement of harmony and texture, while the perceived rhythmic subdivision will be larger than that at the climax, and the tempo will be slower.

Melodic content, variation and repetition are strong functions in the construction of the long-form structures in *Godspeed You! Black Emperor!* and *Explosions in the Sky*. While the hypnotic and enveloping nature of the music stems from the cyclic ebb and flow of materials, the constant changing of musical parameters maintains interest and provides further progressive processes to take place. The first melody that appears in ‘First Breath After Coma’ never deviates from a crotchet pulse, with the first note of the bar being a different pitch than the seven identical ones that follow. This places a great amount of weight on the first beat of every second bar, which, when combined with a bass entry that emphasises the same beat, creates an overall impression of eight-beat blocks (breves) as the fundamental rhythmic unit in the opening motif. This idea of perceived rhythm is greatly important in long-form structures as it creates energy and momentum while allowing the listener to be deceived into feeling many different pulses. In other sections, a semiquaver lattice provides energy, but is overlaid with a minim melody, with the climax being one of finely-tuned increases in density, registral expansion and fluctuation in tempo to not only fulfil, but exceed the expectation that the music has established up until this point.

The image displays a musical score for the piece 'First Breath After Coma'. It consists of four staves: Gtr.1, Gtr.2, Bass, and BD. The score is presented in two systems, each containing four measures. Gtr.1 (Guitar 1) plays a crotchet pulse, with the first note of every second bar being a different pitch, indicated by arrows. Gtr.2 (Guitar 2) plays a semiquaver lattice. Bass (Bass) plays a minim melody. BD (Bass Drum) plays a crotchet pulse. The notation is in treble and bass clefs, with a key signature of one sharp (F#).

Fig.4.2.4. Perception of pulse versus rhythms present in ‘First Breath After Coma’.

While the opening sequence appears to be in A major, the melody has a pronounced use of a D[#] and therefore it becomes apparent that the key is in fact E major, or A Lydian. This emphasis on the subdominant allows the music to move to E major for the second section of the piece and feel like we have modulated to the sharper side of the key. Moving to E major resolves the tensional function of the D[#], as it now conforms to a more conventional leading-note role. Between 00:00 and 1:56 there are three voices that move within and around each other, forming the full texture of the introduction, with very little dynamic change. While this texture is quite static, it is also a rhythmic centrepiece that begins to develop over time.

The role of the drums (including shakers and auxiliary percussion) in long-form structures post-rock is one of great importance. In 'The Earth is Not a Cold Dead Place', the drums are not used in an unconventional manner, with the drummer functioning more like an orchestral percussionist than a drummer. This stems from the way in which the drums rarely articulate short phrases, instead creating longer-term build-ups of energy, often through a large number of snare articulations and cymbal washes. The high-frequency noise bands created by these instruments endows the piece with a 'breathing' metallic quality, while the addition of pulsed snare lines brings the whole piece towards a clearer metrical grid in order to generate more propulsive rhythmic momentum. This change occurs at 1:56, at the same time as a change in melody that is again very steady and repetitive, working towards the first climax of the piece at 3:18.

At this point in the piece, the bass adopts the rhythm of the kick drum, with the rhythm now conforming to the semiquaver grid that was introduced at 1:56. The snare drum rhythm develops by way of increasingly loud accents (Fig.4.2.5), while the shaker becomes more prominent, and the stereo image of that sound gets wider. The gradual thickening of sonic density and a progressive increase in attack activity fuelled by the percussion which leads into a section of greater instability at 4:20, in which the music briefly 'relaxes' before rekindling its energy.

Fig.4.2.5. Conformity of rhythm in 'First Breath After Coma'.

The next section of 'First Breath After Coma' has a degree of stability. The metre is restored at 5:00, firstly by the bass and then by a subtle alignment of all the instrumental layers at 5:35, where sleigh-bells reinstate the rhythmic lattice. The metrical, textural and rhythmical stability is vital to forming a new trajectory towards a point of high energy.

The control of recession and progression²⁹ in *Explosions in the Sky* is especially well-timed in 'First Breath After Coma', and the pacing of the swells and the entry and exit points of each textural layer feels very natural within and around each other. Each section (defined by the length of the harmonic progression or length of the melody) is only repeated in multiples of four (namely 4, 8, or 16 times). Given that the piece is predominantly in simple time, the down beats of each phrase can be felt very clearly and the changes come along in accordance with that. This can be seen on a much more micro-structural level in the analysis of the tempo. In the album *The Earth is not a Cold Dead Place*, the subtleties of the tempo changes can become an apparent force for progressive motion. It is common to see the tempo increase as the group progresses through the bar, stretching

²⁹ Berry, W. (1987). *Structural Functions in Music*: Courier Corporation. p.186

out beat one of each bar before moving more quickly through the following beats. While this change is perceived as a natural part of the ‘groove’, it could also be seen as a crucial aspect to the development of building energy in a long-form structure.

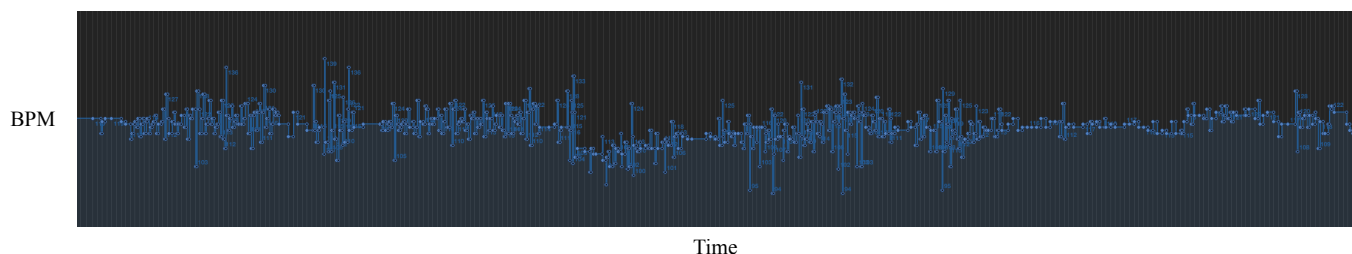


Fig 3.1.1 Beat Mapping Line Example from Logic Pro X. Photo of *The Only Moment We Were Alone*.

Register and registral expansion is a conventional method of creating shape and articulating change within a piece of music, and this is certainly the case in these post-rock works. In all three pieces the register opens with a mid-range motif from which the rest of the piece develops, and the music often reduces back down to this range at another point during the piece. In ‘First Breath After Coma’, a lone A4, opens the piece, while ‘The Only Moment We Were Alone’ starts off with a drone from ‘First Breath After Coma’ that is created from the reverb tail of the last chord of the climax and develops it a new melody. ‘We Drift Like Worried Fire’ begins with a sample that leads into a bare melody beginning on G3.

‘First Breath After Coma’ has the structural crescendo of a typical post-rock piece. The opening melody comprises minimal harmonic development, moderate rhythmic value, and at a moderate dynamic. It also appears in a middle register, which allows maximal opportunity for expansion in either direction. By the end of the track, the maximal point of registral expansion and progression has taken place. Having been through multiple stages of recession as well, the curve of the piece never lets us truly return to minimal energy, instead accumulating a kind of residual energy or tension, which develops the desire for resolution, the expectation of a final moment of absolute transcendence.

4.3 The Only Moment We Were Alone

Using the residual energy from 'First Breath After Coma', 'The Only Moment We Were Alone' is the first track in a 3/4 time signature. The act of removing a beat from the bar, clearly changes the feel with a quicker return to the down-beat. Again, however, the snare drum does not articulate the typical beats of two and four, for two reasons: one of those beats no longer exists, and accenting those beats is not a typical pattern for the long-form builds of post-rock music. This gives the feeling of a bar containing just one crotchet beat, which continuously propels the music forward, allowing the musical interest to be renewed into each and every bar.

Despite having strong forward momentum, this piece is also highly symmetrical in the construction and repetition of its melodic lines. Every melody, and every section of this track has a lowest common denominator of four bars from which phrases are constructed. Regardless of time signature and changes in register and dynamics, all of these sections can be broken down into four-bar blocks, which is more commonly a 'rock' feature. The piece can be divided into six main sections:

- 1 - Introduction. (00:00 - 2:05).
- 2 - Sleigh Bells. (2:05 - 3:23).
- 3 - Start Small and Rise #1. (3:23 - 5:16).
- 4 - Start Small and Rise #2. (5:16 - 7:18).
- 5 - Minor Tonality Lull. (7:18 - 8:29).
- 6 - The Final Climax. (8:29 - 10:14).

Many techniques and functions observed in 'First Breath After Coma' are re-used in 'The Only Moment We Were Alone'. This track begins with a single-note fragment that expands into a simple melody and counter melody pairing. This, together with the crescendi and decrescendi that occur throughout the process, provides relief from the medium sized higher point that we encountered at the end of 'First Breath After Coma'. The two pieces run together and the point of transition is not

completely obvious. As we can see from the diagram (Fig 4.3.1) the progression and recession of this track is obvious from a macrostructural point-of-view.

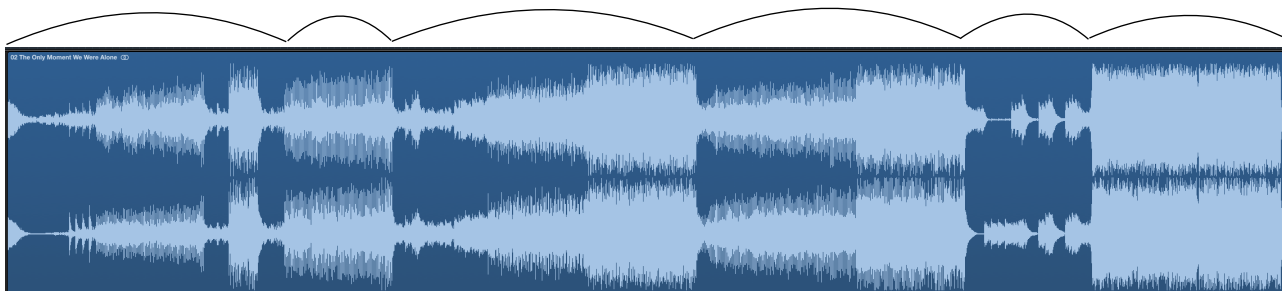


Fig. 4.3.1. Waveform of *The Only Moment We Were Alone*.

The typical pattern for an Explosions in the Sky track is to start with a single-note pattern for the introduction, which occurs in ‘The Only Moment We Were Alone’. After section one exhibits a low quantity of energy, the sound of sleigh bells and a soft syncopated melody lead us through the opening sequence which is built upon a quarter-note bass drum feel with a delicate shaker overlaid. This never quite builds to a climax, but it maintains momentum by gradually introducing material that escalates for the first time at 4:28 with the addition of a syncopated snare line with accents and then expansion into the cymbals. This is first sustained climax of the piece, lasting nearly one minute, but is cut off early in order to save energy for the final climax. The music returns to the original single-note fragment and a foreground melody which intertwined and coexist to melody and countermelody pairing. These enter into a hocket, with panning used to separate the individual components from each other spatially. The subdivisions continue to develop towards a strengthened quarter-note lattice from 6:33 until 6:55, where an eighth-note cascading melody is introduced in the guitars. At this point the music builds towards another climax, while the drums change between cut time and double half time. The effect of this is a continuous stretching and compression of the climactic moment, in which the variance of the texture permits a longer, more drawn-out highpoint than usual.

The next section has the largest use of space and silence in the album so far, with the silence being used between phrases, as well as a progression from one minor chord to another and back again (Fig.4.3.2. p.33), a new feature in the album.



Fig.4.3.2. Harmonic reduction showing the A minor to E minor transition before the Final Climax in 'The Only Moment We Were Alone'.

The four repetitions of this progression establish an expectation of maximal change in as many parameters as possible. At 8:30, the most dramatic shift in the whole album takes place. The parameters of register, tempo, dynamics, attack activity and texture all change abruptly: The register expands, both towards the upper and lower register; the tempo increases from the slow refrain of the 'minor lull', which was at an average of 90BPM, to an average of 100BPM for the duration of the climax; the dynamic shift is elevated from pianissimo to an obliterating fortissimo; and the quantity of attack points and instruments involved increases to include the whole band conforming to a uniform quaver lattice. This is accented and developed further by an emerging tremolo guitar melody that can be heard from 9:28 through to 10:09.

4.3.1 Comparing ‘First Breath After Coma’ and ‘Only Moment We Were Alone’

‘First Breath After Coma’ and ‘Only Moment We Were Alone’ contain many of the same musical functions and display them in a very similar way. Both tracks exhibit a similar method of construction and utilise similar development techniques. Many of these processes are consistent with other post-rock works. The differences occur mostly in regard to the range of dynamic spread that is used in each piece, specifically at the ‘loudest’ moment, which is the climax at the end of ‘Only Moment We Were Alone’.

The use of percussion and the development of rhythm is a consistent feature of the two pieces. The snare drum and bass drum control the rhythmic progression and recession for the whole ensemble, while the use of an accented semiquaver lattice allows the drummer to emphasise and shape the phrases without the traditional pop-rock reliance on the ‘backbeat’. This also allows for the melodic lines to be reinforced evenly throughout the bar by a snare drum articulation.

While the creation and development of melody in both pieces is relatively more simple in comparison to that of Godspeed You! Black Emperor!, the way that these melodies achieve maximal emotional effect is due to the composition of the individual parts. Pop-rock music traditionally places the guitar in the role of either ‘rhythm’ or ‘lead’, with the rhythm guitar holding the role of harmony, the lead guitar takes the role of melody, such a riff or a solo. In Explosions in the Sky, however, the guitars create melodies that are unhindered by lyrics, allowing the melodies to become the narrative structure of the piece. In Explosions in the Sky the role for each guitar is very democratic, with the guitars all playing their own melodic line, and as the textures progress to a denser section of the trajectory, they will take on ‘lead’ and ‘rhythm’ roles. The repetition and development of melody throughout both pieces is a strong characteristic of post-rock music, especially in regards to Godspeed You! Black Emperor!, who develop ostinati from which the melodic fragments and sound objects take energy.

4.5 We Drift Like Worried Fire

‘We Drift Like Worried Fire’ is the third in the four-track album, *Allelujah!Don’t Bend! Ascend!* by Godspeed You! Black Emperor! It begins in the twenty-fifth minute of the album and displays a wide array of features. The larger ensemble than that of *Explosions in the Sky* allows for a much more diverse range of features to be explored, and a different sonic palate is immediate from the outset. Heightened quantities of repetition with lowered levels of melodic variation occur in this track, and the development of the textures is extremely powerful.

‘We Drift Like Worried Fire’ can be divided into four main sections:

1 - Introduction. (00:00 - 3:04).

2 - Build #1. (3:04 - 10:20).

3 - Build #2. (10:20 - 17:10).

4 - Finale. (17:10 - 20:07).

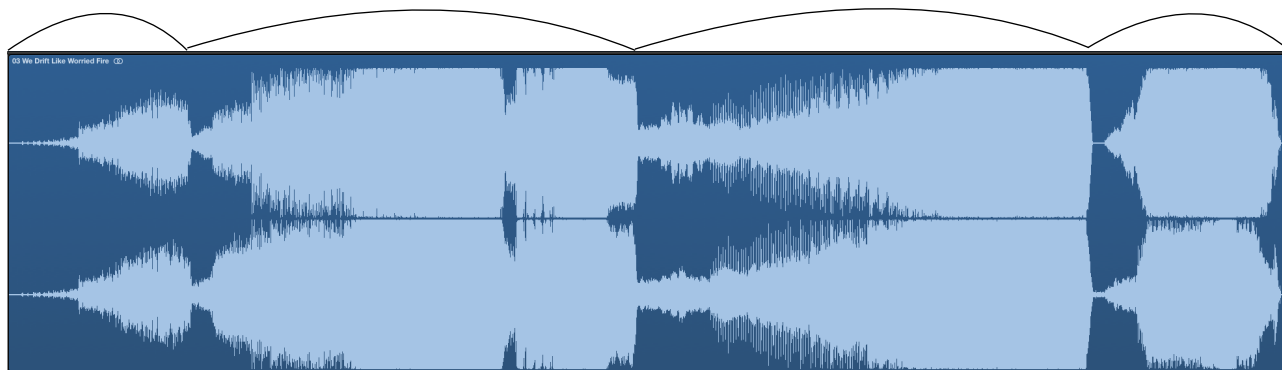


Fig.4.5.1 Waveform of ‘We Drift Like Worried Fire’ showing the respective sections

An otherworldly atmosphere in the introduction creates a brooding quality, and the uneven phrase lengths create an unsettled feeling, with extended techniques and glissandi coming from the instrumentation. The music maintains a stable texture and dynamic and stays fairly static until 3:04, which introduces guitar glissandi covering multiple octaves and panned to multiple spatial locations. It is not until 4:05 that a more conventional drum beat, with snares on beats two and four in a simple time signature, is introduced. This would be ordinary and repetitious in normal

circumstances, but here, the material around it is disorientating. The ostinato is a seven-crotchet phrase played pizzicato on a string instrument (Fig.4.5.2) that repeats four times with a crotchet rest at the end of the cycle.



Fig.4.5.2. A full cycle of the seven note ostinato from 'We Drift Like Worried Fire'.

The rhythmic displacement that occurs as a result of this figure allows the music to constantly remain surprising while the glissandi from the guitars and strings can develop itself within the texture. The development of the ostinato from the high pizzicato strings to a combination of low strings and guitar at 3:06 moves the texture into a more conventional pop-rock register and texture, allowing for the entry of the drums at 4:05. The drums are used in a way that is similar to pop-rock, and come in playing a simple eighth-note groove (Fig.4.5.3) with the crucial change coming at 5:50, with the choice being made to remove the drums from the backbeat, with snares on two and four.

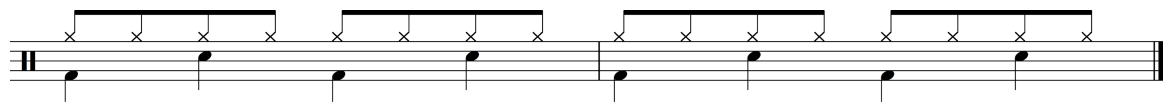


Fig.4.5.3. Eighth-note drum beat example from 'We Drift Like Worried Fire'.

The toms are introduced at 5:52 which lowers the registral spread in the drum kit, creating spectral space into the upper register between 5:50 and 10:20, during which time the first small climax occurs at 9:10. This length of time for a rise and build is significantly longer than that of Explosions

in the Sky, with 'We Drift Like Worried Fire' having build times of approximately 7 minutes, compared to that of 3-4 minutes in 'First Breath After Coma' and 'Only Moment We Were Alone'.

Throughout the first build from 3:26 there is a textural quality that was very difficult to analyse as more spectral material qualities exist. The sound is very unstable, reminiscent of a delay overlapped with another delay, slowly building like an oscillating synth under the main drum-beat and melody until it is too quiet to be heard anymore. The other layers that enter take over by 7:20. Between 7:20 and 8:19, the 'groove' has been well-established, with the drum kit now providing the familiar semiquaver pulse. Unlike Explosions in the Sky, however, the drummer in Godspeed You! Black Emperor! moves around the kit, rather than only using the snare drum, with accents on the cymbals. The effect of using the toms as well as the snare and cymbals, is that it expands the register of the kit, allowing kits' registrational articulation to contribute to the shape and motion of the musical form.

The recession from the highpoint at 8:20 involves the use of stereo between phrases of high intensity and high density (Fig.4.5.4), the critical moment arising at 9:07 in which two tremolo guitar parts are introduced, one panned to each side of the monitor mix. This is the first sustained climax of the piece, and it lasts 50 seconds before winding down to the second melodic idea, introduced at 10:20.

The same use of audio deception as a post-rock function that is found in both Explosions in the Sky and Godspeed You! Black Emperor!. From 4:20 until 5:30 in 'First Breath After Coma' the same phenomena is evident. The music removes itself from the strict lattice to which it was adhering and develops a more fluid texture. In 'We Drift Like Worried Fire', from 11:00 - 11:40, no element of the texture articulates the tempo or meter, and it becomes more pertinent to analyse this section as if no barlines exist. By way of contrast this lack of rigid structural qualities is not found in 'Only Moment We Were Alone'.

At 11:10, a transition takes place over 40 seconds, moving to the next section of the piece at 11:50. At this point, a consistent two-note melody on a pizzicato string instrument is introduced, and replaces the original ostinato for the second build. The reiteration of space, divided by sections of intensity, this time at a lower level, is brought back to allow the drums to develop the use of cymbals. At 13:50, the snare is incorporated, in a very similar way to that of *Explosions in the Sky*, although more in the style of a military drum pattern. The texture at this point is not a continuous lattice of sixteenth notes, instead forming a four-bar loop with dramatic emphasis on the downbeat of the first bar and beat three of every fourth bar.

One by one, layers are added over a period of around four minutes. Because of the large ensemble size in comparison to that of *Explosions in the Sky*, these staggered additions of instruments lead to a build-up that is much longer than we heard in their pieces. At 15:00, the start of the climax is beginning while the tempo continues to increase. In the pieces by *Explosions in the Sky*, tempo fluctuations were only incorporated to a relatively small degree, only enough to be considered ‘groove’. In ‘We Drift Like Worried Fire’, on the other hand, a large-scale *accelerando* is employed to elevate the energy of the texture. By default, increasing the tempo, whilst maintaining the same initial density would create more attack points per minute, and thus generate a denser and more energised texture.

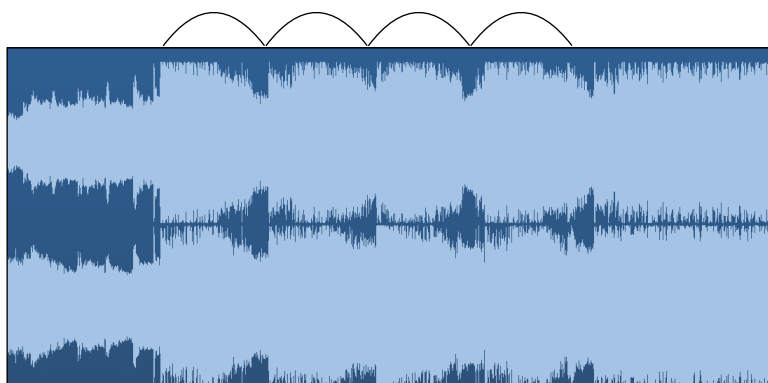


Fig.4.5.4. Use of space and high density in 'We Drift Like Worried Fire'

The *accelerando* takes place over approximately 45 seconds, with the tempo rising from 110BPM to 135BPM. At the peak of the *accelerando*, the energy approaches the maximum level for the piece, with the addition of a distorted guitar on the principal melodic line, a common trait in pop-rock music. This could be called the solo section, and it does exhibit many conventions of pop-rock. The drum kit plays a pattern with snare on beats two and four, and kick drum on beats one and three, with fills on the turnaround of each four-bar pattern. The bass guitar maintains an eighth-note ‘groove’, playing the root notes of the harmony. At 16:40, the density is heightened further by the snare being played on every crotchet, signifying the climactic point of that section, which is ended somewhat prematurely to make way for the final section. These features in ‘We Drift Like Worried Fire’ are the closest moments that both Explosions in the Sky, and Godspeed You! Black Emperor! get to employing a conventional pop-rock approach to form, structures and processes.

The manipulation of the tempo in ‘We Drift Like Worried Fire’ is the defining feature for the two climaxes at the end of sections three and four, also featuring at the escalation point 5:55. In all three sections, the tempo increases to create a sense of urgency to the music, as the next beat is always arriving earlier than expected. This stops the ‘groove’ from being too static, and this energises the overall structure. This does not occur at any stage in Explosions in the Sky, with their tempo changes happening abruptly across section breaks rather than during the sections themselves.

Chapter Five: Portfolio and Reflection

The findings from both the analyses and the broader field of post-rock music greatly influenced the way I approached my creative portfolio. I was particularly influenced by the way that energy accumulates and is shaped in order to create a strong emotional response. To take into account the long-term trajectory of a piece, yet let every moment have the time it deserves, is a very challenging compositional balance.

The frameworks provided by Parks and Berry have been used to identify key progressive and recessive processes in the selected works. The major musical factors examined included: attack density and activity; energy; textural density; register (including orchestration and dynamics); and economy of material through repetition with variation.

The first constraint I set myself in the creative work was that the portfolio should be continuous. Each track should be able to be heard within the album itself, but with natural and intentional transitions, except when I was a specific compositional effect. This means that the album is conceived as a single track that can be split into many sections, allowing the listener to experience the piece as a journey through many emotional states.

Further constraints were imposed by the requirement for technology to be a part of the album. The feedback loop between the composer and the Digital Audio Workstation during the development of an album can be both a helping hand and a hindrance. The speed at which ideas can be captured into a session is very important when considering how to develop an album efficiently and accurately. On the other hand, the involvement of technology in the compositional process was a constant challenge for creativity due to the way that improvisation works in relation to music that is written out beforehand. While the ability of DAWs to allow the computer to assist the creation of a harmonic or melodic progression and then capture improvisation while looping and reworking the

phrases was a crucial element of the creative process, this often resulted in wasted time due to over-indulging in the improvisational sessions.

With so much utilisation of improvisation, shaping the album became extremely organic, even after I had originally intended to completely plan it out. The pacing of the respective sections became the biggest hurdle once they started being conceived. A session would have fragments kept, muted, and organised to keep as ‘potential ideas’, but these would often be deleted at a later date to make way for the next idea that was more appropriate. This was a positive compositional process for me, as it meant the fragments that had potential inspired and allowed better musical ideas to come through.

The original plan had been to compose on a piano or guitar, and create music much more like that of Explosions in the Sky, and perhaps even hold a small concert and record it. With the constraints of technology and the shortfalls of time versus productivity, however, I made the choice to have the album be a completely digital production. The musical style ended up being a hybrid of the two groups that I analysed, utilising the extended ensemble of Godspeed You! Black Emperor! but with the characteristics of Explosions in the Sky.

With the nearly unlimited array of sounds and effects that a composer can achieve with soft-synths, the instrumental sound-world of my creative portfolio steps outside both that of traditional pop-rock, and even outside of post-rock itself. Most of the sounds are created via MIDI, and using synthesisers and sample libraries, although I chose to record live musicians for the vocal elements, in the form of a voice actor and a singer. All other parts are composed digitally. Despite a certain artificiality, this use of MIDI was extremely helpful since it completely eliminated the need to have music notated and prepared for recording sessions. It also aided the development of my use of expressive MIDI data and the creation of the most realistic sound possible, a requirement in modern-day temp-tracking

The portfolio was also to be scoreless, as a way of taking into account the format in which the final product would be submitted, but also to be more adhering to the way which music is consumed during this day in age, which sees the listener prefer to download or stream a file rather than purchase a hard copy. This did make, however, difficult to plan which part of each section would be in which key, direction, and progression of each section in regards to rhythmic, textural and registral trajectories. An initial plan was mapped out as the piece was conceptualised, this was then constantly adapted to accommodate the musical directions that emerged through improvisation. Over time this was refined and the result is a piece that is developed using techniques from both groups and harnessing the ability for creative thinking through the use of technology.

Chapter Six: Conclusion

This exegesis and creative portfolio explore key musical techniques and processes in post-rock music. Through the analysis of several representative works of post-rock music, guided by the frameworks provided by Wallace Berry and Richard Parks, I articulated a number of techniques common to the musical vocabulary of Explosions in the Sky and Godspeed You! Black Emperor!. The focus on computer technology, attack-density, rhythm, texture density, energy and continuous long-term trajectories displays a clear departure from standard rock forms, and these techniques were applied to my own compositional portfolio.

The analysis of Explosions in the Sky and Godspeed You! Black Emperor! showed me that the long-term formal processes of post-rock music align more with that of the symphonic repertoire, even though a smaller array of instruments is used. While the ensemble usually comprises the same instruments as a traditional rock group (guitars, keyboards and drums), some groups extend this to include vocal content, although most post-rock music created before the early 2000s lacks vocals.

Textural manipulation and control is a key feature of this study. It has been shown that in the case of post-rock music, greater emphasis falls on the roles of texture and rhythm in the formation of structural processes. This means that every instrument is a contributor to the overall quality of the piece, while features such as harmonic change and extended harmonic exploration do not occur as frequently as in more conventional pop-rock structures, or that of the symphonic repertoire. These ideas were also a major contributing factor to the aesthetic, artistic and structural elements of the creative portfolio.

In regards to texture, the timing and pacing of trajectories of parametric change was a crucial issue. Careful control of each, entry, build, and exit within the piece was vital to ensure that each climax delivered the most effective level of musical intensity. While this was sometimes clear in the waveforms of each piece, visual analysis viewed on the computer could be deceptive due to

compression techniques, popular in post-production. and as a result, more sophisticated approaches were used.

Post-rock music requires the composer(s) to have a very in-depth understanding of texture and its various qualities, as well as an astute ability to work with rhythm and pacing. As we have seen from the contrast between Explosions in the Sky and Godspeed You! Black Emperor!, it is possible for works to contain many different melodic lines as it is to be based off a single-note melody alone. A high economy of material is a notable feature of Godspeed You! Black Emperor!, while Explosions in the Sky displayed a tendency to use many more different lines in a single track. The use of density, register and tempo as key functional determinations in post-rock music takes the sophisticated but not necessarily complicated harmonic background, creating a world that sees the symphonic ideals reborn on a pop stage.

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